PERCEPTION OF HEALTH CARE SERVICES UTILIZATION AMONG FOREIGN LABOURERS IN MALAYSIA

MARYAM SOHRABI

FACULTY OF BUSINESS AND ECONOMICS
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PERCEPTION OF HEALTH CARE SERVICES UTILIZATION AMONG FOREIGN LABOURERS IN MALAYSIA

ABSTRACT

Introduction: Population diversity can create different health profiles, creating new challenges for national health systems. Even in countries where access to health care is widely and freely available, immigrants are pretty often unable to take advantage of such services, for some reasons including differences in lifestyle or culture, language barriers, financial barriers, or lack of awareness. The lack of access to or low uptake of health care services among this group of people can negatively impact overall public health outcomes.

Objectives: This study aims to investigate the associations between socio-demographic factors and barriers in getting healthcare services. It examines the influence of socio-demographic characteristics on the extent of exposure to barriers (personal, structural, and financial) in getting healthcare services. It further investigates the impact of barriers (personal, structural, and financial) on the tendency of obtaining medical treatment for different levels of illness (mild and severe) among unskilled foreign labourer in Malaysia.

Methodology: This study had been based on the primary data gathered through the usage of a structured questionnaire. Data were collected through quota sampling and had involved respondents who are legal foreign workers in Klang Valley, Malaysia. These respondents were approached by enumerator at their residential areas, embassies, and workplaces.

Analysis: All of the data derived from the survey were analysed by using SPSS Statistics version 20. The demographic profiles and variables representing barriers were examined

using descriptive analysis and cross tabulation. To find answer for the first research question, cross tabulation and chi-square independence test was used to examine associations between socio-demographic factors and barriers in getting healthcare services. For the second research question, answer was obtained using non-parametric tests, namely Mann-Whitney and Kruskal-Wallis tests. The two tests were used to determine the influence of socio-demographic characteristics on the extent of exposure to barriers (personal, structural, and financial) in getting healthcare services. Finally, answer for the third research question was determined based on the results of chi-square independence test and logistic regression analysis. These statistical techniques were used to examine the impact of barriers on the tendency of getting medical treatment for different levels of sickness.

Finding: Results of the study suggest that association exists between certain types of socio-demographic factors and personal, structural, and financial barriers in getting healthcare services. Similarly, the results have shown that certain socio-demographic factors influence the extent of exposure to personal, structural, and financial barriers in getting healthcare services. Finally, the findings of this study indicate that the impact of barriers (personal, structural, and financial) on the tendency of obtaining medical treatment were not the same for different levels of sickness.

Keywords: Healthcare, Utilization, Barriers, Labourer, Malaysia

PERSEPSI PENGGUNAAN PERKHIDMATAN PENJAGAAN KESIHATAN DALAM KALANGAN BURUH ASING DI MALAYSIA

ABSTRAK

Pengenalan: Kepelbagaian populasi boleh menghasilkan profil kesihatan berbeza dan mewujudkan cabaran baharu untuk sistem kesihatan negara. Sekalipun di negara yang mana akses kepada penjagaan kesihatan tersedia secara meluas dan bebas, imigran selalunya tidak dapat menggunakan perkhidmatan tersebut, atas sebab tertentu termasuk perbezaan gaya hidup atau budaya, halangan bahasa, halangan kewangan atau kurangnya kesedaran. Kekurangan akses atau penggunaan perkhidmatan penjagaan kesihatan yang rendah dalam kalangan kelompok ini boleh memberi kesan negatif kepada keseluruhan kesihatan awam.

Objektif: Kajian ini bertujuan untuk menyiasat hubungkait di antara faktor sosio-demografi dan halangan dalam mendapatkan perkhidmatan penjagaan kesihatan. Ia mengkaji pengaruh ciri-ciri sosio-demografi ke atas tahap pendedahan kepada halangan (peribadi, struktur, dan kewangan) dalam mendapatkan perkhidmatan penjagaan kesihatan. Seterusnya ia menyiasat kesan halangan (peribadi, struktur, dan kewangan) terhadap kecenderungan untuk mendapatkan rawatan perubatan bagi tahap penyakit yang berbeza (ringan dan teruk) dalam kalangan buruh asing tidak mahir di Malaysia.

Metodologi: Kajian ini berdasarkan data primer yang dikumpul melalui penggunaan soal selidik berstruktur. Data dikumpul melalui persampelan kuota dan melibatkan responden yang merupakan pekerja asing sah di Lembah Klang, Malaysia. Responden ini telah di oleh enumerator di kawasan kediaman, kedutaan dan tempat kerja mereka.

Analisis: Semua data yang diperolehi daripada tinjauan telah dianalisis menggunakan applikasi statistik SPSS versi 20. Profil demografi dan pembolehubah yang mewakili

halangan telah diperiksa menggunakan analisis deskriptif dan penjadualan silang. Untuk mencari jawapan bagi soalan kajian pertama, penjadualan silang dan ujian kebebasan khi kuasa dua digunakan untuk mengkaji perkaitan antara faktor sosio-demografi dan halangan dalam mendapatkan perkhidmatan penjagaan kesihatan. Bagi persoalan kajian kedua, jawapan diperoleh melalui ujian bukan parametrik iaitu ujian Mann-Whitney dan Kruskal-Wallis. Kedua-dua ujian tersebut digunakan untuk menentukan pengaruh ciri sosio-demografi terhadap tahap pendedahan kepada halangan (peribadi, struktur, dan kewangan) dalam mendapatkan perkhidmatan penjagaan kesihatan. Akhirnya, jawapan bagi soalan kajian ketiga ditentukan berdasarkan keputusan ujian kebebasan khi kuasa dua dan analisis regresi logistik. Teknik statistik ini digunakan untuk mengkaji kesan halangan terhadap kecenderungan mendapatkan rawatan perubatan untuk tahap penyakit yang berbeza. **Penemuan:** Keputusan kajian menunjukkan bahawa wujud perkaitan antara jenis faktor sosio-demografi tertentu dan halangan peribadi, struktur dan kewangan dalam mendapatkan perkhidmatan penjagaan kesihatan. Begitu juga, keputusan telah menunjukkan bahawa faktor sosio-demografi tertentu mempengaruhi tahap pendedahan kepada halangan peribadi, struktur dan kewangan dalam mendapatkan perkhidmatan penjagaan kesihatan. Akhirnya, dapatan kajian ini menunjukkan bahawa kesan halangan (peribadi, struktur, dan kewangan) terhadap kecenderungan mendapatkan rawatan perubatan adalah berlainan untuk tahap penyakit yang berbeza.

Kata kunci: Penjagaan kesihatan, Penggunaan, Halangan, Buruh, Malaysia

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LIST OF ABBREVIATIONS

IOM	Institute of Medicine
MOH	Ministry of Health
MOHR	Ministry of Human Resource
UDHR	Universal Declaration of Human Rights
WHO	World Health Organization
UN	United Nation
MEF	Malaysian Employers Federation
FEMA	Medical Examination Monitoring Agency
SPIKPA	Foreign Worker Hospitalization and Surgical Insurance Scheme
FWCS	Foreign Workers Compensation Scheme
SOCSO	National Social Security Scheme

CHAPTER 1

BACKGROUND OF STUDY

1.1 Introduction

World Health Organization (WHO) defined "Health" as mental and physical wellbeing without sickness (Callahan, 1973). People in good health conditions have a better quality of life, live happier (Gerdtham & Johannesson, 2001; Subramanian, Kim, & Kawachi, 2005), and are less likely to be absent at work (Grossman, 1972). Their population and their health resources mainly define countries' performance, and a lower level of health is the critical element affecting a country to be underdeveloped (Bloom & Canning, 2000; Cole & Neumayer, 2006). The responsibility of each government is to increase an individual's quality of life by providing social services. On the other hand, huge portions of the population in developing countries are disadvantaged and refused access to primary health care services, which is their fundamental right (Hossen & Westhues, 2011).

In this globalized world, delivering health care services is extended to each country's foreign population and citizens. From one aspect, lack of access to foreigners' primary health care system is a transgression of their rights. On the other hand, it improves public health outcomes (Noh, Wahab, Bakar Ah, & Islam, 2016). Expensive emergency care and related extreme charges for the health system will be reduced by encouraging foreigners to get early treatment, utilizing primary health care services, and including them in disease control programs (Mosca, Rijks, & Schultz, 2013). Weiss and Pollack (2017) indicated that limitations of resources and priority selection obstacles were identified as the significant barriers to worldwide health development, while corruption, lack of expertise, and social and cultural barriers were seen as somewhat less severe.

The government of Malaysia has started to hire unskilled foreign labourers to solve the labourer shortage problem. Mainly, the unskilled labourer population in Malaysia is from Asian countries. This population increases over time due to the increasing demand for cheaper labourer costs and rapid economic growth. In Malaysia, foreign workers' health impacts the economy of the country and its public health outcome, like any other host country (Mohd Noor, Isa, Said, & Abd Jalil, 2011). Malaysia has good coverage of health care services that are accessible to a large majority of the population. The government of Malaysia is concerned about foreign workers' health, wellbeing, and provisions for seeking care, insistent employers to address workers' health concerns. Nevertheless, different healthcare systems for local and foreign workers for public and private hospitals and foreign workers should pay more than the locals (Uddin, Akhtar, Masud, & Hye, 2020). Kanapathy (2006) indicated that increasing the fee result in neglecting healthcare needs to some foreign workers with low salary, and those without any medical advantage provided by employers (Joseph Theodore Young, 2004).

In general, sick people have three options 1) Seeking health care 2) Using self-or 3) Doing nothing. The cost of health care and the perceived benefits of seeking treatment decide an individual's willingness to use health care services from an economic standpoint. The tendency to use health care services varies among individuals. Individuals may be influenced by many factors, like; income, insurance, type of illness, the severity of disease, distance to a provider, and owning a vehicle (Hjortsberg, 2003). According to a study by Kahabuka, Kvale, Moland, and Hinderaker (2011), individuals with lower disease severity have the highest possibility of avoiding seeking medical treatment.

1.1.1 Basic Principles of a Public Health Approach to the Health of Migrants

It is not a new phenomenon that immigrants do not frequently take benefit of services available, even in countries that access to health care services is well guaranteed. Generally, immigrants face administrative, cultural, political, economic, and individual barriers when using health services (Dias, Severo, & Barros, 2008). According to the Sixty-first World Health Assembly issued by WHO (2008), there are four basic principles of a public health approach to the health of migrants, which are as below:

- To prevent inequalities in the status of health and access to health services between the host population and migrants.
- To improve access of migrants to curative and preventive interventions and ensure migrants' health rights, that is one of the primary human rights.
- To reduce excess morbidity and mortality by supporting lifesaving interventions.
- To minimize the negative impacts of the migration process on migrants' health outcomes.

1.1.2 Foreign Labourer Impact on Malaysia's Economy

There are not many studies on the impact of foreign labourer on the economy of Malaysia. During the years before the 1990s, for instance, there were insufficient recording information and data the number of illegal workers increased afterward. Therefore, an experimental investigation is not easy to carry out. Nevertheless, few studies have highlighted the negative effect of immigrant workers on the host country's economy, which are attributed to the relationship between the high ratio of irregular migration and observable socio-political issues, in particular, the issue of security (Athukorala & Devadason, 2012; Coppel, Dumont, & Visco, 2001; Feridun, 2005). Moreover, the fundamental fears of migrant workers' policies

in Malaysia have been limited and regulate the entry of illegal migrants through a wide range of policy measures and through guideline that is out of sync with international best practices (Maria, 2011).

The Malaysian economy is set up with low skill, low wage stability, updated industry, and low domestic factor prices by many low price unskilled immigrant workers. Migrant labourer solves the problem of labourer shortage and causes growth. The labourer shortage problem has been solved by importing temporary immigrant workers, especially in sectors influenced by the economy's short structural revolution, supporting labourer cost-effectiveness and competitiveness. Temporary foreign workers are preferred in highly competitive markets and active companies since they have wages, flexibility, and excellent employability skills. During high growth importing foreign labourer can help control wage inflation, while the unemployment level can easily be reduced by removing foreign labourer during the economic slowdown. Therefore, in the host country, it acts as a buffer to solve the influence of the business cycle (Kanapathy, 2006).

1.1.3 The Profile of Foreign Labourer

Malaysia's government accepts foreign labourer applications in various sectors: plantation, production, construction, agriculture, domestic servant, and service sector. Malaysia is over-dependent on foreign labourer because of the benefit of long working hours (more than 12 hours per day) and lower wages compared to local labourers. Many foreign labourers are not receiving their salary as were promised before leaving their home country. In other words, they are working in a condition that is considered unsafe, and many endure verbal and physical abuse from their employer (Karim & Diah, 2015). The Malaysian government has to ensure that such violations are prevented, job-related injury compensations are paid, and

all entitlements and benefits are fulfilled (Masitah, 2008). In general, the perception of public health services is very impressive in Malaysia in terms of health management, health budget, support services, number of doctors, hospital facilities, modern health technology, and physical infrastructure. However, foreign labour's low access to health care services challenges these impressive public health services (Kanapathy, 2006; Karim, Abdullah, & Bakar, 1999). The Ministry of human resource has provided information about the population of foreign labourer by country and sector (Table 1.1).

Table 1.1: The population of foreign labourer by countries and sectors

	Sectors						
Country	Domestic servant	Construction	Manufacturing	Services	Plantation	Agriculture	Total Population
Indonesia	88,956	182,845	128,759	38,069	203,243	72,837	714,709
Nepal	62	10,233	289,829	84,951	3,296	11,956	400,327
Bangladesh	139	85,377	81,508	25,247	16,375	11,376	220,022
Myanmar	86	14,530	92,133	13,742	1,266	4,103	125,860
India	853	9,650	2,570	47,668	20,659	32,552	113,952
Pakistan	39	24,970	4,033	6,198	5,980	18,238	59,458
Philippine	35,076	3,401	4,138	5,386	3,910	4,051	55,962
Vietnam	441	4,021	21,987	1,390	44	361	28,244
China	53	8,803	905	6,475	13	11	16,260
Thailand	317	779	269	9,404	589	1,841	13,199
Cambodia	1,824	127	1,775	874	133	220	4,953
Sri Lanka	747	199	3,473	883	428	190	5,920
Laos	18	1	14	3	1	1	38
Total Population	128,611	344,936	631,393	420,290	255,937	157,737	**1,758,904**

(MOHR, 2017)

1.2 Research Problem

According to studies in Malaysia like Kanapathy (2006), Karim and Diah (2015a), and Masitah, Nor Aini, and Mas Ayu (2008), Malaysia has provided a unique health care system for its citizens. A study by Uddin, Mehedi, Muhammad, and Hye (2020) demonstrated that although Malaysia has modern healthcare facilities, few foreign workers look for their services, either not wishing to or cannot for a specific reason. Strong evidence exists that migrants' lack of awareness of and familiarity with the local healthcare system has a significant impact on healthcare access (Lee et al., 2014). In developing countries, accessibility and use of health care facilities pose a serious concern. Foreign labourers in Malaysia have lower access to primary health care services compared to natives, underutilize health care services, and access barriers exist among foreign workers (Loganathan, Rui, Ng, & Pocock, 2019; Noh et al., 2016; Uddin et al., 2020; Zain, 2012). Uddin et al. (2020) studies assert that the main obstacles amongst Bangladeshi workers were healthcare providers not understanding foreign workers' health difficulties, high health care fees, self-medication, and deficit of transportation. Primary healthcare utilization among foreign labourers is a crucial issue to maintain population health especially for unskilled workers who have lower financial resources and facilities, different lifestyles, different languages, undesirable living conditions, health risks that are commonly associated with the movement of people, and unawareness of health care services provided by the host country. Immigrants' health is essential for sustainable and equitable development (Mohd Noor, Isa, Said, & Abd Jalil, 2011). A low-level utilization of health care between foreign workers has an adverse influence on public health outcomes and the overall well-being of the adult population (WHO, 2018). Therefore, untreated medical conditions or diseases may burden host countries' public health facilities (Curry, 2005; WHO, 2018). Hence, there is a good reason to motivate unskilled foreign labourers to utilize health care services and find hinder factors.

According to Corso et al. (2003), people did not get medical treatment in mild sickness to treat their illness. Mild sickness did not represent a terrific tension in health care utilization. At the same time, it is more likely to seek medical treatment when individuals perceive their illness as serious (Sreeramareddy et al., 2006). Most of the previous studies such as Noh et al. (2016), and Karim and Diah (2015a) on health care that has been conducted in Malaysia mainly focused on health care utilization, some of these studies focused on the availability of health care services, and not many studies concentrate on access barriers and the tendency of health care utilization for unskilled workers (Uddin, Mehedi, Muhammad, & Hye, 2020). Also, it is essential to know people's tendency to get medical treatment for different levels of illnesses. Willingness to the usage of health care services is merely based on the individual's perception of health care needs rather than the result of the medical evaluation (Dubayova et al., 2010). Generally, some people deny their illness symptoms while others exaggerate them. Therefore, this research aimed to investigate the barriers and the tendency of getting medical treatment in different levels of illness. Barriers to using healthcare services are divided into three groups, namely financial, structural, and individual obstacles, according to IOM (Millman, 1993; WHO, 2021). Hence, health care managers and policymakers need to recognize types of barriers and their impact on the tendency of health care utilization in different levels of sickness among unskilled foreign workers. Association between socio-demographic factors and barriers in getting health care services and the effect of these factors on the extent of exposure to barriers in getting healthcare services is essential (Shahid, Shum, Tadakamadla, Kroon, & Peres, 2021) because it helps the understanding the cause of barriers in addition to their nature (Shahid et al., 2021). Identifying the influence of socio-demographic factors on the extent of exposure to barriers in getting healthcare services is important because it can deepen the understanding of the barriers of each specific group of

people. Health care managers can reduce some barriers to particular groups with unique characteristics and ensure that provided services are sufficient and adequate.

1.2.1 Key Research Gap

Despite the availability of modern healthcare facilities in Malaysia, few migrant workers seek their services, either not wishing to or unable to for a certain reason (Uddin et al., 2020). There are few limited studies on barriers to utilizing health care services in Malaysia on a specific ethnic group.

People are acting differently when their sickness is mild or severe (Corso et al., 2003; Sreeramareddy et al., 2006), but there are not many studies investigating the barriers in different levels of sickness with the focus on the effect of socio-demographic factors. Therefore, an in-depth study investigating the barriers in different levels of sickness and the relationship between socio-demographic factors and barriers is much needed.

1.3 Research Questions

1. Which socio-demographic factor is associated with barriers (personal, structural, and financial) in receiving healthcare services?
2. How do socio-demographic factors influence the extent of exposure to personal, structural, and financial obstacles in receiving healthcare services?
3. How have the barriers (personal, structural, and financial) impacted the tendency of getting medical treatment in different levels of illness (mild and severe) among unskilled foreign labourers?

1.4 Research Objectives

1) To investigate the relationship between socio-demographic factors and barriers in getting healthcare services.

2) To identify the influence of socio-demographic factors on the extent of exposure to barriers (personal, structural, and financial) in getting healthcare services.

3. To analyze the impact of barriers (personal, structural, and financial) on the tendency of getting medical treatment in different levels of illness (mild and severe) among unskilled foreign labourers in Malaysia.

1.5 Scope of the Study

The scope of this study is legal foreign unskilled labourers in Malaysia residing in Kuala Lumpur. Since many immigrant workers are living in Kuala Lumpur, this area has been selected for this research. Unskilled workers were chosen for this study due to lower income levels, different lifestyles, lower education levels, and being more vulnerable than skilled workers. The immigration status of foreign workers is a sensitive issue with the possibility of deportation and detention. On the other hand, being undocumented is one of the main reasons foreign workers cannot get treatment when sick. Therefore, for ethical reasons, legal foreign unskilled workers were selected for this study to get an accurate response from participants without any fear and worries.

Mainly these labourers are from Indonesia, Bangladesh, India, Nepal, Philippines, Myanmar, China, Pakistan, Vietnam, Cambodia, Thailand, Sri Lanka, and Laos. The data has been selected from six different working sectors according to the ministry of human resource of Malaysia: domestic servant, Construction, Manufacturing, services, plantation, and agriculture (MOHR, 2017).

1.6 Justification of the Study

According to a 25th article in the Universal Declaration of Human Rights (UDHR), everybody has the equal right to have an acceptable and suitable standard of living for well-being and health for himself and his family together with necessary social services, medical care, housing, clothing, and food. Each individual has the right to be secure in the event of old age, joblessness, disability, widowhood, sickness, or other lack of livelihood in situations that are beyond the individual's control (UN, 1948). This right is regardless of race, gender, age, and education. Models and theories on health behavior explain that all over the world, individuals' health and their attitude in getting health care services are affected by different factors and barriers.

Migrants travel with their susceptibility to certain conditions, such as; culturally based health beliefs, lifestyle and genetic related risk factors, level of exposure to infectious agents, and epidemiological profiles. For instance, the difference in immunization level and prevalence of any neglected disease or given contagious diseases increases the probability of being affected by the condition among migrants or transporting it across borders (WHO, 2008). On the other hand, they are working and living in an unsafe situation with lower income than local workers. In line with international research, everyone needs to have guaranteed access to intensive and equal high-quality health care as human rights principles. Admission to intensive excellence health care services is vital for promoting and sustaining health, avoiding and managing the illness, decreasing unnecessary incapacity and immature death, and attaining health equity.

Some health indicators of countries that ranked higher percentage of foreign labourers in Malaysia show that the mortality rate caused by infectious disease in Malaysia as a host country is much lower than most countries. On the other hand, the prevalence of HIV/AIDS

is much higher in Malaysia, according to World Bank data (World Bank, 2019) which can be a significant threat to noncitizens, especially labourers with less income and lower knowledge. Many foreign workers with little or no knowledge of HIV/AIDS have experienced split family and easily accessible sex services, leading to a high prevalence of sexually transmitted illnesses and HIV/AIDS.

The population of foreign unskilled workers in Malaysia increases every year and there is a need to study the health care utilization's barrier and the effect of socio-demographic factors on the barriers.

1.7 Significance of Study

There is not enough study in Malaysia on barriers to health care utilization, therefore, this study can provide important information about barriers specifically among foreign labourers in Malaysia, public health interventions, and help policymakers to create a pattern of care utilization among a specific group of foreign labourers. The foreign workers' population in Malaysia is increasing every year, and they carry possible health risks. Strong evidence revealed that lack of awareness among migrants and unfamiliarity with the local healthcare system substantially influence healthcare accessibility (Lee et al., 2014). Hence, health care managers and policymakers can improve the health care utilization rate for this group as well as Malaysia's economic and health system as a host country by investigating access barriers, the impact of these barriers on the tendency of getting medical treatment at a different level of sickness, and review the efficiency of the current compulsory medical insurance policy.

1.8 Definition of Key Terms

Health care utilization: is the quantification or description of the use of services by persons to prevent and cure health problems, promoting maintenance of health and well-being, or obtaining information about one's health status and prognosis (Gellman & Turner, 2013).

Access to health care: is defined as having timely use of personal health services to achieve the best possible health outcome (IOM, 1993).

Mild sickness: mild sicknesses are defined as mild symptoms such as flu, fever, and headache (Corso et al., 2003; ICRC, 2015; Name, 2015; WHO, 2003).

Severe sickness: defined as severe symptoms like high fever, injuries, accidents, and diarrhea (Corso et al., 2003; ICRC, 2015; Name, 2015; WHO, 2003).

Not having access to health care services: Those respondents who have experience of avoiding medical treatment at least once a year will be assumed to not have full access to medical services (Choi, 2009).

1.9 Outline of the Study

This thesis is structured into six chapters. Chapter 1 focuses on the study background, an overview of the population of foreign labourers in Malaysia, research problem, research questions and objectives, justification of the study, the healthcare system in Malaysia, foreign workers' insurance benefits, and the role of health care managers. Chapter 2 reviews the main healthcare theories and models and reviews past empirical studies on the health care barriers and access and utilization. Chapter 3 discusses the methodology used in this research. Chapter 4 answers research questions by analyzing the primary data and discussing the

impact of barriers in health care utilization. Chapter 5 provides the discussion, and chapter 6 is the conclusion of the study and highlights the critical implications of methodology and policy, the study's limitations, and directions for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter presents an overview of foreign labourers' health and barriers to access health care services. This chapter begins with health care management, followed by theory and model of health promotion and disease prevention, foreign labourers' health, utilization of health care services among foreign workers, the association between socio-demographic factors, exposure to barriers, and barriers in getting health care services.

2.2 Conceptual Variables

There are two conceptual variables in this study. These two dependent variables examine the participants' tendency of using health care services in Malaysia in two different situations. The variables include;

1) The tendency of health care utilization in case of mild sickness, and;
2) The tendency of health care utilization in case of severe sickness.

2.3 Health Care Management

An expert health care manager has to ensure the excellent delivery of services by managing function, reviewing and monitoring staff performance, modifying and reviewing assignments, and assigning work tasks for each staff. High performance reflects a good interaction between managers and employees. At this level, managers have to focus on close coordination and distinguishing the task interdependencies among employees to ensure that work gets completed effectively and efficiently. Therefore, the manager has to investigate

the organization's performance regarding different measures: access, satisfaction, quality, and cost (Buchbinder & Shanks 2011).

A few years ago, Peter Drucker noted that healthcare organizations are among the hardest to handle organizations. The healthcare industry's growing complexity presents even more severe difficulties for today's managers. Managers must anticipate the impacts of new techniques, choosing those that deliver higher advantages than expenses. They need to evaluate and negotiate complicated economic deals and offering required funds without risking long-term fiscal viability. Managers need to mediate internal professional disputes and balance the conflicting requirements of community organizations, regulators, payers, staff, and patients. These are complex tasks (Baker, 2001).

Recent researches in health care management have concentrated on best practices. For example, McAlearney and Robbins (2013) and Garman and McAlearney (2011) have focused on the best practices of leaders and managers in ensuring organization including; staff frontline empowerment, staff acquisition and improvement, staff engagement, and leadership alignment and development. Another common research area in health care management is a leader's ability to train lower-level managers for leadership in the future and develop their staff. Programs related to leadership development have been studied in terms of their impact and structure. The role and availability of leadership development programs have been checked as critical information by McAlearney and Butler (2008). This study found that leadership development improved the efficiency and quality of services, increased the rate and skills of the workforce, enhanced productivity in education development, and reduced staff turnover. McHugh, Garman, et al. (2010) found leaders have internally improved by using different practices, including; developmental assignment, job

rotation, career development planning, and recognizing candidates for upward movement by reviewing talents. About half of the U.S. health system offered a leadership development program and found that it can help the system focus on employee development and growth and enhance employee retention (McAlearney, et al. 2010). Some recent research has studied leadership development programs' characteristics in hospitals, non-for-profit ownership status, urban location, and finding correlations of programs with size (Kim & Thompson, 2012, Thompson & Kim, 2013). Participating in early careerists in the leadership development program is a new area of management study. Evidence proves some leadership development activities are more attractive to staff than other activities (Thompson & Temple, 2015). Nowadays, some important research areas in health care management are looking at the influence of leadership development training on the effect of teamwork among staff on firm innovation and performance, career development due to contribution in leadership development, and specific decision-making by managers (Amabile, Fisher, et al. 2014).

Knowledge about health policy matters under consideration at the federal and state level is one of the critical areas for managing the external world by affecting health care delivery and health service organization, particularly for senior managers. This essential knowledge influences policy positively to benefit the organization and reduce any adverse impact (Shanks, 2016).

According to Stefl (2008), healthcare leaders and managers should have management skills to cope with the healthcare environment's increased complexity nowadays. There are five common skill areas among all practicing healthcare managers: business skill and knowledge, knowledge of the health care system, leadership, professionalism, and communication and relationship management.

2.4 Theory and Model of Health Promotion and Disease Prevention

Some health promotion and disease prevention theories and models guide the identification of health programs and disease prevention strategies and are used in program planning to understand and explain health behavior. These theories are not directly related to this study and do not fully support this research. However, it can help to find some relevant factors affecting health care utilization. These theories and models include:

2.4.1 Ecological Models

Ecological models of health behavior designed by McLeroy, Bibeau, Steckler, and Glanz (1988) distinguish multiple levels of influence on a person's health, including:

- Public policy
- Community factors
- Institutional and organizational factors
- Interpersonal factors
- Intrapersonal/individual factors

Thurston and Vissandjée (2005) believe that gender as a determinant of immigrant women's health is seen as intertwined in an ecological model of health.

2.4.2 Theory of Reasoned Action/Planned Behaviour

Ajzen and Fishbein (1988) defined the Theory of Planned Behaviour and the Theory of Reasoned Action by individuals' attitudes towards performing the behavior and predicting their health behavior. People's behavioral intention is indicated by;

- Individual norms regarding the behavior and
- Personal attitude toward the behavior.

2.4.3 The Health Belief Model

The Health Belief Model is a conceptual framework designed by Strecher and Rosenstock (1997) that can be used to prevent disease and health promotion. It explains changes in health-related behavior. The main factors of the Health Belief Model focus on individual opinions about health situations, which forecast individual health-related behaviors that can directly affect the health of immigrants. The five main action-related elements that specify the capability of the Health Belief Model to recognize important decision-making points that impact health behaviours are:

- Collecting data through assessments of health requirements and other attempts to determine who is in danger and the target population.
- To understand the perceived severity of the consequences of health issues associated with risk behaviours clearly and unequivocally.
- Communicating the steps involved in taking the recommended action with the target population and highlighting the benefits.
- To assist in the identification and reduction of obstacles to intervention.
- Demonstrating actions through skill development operations and offering assistance to improve self-efficacy and the probability of successful modifications in behavior.

2.4.4 Relapse Prevention Model

The Marlatt and George (1984) Relapse Prevention Therapy model offers a plan for anticipating obstacles and other variables that contribute to the relapse of participants. The model provides coping abilities for program members. The model is helpful for the health of unskilled immigrants due to having different lifestyles, cultures, and knowledge.

Some of the key concepts are:

- Skills training
- Cognitive reframing
- Lifestyle rebalancing

2.4.5 Stages of Change Model (Trans-theoretical Model)

To develop and implement a health promotion program, it is essential to evaluate the organization, community, and individual barriers. The Stages of Change Model also called the Trans-theoretical Model designed by Prochaska and DiClemente (1982), illuminates how an individual or organization incorporates new behaviors, goals, and programs at various levels immigrants as well as the local population. Different intervention strategies will assist individuals advance to the next level at each level. These phases include:

- Pre-contemplation
- Contemplation
- Preparation
- Action
- Maintenance
- Termination

2.4.6 Institute of Medicine Model of Access to Personal Health Care Services

The Institute of Medicine (IOM) has established a Monitoring Access to Personal Health Care Services model to address many conceptual issues and described access as "the timely use of private health services to obtain the greatest possible health result" (Millman, 1993). The current IOM model includes;

- Barriers: Personal, structural, and financial
- Use of service: visits, procedures
- Mediators: patient adherence, quality of providers, the efficacy of treatment, appropriateness
- Outcomes: health status (mortality, morbidity, well-being, functioning) and equity of services.

Drainoni et al. (2006) used the Institute of Medicine's framework to classify barriers as financial, structural, or personal/cultural. Their findings recommended that people with an inability experience multiple barriers to attaining health care and that these barriers are more evident for some types of health care than others.

Prentice and Pizer (2007) studied the association between time spent waiting for health care services and patients' mortality by using the IOM model. The finding shows the relation between waiting for long times for outpatient health care and adverse health outcomes, such as mortality.

Cooper, Hill, and Powe (2002) used the IOM model that indicated barriers and mediators related to interventions designed to exclude disparities in U.S. health care. They believed

interventions might be better by aiming at high-risk populations, concentrating on the most significant contributing factors, comprising measures of suitableness and quality of care and health outcomes, and emphasizing distribution efforts.

Since the IOM model was the most relevant model to evaluate barriers to access health care services, it has been selected for this study to categorize the barriers. Trust, language, attitude, when faced with illness, education, and income are considered as personal barriers according to IOM. Availability of clinics, hospitals, doctors, nurses, and transportation are categorized in structural barriers. Insurance coverage for medicine and doctor visit is considered a financial barrier according to this model. Individual opinions about health situations like thinking the illness is not too serious to seek medical treatment is coming from The Health Belief Model (Strecher & Rosenstock, 1997). Respondents' behavior when they face more serious health issues followed the theory of reasoned and action (Ajzen & Fishbein, 1988). There are other factors in this study that comes from other researches around the world that have been categorized based on IOM model. All the variable resources will be discussed in chapter 3.

2.5 Foreign Labourers' Health

As immigration has become a megatrend in the 21st century, societies are more ethnically and culturally diverse than ever before, generating different health needs and health profiles that postures new health systems challenges. After the economic situation, crime, and unemployment, immigration is considered as the fourth most crucial concern according to European opinion polls, which are a great deal in these countries (Anton & de Bustillo, 2010).

The increasing diversity of the population can pose challenges to national health systems. Migrant surveys have been common in epidemiology for a long time because they shed some light on the comparative significance of the setting and the genetic composition of populations in shaping health disparities between nations (Dias, Severo & Barros, 2008).

Foreigners face many issues when selecting to live in another country: fees and the comfort of possession of properties, living cost, health care advantage, and security. One of Malaysia's benefits is the low cost of living because of the favorable currency exchange rate with many other currencies (Stapa, Musaev, Hieda, & Amzah, 2013). However, migrants are excluded from routine health facilities in some nations. "What is increasingly being documented too is that vulnerable migrant – whether entitled to free health care or not – face numerous barriers to accessing an appropriate level of health care, and this has implications for both individual and public health, as well as for healthcare providers," Hargreaves says (Lopez-Acuna, 2008).

2.6 Worldwide Utilization of Healthcare Services among Immigrants

Studies in the United States show that undocumented Latino immigrants come to the United States mainly for jobs. Their outpatient use of health care is small compared to that of all Latinos and the citizenship of all people, and their hospitalization levels are similar except for childbirth hospitalization (Berk, Schur, Chavez, & Frankel, 2000). Immigrant children are more likely to have good or poor health and are absent from medical insurance or an ordinary health care source. Young immigrant low-income kids stay twice as likely to be uninsured as native kids (22% versus 11%), despite a significant rise in the coverage of immigrant low-income kids through Medicaid and other government programs between 1999

and 2002 (from 45% to 57%). Their parents report seven percent of young immigrant kids are in excellent or poor health, more than twice the rate for native kids (3 percent).

More than twice as many young immigrant kids as indigenous people lack a common source of health care (8% vs. 3%). Immigrant children are more likely to be in parental care and less frequently in childcare cantered. Children under the age of 6 are more likely to receive childcare from relatives (53% versus 34% for native kids) and less likely to receive center-based care (17% versus 26%). In immigrant children whose relatives have little education, the use of center-based care is the lowest. These usage variations can be clarified partly by family structure, low income, work involvement patterns, and possibly a different care propensity (Capizzano & Adams, 2003).

Ku and Matani (2001) believe that recent adjustments in policy have limited accessibility to insurance and health care for immigrants. Few non-citizen immigrants and their children (including those born in the United States) have Medicaid or job-based insurance, and many more are uninsured than indigenous citizens ' children. Even when insured, non-citizens and their kids also have insufficient access to frequent outpatient and emergency care. Immigration status is an essential element of insurance coverage and availability of health care, racial and ethnic disparities.

Access problems such as price, absence of subsidies, language obstacles, and neighboring care accessibility may also be connected with reduced center-based care utilization. While information demonstrates reduced involvement in center-based care among immigrant kids, the reasons for these trends are not well recognized (Takanishi, 2004). However, considering

only families with two working parents, the gap between immigrant and native children is relatively narrower (Capps, 2005).

More than half of low-income immigrant workers in the USA are uninsured; a rate approximately doubles that of the indigenous citizens. Therefore, immigrants are mainly dependent on safety-net health care suppliers, such as government and non-profit hospitals and clinics offering free or low-cost health care. Immigrants also prevented therapy, delayed care, and sometimes used subterranean care sources as an option. For instance, some immigrants sought care from lower-cost unlicensed health care suppliers, sometimes folk medicine providers, and many purchased prescription medicines smuggled in from overseas because of their inability to obtain prescriptions and elevated drug expenses (Ku & Freilich, 2001).

Based on Laroche's (2000) study in Canada, a comparison of immigrants ' health status and their use of health facilities with those of the Canadian-born population using information from the General Social Survey (GSS) in two phases (1985 and 1991). Their primary findings indicate that neither immigrants ' health status nor their rates of use of health facilities vary considerably from those of the population born in Canada. The projected results indicate that the health status of immigrants and their use of health facilities have remained unchanged over time when both information sets are pooled.

According to Sole-Auro, Guillen, and Crimmins (2009), in Europe, evaluation of health care utilization among immigrants and native-born populations in eleven European countries shows in some European nations. Immigrants appear to be using health facilities more than native people with the same features. The more significant difference in health care

utilization between and natives is in physician visits, but overall, there are also more visits to the general practitioner and hospital stays. Immigrants in Denmark, France, Germany, Greece, the Netherlands, Sweden, and Switzerland have more doctor visits than native-born immigrants.

In Germany, differences appear in the general practitioner and hospital stays. On the other hand, another research in Germany discovered a statistically significantly reduced healthcare use amount for migrants relative to Germans. In contrast, the self-reported health status between Germans and immigrants was comparable and not dependent on social variables (Keller & Baune, 2005).

Sole-Auro, Guillen, and Crimmins (2012) also investigated health care usage among immigrants and the native-born elderly population in these countries. In the pooled European sample and some individual nations, after demographic features are monitored, elderly immigrants use 13 to 20 percent more healthcare facilities than native-born ones. The distinctions between immigrants and natives in the use of physicians, but not hospitals, are decreased by about half after regulating the need for health care.

Based on a study in Denmark which examined equity in the use of health care services among immigrants, the Danish health care system seems responsive to health across different population groups. As a consequence of these studies, there is no systematic pattern of disparities in utilization of free health care services, but for dentists requiring co-payment, immigrants and offspring discovered inequity compared to Danish (Nielsen, Hempler, Waldorff, Kreiner, & Krasnik, 2012).

Differences in health care utilization between immigrants and native Italians have been explored by analyzing the latest available (2004/2005) Italian Health Conditions survey. Italian immigrants are much less likely to use specialist health care and medical telephone consultations than natives but more likely to use emergency rooms. Hence, they report an over-use of emergency rooms and underutilization of preventive care among immigrants (De Luca, Ponzo, & Andres, 2013).

Besides Devillanova (2012) published new evidence from a survey on immigrants' access to health care services in this country. His result addressed the problem of inequity in access to health care services among foreigners and foreign-born people. These groups are more likely to use emergency rooms and are less likely to visit and use preventive care to specialist physicians. Similar findings occur for immigrants of the second generation, who show a reduced probability of seeing specialist physicians and more excellent hospitalization rates.

On average, immigrants are less likely to visit a general practitioner and a specialist doctor than Spaniards but are more likely to use emergency services and hospital services to a lesser extent (Jimenez-Rubio & Hernandez-Quevedo, 2011; Rue et al., 2008). Similarly, another study in Spain evaluated immigrants' primary health care utilization patterns. This study also proved that immigrants make lower use of primary care services than the native population (Calderon-Larranaga et al., 2011).

Hernandez-Quevedo and Jimenez-Rubio (2009) compared health care patterns between foreigners and the Spanish domestic population. The outcome demonstrates distinct trends between the domestic and foreign people in Spain in the rate of health and medical care use.

At the same time, immigrants' self-reported health depends on individual nationality relative to that of the Spanish population.

All immigrants seem to face obstacles to specific care entry regardless of their nationality in Bolivia. On the other hand, Anton and de Bustillo (2010) analyzed immigrant health care facilities in this nation. They found no statically noticeable difference in the patterns of general practitioner visits and hospital stays between migrant native people. However, they believed that immigrants have less access to specialists and visit emergency rooms with a higher frequency than natives. Interestingly, People from Bolivia had more unsatisfactory health results in both sexes, especially males.

Conversely, there were the most excellent health results for individuals from Argentina and Colombia. Different outcomes have been discovered for the rest of the nations based on sex, country, and health indicator. Therefore, differences in health status between people born in Spain and foreign-born people depend on the relationship between ethnicity, sex, characteristics of the immigration process, country of origin, and health outcome (Villarroel & Artazcoz, 2012). Generally, Immigrants from poorer countries had the poorest socio-economic condition, but their health was comparatively improved. Immigrants in Spain highlight the "good immigrant impact" transitory nature (Malmusi, Borrell, & Benach, 2010).

Immigrants in Germany seem to be slightly different from German natives in disease risk factors, drug utilization, and health status. Country of origin remains a source of medicines for many immigrants (Volodina et al., 2011). But, Kavuk et al. (2006) claimed a very low utilization of adequate medical care in first-generation Turkish immigrants in Germany.

Schoevers, Loeffen, van den Muijsenbergh, and Lagro-Janssen (2010) conducted a study on the use of healthcare and access to healthcare problems for female undocumented immigrants in the Netherlands. Based on their findings, 56% of undocumented female immigrants have unmet health care needs and low health care utilization. 69% of women reported obstacles in accessing health care facilities. Venema, Garretsen, and Van der Maas (1995), reviewed papers published about the health of immigrants and immigrants' health policy in this country. They concluded that there are differences between migrant communities and the native population in health status and mortality trends.

Stronks, Ravelli, and Reijneveld (2001) focused on the immigrant population of Suriname, the Netherlands Antilles, Turkey, and Morocco in Amsterdam, which brings significant fresh expertise to the global literature on migration medicine and bridges a gap. The authors revealed a lesser utilization of more specialized health care for immigrant groups in the Netherlands, mainly for Turkish and Moroccan immigrants. The utilization rate has remained low even after actual needs and weak health status. Their analyses explain lower utilization of health care services among immigrants and lower social position. It indicates that ethnic background can account for consumption patterns in itself, possibly due to restricted access.

2.7 Summary of Health Care Systems

There are around 200 countries globally. Each country develops its own set of rules and regulations to achieve three fundamental objectives of the health care system; keep people healthy, treat sick people, and protect families against financial constraints from medical costs. Information about the health care system for all these 200 countries is not available to get a picture of how other countries manage their health care system. Except for local differences, the health care system tends to follow general patterns. Table 2.1 summarizes

four primary healthcare models globally: Bismark Model, Market-Driven Health Care Model, Beveridge Model, and National Health Insurance Model (Chee, 2008; Roemer, 1993).

Table 2.1 Health Care Models

Health care Models	Key Features	Example Countries
Beveridge	1) The government provides and finances health care by tax payments. 2) There is no medical bill. 3) Medical treatment is a public service. 4) Providers can be government employees. 5) The government controls the costs as the sole payer.	Hong Kong, New Zealand, most of Scandinavia, the Mediterranean countries (of the EU), Ireland, Great Britain, Cuba, and the former Socialist Bloc countries
National Health Insurance	1) Health care is delivered by a private provider. 2) The government has the significant market power to lower the price by negotiation. All the costs are paid by the government-run insurance program purchased by citizens. 3) National insurance pays medical bills and collects monthly premiums. 4) Plans tend to be much simpler administratively and cheaper. 5) Costs are controlled by making the patient wait for treatment or limiting the medical services they will pay for.	Canada and Taiwan
Bismark	1) Both payers and providers are private. 2) Private insurance plans financed by employers and employees through payroll deduction. 3) The plans do not make a profit and cover everyone. 4) Cost is controlled by tight regulation of medical fees and services.	Germany and Japan
Market-Driven Health Care	1) Health care is covered by Insurance. 2) Providers are private. 3) An individual needs to purchase private healthcare insurance.	United State

(Chee, 2008; Roemer, 1993)

2.8 Health Care System in Malaysia

Since Malaysia's independence in 1957, this country has experienced considerable transformation. The health care system has changed from a simple single provider to multiple providers as public and private providers and interacting with third-party financiers. Each party is trying to maximize its benefit by interacting with other parties. The major healthcare-related facilities and health care are financed by central taxation by the government for Malaysian citizens. Due to increased middle-income classes, urbanization, increased income, demand growth for health care from the 1980s, this situation had changed (Chee, 2007).

The government of Malaysia introduced a program in the mid-1980s on economic deregulation and liberalization that comprised a broad privatization policy associated with the concept of "Malaysia Incorporated." This concept sees the private sector as the main instrument of growth and the government as the provider of macroeconomic management, liberalization, deregulation, and enabling environment infrastructure (EPU, 1996). Gomez and Sundaram (1999) and Chee (2006) believe that the government was powerfully affected by mentors from the Thatcher government of the United Kingdom and the World Bank to introduce denationalization to decrease costs for the government.

In the Seventh Malaysian Plan (1996-2000), it was indicated that the Government "will gradually reduce its role in the provision of health services and increase its regulatory and enforcement functions" (Chee, 2007; EPU, 1996).

Raising the number of private hospitals since the mid-1980s resulted from that strong promotion by Malaysia's government towards personal health care. Medical specialists set up many companies and corporations, and foreign investors involved investing in building

private hospitals. Most of the bills in private hospitals are paid from out-of-pocket. Moreover, the government established Government-Linked Companies (GLCs), which, among other things, acquired shares or started large private hospitals. The state government of Terengganu, Pahang, Johor, and Melaka federally controlled Khazanah Nasional and Sime Darby to become owners of private hospitals.

2.9 The Role of the Health Care Manager

The well-managed health care organization focuses on more excellent health care organizations, their caregivers, families, patients, and other associates to provide efficient, equitable, timely, effective, safe care, and patient-centered. They enable their associates; reward them for improving, measuring their performance, and encouraging them to meet customers' and patients' needs (White & Griffith, 2010).

Ineffective health care management, managerial functions have been defined in three levels. Self-management level or managing yourself means applying and developing appropriate interpersonal, technical, and conceptual skills and competencies and being comfortable to be more effective in the next level. The second level is the unit/team level. The proficiency of the managers at this level comprises the supervision of others to finish the work efficiently. This includes; amendment and assignment review, observing and reviewing individual performance, and executing the management role to confirm excellent delivery of services. At this level, managers make sure that works get accomplished effectively and efficiently. The third level is the organizational level. Individual managers contribute to the organization's general performance in several performances: access, satisfaction, quality, and costs of services (Buchbinder & Shanks, 2011).

2.9.1 The Role of District Health Care Management in Malaysia

Currently, the Ministry of Health centrally administers public sector health services through its central offices, state, and district. This ministry regulates and plans the pharmaceutical industry and most public sector health services but exerts little regulatory power over the private sector (Jaafar, Muttalib, Othman & Healy, 2013). The District Health Offices are responsible at the basic operational level in the health care system and mainly coordinate and manage affordable, efficient, and effective health services in Malaysia. Public clinics are the leading primary health care provider in Malaysia. A District Health Office has two essential functions; managing the resources within the district and delivering public health care services. This includes collaborations with different investors to coordinate, monitor, implement and plan the programs and services. The main stakeholders are the Ministry of Health, State Health Departments, District Health Offices, inter-governmental agencies, and the private sectors. The district health office manages national health strategies and policies at the ground level in the public health sector. It is responsible for setting goals to achieve long-term and short-term goals, which are national priorities. Health outcomes can be improved at the district level by the operational plan. Therefore, the management team will carefully monitor the health status and examine the real-time data regularly. The District Medical Officer of Health will provide the provided reports and update the stakeholders to assist the decision-making. There are six significant services provided by a District Health Offices, namely Environmental Health and Water Supply Services, Health Education and Promotion, Food Quality Control, Occupational Health, Disease Control, and Family Health (Liyanatul Najwa et al., 2016).

2.10 Ministry of Health Reports

As stated in the ministry of health report, overall, there were 2.2 clinics per 10,000 populations in Malaysia (MOH, 2020). The ratio of private clinics to public clinics is 2.3. Generally, total attendances per day in public clinics were higher compared to private clinics. More than 90% of public clinics provided health promotion and preventive services.

Table 2.2 shows the latest number of available hospitals and clinics in Malaysia. There are 144 governmental hospitals and 3224 governmental medical clinics and 210 private hospitals, and 7718 private clinics in Malaysia.

Table 2.2: Number of health service providers in Malaysia, 2020

	Government	Non-ministry of health	Private
Hospitals	144	10	210
Medical clinics	3224	-	7,718

(MOH, 2020)

Table 2.3 presents the latest health human resources data provided by the Ministry of Health of Malaysia. This table shows the numbers of doctors, dentists, nurses, and other health care providers in Malaysia in the government and private sectors.

Table 2.3 Health human resources data provided by the Ministry of Health of Malaysia

	2008 (per 10,000 population)	2008 (per 10,000 population)	Percentage increase
Dentists	1.32	2.99	127%
Doctors	9.11	18.88	107%
Pharmacists	2.32	4.14	78%
Assistant Medical Officer	3.30	5.53	68%
Nurses	19.68	32.85	67%
Community Nurses	6.77	7.25	7%

(MOH, 2020)

2.11 Health Care Policy over Foreign Workers

In 1997, the Government of Malaysia granted the concession to a private Foreign Labourers Medical Examination Monitoring Agency (FEMA) to introduce, handle and oversee a nationwide compulsory health screening program for all legal foreign labourers in Malaysia. The concession aims to guarantee that foreign labourers are free from an identified list of infectious illnesses (TB and Hepatitis B being the chief among them) and ensure that Malaysian public health facilities are not burdened with medical circumstances or conditions requiring continuous and comprehensive therapy by foreign labourer. *As of January 2011, the Malaysian government made it mandatory for migrant workers to purchase medical insurance coverage.* This strategy aimed to enhance healthcare coverage and advantages for migrant employees and overcome the issue of raising unpaid hospital bills incurred by employers in publicly financed hospitals (MOHR, 2013).

The benefits include:

- Payment for death or injuries
- Expenses for injuries sustained during work and
- Payment for deporting the dead body to the country of origin

Besides, every employer must ensure all foreign labourer under an official insurance scheme. Any employer who refuses to insure shall be guilty of a crime and responsible on conviction to a fine or imprisonment for a term (MEF, 2014).

According to Loganathan, Chan, and Pocock (2020), Malaysia recently extended protection for migrant workers under the national social security scheme (SOCSO), previously exclusive to citizens. Although documented migrant workers are covered by mandatory healthcare insurance (SPIKPA), financial constraints remain a major barrier for non-citizen healthcare access. The government has attempted to resolve the arrears in bills by introducing the SPIKPA policy for foreign workers, who were previously only protected by the Foreign Workers Compensation Scheme (FWCS) (Nordin et al., 2018).

2.12 Provision of Medical Benefits to Foreign Labourer

As stated earlier, those employers who are hiring foreign labourers are forced to comply with the legal requisite Under Section 26(2) of the Amended Act 1996 of Workmen's Compensation Act 1952 to buy insurance to buying insurance to protect their foreign labourer regarding work injury compensation and non-employment injury suffered by foreign labourer.

This insurance is a grantee to cover deporting expenses if any foreign worker is required to be sent back to his origin country by authorities during their stay in Malaysia. This period is set by the Immigration Department depending on the work permit.

The Foreign Labourer – Plus (FWPLUS) is additional coverage on top of the Compulsory Foreign Labourer Compensation Scheme (FWCS). This policy protects payment for employment injury and a non-employment injury sustained by your foreign labourer due to accidental causes only. The period of cover is for one year. The insurance should be renewed according to the insurance policy annually. Table 2.4 shows the benefits of insurance coverage.

Table 2.4: Benefits of insurance coverage

Benefits	Sum Insured
Death	RM10,000
Permanent Disablement (Accidental only)	RM10,000
Medical and Surgical Expenses (Accidental only)	RM2,000

Foreign Worker Hospitalization & Surgical Insurance Scheme (SKHPPA) is planned to decrease the financial liability of the employer of foreign labourer in the event of hospital admission of their foreign labourer to a Non-Corporatized Malaysian Government Hospital due to an accident or illness which is renewable every year. This plan covers the following benefits presented in Table 2.5.

Table 2.5: Hospitalization & Surgical Insurance Scheme (SKHPPA)

No	Benefits	Amount (RM)
1 (a)	Daily Hospital & Room Board (Maximum up to 30 days)	As charged according to charges consistent with Third (3rd) Class Room and Board to a maximum of RM160.00 per day in a Non-Corporatized Malaysian Government Hospital in conformance to the charges specified under Fees Act 1951, Fes (Medical) Order 1982.
1(b)	Intensive Care Unit (ICU) (Maximum up to 15 days)	
2	Hospital Supplies and Services	
3	Operating Theatre	
4	Surgical Fees (Exclude Organ Transplantation)	
5	Anesthetist Fees	
6	In-Hospital Physician Visits (Maximum up to 30 days)	
7	In-Hospital Specialist Consultation (Maximum up to 30 days)	
8	Ambulance Fees / Medical Report Fees	
Maximum Overall Annual Limit (Item 1 to 8)		20,000

Enforced by the Ministry of Health, all foreign labourers are forced to take up this compulsory scheme with a premium of RM120 and total coverage of RM10000. The premium for the insurance policy is allowed by the foreign labourers themselves.

2.13 Issues of Health care Utilization among Foreign Labourers in Malaysia

Malaysia records a total of 1,758,904 million registered (documented or regular) migrants, constituting approximately 20% of the workforce in 2017 (MOHR, 2017). In percentage terms, this makes Malaysia, the largest importer of labourer in Asia (Devadason & Meng, 2014). Labourer shortages in Malaysia can be ascribed to fast industrialization, higher education leading to external and internal migration and labourer shortages, and low salaries and working conditions in plantations, building, and service industries. Such deficiencies were mainly encountered by using illegal migrant workers from Indonesia, southern Thailand, and the south of the Philippines. Such workers assisted in implementing the government's economic restructuring plan, 1971-1990, but the government also recognized the socio-economic problems caused by illegal migration. Policies are being created to promote temporary labourer migration in important industries (Anderson, 2021; Nayagam, 1992). Most non-citizens in this nation come from less developed countries such as Indonesia, Bangladesh, the Philippines, Myanmar, Nepal, Cambodia, and Vietnam (Wagstaff, 2002). People from developing countries tend to have low accessibility to health care services than those in better-off countries. Within the countries having a higher income population, the poorer ones have less access to the health care services (Peters et al., 2008) and receive lower quality and quantity of health care services (Arcury, Preisser, Gesler, & Powers, 2005).

Based on the evidence, associated work organization and employment conditions are dangerous for the health of most immigrant workers (Benach, Muntaner, Chung, & Benavides, 2010), but still little is known about their utilization of healthcare services (Hooi & Hooi, 2003). Attention to the health of immigrants is still limited (Zimmerman, Kiss, & Hossain, 2011).

The current evidence shows that immigrant workers have lower access to public health care services (Hooi & Hooi, 2003; Noh et al., 2016; Peabody, Rahman, Gertler, Mann, & Farley, 2005; Yusof, 1996; Zain, 2012). Barriers to utilize health care services among immigrants in Malaysia include; ignorance, lack of confidence, and problems with healthcare providers (Zain, 2012). Noh et al. (2016) interviewed 600 foreign workers in Malaysia. The result of their study showed the foreign workers' access to public health services was very low.

Around 24% of Nepalese female reported that they experienced health issues while they were working in Malaysia. The most common health issues face by despondence were accident, severe sickness and fever and they face with some work related health risks (Simkhada, Van Teijlingen, Gurung, & Wasti, 2018).

Karim and Diah (2015a) evaluated the health-seeking behaviour of the Bangladeshi migrant workers in Malaysia. Bangladeshi workers are completely ovoid of having any medical facilities from their respective employment and working farms. This is obvious when it was noticeable by 87% of Bangladeshi workers who said clearly that they do not receive any medical care or health security and rights in times of need and emergency. Since they are not supported by any medical insurance whatsoever, they are always scared of seeing a medical doctor or seeing any health clinics or hospitals.

Loganathan et al. (2019) studied the barriers in access to health care services among foreign workers in Malaysia. They established that healthcare services in Malaysia are mainly unreachable to migrant labourers. Complex access barriers were recognized beyond the control of the health sector. The barriers include affordability and financial restrictions, the necessity of legitimate documents such as valid passports and work permits, language obstacles, discrimination and xenophobia, physical unreachability, and employer-related obstacles.

Uddin et al. (2020), identifies barriers to access health care services among Bangladeshi workers in Malaysia. His results specified that the main obstacles were healthcare providers not understanding migrant workers' health problems, high medical costs, self-medication, and lack of transportation.

Another study by Uddin et al. (2020) indicated that marital status, education, self-rated health status, sickness, and chronic disease in the last year, had the utmost influence on healthcare utilization among immigrant labourers in Malaysia.

Loganathan, Rui, Ng, and Pocock (2019), found that healthcare services in Malaysia are often inaccessible to migrant workers. Complex access barriers were identified, many beyond the control of the health sector. Major themes include affordability and financial constraints, the need for legal documents like valid passports and work permits, language barriers, discrimination and xenophobia, physical inaccessibility, and employer-related barriers. Our

study suggests that government-mandated insurance for migrant workers is insufficient because of the recent increase in medical fees.

Adhikary, Keen, and Van Teijlingen (2019), study shows that half his research participants experienced work-related accidents abroad. Based on participants' belief poor communication, and workers' high-risk behavior are the most important reasons behind the health issues.

2.14 Barriers in Utilizing Healthcare Services, Associations, and Exposure

Health care utilization is a limited indicator of access to health care services. Due to access barriers, some people underutilize health care services while some others overuse the services. Those who have more health care issues, impoverished people, may need to use more health care services. Specific personal barriers restrict individuals' access to health care services. Lacks of transportation, inadequate medical insurance coverage, and language difficulties are a few of many barriers that may prevent sick people from taking health care services when they need them. In general, obstacles make inequality for poor and minority groups. These two groups have more health issues and face more barriers because they may receive extra care, content, and quality of health care services. According to the definition cited by the Institute of Medicine, accessibility refers to the timely use of individual health services to achieve the best possible outcome (Millman, 1993). Improving access to primary health care services can be associated with a significant reduction in avoidable hospitalization and premature mortality rates (Lavoie et al., 2019).

2.14.1 Association between Socio-Demographic Factors and Barriers

Fletcher and Frisvold (2009) evaluated preventive health care utilization patterns among graduate students in Wisconsin, USA. Their findings suggest that increases in education have the potential to spill over on long-term health choices.

Ji and Hong (2020) research proves that social disparities exist in adherence to antidepressant treatment by income level in this Korean population-based retrospective cohort of depressed outpatients.

Brown, Sagar-Ouriaghli, and Sullivan (2019) investigated help-seeking patterns among males when they are sick. Their research proves that men are less likely to seek help from mental health professionals.

Ogunlesi and Olanrewaju (2010) identified the effect of socio-demographic factors on healthcare-seeking behaviors for childhood diseases. Their study established that the age of the mother, mother education, and family socioeconomic status are predictors of appropriate healthcare-seeking behaviors for childhood illnesses.

Devaraj and Eswar (2011) evaluated the relationship between socio-demographic factors and dental service utilization between patients visiting a Dental College and Hospital, India. Their study shows that Place of residence and salary/month was remarkably related to dental service utilization. There was no substantial relationship between age, gender, and education level using dental service.

Leaf, Bruce, Tischler, and Holzer III (1987) study shows that attitudes toward mental health services were affected by age, sex, race, education, and income.

Shahid, Shum, Tadakamadla, Kroon, and Peres (2021) reviewed 40 studies that explain access to healthcare services among adults. In this review, relations were established between age, education level, costs, and needs.

2.14.2 Socio-Demographic Factors and Exposure to Barriers

Blumenshine et al. (2008) suggested a model in which social status disparities are taken into account. Differences in influenza exposure, unequal levels of vulnerability to illness if infected, differential access to prophylaxis before disease develops, and differential access to care after the disease develops could all be caused by income, race, and ethnicity (Szilagyi et al., 2002).

Annual influenza immunization disparities contribute to disproportionate vulnerability and are linked to unequal healthcare coverage. There are racial/ethnic differences in influenza vaccination across all age groups (Fitch & Racine, 2004; Hutchins, Fiscella, Levine, Ompad, & McDonald, 2009). Barriers to immunization for children comprise low socioeconomic status, living in an urban area, and racial/ethnic minority status.

Quinn et al. (2011) indicated significant race/ethnicity-related disparities in potential risk from H1N1 flu. Differences in exposure risks, susceptibility (especially to severe disease), and healthcare access can interact to worsen established health disparities and lead to higher morbidity and mortality in these populations.

2.14.3 Personal Barriers

Accessibility to the health care system has different meanings, and the barriers vary according to different countries (Aitken, Backliwal, Chang, & Udeshi, 2013). Most researchers believe that accessibility refers to the timely use of services based on the user's needs (Peters et al., 2008). Cultural and personal obstacles can limit individuals who need to get medical treatment or hinder them from getting post-treatment after getting health care services (Millman, 1993). Socio-demographic factors are considered elements of personal barriers in the Institute of Medicine Model, including gender, ethnicity, education, length of stay, and income. Interactions exist between social class and place of origin and immigrants' health inequality. It has been proven that there is inequality in health care usage among different levels of social classes and gender (Malmusi et al., 2010). Women's health is a predictor of society's health, and in many South Asian countries, it has been completely ignored. Women were more vulnerable to different diseases due to gender discrimination, which was linked to higher mortality and morbidity rates (Deogaonkar, 2004). Sanz et al. (2011) studied the patterns of health care utilization among immigrants, and the results show that health services used by the immigrant population differ by gender and place of origin, and the use of health services among immigrant women is significantly associated with lengths of stay and country of origin. The same study proved that immigrant men generally use health care services less frequently than the native population. Grossman and Kaestner (1997) believe education is considered a significant contributing factor of health, and Groot and Van Den Brink (2007), and Balarajan, Selvaraj, and Subramanian (2011) proved education affects health significantly. In general, poverty is frequently associated with poor education status, so there is a positive relationship between earnings and higher education. Therefore, education is an essential determinant of health, affects the person's health status, and influences family members' health status (Butsch, Sakdapolak, & Saravanan, 2012).

Despite Asanin and Wilson (2008) proving that there is a strong relationship between health and socioeconomic status of immigrants, another study revealed that socioeconomic status is not a hinder factor when the benefit of getting health care services are more than the costs and the distance to the provider is not far from an individual's living area (Griffiths & Stephenson, 2001).

Information and knowledge can change the demand for health services by influencing compliance with the treatment, health-seeking behavior, and awareness of illness and health, and health beliefs. These barriers may be further shaped by socio-cultural factors, such as cultural beliefs, religion, and gender. It is essential to encourage proper demands available for health services by building health 'consciousness' and health knowledge amongst the socially disadvantaged groups (Balarajan et al., 2011).

Graetz, Rechel, Groot, Norredam, and Pavlova (2017) reviewed different studies in health care utilization in Europe and concluded that migrants refuse to use health care services due to fear and lack of knowledge on the potential risk to their health and time pressure.

Kohlenberger, Buber-Ennser, Rengs, Leitner, and Landesmann (2019) study in Austria shows a lack of knowledge about doctors and language barriers to utilize health care services among refugees.

Ye, Shim, and Rust (2012) identified that people with severe psychological distress are more likely to avoid seeking medical treatment due to fear of having a severe illness or thinking about dying.

Having limited knowledge on the proper health behavior and unawareness of the services provided in health care units and locations leads to lower utilization and demand of health services in the public sector (Agarwal, Satyavada, Kaushik, & Kumar, 2007). Thus, Individuals' differences, cultural values and beliefs, poor communication and information exchange, poor coordination and cooperation, and inadequate knowledge are barriers to accessibility of health services (Haghparast-Bidgoli, Hasselberg, Khankeh, Khorasani-Zavareh, & Johansson, 2010). Also, work or study commitment and lack of information about the health services provided in public clinics can lead individuals not to use the services (Ghafari, Shamsuddin, & Amiri, 2014; Lee et al., 2014).

According to a study conducted in Canada, immigrants face geographical, sociocultural, and economic obstacles while seeking health care in their culture (Asanin & Wilson, 2008).
Ma, Sanchez, and Ma (2019) investigated the connection between race/ethnicity concordance and in-person provider visits. Their findings suggest that race/ethnicity concordance can explain racial differences in healthcare use.

Inadequate knowledge, underlying health, and cultural values, perceptions, and language were significant barriers to using health care facilities to study black and minority ethnic groups in the United Kingdom (Thomas, Saleem, & Abraham, 2005).

According to Crawford, Ahmad, Beaton, and Bierman (2016), South Asian immigrants in Canada, the USA, and the UK face barriers to access health care services. These barriers include; beliefs and attitudes toward illness, lack of knowledge, and gender differences.

Keller and Baune (2005) discovered that, regardless of ethnicity, a low social class was substantially correlated with less use of health care facilities by German and immigrants compared to adults from a high social class. The majority of studies found that migrant women were more likely than countrywomen to receive insufficient parental treatment.

Immigrant women's rates of insufficient parental care varied greatly depending on their country of origin. They were related to being under 20 years old, multiparous, single, having foul or fair language skills, having less than five years of schooling, unplanned pregnancy, and not having medical insurance (Deogaonkar, 2004; Heaman et al., 2013).

Many women avoid seeking health care services due to many personal barriers such as; shame, fear, or lack of information (Schoevers et al., 2010). Women born in Mexico and who spoke Spanish exclusively in the United States were more likely to have sick children than non-newcomers (Guendelman, English, & Chavez, 1995).

In Malaysia, the possible causes of this lower access are ignorance and confidence (Zain, 2012). These differences in use can be partially explained by family structure, low incomes, patterns of work participation, and, perhaps, by a differing propensity for care (Capizzano & Adams, 2003).

2.14.4 Structural Barriers

According to the Institute of Medicine, accessibility not only means visiting a doctor but is also referred to as the ability to provide the medicine that can affect health outcomes (Millman, 1993).

Availability of health care services is defined as having the appropriate type of service providers, facilities, and materials whenever needed, dependent on the distance and traveling

time between the user and service provider (Peters et al., 2008). Individuals' distance to primary health care providers directly affects childhood mortality, which has been well documented (Deogaonkar, 2004). Meanwhile, physical distance is a critical factor for determining accessibility, especially for women, who overcome this through better transportation, roads, communication network, or outreach (Balarajan et al., 2011). Generally, due to the availability of transportation facilities, urban areas have fewer challenges than rural areas (Aitken et al., 2013).

Some studies reported the absence of doctors, nurses, diagnosis facilities, low service quality (Balarajan et al., 2011; Deogaonkar, 2004), and long waiting times as the primary reasons for the patients not using the public health care services or delaying its use. Despite the lower cost of treatment in public sectors (2–9 times more affordable), even poor people prefer private healthcare providers due to lack of human resources, facilities, adequate necessary medicines, poor physical environments, and limited operation time in the public sector (Aitken et al., 2013; Balarajan et al., 2011).

To ensure the physical availability of an appropriate level of resources for health care services, a well–organized distribution of resources between different groups of services and between other geographical regions is essential (Balarajan et al., 2011; Banerjee, Duflo, & Glennerster, 2008).

The possible barriers leading to lower healthcare utilization among foreign labourer are a problem with healthcare providers and the process of delivering health services in Malaysia (Noh, Wahab, Bakar, & Islam, 2016; Peabody et al., 2005; Yusof, 1996; Zain, 2012). Time constraints, long waiting times, negative attitude of the health care providers, and long-

distance, are the most critical barriers for individuals not to use the public sector health care services in Malaysia (Ghafari et al., 2014; Heller, 1982).

There are some reports which claim high workload, more number of patients, and responsibility for too many tasks, forced the service providers to spend less time for each patient leading to lower quality of service (Haghparast-Bidgoli et al., 2010; Jolaee, Nasrabadi, & Yekta, 2006; Mohammad-Alizadeh C et al., 2009). Moreover, it has been proven that inadequate skills and knowledge of staff and previous negative experience are known as significant utilization barriers (Haghparast-Bidgoli et al., 2010; Lerner & Robles, 2017).

Tusubira et al. (2020), study result in Uganda shows operating hours were barriers in public facilities.

Clouse et al. (2014) study in South Africa shows that adverse clinic staff treatment was one barrier to seeking postpartum treatment among HIV-positive mothers.

Mason et al. (2019) systematic review of barriers to access health care services among autistic adults shows many healthcare providers do not have enough expertise or tools to treat autistic people efficiently.

According to a study by Boro and Saikia (2020), lack of infrastructure, the negative behavior of hospital staff, transportation, distance to the provider are the direct and indirect financial barriers to utilizing healthcare services.

Mason et al. (2019), the systematic review shows that healthcare providers' knowledge and waiting time are the barriers to use health care services among autistic adults and highlighted.

Xie and Or (2017) study discovered that actual waiting time was negatively correlated with patient satisfaction regarding several aspects of their care. Furthermore, patients who were less satisfied with the socio-cultural environment and the identity-oriented approach to their care tended to perceive the amounts of time they spent waiting and receiving care as less acceptable.

Qian, Pong, Yin, Nagarajan, and Meng (2009) research in rural China indicated that when outpatients have specific concerns about provider quality or credibility or their health status is low, research in rural China shows that distance matters less. They can drive longer distances to receive better medical treatment for their disease. Making an appointment and long waiting lists are the barriers to utilize health care services among refugees in Austria, according to a study by Kohlenberger et al. (2019).

2.14.5 Financial Barriers

Financial barriers can limit access by reducing health care cost affordability or discouraging health care providers from treating patients when they need to get medical services (Millman, 1993).

Financial barriers include the insurance coverage and costs of services, which are directly related to the user's ability and willingness to pay for those services (Lerner & Robles, 2017; Peters et al., 2008). High level of out-of-pocket expenditure, lack of comprehensive risk pooling mechanism, low level of public financing in the perspective of increasing health

expenditure are the key factors affecting the equity in the financial risk protection and health financing (Balarajan et al., 2011; Tusubira et al., 2020).

Health insurance is a significant factor in gaps in access to primary care between immigrants and non-immigrants, providing strong support for expanding medical care coverage in the United States, and a new study reveals that 45 percent of foreign immigrants in the United States do not have access to public or private health insurance (Siddiqi, Zuberi, & Nguyen, 2009).

Due to low insurance penetration and most of the current insurance plans not covering medication expenses, completion of the treatment has become much costlier (Aitken et al., 2013). Immigrants, on average, have lower health insurance rates, use fewer health services, and receive lower-quality care than native-born Americans; however, subgroups vary (Derose, Escarce, & Lurie, 2007).

Peipins, Soman, Berkowitz, and White (2012) research among U.S. workers undergoing mammography, Pap testing, endoscopy, fecal occult blood test shows that lack of paid sick leave seems to be a possible obstacle to receive preventive medical care.

Poverty makes people more sensitive to health care services. Therefore, the financial cost is the most important reason for them to avoid seeking care (Balarajan et al., 2011), primarily women, older people, the disabled, and the destitute (Mehta & Shah, 2003).

Despite providing nominally priced primary healthcare by the government of Malaysia for foreigners in public clinics, health care resources within the country were not optimally utilized (Noh, 2011).

The current policy limits immigrant's access to insurance and healthcare in the US. Most of the non-citizen immigrants and their families are uninsured. Compare to the native population, those who have job-based insurance or Medicaid are lower among non-citizen immigrants. On the other hand, non-citizens and their children also have worse access to emergency and ambulatory care, even those with insurance coverage (Leighton Ku & Matani, 2001). A study on non-citizen immigrants from 16 countries in the US shows 44% of non-citizen immigrants are uninsured and less likely to have government insurance coverage or employer-sponsored health insurance (Carrasquillo, Carrasquillo, & Shea, 2000). Undocumented immigrants account for one-third of the uninsured immigrant population (Goldman, Smith, & Sood, 2005).

Blake, Blendon, and Viswanath (2010) found that lack of paid sick leave and income are the employment characteristics that may hinder employers from seeking medical treatment.
Another study in Los Angeles shows More than half of low-income immigrants are uninsured, approximately twice that of the native citizens. Immigrants are also particularly reliant on safety-net healthcare services, such as government and non-profit hospitals and clinics that provide free or low-cost care. Immigrants often eschew medication, postpone treatment, and sometimes turn to illegal sources of care as a last option. Because of their inability to receive drugs and high medication costs, some immigrants sought treatment from lower-cost unlicensed health care providers, often folk medicine providers, and often imported prescription drugs smuggled in from abroad (Ku & Freilich, 2001).

Kullanit and Taneepanichskul (2017) asserted that satisfaction and perceptions of the ability to pay for transportation expenses are linked to healthcare use. Further basic insurance policy may partially support transportation costs for the elderly to lessen their ability to pay perception.

Trevino, Moyer, Valdez, and Stroup-Benham (1991) revealed that Uninsured Hispanics in the United States are less likely to have visited a doctor in the previous year, less likely to have a periodic health care source, and less likely to rate their health status as very good or excellent.

Weeratunga, Dissa, and Dissanayake (2017) study in Sri Lanka shows that medication cost is the most critical hinder factor among elderlies when all the health care expenses are taken into account.

According to Freeman, Kadiyala, Bell, and Martin (2008), medical insurance improves health by increasing health care utilization. Health-care coverage boosts inpatient use, thus lowering ambulatory-care-related hospital admissions (Buchmueller, Grumbach, Kronick, & Kahn, 2005).

Since nearly half of recent immigrants in the US are uninsured, access to cancer screening services is difficult for this group. Surveys on foreign women in the United States show that uninsured foreign women have lower utilization of specific health care screening related to females compared to US-born women, but this disparity is less among insured foreign women (Carrasquillo & Pati, 2004; Echeverria & Carrasquillo, 2006). Another study on the effect of

insured insurance on immigrant and US-born populations shows that insured immigrants have lower medical costs compared to insured US-born citizens (Leighton Ku, 2009).

A conducted study in Canada by Lovshin and Shah (2017) among diabetic immigrants shows despite universal access to a physician, only half of this group are receiving retinopathy screening within the first year, and even recent immigrants were remarkably less likely to be screened. Among foreign-born Latino's unauthorized immigrants are five times more likely than naturalized citizens to go to clinics or primary care providers and uninsured (Sanchez, Vargas, Juarez, Gomez-Aguinaga, & Pedraza, 2017).

A study in South Korea studied the impact of private insurance on health care use by using the national representative sample. Based on the result, those who have private health insurance coverage have a higher probability of health care utilization in inpatient and outpatient care and a positive impact on outpatient costs and not the number of outpatient visits. There was no significant relationship between private health insurance coverage and inpatient costs and inpatient days (Jeon & Kwon, 2013).

The government's universal health insurance covers all the citizens in Taiwan since 1995. The goal of this national insurance is to guarantee health care accessibility at reasonable costs. Shou-Hsia and Tung-Liang (1997) evaluated the effect of this federal health insurance on the health care utilization among Taiwanese citizens. They conducted a cohort survey before and after national health insurance coverage. The result of their research proves that after national health insurance coverage, those newly insured utilized health care services two times more than before. They conclude that universal health insurance eliminated some barriers to using health care facilities among the newly insured population. There is an

insignificant effect on decreasing medical care utilization and co-payment design in the insurance scheme. Taiwanese citizens now have more equitable access to health care, more significant financial risk security, and equity in health care financing due to the National Medical Insurance. The NHI regularly achieves a 70 percent satisfaction rating from the general public. Taiwan was able to control healthcare inflation (Lu & Hsiao, 2003).

Finding the underlying causes of the foreign workers' lower access to health care services in Malaysia is the primary concern since all the foreign workers have equal rights as local workers based on the policy defined by Malaysia's government (Robertson Jr & Association, 2009), as described in chapter 1. It is the responsibility of the employer to cover health, housing, and other terms and conditions of employment (Kanapathy, 2006; Noh et al., 2016). Employers are free to hire any insurance provider to offer health care, and they must provide the same insurance to current foreign employees when their work permits are renewed (Noh, Wahab, Bakar, & Islam, 2016). However, rising medical costs can prevent some foreign workers from receiving healthcare, especially those who have no legal status, work in the lowest-paying jobs, and have no employer-provided medical benefits.

2.15 Conclusion

Investigating access to health care services is a complicated issue due to different dimensions of access. Health care utilization is affected by various barriers as well as socio-demographic factors. In this study, barriers have been divided into three other groups of barriers. Personal barriers include socio-demographic characteristics, health and cultural beliefs and attitudes toward getting treatment, trust, fear, shame, lack of information, and lack of knowledge, language, and communication skills. Structural factors include; operation hours, doctors' and nurses' behavior, appointment, availability of health care provider, long waiting time,

transportation, and distance to the health care provider. Financial barriers are including; fear of losing daily income, affordability of health care costs (consultation, medication, and transportation), and medical insurance coverage.

Poor people have more health issues and face more barriers to get health care services. Immigrant unskilled workers have a different lifestyle, living conditions, and less income compare to local workers. Therefore they may have more issues with getting health care services. Hence, investigating the common barriers in getting health care when needed is necessary to guarantee their health and rights.

CHAPTER 3

METHODOLOGY

3.1 Introduction

In chapter two, the literature review provided the context of barriers in healthcare utilization and the study's conceptual framework. In the current chapter, apart from the study setting and research design, the conceptual framework, pilot survey, analysis methods, and analytical aspects of the study are discussed.

3.2. Operational Definition

Quota Sampling: "is a type of non-probability sampling method wherein data is collected from a homogeneous group. The elements from the population are chosen on a non-random basis and all members of the population do not have an equal chance of being selected to be a part of the sample group" (Moser, 1952).

Conceptual Framework: "A conceptual framework is an analytical tool with several variations and contexts. It can be applied in different categories of work where an overall picture is needed. It is used to make conceptual distinctions and organize ideas" (Berlin, 1986).

K-independent Sample Test: "K-independent sample test is to determine whether the location parameters of the populations are different and to determine whether the scale parameters for the populations are different" (Hollander, Wolfe, & Chicken, 2013).

Structured Questionnaire: "is a document that consists of a set of standardized questions with a fixed scheme, which specifies the exact wording and order of the questions, for gathering information from respondents" (Michalos, 2014).

Face to Face Interview: "Face-to-face interviews are structured interviews conducted by trained interviewers who use a standardized interview protocol and a standardized set of responses for recording participants' responses" (Jennings, 2005).

3.3 Study Setting

Many studies had shown that the existed barriers in the accessibility and utilization of healthcare services among foreign labourer in Malaysia (Ghafari et al., 2014; Heller, 1982; Hooi & Hooi, 2003; MOH, 2015; N. A. Noh et al., 2016; Uddin et al., 2020; Uddin et al., 2020; Zain, 2012). Most of the foreigners that used primary healthcare services were from third-world countries that had migrated to more urbanized countries like Malaysia for employment purposes (Sheamini Sivasampu, 2010). Since these foreigners had consisted mainly of adults or manual workers, the lack of access and the underutilization of primary healthcare services among this group of people can present a negative effect on public health outcomes since untreated medical conditions or disease may burden the host countries' public health facilities (MOHR, 2013). Therefore, this study focused on the barriers faced by unskilled legal foreign workers in Malaysia in getting needed medical treatment.

As mentioned earlier in chapter one, this study aimed;

1) To investigate the relationship between socio-demographic factors and barriers in getting healthcare services.

2) To identify the influence of socio-demographic factors on the extent of exposure to barriers (personal, structural, and financial) in getting healthcare services.

3. To analyze the impact of barriers (personal, structural, and financial) on the tendency of getting medical treatment in different levels of illness (mild and severe) among unskilled foreign labourer in Malaysia.

3.4 Research Design

Figure 3.1 shows the research design, which presents different phases of the study, steps taken, and the outcome. The phases started with a literature review followed by hypothesis and model construct, pilot study, empirical study, thesis writing. Critical thinking of the existing researches, models, and theories helped to identify the research problems. By identifying the research hypothesis, research questions and conceptual models were developed. After providing the first draft of the questionnaire, the pilot study helped establish validity and reliability. The revised questionnaire has been used for empirical research through data collection and data analysis. Findings, limitations, and suggestions are discussed in the final report.

This survey was conducted in December 2016 and had targeted legal unskilled foreign workers in the Klang Valley area, Malaysia. The study had involved the usage of the quantitative method.

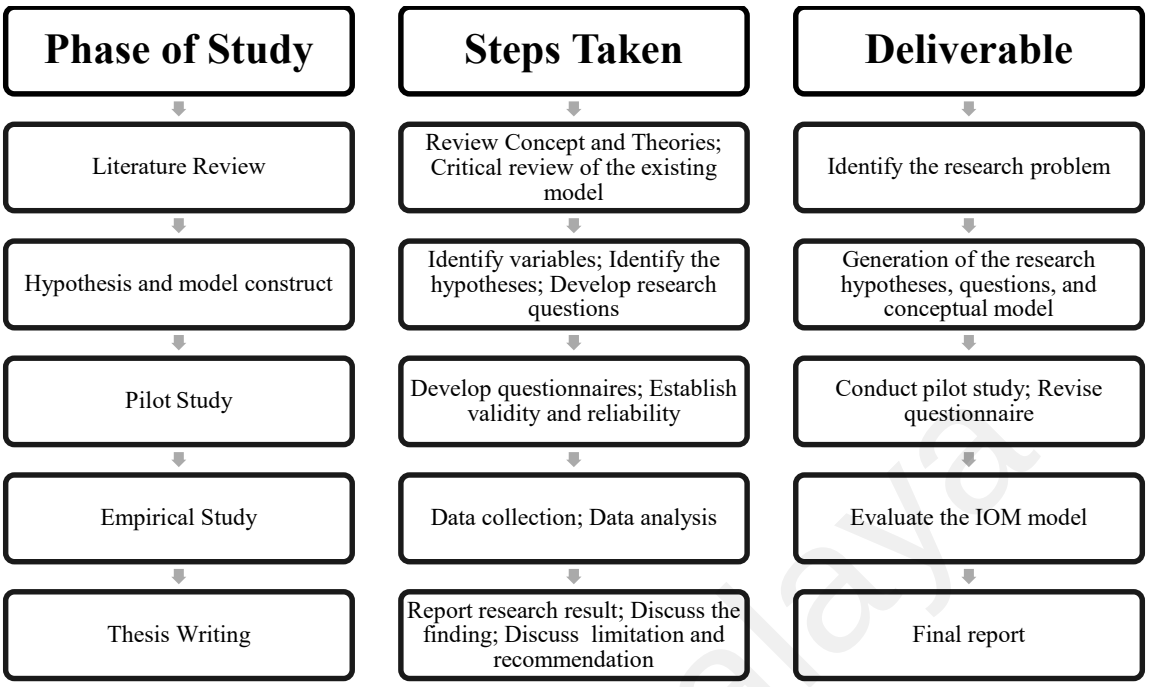

Figure 3.1: Research Design

3.4.1 Conceptual Framework

The conceptual framework in this study had been to discuss the subject of 'Foreign Labourer and Health, Utilization of Health Care Services in Malaysia.' In light of the earlier theoretical discussion and literature review from the previous chapter, the conceptual framework in Figure 3.2 was designed to focus on the current scenario of healthcare utilization among unskilled labourer in Malaysia.

Socio-demographic factors are independent variables in this conceptual framework, and Barriers (personal, structural, and financial) are dependent variables. The other dependent variable in this framework is utilizing healthcare services for mild and severe illnesses, while the independent variables are the personal, structural, and financial barriers.

The personal barriers had consisted of socio-demographic, cultural, attitude, language, fear of medication side effect, fear of being diagnosed with severe illness, medical leave, the importance of other basic needs, unavailability of someone to accompany and the unavailability of someone in caring for their child/children. As for structural barriers, the factors included payment method, availability of healthcare provider, appointment, waiting time, the attitude of the healthcare provider, and transportation. In financial barriers, aspects such as fear of losing daily income, affordability of healthcare costs (consultation, medication, and transportation), and medical insurance coverage were considered.

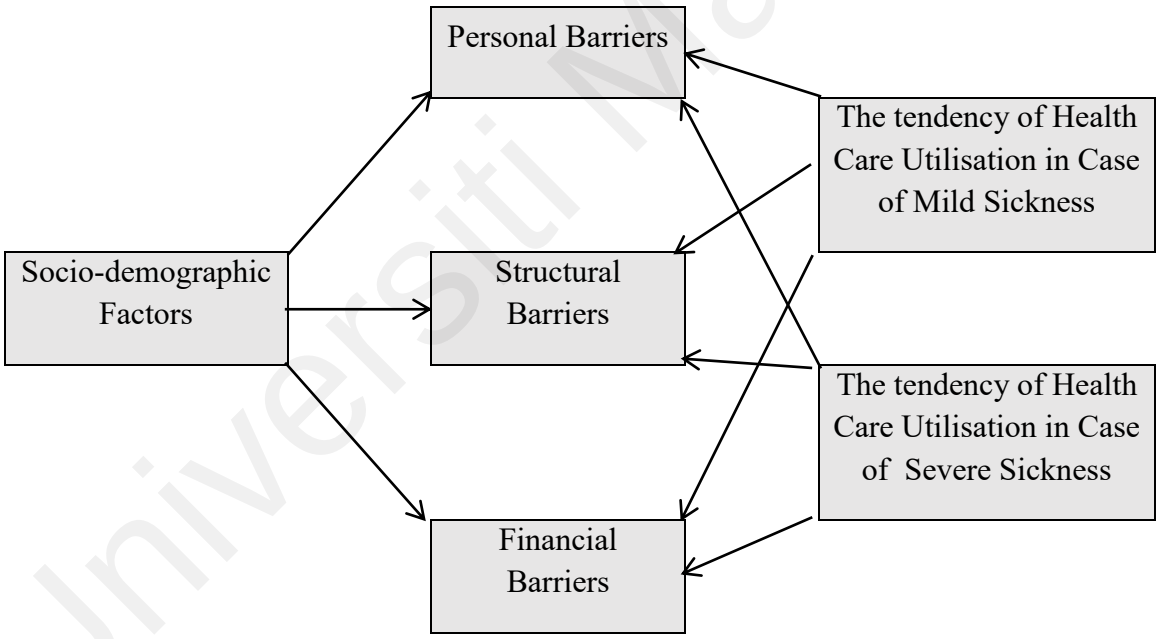

Figure 3.2: Conceptual Framework

3.4.2 Research Hypotheses

H1: Association exists between certain types of socio-demographic factors and barriers (structural, financial, and personal) in getting healthcare services.

H2: Certain socio-demographic factors influence the extent of exposure to personal, structural, and financial barriers in getting healthcare services.

H3: The effects of certain types of financial, structural, and personal barriers to getting medical treatment are not the same in different levels of sickness (mild and severe).

3.4.3 Sampling Method and Data Collection

The data were collected through a quota sampling technique representing a similar distribution of respondents' country of origin, gender, and working sector according to data provided by the Ministry of Human Resource of Malaysia to reflect the true population. The respondents were then questioned about their country of origin before the distribution of the questionnaire. Then enumerators controlled the other two categories of gender and sectors. They were trained to collect a certain amount of samples from each country, gender, and sector based on tables 3.2, 3.3, and 3.4. For example; the distribution of sampled foreign workers by their country of origin is as follows: Indonesia (42.6%), Bangladesh 18.5%, India 6.2%, Nepal 21.5%, Myanmar 7.2%, and other countries 4%. Moreover, the percentages of respondents were controlled by gender and working sectors to reflect the appropriate documented foreign workers in Malaysia.

3.4.4 Sampling Strategy

According to the Ministry of Human Resources of Malaysia's latest report in June 2017, 1,758,904 foreign labourer in Malaysia from six major sectors (Table 3.1). Around 18% of this population resides in Klang Valey area (Yi, Simler, Loh, & Tan Wei, 2020), therefore a study on the foreign labourer population in Klang valley can represent the total foreign labourer population in Malaysia. Ministry of human resource defined six different sectors for unskilled workers as; manufacturing, domestic, agriculture, construction, service, and plantation. Plantation agriculture was a form of large-scale farming that typically ranged from approximately 500 to 1,000 or more acres of land and produced one or two crops and sometimes livestock for sale (Vejnar, 2016). Agriculture is the process of producing food, feed, fiber, and many other desired products by the cultivation of certain plants and the raising of domesticated animals on a smaller scale (Daily Science).

Table 3.1 Statistic of foreign labourer in Malaysia according to country of origin

Indonesia	Nepal	Bangladesh	Myanmar	India	Pakistan	Philippine
714,709	400,327	220,022	125,860	113,952	59,458	55,962
Vietnam	China	Thailand	Cambodia	Sri Lanka	Laos	Total
28,244	16,260	13,199	4,953	5,920	38	1,758,904

(MOHR, 2017)

The targeted population in this study had been legal foreign unskilled workers in the Klang Valley area. Respondents were selected from all six working sectors: manufacturing, domestic, agriculture, construction, service, and plantation. The total number of legal foreign workers in Malaysia was estimated at 1.76 million in July 2017. The minimum sample size was 195 based on G-power measurement. Following the random oversampling method, 500 samples were targeted to understand the problems better and achieve more accurate results (Davern, McAlpine, Ziegenfuss, & Beebe, 2007; Santos, Abreu, García-Laencina, Simão, &

Carvalho, 2015). Finally, 502 samples were collected to represent an adequate sample of the population. Questionnaires were distributed to collect data from residential and work areas and the nearby embassies. Some local Malaysian enumerators were assigned and trained for data collection who were able to identify foreign workers from their accent and face. Almost all of the respondents were able to understand the Malay language or English language or they had a friend who was able to translate for them. Enumerators asked respondents about their country of origin to make sure that they are foreigners and to control the nationality while they are sampling. For those respondents who were not able to speak fluent English or Malay language, assistance was acquired from their fluent friends. All questions were in both Malay and English, in the same questionnaire. It has been described to participants that these questions are only for research purposes and it is confidential and participants answered based on their perceptions. As shown in Table 3.2, most foreign workers in Malaysia had come from Indonesia, Nepal, and Bangladesh.

Table 3.2: Total legal unskilled foreign workers' population in Malaysia by country of origin

Ethnic	Percentage
Indonesia	40%
Nepal	23%
Bangladesh	12%
Myanmar	7%
India	6%
Others	12%
Total	100%

(MOHR, 2017)

Table 3.3 shows the legal foreign workers' population according to the different sectors in Malaysia provided by the Ministry of Human Resources. The majority of the legal foreign workers were from the manufacturing industry and followed by agriculture and plantation, construction, service, and lastly, the domestic sector. The samples had been collected according to the information provided by the Ministry of Human Resources Malaysia.

Table 3.3: Total legal unskilled foreign workers' population in Malaysia by sector

Sector	Percentage
Domestic servant	7%
Construction	20%
Manufacturing	35%
service	13%
Agriculture and plantation	25%
Total	100%

(MOHR, 2017)

Table 3.4 shows that around 60% of legal unskilled foreign workers' population in Malaysia are male and 40% are female.

Table 3.4: Total legal unskilled foreign workers' population in Malaysia by gender

Gender	Percentage
Male	60.60
Female	39.40
Total	100

(MOHR, 2017)

3.5 Data

This study had been based on the primary data that was gathered using a structured questionnaire. Data were collected through quota sampling and had involved respondents who are legal foreign workers in Klang Valley around residential areas, embassies, and workplaces. The questionnaire has been translated to the Malay version using the forward and backward translation method to maintain the equivalence of the test. Five hundred two questionnaires have been distributed with a 100% response rate.

The respondents answered the questions related to the personal, structural, and financial barriers of utilizing health care services as stated by the Institute of Medicine model. Personal barriers questions include: “I Did not think that I was sick enough to see the doctor,” “My faith/spiritual beliefs will help me with my illnesses,” “I think the medications side effects are more than the disease,” “I think my other basic needs are more important than healthcare,” “There was no cure, why to bother with medical treatment,” “Difficulty of finding someone to take care of my child/children,” “Difficulty of getting leave,” “Preferred to use alternative medications such as traditional medicine,” “Problem of finding a medical practitioner who speaks in my preferred language,” “The place that clinic/hospital is located is not accessible for me,” “I did not feel comfortable to be in clinic/hospital,” “I did not trust on the medical system to do the right thing for me,” “My employer did not allow me to take leave, “No one was available to accompany me since I am not able to come alone, “and “There was no same gender doctor.”

As for structural barriers, the questions had included “Worried about payment method for care,” “Problem with making an appointment,” “Problem in getting an appointment at the time I could make it,” “Unavailability of the doctor in clinic/ hospital,” “Doctor was not knowledgeable/experienced,” “Doctor’s behavior,” “Long waiting time,” and “Unavailability of transportation, unavailability of a clinic nearby my residential area (or clinic is too far).”. In contrast, the questions related to financial barriers had been “Do not have medical insurance coverage,” “Insurance coverage does not cover all the expected costs,” “Consultancy price was not affordable,” “Medication cost was not affordable,” “Transportation cost was not affordable,” and “Fear of losing my daily income.”

3.6 Measurement

Since the focus of this study had been on barriers affecting the tendency of getting medical treatment, the Institute of Medicine’s Model of Access to Personal Healthcare Services (1993) was therefore used in the development of the initial framework. According to this model, healthcare utilization had varied according to personal, structural, and financial barriers. For this reason, this study had modified the IOM Model with the expansion of additional barrier factors. The questionnaire consists of three sections. The first section touches on demographic characteristics such as age, marital status, gender, and country of origin, length of stay, communication language, employment status, and monthly income. This was then followed by the second section on participants’ health status, medical insurance coverage, strategies in coping with healthcare costs, number of times the participants had sought healthcare, and their healthcare utilization rate before ending with the last section that had inquired on the participant’s preference and reasons for going to public and private healthcare service providers.

The third part of the questionnaire has been divided into two sub-sections. After the respondents had completed the first two parts of the questionnaire, they had to answer specific questions concerning their aspects of access and available health care services.

For personal barriers, length of stay (Sanz et al., 2011), ethnic (Malmusi, Borrell, & Benach, 2010; Sanz et al., 2011), and gender (Balarajan, Selvaraj, & Subramanian, 2011; Keller & Baune, 2005) had been added as socio-demographic factors affecting the tendency of getting treatment. The fear of medication side effects (Ashton, 2002; Neuman, 2012) and fear of being diagnosed with any severe illness (Leydon, Bynoe-Sutherland, & Coleman, 2003) may also impact an individual's willingness in getting medical treatment. Inadequate paid sick leave coverage is also viewed as a barrier to get medical leave. According to the latest accessible data from the U.S. Bureau of Labourer Statistics, it was found that almost half of the private-sector U.S. workers (47 percent) were deprived of paid sick leave (U.S. Bureau of Labourer Statistics 2001). The employers even reduced their paid sick leave programs. As a result, the number of workers deprived of paid sick leave increased. In circumstances of facing illness, they have to choose between taking unauthorized time off or going to work anyway (Lovell, 2004). Among other personal barriers in healthcare utilization had also been due to the community belief of preferring traditional medicine to biomedical care (Ensign & Panke, 2002; Welch, Comer, & Steinman, 1973), feelings of shame and embarrassment of seeing a doctor (Schoevers et al., 2010; Zain, 2012), having no one to accompany them to health institutions (Koblinsky, Anwar, Mridha, Chowdhury, & Botlero, 2008) and the difficulties of finding carers for their child/children (Gelberg, Gallagher, Andersen, & Koegel, 1997).

As for structural barriers, the other factors that had been included in their studies were payment methods (Bradford, Coleman, & Cunningham, 2007; Lu & Hsiao, 2003; Yip & Hsiao, 2009), the attitude of doctors and nurses, the difficulty of setting up appointments and the long waiting time of getting treatments (Ghafari et al., 2014; Heller, 1982).

Other financial barriers such as the sudden loss of income (López-Acuña, 2008), the affordability of medical (Balarajan et al., 2011; Lawson, 2004), and transportation costs (Khammash, 2003) were also cited as reasons for preventing access to healthcare services.

According to the literature, using healthcare services is also dependent on the severity of illness (Corso et al., 2003; ICRC, 2015; Name, 2015; WHO, 2003). These studies predict the low tendency of getting treatment for mild sicknesses such as flu, fever, and headache, while severe illness in the likes of high fever, injuries, accidents, and diarrhea may associate with the increased odds of visiting a healthcare service provider.

3.7 Pilot Survey

One hundred samples were collected in the pilot survey that was prepared in both English and the Malay language. Since most participants do not possess a high education level, the respondents were guided through the questionnaire by the interviewers.

Table 3.5 shows the primary data that was gathered from the pilot survey. The majority of the respondents from the pilot survey were from Indonesia (59%), which was followed by Bangladesh (22%), Nepal (11%), Myanmar (6%), and Pakistan (2%). Most of the respondents were male (72%), below 30 years old (42%), and were from the service sector

(37%), agricultural (27%), construction (16%), plantation (8%), domestic (6%) and the manufacturing (6%) sectors.

Due to the importance of obtaining accurate representative samples, the ethnic, gender, and employment classification was considered after the pilot survey to eliminate bias from a different distribution.

Table 3.5: Demographic Factors

		Frequency	Percentage
Country of Origin	Indonesia	59	59.0
	Bangladesh	22	22.0
	Pakistan	2	2.0
	Nepal	11	11.0
	Myanmar	6	6.0
Gender	Male	72	72.0
	Female	28	28.0
Age	<=25	15	15.0
	26-30	27	27.0
	31-35	10	10.0
	36-40	21	21.0
	41-45	12	12.0
	46-50	8	8.0
	>50	7	7.0
Employment classification	Domestic servant	6	6.0
	Construction	16	16.0
	Manufacturing	6	6.0
	Services	37	37.0
	Plantation	8	8.0
	Agriculture	27	27.0

3.7.1 Reliability Statistics

Cronbach's alpha method was used to show the close relationships between the three different types of barriers. A reliability coefficient of 0.70 or higher is considered an "acceptable" value in most social science research situations (Cortina, 1993). The corresponding alpha coefficients for all 13 of the personal barrier and 8 of the structural barrier items were 0.693 and 0.663, which suggest that both barriers had a reasonable internal consistency, while the alpha coefficient for the five financial barrier items was 0.803, which indicates that the items had a high internal consistency.

Table 3.6: Reliability test

Barriers	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
Personal	0.693	0.769	13
Structural	0.663	0.690	8
Financial	0.803	0.810	5

3.8 Analysis

This section will discuss the different types of statistical analysis used for each objective. All of the data derived from the survey will be analyzed by using SPSS Statistics version 20. The demographic factors and barriers will be analyzed using descriptive statistics and crosstab to examine the character of the sample population.

The first research question will be analyzed using descriptive statistics, crosstab, and chi-square independence test to show the association between socio-demographic factors and barriers in getting healthcare services. As a standard statistical rule, statisticians typically

adopt a significance level denoted by alpha (α) as a pre-chosen probability for significance at 0.05 (statistically significant).

The second research question will be analyzed using a non-parametric K-independent sample and 2 independent sample tests. A Mann-Whitney analysis is employed to differentiate between two independent samples, yet the distributions of the sample are not distributed normally. A Kruskal-Wallis test is carried out to resolve the significant differences between the medians of three or more independent groups. Therefore, these tests were used to investigate the effect of socio-demographic factors on exposure to barriers (financial, structural, personal) in receiving healthcare services.

The third research question will be analyzed using a chi-square independence test and logistic regression to examine the impact of barriers on getting medical treatment in different levels of illness. In this study, the factors were selected according to the p-value ≤ 0.05. The chosen elements were used for logistic regression in describing the strength of relationships, predicting the likelihood of getting medical treatment, and measuring the impact caused by the respective barriers. The 4-point Likert scale has been transferred into a dummy variable to do logistic regressions. "1" represents unlikely to go or will not go while "0" stands for will go or more likely to go. Hence, the resulting dummy variable represents the tendency of respondents to refuse health care treatment in severe and mild sickness cases.

3.9 Conclusion

The conceptual framework was designed based on the Institute of Medicine's model for monitoring access to healthcare in America and the policies concerning foreign workers' healthcare in Malaysia. The quantitative method was used to obtain the data and information

on the foreign workers' demographic, health status, medical insurance, healthcare utilization, and the barriers to accessing healthcare services from the research questions.

CHAPTER 4

RESULTS

4.1 Introduction

This chapter highlights respondents' demographic characteristics and results of data to answer the research questions by using descriptive statistics, frequency analysis, Crosstab, chi-square independence test, and logistic regression. Barriers to utilize health care services have been examined into two situations as mild sickness and severe sickness.

4.2 Demographic Analysis of Respondents

There were 502 respondents involved in the analysis. The respondents' profile is summarized in Table 4.1. All the participants in this study are legal foreign labourer in Malaysia. The majority of the respondents are from Indonesia (42.2%), followed by Nepal (21.5%), Bangladesh (18.5%), Myanmar (7.2%), India (6.2%), and other countries (4.0%).

In terms of gender, 78.1% of respondents are male, and 21.9% are female. Around two-thirds of respondents were aged 30 years old and younger (64.9%), 24.1% are 31-40 years old, and 11% are 41 years old and older. More than half of the respondents had secondary education or equivalent (51.6%) as their highest level of education, 37.1% had primary education, and only 11.4% had tertiary education. The data shows that most participants are non-married (55.8%), 44.2% are married (married, divorced, or widow/widower). The majority of the respondents prefer to use the Malay language (82.9%) to communicate, 11.4% communicate in English, and 5.8% prefer to use other languages. Most respondents work in the private sector (97.4%), while the remaining 2.6% work in the government sector. In terms of employment classification, 32.1% worked in the services sector, followed by construction (24.1%), manufacturing (22.1%), agriculture (9.2%), domestic servant (8%), and plantation

(4.6%). The majority of the participants in this study earned RM1001-RM2000 (62.7%), 30.7 earned more than RM2001, and 6.6% earned less than RM1000 per month. The majority of them have resided in Malaysia for 1 to 5 years (76.3%), 15.1% live for 6 to 10 years, 7.8% reside for more than 11 years, and 0.8% reside for less than one year.

Table 4.1: Socio-demographic background

		Frequency	Percentage
Country of Origin	Indonesia	214	42.6
	Bangladesh	93	18.5
	India	31	6.2
	Nepal	108	21.5
	Myanmar	36	7.2
	Others	20	4.0
Gender	Male	392	78.1
	Female	110	21.9
Age	<=30	326	64.9
	31-40	121	24.1
	=>41	55	11.0
Highest education level	Primary	186	37.1
	Secondary	259	51.6
	Tertiary education	57	11.4
Marital Status	Married	222	44.2
	No-married	280	55.8
Communication Language	Malay Language	416	82.9
	English Language	57	11.4
	Other Languages	29	5.8
Employment Sector	Government	13	2.6
	Private	489	97.4
Employment classification	Domestic service	40	8.0
	Construction	121	24.1
	Manufacturing	111	22.1
	Services	161	32.1
	Plantation	23	4.6
	Agriculture	46	9.2
Total monthly income	=<RM1000	33	6.6
	RM1001-RM2000	315	62.7
	>=RM2001	154	30.7
Duration of stay in Malaysia (Years)	<=1	4	0.8
	1-5	383	76.3
	6-10	76	15.1
	>11	39	7.8

4.3 Health Status and Health Care Utilization

As presented by Table 4.2, most participants have not ever been diagnosed with any chronic disease like diabetes, thyroid problem, hypertension, heart disease, chronic respiratory disease, cancer, kidney and liver disease, mental, behavioral disorders, and HIV/AIDS (95%). Only 5% mentioned they had been diagnosed with at least one chronic health disease. The majority of respondents rate their overall health status as good (44.2%), followed by very good (37.1%), excellent (11.4%), fair (6.2%), and poor (1.2%).

Table 4.2: Health Status

		Frequency	Percentage
Have you ever been diagnosed with any chronic disease	Yes	25	5.0
	No	477	95.0
Overall health status	Excellent	57	11.4
	Very Good	186	37.1
	Good	222	44.2
	Fair	31	6.2
	Poor	6	1.2

Figure 4.1 shows that on average, 90.8% feel sick at least once a year, 9.2% never feel sick during the last 12 months. 38% never get outpatient medical treatment in the last 12 months. The majority of respondents have never been hospitalized in Malaysia (90.8%).

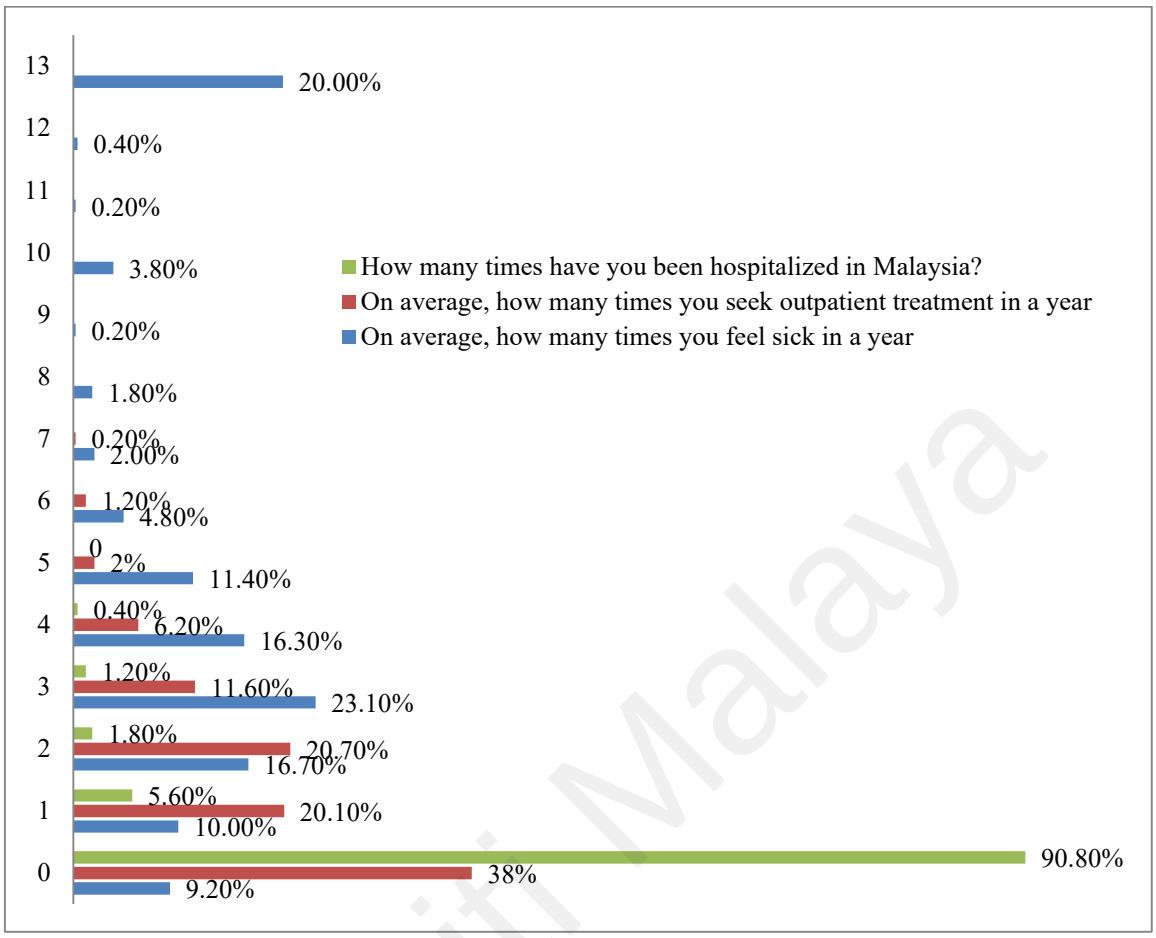

Figure 4.1: Health Care Utilization

4.3.1. Tendency of getting treatment when sick.

Respondents were asked about the likelihood of getting medical treatment in the case of mild and severe sickness. Figure 4.2 shows that for the case of mild sickness, almost half of the respondents stated that they would undoubtedly get medical treatment (49.80%), 32.90% said less likely to get treatment, 10% stated more likely to get treatment, and 7.40% stated indeed will get treatment. In severe sickness, 39.80% stated that they would get treatment, 39.60% stated more likely to get treatment, 14.5% stated less likely to get treatment, and 6% stated they would not get treatment.

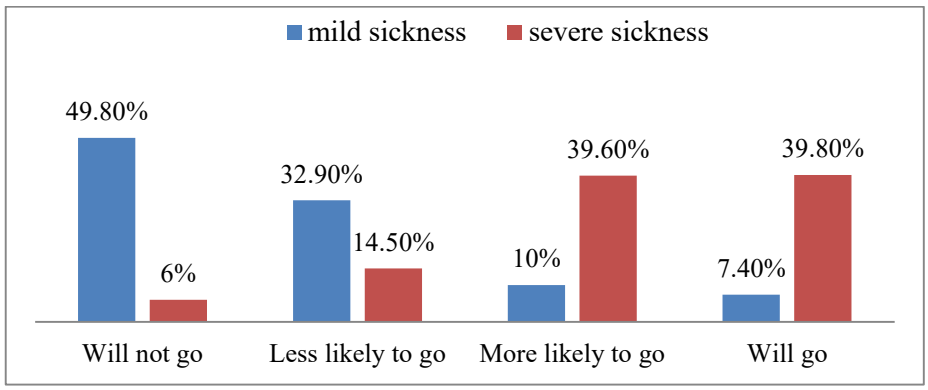

Figure 4.2: The likelihood of going to a clinic or hospital for treatment in case of mild and severe sickness.

As presented in Table 4.3, a significant percentage of domestic servants stated that they are less likely to get treatment (45%) from the clinic or hospital when experiencing mild sickness. Nearly half of the construction workers (48.7%) will not go to a clinic or hospital when they have a mild sickness. More than one-third of labourer in the manufacturing sector is less likely to go (37.8%) and will not go (36.9%). A more significant number of service sector workers (56.5%), plantation (78.2%), and 63% of agriculture workers will not go to the clinics or hospital for mild sickness. The majority of those who stated they would go to a clinic or hospital in the case of mild sickness are from manufacturing (9%), construction (8.2%), service sector (8%), and domestic servant (7.5%). The majority of those who stated they would more likely seek medical treatment in mild sickness were domestic servants (17.5%) and manufacturing (16.2%).

Table 4.3: The tendency of seeking medical treatment in case of mild sickness				
	Will not go	Less likely to go	More likely to go	Will go
Domestic services	30%	45%	17.5%	7.5%
Construction	48.7%	33.8%	9.0%	8.2%
Manufacturing	36.9%	37.8%	16.2%	9.0%
Services	56.5%	29.1%	6.2%	8.0%
Plantation	78.2%	8.6%	13%	0.0%
Agriculture	63.0%	32.6%	2.1%	2.1%

Table 4.4 shows the tendency of seeking medical treatment in case of severe sickness. The majority of those who will not seek medical treatment in the case of severe sickness are from construction (9%) and the service sector (8.6%). Labourers from the plantation (30.4%) and agriculture (30.4%) ranked the highest percentages among those who stated that the possibility of getting medical treatment in the case of severe sickness is less likely. The majority of those who said there is a more likely possibility of getting medical treatment were from service (43.4%), agriculture (43.4%), construction (40.4%), and manufacturing (37.8%). The majority of those who stated they would get medical treatment in severe sickness was manufacturing (55.8%) and plantation (52.1%).

Table 4.4: The tendency of seeking medical treatment in case of severe sickness				
	Will not go	Less likely to go	More likely to go	Will go
Domestic services	2.5%	7.5%	35%	55%
Construction	9.0%	15.7%	40.4%	34.7%
Manufacturing	2.7%	3.6%	37.8%	55.8%
Services	8.6%	16.1%	43.4%	31.6%
Plantation	0.0%	30.4%	17.3%	52.1%
Agriculture	2.1%	30.4%	43.4%	23.9%

4.3.2 Availability of Health Care Providers

Figure 4.3 presents the availability of health care service providers around the respondents' residential area. The result shows that a private clinic (77.10%) is the most available health service provider for the respondents of this study, followed by a pharmacy (67.70%), a public clinic (36.70%), a public hospital (33.90%), and private hospital (30.90%).

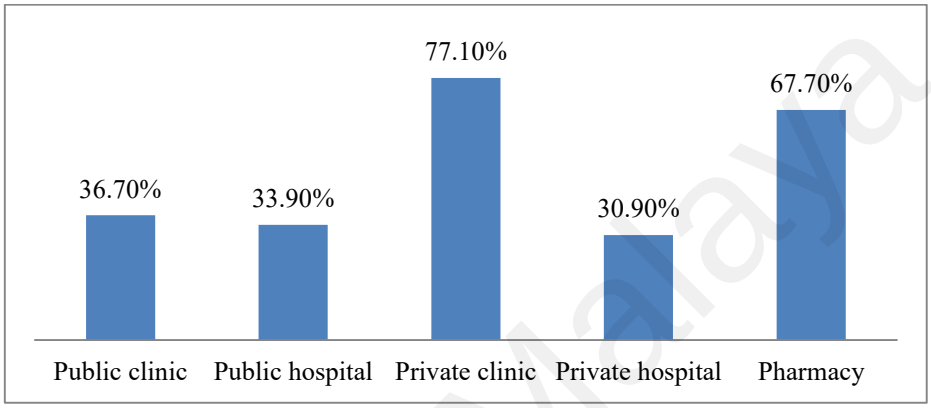

Figure 4.3: Availability of healthcare services nearby the respondents' residential area

Figure 4.4 shows the respondents' regular source of health care service providers whenever they feel sick and need medical treatment. The majority preferred to get treatment from private clinics (55.40%), 17.70% from pharmacies, 12.40% from public clinics and public hospitals, and 2.20% from private hospitals.

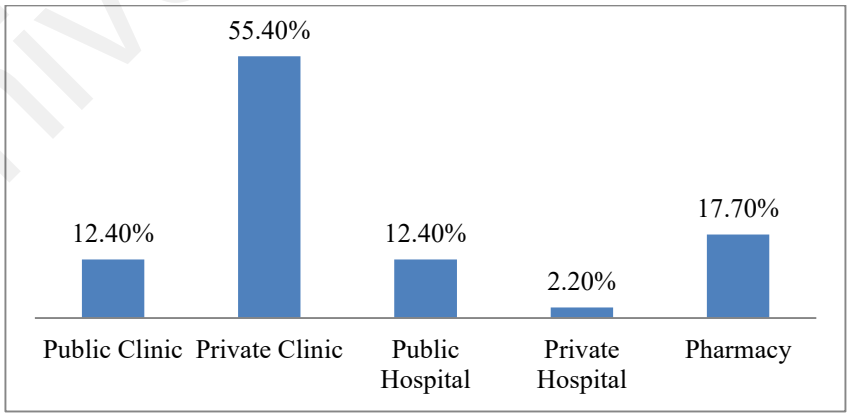

Figure 4.4: Prefered healthcare service provider

Table 4.5 shows the main three reasons for selecting public clinics as a regular source of treatments. These three reasons include; easily reachable (9.6%), more pleasant (8%), and shorter waiting time (6.8%). The main three reasons for selecting private clinics are easily reachable (37.2%), shorter waiting time (32%), and not too crowded (23.2%). Cheaper service charges (9%), easily reachable (5.2%), and a request by the employer (3.4%) are the main three reasons to select public hospitals. Shorter waiting time (1.6%), easily reachable (1.4%), and more pleasant areas (1.2%) are the main three reasons to select private hospitals. Easily reachable (13.6%), shorter waiting time (11.4%), and not too crowded (11%) are the main three reasons to select pharmacies.

Table 4.5: The main three reasons for selecting health service provider *

	Public Clinic (of the total sample)	Private Clinic (of the total sample)	Public Hospital (of the total sample)	Private Hospital (of the total sample)	Pharmacy (of the total sample)
Shorter waiting time	6.8%	32%	2.6%	1.6%	11.4%
More proper medication	4.6%	12%	1.6%	0.8%	7.8%
Service charge is cheaper	5.8%	4.8%	9.0%	0.2%	1.4%
Requested by employer	0.4%	1.6%	3.4%	0.2%	0.4%
Proper Facility	0.0%	8.6%	2.2%	0.4%	3.4%
Longer operation time	2.4%	15.0%	1.4%	1.0%	8.2%
‘Table 4.5 continued’					
More qualified doctors	4.6%	13.2%	1.8%	1.0%	7.8%
Getting an appointment is easier	5.6%	21.4%	1.8%	1.0%	10.6%
Not too crowded	5.8%	23.2%	2.4%	1.0%	11.0%
More pleasant	8.0%	21.2%	2.4%	1.2%	9.8%
Easily reachable	9.6%	37.2%	5.2%	1.4%	13.6%

** The respondents were able to choose up to three answers for this question.*

Figure 4.5 represents traveling options to go to a health care provider. 40.6% of the respondents travel to health care providers by using their vehicle, followed by taxi (24.3%), walking (18.3%), bus (15.9%), and train (0.8%).

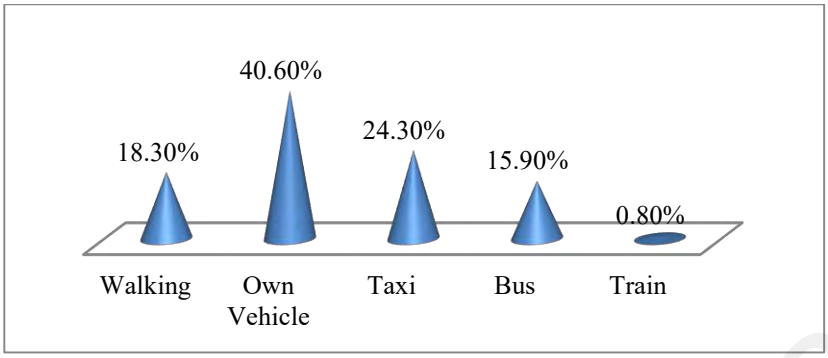

Figure 4.5: Travel options to go to the health care provider

4.4 Associations between Socio-Demographic Factors and Barriers in Getting Healthcare Services

Descriptive statistics, crosstab, and chi-square independent test are used to show which socio-demographic factor is associated with barriers (personal, structural, and financial) in getting healthcare services.

4.4.1 Associations between Socio-Demographic Factors and Personal Barriers in Getting Healthcare Services

Table 4.6 gives the results of association analysis between the thinking that illness was not too severe and socio-demographic factors. The results suggest associations exist between the thinking that illness was not too serious and four socio-demographic factors (country of origin, gender, preferred language to communicate, and working sector) with p-values of the Chi-square independence test less than 0.05. There is no association between the thinking that illness was not too serious and five other socio-demographic factors (age, education, marital status, employment sectors, and income). All p-values of the test are greater than 0.05.

Respondents experienced this barrier differently by country of origin, gender, preferred language, and working sector. Foreign workers from Bangladesh, Myanmar, other countries, and Nepal are the groups with the highest proportion of them (90.3%, 88.9%, 80%, and 79.6%, respectively), stating that they do not seek treatment because they feel the disease is not too severe compared to others who come from other countries. Male (80.4%) had the highest proportion to answer yes compared to women (59.1%). In terms of the influence of the preferred language of communication, those who preferred to communicate other than Malay and English languages have 96.6% of them answered yes of having the barrier, which is higher compared to those who like to communicate in Malay (74.4%) or English language (71.9%). Agriculture, construction, and plantation are three sectors with the highest proportion of respondents answering "yes" of having the barrier (91.3%, 82.6%, and 78.3%, respectively) compared to service, manufacturing, and domestic servant (74.5%, 72.1%, and 50% respectively).

Table 4.6: Associations between socio-demographic factors and thinking that illness is not too severe

	Reason for avoiding treatment:	I did not think that my illness was too serious				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	67.3	32.7	28.700	5	0.000
	Bangladesh	90.3	9.7			
	India	58.2	41.9			
	Nepal	79.6	20.4			
	Myanmar	88.9	11.1			
	Others	80.0	20.0			
Gender	Male	80.4	19.6	21.116	1	0.000
	Female	59.1	40.9			
Age	=<30	75.5	24.5	1.432	2	0.489
	31-40	73.6	26.4			
	=>40	81.8	18.2			
Education	Primary or equivalent	78.0	22.0	5.905	2	0.052
	Secondary/equivalent	71.8	28.2			
	Tertiary education	86.0	14.0			

‘Table 4.6, continued’						
Marital Status	Married	78.4	21.6	1.555	1	0.249
	Non-married	73.6	26.4			
Preferred Language	Malay	74.8	25.2	7.494	2	0.024
	English	71.9	28.1			
	Others	96.6	3.4			
Employment Sector	Government	53.8	46.2	3.464	1	0.063
	Private	76.3	23.7			
Working Sector	Domestic servant	50.0	50.0	24.617	5	0.000
	construction	82.6	17.4			
	Manufacturing	72.1	27.9			
	Services	74.5	25.5			
	Plantation	78.3	21.7			
	Agriculture	91.3	8.7			
Income	=<RM1000	81.8	18.2	0.720	2	0.698
	RM1001-RM2000	75.2	24.8			
	>=RM2001	75.3	24.7			

Table 4.7 shows the result of association analysis between fear of medication side effects and socio-demographic factors. According to the Chi-square independence test results, association exist between fear of medication side effect and education level (p-value = 0.000), preferred language to communicate (p-value = 0.003) and income level (p-value = 0.024). There is no association between fear of medication side effects and country of origin, gender, age, marital status, employment sector, and working sector (p-value of the Chi-square independence test are greater than 0.05).

Respondents experienced this barrier differently by education, preferred language, and income. Between different levels of education, 33.3% of those who had tertiary education level answered “yes” to having the barrier, which is higher compared to those with primary (12.9%) and secondary education level (11.2%). Those who preferred other languages to communicate (31%) responded more “yes” to have a fear of medication side effects as a reason for not seeking medical treatment compared to those who prefer to communicate in

Malay (12%) or English (22.8%). In terms of income level, those who had lower than RM1000 income per month (30.3%) had the highest proportion of respondents answering "yes" of having the barrier compared to those who had a higher level of income (13.7% and 12.3%).

Table 4.7: Associations between socio-demographic factors and fear of medication side effects

	Reason for avoiding treatment:	I am afraid of the medications side effect				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	12.6	87.4	2.934	5	0.710
	Bangladesh	16.1	83.9			
	India	19.4	80.6			
	Nepal	16.7	83.3			
	Myanmar	8.3	91.7			
	Others	15.0	85.0			
Gender	Male	15.6	84.4	2.162	1	0.141
	Female	10.0	90.0			
Age	=<30	14.1	85.9	0.044	2	0.978
	31-40	14.9	85.1			
	=>40	14.5	85.5			
Education	Primary or equivalent	12.9	87.1	19.132	2	0.000
	Secondary/equivalent	11.2	88.8			
	Tertiary education	33.3	66.7			
Marital Status	Married	14.9	85.1	0.088	1	0.766
	Non-married	13.9	86.1			
Preferred Language	Malay	12.0	88.0	11.729	2	0.003
	English	22.8	77.2			
	Others	31.0	69.0			
Employment Sector	Government	15.4	84.6	0.012	1	0.914
	Private	14.3	85.7			
Working Sector	Domestic servant	12.5	87.5	10.246	5	0.069
	construction	17.4	82.6			
	Manufacturing	13.5	86.5			
	Services	18.0	82.0			
	Plantation	4.3	95.7			
	Agriculture	2.2	97.8			
Income	=<RM1000	30.3	69.7	7.469	2	0.024
	RM1001-RM2000	13.7	86.3			
	>=RM2001	12.3	87.7			

Table 4.8 shows the result of an association analysis between the unavailability of same-gender doctors and socio-demographic factors. Chi-square independence test results show an association between unavailability of same-gender doctor and the working sector (p-value = 0.043) and income (p-value = 0.006). The p-values of the Chi-square independence test are greater than 0.05 for other socio-demographic factors. Therefore, the association does not exist between the unavailability of same-gender doctors and country of origin, participants' gender, age, education, marital status, preferred language to communicate, and employment.

Respondents experienced this barrier differently by working sector and income. Those who are working in construction (9.1%), manufacturing (9.0%), and plantation (8.7%) have the highest proportion of answering "yes" to this barrier compared to those who are working in service (3.7), domestic servant (0.0%) and agriculture (0.0%). The highest proportion of answering "yes" to the availability of same-gender doctors as a barrier to seeking medical treatment belongs to those with monthly income below RM1000 (18.2%) compared to the other two groups.

Table 4.8: Associations between socio-demographic factors and the unavailability of the same-gender doctor

	Reason for avoiding treatment:	The nearest clinic does not have the same-gender doctor				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	5.6	94.4	7.252	5	0.203
	Bangladesh	6.5	93.5			
	India	3.2	96.8			
	Nepal	2.8	97.2			
	Myanmar	11.1	88.9			
	Others	15.0	85.0			

'Table 4.8 continued'

Gender	Male	5.9	94.1	0.027	1	0.870
	Female	5.5	94.5			
Age	=<30	5.8	94.2	0.012	2	0.994
	31-40	5.8	94.2			
	=>40	5.5	94.5			
Education	Primary or equivalent	8.1	91.9	3.696	2	0.158
	Secondary/equivalent	3.9	96.1			
	Tertiary education	7.0	93.0			
Marital Status	Married	5.9	94.1	0.005	1	0.946
	Non-married	5.7	94.3			
Preferred Language	Malay	5.5	94.5	1.186	2	0.553
	English	5.3	94.7			
	Others	10.3	89.7			
Employment Sector	Government	7.7	92.3	0.090	1	0.764
	Private	5.7	94.3			
Working Sector	Domestic servant	0.0	100	11.448	5	0.043
	Construction	9.1	90.9			
	Manufacturing	9.0	91.0			
	Services	3.7	96.3			
	Plantation	8.7	91.3			
	Agriculture	0.0	100			
Income	=<RM1000	18.2	81.8	10.358	2	0.006
	RM1001-RM2000	4.4	95.6			
	>=RM2001	5.8	94.2			

The associations between not being able to get leave from work and socio-demographic factors are shown in Table 4.9. There is association between not being able to get leave from work and country of origin (p-value= 0.000), working sector (p-value= 0.000), and level of income (p-value= 0.017) according to Chi-square independence test results. There is no association between not being able to get leave from work and gender, age, education, marital status, preferred language to communicate, and employment sector as the test's p-values are greater than 0.05.

Respondents experienced this barrier differently by country of origin, working sector, and income. Respondents from Indonesia (33.6%), Bangladesh (31.2%), Myanmar (22.2%), and Nepal (19.4%) had the highest proportion of answering "yes" to not being able to get leave as a barrier to get medical treatment compared to India (6.5%) and other countries (0.0%). In terms of the working sector, workers in the plantation and agriculture (56.5%) sector had the highest proportion of answering "yes" to this barrier. Those who had below RM1000 monthly income had the highest proportion of having this barrier to seek medical treatment compared to other income levels.

Table 4.9: Associations between socio-demographic factors and not being able to get medical leave from work

	Reason for avoiding treatment:	I was not able to get medical leave from work				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	33.6%	66.4%	23.468	5	0.000
	Bangladesh	31.2%	68.8%			
	India	6.5%	93.5%			
	Nepal	19.4%	80.6%			
	Myanmar	22.2%	77.8%			
	Others	0.0%	100%			
Gender	Male	27.3%	72.7%	0.925	1	0.336
	Female	22.7%	77.3%			
Age	=<30	28.2%	71.8%	3.451	2	0.178
	31-40	25.6%	74.4%			
	=>40	16.4%	83.6%			
Education	Primary or equivalent	28.5%	71.5%	0.745	2	0.689
	Secondary/equivalent	25.1%	74.9%			
	Tertiary education	24.5%	75.4%			
Marital Status	Married	24.3%	75.7%	0.797	1	0.372
	Non-married	27.9%	72.1%			
Preferred Language	Malay	25.0%	75.0%	3.857	2	0.145
	English	28.1%	71.9%			
	Others	41.4%	58.6%			
Employment Sector	Government	15.4%	84.6%	0.820	1	0.365
	Private	26.6%	73.4%			

‘Table 4.9 continued’						
Working Sector	Domestic servant	15.0%	85.0%	41.422	5	0.000
	Construction	19.0%	81.0%			
	Manufacturing	27.9%	72.1%			
	Services	20.5%	79.5%			
	Plantation	56.5%	43.5v			
	Agriculture	56.5%	43.5%			
Income	=<RM1000	45.5%	54.5%	8.155	2	0.017
	RM1001-RM2000	26.7%	73.3%			
	>=RM2001	21.4%	78.6%			

Table 4.10 gives the results of association analysis between preference to use traditional medicine and socio-demographic factors. Chi-square independence test results show that an association exists between prefer to use traditional medicine and the preferred language to communicate (p-value = 0.018) and income (p-value = 0.021). The association does not exist between preference to use traditional medicine, and other seven socio-demographic factors (country of origin, gender, age, education, marital status, employment sectors, and working sector) as all p-values of the test are greater than 0.05. Respondents experienced this barrier differently by preferred language and income. Regarding preferred language and income, those who chose to use other languages to communicate (48.3%) and those who had income below RM1000 per month (45.5%) had the highest proportion of responding yes to prefer traditional medicine a barrier to seek medical treatment.

Table 4.10**:** Associations between socio-demographic factors and preference to use traditional medicine

	Reason for avoiding treatment:	I preferred to use traditional medicine like herbal				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	28.5	71.5	3.887	5	0.566
	Bangladesh	34.4	65.6			
	India	22.6	77.4			
	Nepal	23.1	76.9			
	Myanmar	25.0	75.0			
	Others	25.0	75.0			
Gender	Male	26.8	73.2	0.729	1	0.393
	Female	30.9	69.1			
Age	=<30	28.5	71.5	0.378	2	0.828
	31-40	25.6	74.4			
	=>40	27.3	72.7			
Education	Primary or equivalent	23.1	76.9	3.386	2	0.184
	Secondary/equivalent	29.7	70.3			
	Tertiary education	33.3	66.7			
Marital Status	Married	25.2	74.8	1.207	1	0.272
	Non-married	29.6	70.4			
Preferred Language	Malay	25.5	74.5	8.059	2	0.018
	English	33.3	66.7			
	Others	48.3	51.7			
Employment Sector	Government	15.4	84.6	1.009	1	0.315
	Private	28.0	72.0			
Working Sector	Domestic servant	27.5	72.5	1.138	5	0.951
	Construction	24.8	75.2			
	Manufacturing	30.6	69.4			
	Services	28.0	72.0			
	Plantation	30.4	69.6			
	Agriculture	26.1	73.9			
Income	=<RM1000	45.5	54.5	7.746	2	0.021
	RM1001-RM2000	28.6	71.4			
	>=RM2001	22.1	77.9			

Table 4.11 shows the result of association analysis between inability to communicate with doctor/nurse and socio-demographic factors. According to the Chi-square independence test results, association exist between inability to communicate with doctor/nurse and gender (p-

value = 0.020), age (p-value = 0.030), education level (p-value = 0.002), marital status (p-value = 0.030) preferred language to communicate (p-value = 0.000) and working sector (p-value = 0.001). Association does not exist between inability to communicate with doctor/nurse and country of origin (p-value = 0.074), employment sector (p-value = 0.733) and income (p-value = 0.297).

Respondents experienced this barrier differently by gender, age, education, marital status, preferred language, and working sector. Male foreign workers (12.2%) had a higher proportion of answering yes to the inability to communicate with doctors and nurses than females. In terms of age and education, those who were 30 years old and younger (12.9%) and those who had tertiary education level (22.8%) had a higher proportion to answer yes for having the barrier. Non-married (13.2%) had more barriers to communication compared to married workers.

The majority of those who stated that communication issues as a barrier to seek medical treatment preferred to speak in English (28.1%) and other languages (27.6%). Foreign workers from the service sector (18%), construction (11.6%), and manufacturing (7.2%) are the group with the highest proportion of stating communication issue as a barrier compared to the domestic servant (0%), plantation (0%), and agriculture (4.3%).

Table 4.11: Associations between socio-demographic factors and inability to communicate with doctors and nurses

	Reason for avoiding treatment:	I was not able to communicate with doctors and nurses				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	13.6	86.4	10.051	5	0.074
	Bangladesh	11.8	88.2			
	India	3.2	96.8			
	Nepal	4.6	95.4			
	Myanmar	16.7	83.3			
	Others	5.0	95.0			
Gender	Male	12.2	87.8	5.392	1	0.020
	Female	4.5	95.5			
Age	=<30	12.9	87.1	6.990	2	0.030
	31-40	8.3	91.7			
	=>40	1.8	98.2			
Education	Primary or equivalent	6.5	93.5	12.395	2	0.002
	Secondary/equivalent	10.8	89.2			
	Tertiary education	22.8	77.2			
Marital Status	Married	7.2	92.8	4.732	1	0.030
	Non-married	13.2	86.8			
Preferred Language	Malay	7.0	93.0	33.084	2	0.000
	English	28.1	71.9			
	Others	27.6	72.4			
Employment Sector	Government	7.7	92.3	0.116	1	0.733
	Private	10.6	89.4			
Working Sector	Domestic servant	0.0	100	20.241	5	0.001
	Construction	11.6	88.4			
	Manufacturing	7.2	92.8			
	Services	18.0	82.0			
	Plantation	0.0	100			
	Agriculture	4.3	95.7			
Income	=<RM1000	18.2	81.8	2.426	2	0.297
	RM1001-RM2000	9.5	90.5			
	>=RM2001	11.0	89.0			

Table 4.12 gives the association analysis results between trust in doctors to make the right decision and socio-demographic factors. Chi-square independence test results show that the

association between socio-demographic characteristics and trust in doctors to make the right decision does not exist as the test's p-values are greater than 0.05.

Table 4.12: Associations between socio-demographic factors and trust in doctors to make the right decision

	Reason for avoiding treatment:	I did not trust the doctor will make the right decision for me				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	7.0	93.0	5.778	5	0.328
	Bangladesh	4.3	95.7			
	India	0.0	100			
	Nepal	3.7	96.3			
	Myanmar	11.1	88.9			
	Others	5.0	95.0			
Gender	Male	6.1	93.9	1.008	1	0.315
	Female	3.6	96.4			
Age	=<30	5.5	94.5	2.273	2	0.321
	31-40	7.4	92.6			
	=>40	1.8	98.2			
Education	Primary or equivalent	5.4	94.6	0.253	2	0.881
	Secondary/equivalent	5.4	94.6			
	Tertiary education	7.0	93.0			
Marital Status	Married	5.9	94.1	0.058	1	0.809
	Non-married	5.4	94.6			
Preferred Language	Malay	5.0	95.0	1.697	2	0.428
	English	7.0	93.0			
	Others	10.3	89.7			
Employment Sector	Government	7.7	92.3	0.113	1	0.736
	Private	5.5	94.5			
Working Sector	Domestic servant	7.5	92.5	5.016	5	0.414
	Construction	4.1	95.9			
	Manufacturing	8.1	91.9			
	Services	6.2	93.8			
	Plantation	4.3	95.7			
	Agriculture	0.0	100			
Income	=<RM1000	12.1	87.9	3.014	2	0.222
	RM1001-RM2000	5.4	94.6			
	>=RM2001	4.5	95.5			

Table 4.13 shows the association between socio-demographic factors and the unavailability of someone to accompany to go to the clinic or hospital. The results suggest an association between education level (p-value = 0.000) and availability of someone to accompany to go to the clinic or hospital. The Chi-square independence test result shows that the association does not exist between the availability of someone to accompany to go to the clinic or hospital. The other seven socio-demographic factors (country of origin, gender, age, marital status, preferred language to communicate, employment sector, working sector, and income) as p-values of the test are greater than 0.05. Respondents experienced this barrier differently by education. Foreign workers with a tertiary education level (31.6%) had the highest proportion of answering "yes" to the unavailability of someone to accompany me to a clinic or hospital as a barrier to seek medical treatment.

Table 4.13: Associations between socio-demographic factors and the unavailability of someone to accompany to the clinic or hospital

	Reason for avoiding treatment:	No one was available to accompany me to the clinic				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	9.3	90.7	4.979	5	0.418
	Bangladesh	11.8	88.2			
	India	19.4	80.6			
	Nepal	14.8	85.2			
	Myanmar	13.9	86.1			
	Others	20.0	80.0			
Gender	Male	13.8	86.2	3.355	1	0.067
	Female	7.3	92.7			
Age	=<30	13.2	86.8	2.714	2	0.257
	31-40	13.2	86.8			
	=>40	5.5	94.5			
Education	Primary or equivalent	12.9	87.1	24.646	2	0.000
	Secondary/equivalent	7.7	92.3			
	Tertiary education	31.6	68.4			
Marital Status	Married	11.7	88.3	0.150	1	0.698
	Non-married	12.9	87.1			
Preferred Language	Malay	10.8	89.2	5.308	2	0.070
	English	19.3	80.7			
	Others	20.7	79.3			

‘Table 4.13 continued’						
Employment Sector	Government	0.0	100	1.881	1	0.170
	Private	12.7	87.3			
Working Sector	Domestic servant	5.0	95.0	7.248	5	0.203
	Construction	14.9	85.1			
	Manufacturing	16.2	83.8			
	Services	12.4	87.6			
	Plantation	8.7	91.3			
	Agriculture	4.3	95.7			
Income	=<RM1000	24.2	75.8	4.882	2	0.087
	RM1001-RM2000	12.1	87.9			
	>=RM2001	10.4	89.6			

Table 4.14 shows the association between socio-demographic factors and fear of being diagnosed with any disease. Chi-square independence test results show that association exist between fear of being diagnosed with any disease and education level (p-value = 0.000), preferred language to communicate (p-value = 0.000), working sector (p-value = 0.011). The results prove that the association does not exist with the other six socio-demographic factors (country of origin, gender, age, marital status, employment sector, and income) with the p-values greater than 0.05.

Respondents experienced this barrier differently by education, preferred language, and working sector. Regarding education and preferred language, foreign workers with tertiary education level (38.6%), those who preferred the English language for communication (38.6%) ranked the highest proportion to select fear of being diagnosed with any disease as a barrier to seek medical treatment. Domestic servant (12.5%), construction (15.7%), manufacturing (12.6%), and service sector (23%) are the four sectors with the highest proportion of respondents answering “yes” to having this barrier compared to plantation workers (0%) and agriculture (6.5%).

Table 4.14: Associations between socio-demographic factors and fear of being diagnosed with any disease

	Reason for avoiding treatment:	Fear of being diagnosed with any disease				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	18.2	81.8	4.004	5	0.549
	Bangladesh	16.1	83.9			
	India	9.7	90.3			
	Nepal	11.1	88.9			
	Myanmar	13.9	86.1			
	Others	20.0	80.0			
Gender	Male	16.6	83.4	1.485	1	0.223
	Female	11.8	88.2			
Age	=<30	18.1	81.9	4.822	2	0.090
	31-40	11.6	88.4			
	=>40	9.1	90.9			
Education	Primary or equivalent	10.8	89.2	26.868	2	0.000
	Secondary/equivalent	13.9	86.1			
	Tertiary education	38.6	61.4			
Marital Status	Married	12.2	87.8	3.456	1	0.063
	Non-married	18.2	81.8			
Preferred Language	Malay	12.0	88.0	27.604	2	0.000
	English	38.6	61.4			
	Others	20.7	79.3			
Employment Sector	Government	7.7	92.3	0.626	1	0.429
	Private	15.7	84.3			
Working Sector	Domestic servant	12.5	87.5	14.885	5	0.011
	Construction	15.7	84.3			
	Manufacturing	12.6	87.4			
	Services	23.0	77.0			
	Plantation	0.0	100			
	Agriculture	6.5	93.5			
Income	=<RM1000	18.2	81.8	2.303	2	0.316
	RM1001-RM2000	13.7	86.3			
	>=RM2001	18.8	81.2			

Table 4.15 gives the association analysis results between socio-demographic factors and priority given to other basic needs than health care. An association exists between five demographic characteristics (education level, marital status, preferred language, working sector, and income) and priority given to other basic needs than health care with p-values of the Chi-square independence test below 0.05. In contrast, the p-values of the Chi-square independence test between priority given to other basic needs than health care and country

of origin, gender, age, and employment sector are greater than 0.05. Therefore, association does not exist between these four socio-demographic factors and this specific barrier.

Respondents experienced this barrier differently by education, marital status, preferred language, working sector, and income. Foreign workers with a tertiary education level (50.9%) are the group with the highest proportion to select my other basic needs, which is more important than health as a barrier to seeking medical treatment. The proportion of selecting this barrier is highest among non-married (34.3%) compared to married. Those who preferred the English language (59.6%) ranked the highest proportion of selecting this barrier. Workers from service, plantation, and the domestic servant had the highest proportion to answer yes to this barrier (37.3%, 39.1%, and 32.5%, respectively). The majority of those with income below RM1000 (51.5%) answered yes to having this barrier.

Table 4.15: Associations between socio-demographic factors and priority given to other basic needs than health care

	Reason for avoiding treatment:	My other basic needs are more important than health care				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	28.5	71.5	2.094	5	0.836
	Bangladesh	29.0	71.0			
	India	25.8	74.2			
	Nepal	30.6	69.4			
	Myanmar	38.9	61.1			
	Others	25.0	75.0			
Gender	Male	29.6	70.4	0.010	1	0.919
	Female	29.1	70.9			
Age	=<30	32.8	67.2	5.073	2	0.079
	31-40	24.0	76.0			
	=>40	21.8	78.2			
Education	Primary or equivalent	22.0	78.0	17.551	2	0.000
	Secondary/equivalent	30.1	69.9			
	Tertiary education	50.9	49.1			
Marital Status	Married	23.4	76.6	7.027	1	0.008
	Non-married	34.3	65.7			

		‘Table 4.15 continued’				
Preferred Language	Malay	24.8	75.2	30.409	2	0.000
	English	59.6	40.4			
	Others	37.9	62.1			
Employment Sector	Government	23.1	76.9	0.263	1	0.608
	Private	29.7	70.3			
Working Sector	Domestic servant	32.5	67.5	11.674	5	0.040
	Construction	26.4	73.6			
	Manufacturing	19.8	80.2			
	Services	37.3	62.7			
	Plantation	39.1	60.9			
	Agriculture	26.1	73.9			
Income	=<RM1000	51.5	48.5	9.417	2	0.009
	RM1001-RM2000	29.5	70.5			
	>=RM2001	24.7	75.3			

Table 4.16 shows the association between feeling shy about seeing the doctor and sharing health information and socio-demographic factors. According to the Chi-square independence test results, feeling shy is only associated with the country of origin (p-value = 0.000) and income (p-value = 0.014). The test's p-values for the other socio-demographic factors (gender, age, education, marital status, preferred language and employment, and working sector) are greater than 0.05. Respondents experienced this barrier differently by country of origin and income. Foreign workers from Indonesia (19.2%), Myanmar (11.1%), and Bangladesh (7.5%) had the highest proportion of answering “yes” to “feel shy to see the doctor and share my health information” compared to Nepal (5.6%), India (0.0%) and other countries (0.0%). Those who had lower than RM1000 income per month had the highest proportion to answer “yes” to this barrier compared to those with higher salaries.

Table 4.16: Associations between socio-demographic factors and feeling shy to see the doctor and share the health information

	Reason for avoiding treatment:	I feel shy to see the doctor and share my health information				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	19.2	80.8	24.059	5	0.000
	Bangladesh	7.5	92.5			
	India	0.0	100			
	Nepal	5.6	94.4			
	Myanmar	11.1	88.9			
	Others	0.0	100			
Gender	Male	12.0	88.0	0.333	1	0.564
	Female	10.0	90.0			
Age	=<30	13.8	86.2	5.707	2	0.058
	31-40	9.1	90.9			
	=>40	3.6	96.4			
Education	Primary or equivalent	10.2	89.8	2.360	2	0.307
	Secondary/equivalent	11.2	88.8			
	Tertiary education	17.5	82.5			
Marital Status	Married	8.6	91.4	3.494	1	0.062
	Non-married	13.9	86.1			
Preferred Language	Malay	10.1	89.9	5.128	2	0.077
	English	19.3	80.7			
	Others	17.2	82.8			
Employment Sector	Government	15.4	84.6	0.192	1	0.662
	Private	11.5	88.5			
Working Sector	Domestic servant	12.5	87.5	3.579	5	0.611
	Construction	11.6	88.4			
	Manufacturing	10.8	89.2			
	Services	14.3	85.7			
	Plantation	4.3	95.7			
	Agriculture	6.5	93.5			
Income	=<RM1000	27.3	72.7	8.541	2	0.014
	RM1001-RM2000	10.5	89.5			
	>=RM2001	10.4	89.6			

Table 4.17 gives the association analysis results between socio-demographic factors and the difficulty of finding someone to take care of the participants' child/children. Chi-square independence test results show that the association exists between income (p-value = 0.000) and difficulty finding someone to take care of the participants' child/children. The other eight factors (country of origin, gender, age, education, marital status, preferred language to communicate, employment, and working sector) had p-values greater than 0.05. Therefore, association does not exist between the barrier and these seven socio-demographic factors. Respondents experienced this barrier differently by the level of income. The highest proportion of answering yes to the difficulty of finding someone to take care of my child belongs to workers with income below RM1000 per month (12.1%).

Table 4.17: Associations between socio-demographic factors and difficulty finding someone to take care of the participants' child/children

	Reason for avoiding treatment:	I had difficulty finding someone to take care of my child				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	2.3	97.7	16.605	5	0.901
	Bangladesh	2.2	97.8			
	India	3.2	96.8			
	Nepal	2.8	97.2			
	Myanmar	0.0	100.0			
	Others	0.0	100.0			
Gender	Male	2.0	98.0	0.189	1	0.664
	Female	2.7	97.3			
Age	=<30	2.8	97.2	1.581	2	0.454
	31-40	0.8	99.2			
	=>40	1.8	98.2			
Education	Primary or equivalent	1.6	98.4	0.771	2	0.680
	Secondary/equivalent	2.3	97.7			
	Tertiary education	3.5	96.5			
Marital Status	Married	2.7	97.3	0.486	1	0.486
	Non-married	1.8	98.2			
Preferred Language	Malay	1.9	98.1	3.186	2	0.203
	English	1.8	98.2			
	Others	6.9	93.1			

‘Table 4.17 continued’						
Employment Sector	Government	0.0	100	0.299	1	0.585
	Private	2.2	97.8			
Working Sector	Domestic servant	0.0	100	7.693	5	0.174
	Construction	5.0	95.0			
	Manufacturing	0.9	99.1			
	Services	2.5	97.5			
	Plantation	0.0	100			
	Agriculture	0.0	100			
Income	=<RM1000	12.1	87.9	16.291	2	0.000
	RM1001-RM2000	1.6	98.4			
	>=RM2001	1.3	98.7			

4.4.2 Associations between Socio-Demographic Factors and Structural Barriers in Getting Healthcare Services

Table 4.18 shows the results of association analysis between socio-demographic factors and the worry about payment method. According to Chi-square independence test results, the worry about payment method is associated with gender (p-value = 0.024) and working sector (p-value=0.043). The association does not exist between the worry about payment method and country of origin, age, education, marital status, preferred language to communicate, employment sector, and income (p-values > 0.05).

Respondents experienced this barrier differently by gender and working sector. Among foreign workers, females (27.3%) ranked the highest proportion to answer yes to worries about the payment method as a barrier to seek medical treatment. In terms of the working sector, those who are working in agriculture (6.5%) and plantation (4.3%) had the lowest proportion of having this barrier compared to the domestic servant, construction, manufacturing, and service sector (20%, 21.5%, 18.9%, and 24.8% respectively).

Table 4.18: Associations between socio-demographic factors and the worry about payment method

	Reason for avoiding treatment:	I was worried about the payment method (like paying the deposit, paying cash, etc.)				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	23.8	76.2	7.635	5	0.178
	Bangladesh	22.6	77.4			
	India	12.9	87.1			
	Nepal	15.7	84.3			
	Myanmar	11.1	88.9			
	Others	10.0	90.0			
Gender	Male	17.6	82.4	5.074	1	0.024
	Female	27.3	72.7			
Age	=<30	19.3	80.7	0.938	2	0.626
	31-40	22.3	77.7			
	=>40	16.4	83.6			
Education	Primary or equivalent	18.8	81.2	0.475	2	0.789
	Secondary/equivalent	20.8	79.2			
	Tertiary education	17.5	82.5			
Marital Status	Married	18.5	81.5	0.394	1	0.530
	Non-married	20.7	79.3			
Preferred Language	Malay	18.0	82.0	4.395	2	0.111
	English	28.1	71.9			
	Others	27.6	72.4			
Employment Sector	Government	7.7	92.3	1.220	1	0.269
	Private	20.0	80.0			
Working Sector	Domestic servant	20.0	80.0	11.451	5	0.043
	Construction	21.5	78.5			
	Manufacturing	18.9	81.1			
	Services	24.8	75.2			
	Plantation	4.3	95.7			
	Agriculture	6.5	93.5			
Income	=<RM1000	27.3	72.7	2.480	2	0.289
	RM1001-RM2000	17.8	82.2			
	>=RM2001	22.1	77.9			

Table 4.19 gives the results of association analysis between socio-demographic factors and clinics/hospitals' operating hours. The results of Chi-square independence test suggest that association exist between clinics/hospitals operating hours and education (p-value = 0.003), preferred language (p-value = 0.017) and working sector (p-value = 0.001). There is no association between clinics/hospitals' operating hours and six other socio-demographic factors (country of origin, gender, age, marital status, employment sector, and income). All p-values of the test are greater than 0.05.

Respondents experienced this barrier differently by education, preferred language, and working sector. The highest proportion that faced the barrier of operation hours had a secondary level of education (47.1%) compared to those with primary and tertiary education. Those who prefer to communicate in Malay had the lowest proportion to answer "yes" to this barrier compared to the other two groups. Those who were working in the service sector (18.0%) and construction (9.9%) ranked the highest proportion of answering "yes" to this barrier compared to the domestic servant, manufacturing, plantation, and agriculture (5%, 6.3%, 0%, and 2.2% respectively).

Table 4.19: Associations between socio-demographic factors and clinics/hospitals operating hours

	Reason for avoiding treatment:	Clinics or hospitals nearby my living area does not operate out of office work				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	7.0	93.0	5.828	5	0.323
	Bangladesh	11.8	88.2			
	India	9.7	90.3			
	Nepal	14.8	85.2			
	Myanmar	8.3	91.7			
	Others	15.0	85.0			

‘Table 4.19 continued’						
Gender	Male	10.2	89.8	0.004	1	0.950
	Female	10.0	90.0			
Age	=<30	12.3	87.7	5.137	2	0.077
	31-40	7.4	92.6			
	=>40	3.6	96.4			
Education	Primary or equivalent	27.5	38.1	11.628	2	0.003
	Secondary/equivalent	47.1	52.1			
	Tertiary education	25.5	9.8			
Marital Status	Married	8.1	91.9	1.835	1	0.176
	Non-married	11.8	88.2			
Preferred Language	Malay	8.4	91.6	8.199	2	0.017
	English	19.3	80.7			
	Others	17.2	82.8			
Employment Sector	Government	0.0	100	1.509	1	0.219
	Private	10.4	89.6			
Working Sector	Domestic servant	5.0	95.0	19.637	5	0.001
	Construction	9.9	90.1			
	Manufacturing	6.3	93.7			
	Services	18.0	82.0			
	Plantation	0.0	100.0			
	Agriculture	2.2	97.8			
Income	=<RM1000	15.2	84.8	1.853	2	0.396
	RM1001-RM2000	8.9	91.1			
	>=RM2001	11.17	88.3			

Table 4.20 shows the association analysis results between socio-demographic factors and unfriendly behaviour of nurses, doctors, or staff. Associations exist between unfriendly behaviour of nurse, doctors or staffs and gender (p-value = 0.050), working sector (p-value = 0.039) and income (p-value = 0.004) according to the results of Chi-square independence test. There is no association between nurses' unfriendly behaviour, doctors, or staff and six other socio-demographic factors (country of origin, age, education, marital status, preferred language, and employment sector). All p-values of the test are greater than 0.05.

Respondents experienced this barrier differently by gender, working sector, and income. Male foreign workers (9.4%) had a higher proportion to answer “yes” to this barrier compared with females (3.6%). Those who are working in construction (12.4%),

manufacturing (10.8%), and the service sector had a higher proportion to answer "yes" to this barrier compared to the domestic servant (0%), plantation (0%), and agriculture (2.2%). In terms of income, participants with income below RM1000 per month (21.2%) had a higher proportion of stating this barrier as a reason for avoiding seeking medical treatment.

Table 4.20: Associations between socio-demographic factors and unfriendly behaviour of nurses, doctors, or staff

	Reason for avoiding treatment:	Nurses, doctors, or staff are not behaving friendly				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	6.5	93.5	4.043	5	0.543
	Bangladesh	10.8	89.2			
	India	9.7	90.3			
	Nepal	10.2	89.8			
	Myanmar	8.3	91.7			
	Others	0.0	100.0			
Gender	Male	9.4	90.6	3.856	1	0.050
	Female	3.6	96.4			
Age	=<30	9.8	90.2	3.602	2	0.165
	31-40	5.8	94.2			
	=>40	3.6	96.4			
Education	Primary or equivalent	9.7	90.3	0.905	2	0.636
	Secondary/equivalent	7.3	92.7			
	Tertiary education	7.0	93.0			
Marital Status	Married	6.8	93.2	1.056	1	0.304
	Non-married	9.3	90.7			
Preferred Language	Malay	8.7	91.3	1.964	2	0.375
	English	3.5	96.5			
	Others	10.3	89.7			
Employment Sector	Government	7.7	92.3	0.004	1	0.949
	Private	8.2	91.8			
Working Sector	Domestic servant	0.0	100	11.728	5	0.039
	Construction	12.4	87.6			
	Manufacturing	10.8	89.2			
	Services	8.1	91.9			
	Plantation	0.0	100			
	Agriculture	2.2	97.8			
Income	=<RM1000	21.2	78.8	11.028	2	0.004
	RM1001-RM2000	5.7	94.3			
	>=RM2001	10.4	89.6			

Table 4.21 gives the results of association analysis between socio-demographic factors and difficulty to make an appointment. According to the Chi-square independence test results, an association exists between the difficulty of making an appointment and five socio-demographic factors (country of origin, gender, education, working sector, and income). The p-values of the Chi-square independence test are less than 0.05 for all of these five socio-demographic factors. There are four socio-demographic factors (age, marital status, preferred language, and employment sector) with p-values greater than 0.05. Therefore, these four factors have no association with difficulty in making an appointment.

Respondents experienced this barrier differently by country of origin, gender, education, working sector, and income. The highest proportion of those who stated they had difficulty making an appointment was from Nepal (22.2%) and India (19.4%) compared to Indonesia, Bangladesh, Myanmar, and other countries (9.3%, 8.6%, 8.3%, and 10% respectively). Male foreign workers (14.0%) and tertiary education (22.8%) had a higher proportion of this barrier than females. In terms of working sector and income, workers in construction (18.2%), manufacturing (19.8%), and domestic servant (10%), and those with income below RM1000 per month (39.4%) had the highest rank to answer “yes” to this barrier.

Table 4.21: Associations between socio-demographic factors and difficulty to make an appointment

	Reason for avoiding treatment:	I had difficulty making an appointment				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	9.3	90.7	14.539	5	0.013
	Bangladesh	8.6	91.4			
	India	19.4	80.6			
	Nepal	22.2	77.8			
	Myanmar	8.3	91.7			
	Others	10.0	90.0			
Gender	Male	14.0	86.0	3.574	1	0.059
	Female	7.3	92.7			
Age	=<30	12.3	87.7	4.292	2	0.117
	31-40	16.5	83.5			
	=>40	5.5	94.5			
Education	Primary or equivalent	12.4	87.6	6.536	2	0.038
	Secondary/equivalent	10.4	89.6			
	Tertiary education	22.8	77.2			
Marital Status	Married	11.7	88.3	0.255	1	0.614
	Non-married	13.2	86.8			
Preferred Language	Malay	11.8	88.2	3.777	2	0.151
	English	12.3	87.7			
	Others	24.1	75.9			
Employment Sector	Government	7.7	92.3	0.287	1	0.592
	Private	12.7	87.3			
Working Sector	Domestic servant	10.0	90.0	19.072	5	0.002
	Construction	18.2	81.8			
	Manufacturing	19.8	80.2			
	Services	8.7	91.3			
	Plantation	0.0	100			
	Agriculture	2.2	97.8			
Income	=<RM1000	39.4	60.6	24.22	2	0.000
	RM1001-RM2000	11.7	88.3			
	>=RM2001	8.4	91.6			

Table 4.22 shows the association analysis results between socio-demographic factors and the unavailability of doctors at the nearest clinic. Associations exist between unavailability of doctors at the nearest clinic and income (p-value = 0.004) according to the results of the Chi-square independence test. The association does not exist between the unavailability of a doctor at the nearest clinic, and the other eight socio-demographic factors (country of origin, gender, age, education, marital status, preferred language, employment, and working sector) p-values of the test are greater than 0.05. Respondents experienced this barrier differently by the level of income. Foreign workers with less than RM1000 per month (18.2%) had the highest proportion to answer "yes" to the unavailability of a doctor at the nearest clinic as a reason to avoid seeking medical treatment.

Table 4.22: Associations between socio-demographic factors and unavailability of doctors at the nearest clinic

	Reason for avoiding treatment:	The nearest clinic does not have a doctor				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	4.2	95.8	3.470	5	0.628
	Bangladesh	5.4	94.6			
	India	0.0	100.0			
	Nepal	1.9	98.1			
	Myanmar	5.6	94.4			
	Others	5.0	95.0			
Gender	Male	4.3	95.7	1.496	1	0.221
	Female	1.8	98.2			
Age	=<30	4.0	96.0	0.116	2	0.943
	31-40	3.3	96.7			
	=>40	3.6	96.4			
Education	Primary or equivalent	4.8	95.2	1.281	2	0.527
	Secondary/equivalent	3.5	96.5			
	Tertiary education	1.8	98.2			
Marital Status	Married	3.2	96.8	0.436	1	0.509
	Non-married	4.3	95.7			
Preferred Language	Malay	3.8	96.2	1.421	2	0.491
	English	1.8	98.2			
	Others	6.9	93.1			
Employment Sector	Government	7.7	92.3	0.560	1	0.454
	Private	3.7	96.3			

‘Table 4.22 continued’						
Working Sector	Domestic servant	0.0	100	5.958	5	0.310
	Construction	6.6	93.4			
	Manufacturing	2.7	97.3			
	Services	4.3	95.7			
	Plantation	0.0	100			
	Agriculture	2.2	97.8			
Income	=<RM1000	18.2	81.8	20.900	2	0.000
	RM1001-RM2000	2.2	97.8			
	>=RM2001	3.9	96.1			

Table 4.23 shows the association between socio-demographic factors and long waiting time. According to the chi-square independence test results, only education (p-value = 0.000) is associated with the long waiting time. There is no association between the other eight socio-demographic factors (country of origin, gender, age, marital status, preferred language, employment, working sector, and income) and long waiting time as p-values of the test are greater than 0.05. Respondents experienced this barrier differently by the level of education. Foreign workers with the highest education level (54.4%) had the highest proportion of answering yes to long waiting time as a barrier to use health care services.

Table 4.23: Associations between socio-demographic factors and long waiting time

	Reason for avoiding treatment:	The waiting time is too long				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	24.8	75.2	6.177	5	0.289
	Bangladesh	35.5	64.5			
	India	35.5	64.5			
	Nepal	34.3	65.7			
	Myanmar	25.0	75.0			
	Others	35.0	65.0			
Gender	Male	30.6	69.4	0.457	1	0.499
	Female	27.3	72.7			
Age	=<30	30.1	69.9	0.401	2	0.818
	31-40	28.1	71.9			
	=>40	32.7	67.3			
Education	Primary or equivalent	22.0	78.0	21.797	2	0.000
	Secondary/equivalent	30.1	69.9			
	Tertiary education	54.4	45.6			

'Table 4.23 continued'						
Marital Status	Married	29.7	70.3	0.004	1	0.948
	Non-married	30.0	70.0			
Preferred Language	Malay	28.1	71.9	5.620	2	0.060
	English	33.3	66.7			
	Others	48.3	51.7			
Employment Sector	Government	23.1	76.9	0.295	1	0.587
	Private	30.1	69.9			
Working Sector	Domestic servant	20.0	80.0	9.844	5	0.080
	Construction	30.6	69.4			
	Manufacturing	22.5	77.5			
	Services	32.3	67.7			
	Plantation	47.8	52.2			
	Agriculture	37.0	63.0			
Income	=<RM1000	21.2	78.8	1.989	2	0.370
	RM1001-RM2000	31.7	68.3			
	>=RM2001	27.9	72.1			

The existence of an association between the unavailability of transportation and socio-demographic factors has been shown in Table 4.24. The association exist between unavailability of transportation and age (p-value = 0.042), working sector (p-value = 0.002), and income (p-value = 0.033) according to Chi-square independence test results. There is no association between unavailability of transportation and country of origin, gender, education, marital status, preferred language to communicate, and employment sector (p-values > 0.05). Respondents experienced this barrier differently by age, working sector, and level of income. Foreign labourers that were 40 years old and older (5.5%) ranked the lower proportion of answering "yes" to "unavailability of transportation" as a reason for not seeking medical treatment. In terms of working sector and income, those who were working in plantation (4.3%) and agriculture (0.0%) had a lower proportion and those with lower than RM1000 income per month (27.3%) had a higher proportion to face this barrier.

Table 4.24: Associations between socio-demographic factors and unavailability of transportation

	Reason for avoiding treatment:	Transportation was not available for me				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	22.0	78.0	7.776	5	0.169
	Bangladesh	11.8	88.2			
	India	16.1	83.9			
	Nepal	13.0	87.0			
	Myanmar	13.9	86.1			
	Others	10.0	90.0			
Gender	Male	15.8	84.2	1.079	1	0.299
	Female	20.0	80.0			
Age	=<30	19.0	81.0	6.336	2	0.042
	31-40	15.7	84.3			
	=>40	5.5	94.5			
Education	Primary or equivalent	17.7	82.3	0.314	2	0.855
	Secondary/equivalent	15.8	84.2			
	Tertiary education	17.5	82.5			
Marital Status	Married	15.3	84.7	0.574	1	0.449
	Non-married	17.9	82.1			
Preferred Language	Malay	16.3	83.7	0.988	2	0.610
	English	21.1	78.9			
	Others	13.8	86.2			
Employment Sector	Government	23.1	76.9	0.385	1	0.535
	Private	16.1	83.4			
Working Sector	Domestic servant	17.5	82.5	18.429	5	0.002
	Construction	13.2	86.8			
	Manufacturing	22.5	77.5			
	Services	21.7	78.3			
	Plantation	4.3	95.7			
	Agriculture	0.0	100			
Income	=<RM1000	27.3	72.7	6.852	2	0.033
	RM1001-RM2000	18.4	81.6			
	>=RM2001	11.0	89.0			

Table 4.25 gives the results of association analysis between socio-demographic factors and long-distance to clinic/hospital. According to the Chi-square independence test results, an association exists between long-distance to clinic/hospital and five socio-demographic factors (country of origin, gender, preferred language to communicate, working sector, and income). The p-values of the Chi-square independence test are less than 0.05 for all of these five socio-demographic factors. There are four socio-demographic factors (age, education, marital status, and employment sector) with p-values greater than 0.05.

Therefore, these five factors have no association with long-distance to clinic/hospital. Respondents experienced this barrier differently by country of origin, gender, preferred language, working sector, and income. Foreign workers from Myanmar (33.3%), Bangladesh (19.4%), and India (25.8%) ranked the highest proportion of answering "yes" to "clinic or hospital was too far from my house" as a barrier to use health care services. In terms of gender and language preference, males (18.4%) and those who preferred other languages to communicate had the highest proportion to have this barrier. The highest proportion in different working sectors belongs to the construction (24.8%) and manufacturing sector (19.8%). Those who had income below RM1000 per month (30.3%) had the highest proportion of answering yes to this barrier.

Table 4.25: Associations between socio-demographic factors and long-distance to clinic/hospital

	Reason for avoiding treatment:	The clinic or hospital was too far from my house				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	11.2	88.8	16.548	5	0.000
	Bangladesh	19.4	80.6			
	India	25.8	74.2			
	Nepal	15.7	84.3			
	Myanmar	33.3	66.7			
	Others	5.0	95.0			
Gender	Male	18.4	81.6	7.892	1	0.005
	Female	7.3	92.7			
Age	=<30	15.3	84.7	0.622	2	0.733
	31-40	18.2	81.8			
	=>40	14.5	85.5			
Education	Primary or equivalent	17.2	82.8	3.367	2	0.186
	Secondary/equivalent	13.5	86.5			
	Tertiary education	22.8	77.2			
Marital Status	Married	16.2	83.8	0.023	1	0.879
	Non-married	15.7	84.3			
Preferred Language	Malay	13.9	86.1	12.188	2	0.002
	English	19.3	80.7			
	Others	37.9	62.1			
Employment Sector	Government	23.1	76.9	0.508	1	0.476
	Private	15.7	84.3			

		‘Table 4.25 continued’				
Working Sector	Domestic servant	10.0	90.0	14.644	5	0.012
	Construction	24.8	75.2			
	Manufacturing	19.8	80.2			
	Services	10.6	89.4			
	Plantation	8.7	91.3			
	Agriculture	10.9	89.1			
Income	=<RM1000	30.3	69.7	6.098	2	0.047
	RM1001-RM2000	14.0	86.0			
	>=RM2001	16.9	83.1			

4.4.3 Associations between Socio-Demographic Factors and Financial Barriers in Getting Healthcare Services

Table 4.26 shows the results of association analysis between socio-demographic factors and fear of losing daily income. The results of Chi-square independence test prove that associations exist between fear of losing daily income and country of origin (p-value = 0.029), employment sector (p-value = 0.031), and working sector (p-value = 0.001). The association does not exist between fear of losing daily income and six other socio-demographic factors (gender, age, education, marital status, preferred language, and income). All p-values of the test are greater than 0.05.

Respondents experienced this barrier differently by country of origin, employment sector, and working sector. The highest proportion of those who selected fear of losing daily income was from Myanmar (63.9%) and India (61.3%). In terms of employment and working sector, the highest proportion belongs to private-sector workers (45.6%), and those who were work in plantations (60.9%), agriculture (67.4%), and construction (48.8%).

Table 4.26: Associations between socio-demographic factors and fear of losing daily income

	Reason for avoiding treatment:	I had a fear of losing my daily income				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	41.1	58.9	12.495	5	0.029
	Bangladesh	40.9	59.1			
	India	61.3	38.7			
	Nepal	47.2	52.8			
	Myanmar	63.9	36.1			
	Others	30.0	70.0			
Gender	Male	45.4	54.6	0.250	1	0.617
	Female	42.7	57.3			
Age	=<30	44.8	55.2	0.305	2	0.859
	31-40	46.3	53.7			
	=>40	41.8	58.2			
Education	Primary or equivalent	45.2	54.8	1.715	2	0.424
	Secondary/equivalent	46.3	53.7			
	Tertiary education	36.8	63.2			
Marital Status	Married	43.2	56.8	0.400	1	0.527
	Non-married	46.1	53.9			
Preferred Language	Malay	42.8	57.2	5.029	2	0.081
	English	50.9	49.1			
	Others	62.1	37.9			
Employment Sector	Government	15.4	84.6	4.676	1	0.031
	Private	45.6	54.4			
Working Sector	Domestic servant	32.5	67.5	21.041	5	0.001
	Construction	48.8	51.2			
	Manufacturing	33.3	66.7			
	Services	44.1	55.9			
	Plantation	60.9	39.1			
	Agriculture	67.4	32.6			
Income	=<RM1000	48.5	51.5	1.780	2	0.411
	RM1001-RM2000	42.5	57.5			
	>=RM2001	48.7	51.3			

Table 4.27 shows the result of association analysis between socio-demographic factors and the unaffordability of consultation fees. According to the Chi-square independence test results, association exist between unaffordability of consultation fee and country of origin (p-value = 0.000), marital status (p-value = 0.025) and working sector (p-value = 0.000). There is no association between unaffordability of consultancy fee and gender, age,

education, preferred language to communicate, employment sector, and income (p-values of the test are greater than 0.05).

Respondents experienced this barrier differently by country of origin, marital status, and working sector. The lowest proportion of foreign workers who selected unaffordability of consultation fee as a barrier to seek medical treatment belongs to participants from Indonesia (17.3%) and Bangladesh (17.2%). The group of Non-married (30.0%) participants ranked the highest proportion to face this barrier. Those who were working in plantations (56.5%), agriculture (41.3%), and domestic servant (32.5%) had the highest proportion of facing this barrier.

Table 4.27: Associations between socio-demographic factors and unaffordability of consultation fee

	Reason for avoiding treatment:	The consultation fee was not affordable for me				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	17.3	82.7	37.560	5	0.000
	Bangladesh	17.2	82.8			
	India	35.5	64.5			
	Nepal	37.0	63.0			
	Myanmar	55.6	44.4			
	Others	35.0	65.0			
Gender	Male	24.7	75.3	1.692	1	0.193
	Female	30.9	69.1			
Age	=<30	28.5	71.5	3.985	2	0.136
	31-40	24.0	76.0			
	=>40	16.4	83.6			
Education	Primary or equivalent	23.1	76.9	3.994	2	0.136
	Secondary/equivalent	29.7	70.3			
	Tertiary education	19.3	80.7			
Marital Status	Married	21.2	78.8	5.005	1	0.025
	Non-married	30.0	70.0			
Preferred Language	Malay	24.8	75.2	2.300	2	0.317
	English	33.3	66.7			
	Others	31.0	69.0			
Employment Sector	Government	23.1	76.9	0.063	1	0.802
	Private	26.2	73.8			

‘Table 4.27 continued’						
Working Sector	Domestic servant	32.5	67.5	23.386	5	0.000
	Construction	17.4	82.6			
	Manufacturing	21.6	78.4			
	Services	25.5	74.5			
	Plantation	56.5	43.5			
	Agriculture	41.3	58.7			
Income	=<RM1000	30.3	69.7	3.321	2	0.190
	RM1001-RM2000	28.3	71.7			
	>=RM2001	20.8	79.2			

Table 4.28 gives the results of association analysis between socio-demographic factors and unaffordability of medication cost. Chi-square independence test results show that the association exists between unaffordability of medication cost and country of origin (p-value = 0.000) and working sector (p-value = 0.004). The other seven factors (gender, age, education, marital status, preferred language to communicate, employment sector, and income) had p-values greater than 0.05. Therefore, an association does not exist between the unaffordability of medication cost and these seven socio-demographic factors.

Respondents experienced this barrier differently by country of origin and working sector. Foreign workers from Myanmar (52.8%) and Nepal (33.3%) had the highest proportion that stated medication cost was not affordable for them; therefore, they could not get health care services. Participants from the plantation (47.8%) and agriculture (41.3%) had the highest proportion to answer yes to this barrier.

Table 4.28: Associations between socio-demographic factors and unaffordability of medication costs

	Reason for avoiding treatment:	Medication cost was not affordable for me				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	21.0	79.0	26.578	5	0.000
	Bangladesh	14.0	86.0			
	India	25.8	74.2			
	Nepal	33.3	66.7			
	Myanmar	52.8	47.2			
	Others	25.0	75.0			
Gender	Male	24.0	76.0	1.194	1	0.275
	Female	29.1	70.9			
Age	=<30	25.5	74.5	0.900	2	0.638
	31-40	26.4	73.6			
	=>40	20.0	80.0			
Education	Primary or equivalent	23.1	76.9	4.677	2	0.096
	Secondary/equivalent	28.6	71.4			
	Tertiary education	15.8	84.2			
Marital Status	Married	23.4	76.6	0.595	1	0.441
	Non-married	26.4	73.6			
Preferred Language	Malay	25.0	75.0	0.061	2	0.970
	English	26.3	73.7			
	Others	24.1	75.9			
Employment Sector	Government	15.4	84.6	0.670	1	0.413
	Private	25.4	74.6			
Working Sector	Domestic servant	30.0	70.0	17.338	5	0.004
	Construction	18.2	81.8			
	Manufacturing	24.3	75.7			
	Services	21.7	78.3			
	Plantation	47.8	52.2			
	Agriculture	41.3	58.7			
Income	=<RM1000	36.4	63.6	3.902	2	0.142
	RM1001-RM2000	26.0	74.0			
	>=RM2001	20.8	79.2			

The results of the association analysis between socio-demographic factors and unaffordability of transportation cost are shown in Table 4.29. The association exist between unaffordability of transportation cost and country of origin (p-value = 0.000), marital status (p-value = 0.035) and working sector (p-value = 0.000) according to Chi-square independence test results. There is no association between unaffordability of transportation

cost and gender, age, education, preferred language to communicate, employment sector, and income (p-values > 0.05).

Respondents experienced this barrier differently by country of origin, marital status, and working sector. In terms of country of origin, Myanmar (47.2%) and Nepal (25.9%) had the highest proportion of answering yes to the unaffordability of transportation cost as a barrier to seek medical treatment. Non-married (18.6%) had the higher proportion to select this barrier compared to married. Foreign workers working in the plantation (43.5%) and agriculture (37.0%) sector had the highest proportion to answer yes to this barrier.

Table 4.29: Associations between socio-demographic factors and unaffordability of transportation cost

	Reason for avoiding treatment:	Transportation cost was not affordable for me				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	7.9	92.1	48.732	5	0.000
	Bangladesh	9.7	90.3			
	India	16.1	83.9			
	Nepal	25.9	74.1			
	Myanmar	47.2	52.8			
	Others	10.0	90.0			
Gender	Male	15.1	84.9	0.323	1	0.570
	Female	17.3	82.7			
Age	=<30	17.5	82.5	4.009	2	0.135
	31-40	14.0	86.0			
	=>40	7.3	92.7			
Education	Primary or equivalent	16.7	83.3	2.260	2	0.323
	Secondary/equivalent	16.2	83.3			
	Tertiary education	8.8	91.2			
Marital Status	Married	11.7	88.3	4.440	1	0.035
	Non-married	18.6	81.4			
Preferred Language	Malay	15.6	84.4	0.165	2	0.921
	English	14.0	86.0			
	Others	17.2	82.8			
Employment Sector	Government	7.7	92.3	0.626	1	0.429
	Private	15.7	84.3			

		‘Table 4.29 continued’				
Working Sector	Domestic servant	20.0	80.0	40.033	5	0.000
	Construction	8.3	91.7			
	Manufacturing	16.2	83.8			
	Services	9.3	90.7			
	Plantation	43.5	56.5			
	Agriculture	37.0	63.0			
Income	=<RM1000	15.2	84.8	3.583	2	0.167
	RM1001-RM2000	17.8	82.2			
	>=RM2001	11.0	89.0			

Table 4.30 shows the result of association analysis between socio-demographic factors and non-coverage of the medical insurance policy. According to Chi-square independence test results, an association exists between non-coverage of medical insurance policy and country of origin (p-value = 0.000) and working sector (p-value = 0.000). There is no association between the non-coverage of medical insurance policy and six other socio-demographic factors (gender, age, education, marital status, preferred language to communicate, employment sectors, and income). All p-values of the test are greater than 0.05.

Respondents experienced this barrier differently by country of origin and working sector. Among foreign workers, participants from Myanmar (44.4%), Nepal (20.4%), India (16.1%) had the highest proportion to answer yes to the question “My insurance policy does not cover the cost of service I needed” as a barrier to seek medical treatment. In terms of the working sector, the highest proportion belongs to plantation (43.5%) and agriculture (39.1%).

Table 4.30: Associations between socio-demographic factors and non-coverage of the medical insurance policy.

	Reason for avoiding treatment:	My insurance policy does not cover the cost of service I needed				
	Answer:	Yes (%)	No (%)	Value	df	Sig
Country of Origin	Indonesia	7.5	92.5	55.474	5	0.000
	Bangladesh	3.2	96.8			
	India	16.1	83.9			
	Nepal	20.4	79.6			
	Myanmar	44.4	55.6			
	Others	0.0	100.0			
Gender	Male	13.8	86.2	3.355	1	0.067
	Female	7.3	92.7			
Age	=<30	13.5	86.5	1.224	2	0.542
	31-40	10.7	89.3			
	=>40	9.1	90.9			
Education	Primary or equivalent	15.6	84.4	3.621	2	0.164
	Secondary/equivalent	11.2	88.8			
	Tertiary education	7.0	93.0			
Marital Status	Married	12.6	87.4	0.025	1	0.874
	Non-married	12.1	87.9			
Preferred Language	Malay	11.8	88.2	0.916	2	0.633
	English	14.0	86.0			
	Others	17.2	82.8			
Employment Sector	Government	7.7	92.3	0.268	1	0.605
	Private	12.5	87.5			
Working Sector	Domestic servant	5.0	95.0	62.375	5	0.000
	Construction	11.6	88.4			
	Manufacturing	9.0	91.0			
	Services	5.0	95.5			
	Plantation	43.5	56.5			
	Agriculture	39.1	60.9			
Income	=<RM1000	12.1	87.9	5.782	2	0.056
	RM1001-RM2000	14.9	85.1			
	>=RM2001	7.1	92.9			

4.5 Influence of Socio-Demographic Factors on the Extent of Exposure to Personal, Structural, and Financial Barriers

A non-parametric K-independent sample and 2 independent sample tests were used to investigate the influence of socio-demographic factors on exposure to barriers (personal, structural, and financial) in getting healthcare services.

Table 4.31 shows that foreign workers from different countries of origin are differently exposed to personal and financial barriers, as indicated by p-values of the Kruskal-Wallis test less than 0.05 (0.026 and 0.001, respectively). The result also suggests that foreign workers from different countries of origin are similarly exposed to structural barriers (p-value is equal to 0.276). Foreign workers from Bangladesh, Myanmar, Indonesia, and Nepal are more exposed to personal and financial barriers than those from India and other countries, indicated by higher mean ranks of the Kruskal-Wallis test. According to the Mann-Whitney test results, different gender is differently exposed to the personal barrier (p-value= 0.019) and similarly exposed to the structural and financial barriers with the p-value greater than 0.05 (0.742 and 0.869, respectively). Male foreign workers are more exposed to personal barriers than female workers with a higher mean rank (259.38).

Kruskal-Wallis test shows foreign workers with different age group are similarly exposed to personal (P-value= 0.265), structural (P-value= 0.421) and financial (P-value= 0.543) barriers. According to Kruskal-Wallis test results, participants from different levels of education are differently exposed to personal (P-value= 0.000) and structural (P-value= 0.011) barriers. The results also prove that workers with different levels of education are similarly exposed to financial barriers (P-value= 0.155). The participants with tertiary education levels are more exposed to personal and structural barriers with the highest mean rank (329.78 and 295.40) than those with lower education levels.

The results of the Mann-Whitney test reveals that both married and non-married are similarly exposed to personal, structural, and financial barriers with a p-value greater than 0.05. Foreign workers with different language preference are differently exposed to personal (P-value= 0.000), structural (P-value= 0.002) barriers and similarly exposed to the financial

barriers (P-value= 0.267). Those who preferred to use other languages to communicate are more exposed to the personal barrier, with a mean rank of 326.52. Those who preferred to communicate in English and other languages are more exposed to structural barriers, with the mean rank of 312.78 and 288.75.

The Mann-Whitney test results show foreign workers who work in the private or government sector are similarly exposed to personal (P-value= 0.108), structural (P-value= 0.416), and financial (P-value= 0.133) barriers. The Participants from different working sectors are differently exposed to structural and financial barriers as indicated by p-values of the Kruskal-Wallis test that are less than 0.05 (P-value= 0.044 and 0.000, respectively). The result also suggests that foreign workers from different working sectors are similarly exposed to personal barriers (p-value is equal to 0.166). Those who work in the service sector, construction, manufacturing, and domestic servant are more exposed to structural barriers with the mean rank of 268.96, 265.2, 245.70, and 224.16. Foreign workers who work in plantation and agriculture sectors had the highest mean rank in financial barriers (337.37 and 318.76) than other sectors' workers, which means they are more exposed to financial barriers.

According to the Kruskal-Wallis test result, foreign workers with different income levels are differently exposed to personal (P-value= 0.001) barriers. According to the results, they are similarly exposed to the structural (P-value=0.176) and financial barriers (P-value= 0.481). Participants with monthly income below RM1000 are more exposed to personal barriers than those with higher income, with a mean rank of 331.15.

Table 4.31: Significance of differences in the extent of exposure to personal, structural, and financial barriers

	Personal Barriers		Structural Barriers		Financial Barriers	
Socio-demographic factors	***P-value***	***Mean Rank***	***P-value***	***Mean Rank***	***P-value***	***Mean Rank***
Country of origin[2]	**0.026**		**0.276**		**0.001**	
Indonesia		260.21				258.35
Bangladesh		275.54				277.05
India		185.90		NA		185.95
Nepal		233.14				259.96
Myanmar		262.42				227.33
Others		227.75				158.88
Gender[1]	**0.019**		**0.742**		**0.869**	
Male		259.38		NA		NA
Female		223.42				
Age[2]	**0.265**	NA	**0.421**	NA	**0.543**	NA
Education[2]	**0.000**		**0.011**		**0.155**	
Primary or equivalent		235.67		234.28		NA
Secondary or		245.64		254.20		
equivalent		329.78		295.40		
Tertiary or equivalent						
Marital status[1]	**0.289**	NA	**0.306**	NA	**0.281**	NA
Preferred language[2]	**0.000**		**0.002**		**0.267**	
Malay		237.30		242.12		NA
English		317.00		288.75		
Others		326.52		312.78		
Employment sector[1]	**0.108**	NA	**0.416**	NA	**0.133**	NA
Working sector[2]	**0.166**	NA	**0.044**		**0.000**	
Domestic servant				224.16		241.85
Construction				265.02		242.04
Manufacturing				245.70		232.80
Services				268.96		242.42
Plantation				218.33		337.37
Agriculture				209.18		318.76
Income[1]	**0.001**		**0.176**		**0.481**	
=<RM1000		331.15		NA		NA
RM1001-RM2000		253.44				
>=RM2001		230.47				

Note: [1]: based on the Mann-Whitney test, [2]: based on the Kruskal-Wallis test.

4.6 Barriers to Healthcare Utilization

According to the Institute of Medicine Model, barriers were divided into three categories to answer the third research question. These three categories are personal, structural, and financial barriers.

There were a set of questions related to each category of the barrier. The main question was: "Have you ever decided not to go to a clinic or hospital for treatment due to any of the following reasons?". The respondents answered the sub-questions by "Yes" or "No."

4.6.1 Personal Barrier

According to the result presented in Table 4.32, majority of the respondents (75.6%) mentioned they avoided to go to the clinic or hospital because did not think their illness was too serious, 14.3% afraid of medications side effect, 5.8% avoided to seek health care because the nearest clinic did not have same-gender doctor, 26.2% were not able to get leave from their work, and 27.6 preferred to use their own traditional medicine like herbal medication. Around 10.6% had language problem to communicate with doctors and nurses, only 5.6% did not trust the doctors to make the right decision for their treatment, 12.4% did not have anyone to accompany them to go to the clinic or hospital, and 15.5% had a fear of being diagnosed with the disease. Interestingly 29.4% believed their other basic needs were more important than their health, 11.6% feel shy to see a doctor and share their health problem, and only 2.2% had difficulty finding someone to take care of their child/children.

Table 4.32: Reasons for not going to clinic or hospital for treatment

	Reasons	Frequency of answering "Yes."	Percentage
Personal factors	I did not think that my illness was too serious	380	75.6
	I am afraid of the medications side effects	72	14.3
	The nearest clinic does not have a same-gender doctor	29	5.8
	I was not able to get leave from work	132	26.2
	I preferred to use traditional medicine like herbal medication	139	27.6
	I was not able to communicate with doctors and nurses (language problem)	53	10.6
	I did not trust the doctor will make the right decision for me	28	5.6
	No one was available to accompany me to the clinic/hospital	62	12.4
	Fear of being diagnosed with any disease	78	15.5
	My other basic needs are more important than health care	148	29.4
	I feel shy to see a doctor and share my health problems	58	11.6
	I had difficulty in finding someone to take care of my child/children	11	2.2

4.6.1.1. Impact of Personal Barriers on the Tendency of Getting Treatment in Case of Mild Sickness

A chi-square independent test and logistic regression analysis were used to analyze the impact of barriers (personal, structural, and financial) on the tendency of getting medical treatment in different levels of illness (mild and severe) among unskilled foreign labourer in Malaysia.

Table 4.33 shows that 75% of those who live in Malaysia for one year or, 82.7% of those who live for 1 to 5 years, 78.9% of those who live for 6-10 years, and 92.3% of those who live for more than 11 years has less tendency to get medical treatment in case of mild sickness. However, the Chi-square independence test result shows no association between the duration of stay in Malaysia and the tendency to get medical services at a clinic or hospital in case of mild sickness (p-value = 0.328). The majority of all ethnic groups will not get medical treatment in case of mild sickness. Only 33.2% of Indonesians, 2.2% of Bangladeshis, 0.0% of Indians, 10.2% of Nepalese, 5.6% of Myanmarese, and 0.0% of other ethnic groups will get medical treatment for mild sickness. The Chi-square independence test shows association exists between the country of origin and the tendency to get medical services at a clinic or hospital in case of mild sickness (p-value = 0.000). Those from Indonesia had more tendency to get treatment than those from other countries.

82.9% of male and 82.7% female has less tendency to get treatment when experiencing mild sickness. According to the Chi-square independence test, there is no association between gender and the preference to get medical services at a clinic or hospital in case of mild sickness (p-value = 0.973). Most of the respondents regardless of age groups had less tendency to get medical treatment when experiencing mild sickness (85% of those who are 30 years old and younger, 77.5% of 31-40 years old, and 81.8% of those who are 40 years

old and older). According to the Chi-square independence test, there is no association between age and tendency to get medical services at a clinic or hospital in case of mild sickness (p-value = 0.175).

Most respondents had less tendency to get treatment in all education levels when experiencing mild sickness (80.6% of those with primary education, 84.5% with secondary, and 82.5% with tertiary education). The p-value of the Chi-square independence test shows there is no association between education and using medical services (p-value = 0.625). 81.4% of married and 83.9% of non-married had less tendency to get medical treatment for mild sickness. The p-value of the Chi-square independence test shows that there is no association between marital status and tendency to get medical services at a clinic or hospital in case of mild sickness (p-value = 0.465). Only 17.8% of those who prefer to communicate with the Malay language, 17.5% of those who prefer the English language, and 6.9% of those who prefer other languages had a higher tendency to get treatment for mild sickness. There is no association between preferred language and tendency to get medical services at a clinic or hospital in mild sickness (p-value = 0.359).The majority of foreign labourers who work in different employment and the working sector tend to get medical treatment for mild sickness. According to the Chi-square independence test, there is no association between the employment sector (p-value = 0.359) and the tendency to get medical services at a clinic or hospital in case of mild sickness.

There is an association between the working sector (p-value = 0.029) and the tendency to get medical services at a clinic or hospital in case of mild sickness with those working as a domestic servant (25%) and in the manufacturing sector (24.5%) had higher tendency to get treatment than those working in other sectors. Most of the respondents with different income

levels had less tendency to use medical services when experiencing mild sickness (=<RM1000= 87.9%, RM1001-RM2000= 83.1%, and >=RM2001= 81.2%). According to the Chi-square independence test, there is no association between income and the tendency to get medical services at a clinic or hospital in case of mild sickness (p-value = 0.635).

Table 4.33: Pearson Chi-square independence test between socio-demographic and tendency to get treatment when experiencing mild sickness

		Tendency to get treatment				
		Not go	Will go	value	df	P-value
Lengths of stay	<=1 year	75.0%	25%			
	1-5 years	82.7%	17.3%			
	6-10 years	78.9%	21.1%	3.445	3	0.328
	>11 years	92.3%	7.7%			
Country of Origin	Indonesia	66.8%	33.2%			
	Bangladesh	97.8%	2.2%			
	India	100%	0.0%			
	Nepal	89.8%	10.2%	70.810	5	0.000
	Myanmar	94.4%	5.6%			
	Others	100%	0.0%			
Gender	Male	82.9%	17.1%			
	Female	82.7%	17.3%	0.001	1	0.973
Age	=<30	85.0%	15.0%			
	31-40	77.5%	22.5%	3.486	2	0.175
	=>40	81.8%	18.2%			
Education	Primary or equivalent	80.6%	19.4%			
	Secondary or equivalent	84.5%	15.5%	0.941	2	0.625
	Tertiary education /equivalent	82.5%	17.5%			
Marital Status	Married	81.4%	18.6%	0.535	1	0.465
	Non-married	83.9%	16.1%			
Preferred Language	Malay	82.2%	17.8%			
	English	82.5%	17.5%	2.286	2	0.319
	Others	93.1%	6.9%			
Employment Sector	Government	92.3%	7.7%	0.842	1	0.359
	Private	82.6%	17.4%			
Working Sector	Domestic servant	75.0%	25.0%			
	Construction	82.6%	17.4%			
	Manufacturing	75.5%	24.5%	12.472	5	0.029
	Services	85.7%	14.3%			
	Plantation	87.0%	13.0%			
	Agriculture	95.7%	4.3%			
Income	=<RM1000	87.9%	12.1%			
	RM1001-RM2000	83.1%	16.9%	0.909	2	0.635
	>=RM2001	81.2%	18.8%			

Based on Pearson Chi-square independence test results, country of origin and working sector have been selected from socio-demographic factors for logistic regression analysis to predict the likelihood of using medical services in case of mild sickness. The estimation results are given in Table 4.34. Country of origin was found to be insignificant determinant in the logistic regression with the p-value greater than 0.05 (Indonesia (reference), Bangladesh (p-value=0.909), India (p-value=0.124), Nepal (p-value-0.273), Myanmar (p-value=0.281), other countries (p-value=0.311)). In terms of the working sector, the results suggest that those working as domestic servants have a 6.2 times higher possibility of getting treatment (Exp(B)= 6.207) than those working in the agriculture sector when experiencing mild sickness with a p-value of 0.027. Other working sectors are not a significant determinant of getting treatment for mild sickness (p-values > 0.05).

Table 4.34: Socio-demographic factors as determinants of the tendency to get treatment when experiencing mild sickness in logistic regression

		B	S.E.	Wald	df	Sig.	Exp(B)
Country of Origin	Indonesia	Ref	Ref	Ref	Ref	Ref	Ref
	Bangladesh	0.039	0.338	0.013	1	0.909	1.039
	India	-1.169	0.759	2.368	1	0.124	0.311
	Nepal	-0.384	0.350	1.203	1	0.273	0.681
	Myanmar	-0.618	0.572	1.164	1	0.281	0.539
	Others	-0.790	0.780	1.026	1	0.311	0.454
Working Sector	Agriculture	Ref	Ref	Ref	Ref	Ref	Ref
	Domestic servant	1.826	0.826	4.880	1	0.027	6.207
	Construction	1.363	0.771	3.127	1	0.077	3.908
	Manufacturing	1.908	0.763	6.260	1	0.012	6.742
	Services	1.273	0.763	2.783	1	0.095	3.573
	Plantation	1.235	0.958	1.662	1	0.197	3.439
Constant		-2.822	0.747	14.255	1	0.000	0.059

According to Table 4.35, in the case of mild sickness, those who thought their illness was not too serious (85.8%) have a higher possibility of not going to a clinic or hospital for treatment compared to those who do not have this belief (73.8%). Chi-square independence test proves an association between thinking the illness is not too serious and the tendency to get medical service (p-value = 0.002). There is a high possibility of not seeking medical treatment in the case of mild sickness for both those who were afraid of medication side effects (80.6%) and those without this fear (83.2%). The p-value of the chi-square independence test shows that there is no association between fear of medication side effects and the tendency of getting medical treatment (p-value=0.579). 69% of those who mentioned that they did not go to the clinic/hospital because the nearest clinic/hospital does not have a same-gender doctor cannot get treatment when experiencing mild sickness. Interestingly, a higher percentage (83.7%) of those who did not avoid seeking care due to this barrier also had a higher possibility of not getting treatment when experiencing mild sickness. The Chi-square independence test shows a significant relationship between the unavailability of same-gender doctors and the tendency to get medical treatment (p-value = 0.041).

87.9% of respondents could not get medical leave, and 81% of those who could get medical leave have a higher possibility of not getting treatment when experiencing mild sickness. The p-value of the Chi-square independence test shows that there is no association between the inability to get medical leave and the tendency to get medical treatment (p-value = 0.073). The majority (91.4%) of those who prefer traditional medication have a lower tendency to get treatment in the case of mild sickness. A lower percentage (79.6%) of those who do not prefer traditional medicine also has a lower tendency to get treatment in mild sickness. The relationship between using traditional medication and getting medical treatment is significant (p-value = 0.002).

According to the chi-square independence test, there is no association between communication issues and the tendency to use health care services (p-value=0.970). Therefore, 83% of those who were not able to communicate with doctors/nurses and 82.8% of those who did not have any problem in communication will not seek medical treatment in the case of mild sickness. There is not much difference between the group who trust the doctor to make the right decision (17.9%) and the group who trust (17.1%) in case of mild sickness to get treatment. The p-value in the chi-square independence test shows that there is no association between trust in doctors and the tendency of getting medical treatment (p-value=0.920). There is no significant relationship between the availability of someone to accompany and the tendency to get treatment according to the result of the chi-square independence test (p-value=0.054). 74.2% of those who do not have anyone to accompany them to hospital or clinic and 84.1% of those who have someone to accompany will not seek medical treatment in the case of mild sickness. The p-value of the chi-square independence test shows that there is no relationship between the fear of being diagnosed with any disease and the tendency of using medical services (p-value=0.650). 15.4% of those who fear being diagnosed with any illness and 17.5% of those who do not have this fear tend to get medical treatment in the case of mild sickness.

88.5% of those who believe that their other basic needs are more important than their healthcare will not get treatment in a clinic or hospital for mild sickness. This percentage is slightly lower in the second group, who do not believe (80.5%). The Association between the importance of other basic needs and the tendency of getting medical treatment is significant (p-value=0.029). 84.5% of those who feel shy to see a doctor will not go to a clinic or hospital for mild sickness, and 17.6% of those who do not feel shy will go to a clinic or hospital to

get treatment. There is no association between feeling shy to share their health problem and willingness to use health care services based on the chi-square independence test (p-value=0.723). A hundred percent of those who have a child and do not have anyone to take care of their child will not go to a clinic or hospital, and among those who do not have this difficulty, 82.4% will not go. There is no significant association between having someone take care of a child/children and getting medical treatment (p-value=0.123).

Table 4.35: Pearson Chi-square independence test between personal barriers and tendency to get treatment when experiencing mild sickness

		Tendency to get treatment				
		Not go	Will go	Value	df	P-value
I thought my illness is not too serious	Yes	85.8%	14.2%	9.318	1	0.002
	No	73.8%	26.2%			
I am afraid of the medications side effects	Yes	80.6%	19.4%	0.307	1	0.579
	No	83.2%	16.8%			
The nearest clinic does not have a same-gender doctor	Yes	69.0%	31.0%	4.164	1	0.041
	No	83.7%	16.3%			
I was not able to get leave from work	Yes	87.9%	12.1%	3.207	1	0.073
	No	81.0%	19.0%			
I preferred to use traditional medicine like herbal medication	Yes	91.4%	8.6%	9.850	1	0.002
	No	79.6%	20.4%			
I was not able to communicate with doctors and nurses (language problem)	Yes	83.0%	17.0%	0.001	1	0.970
	No	82.8%	17.2%			
I did not trust the doctor will make the right decision for me	Yes	82.1%	17.9%	0.010	1	0.920
	No	82.9%	17.1%			
No one was available to accompany me to the clinic/hospital	Yes	74.2%	25.8%	3.547	1	0.054
	No	84.1%	15.9%			
Fear of being diagnosed with any disease	Yes	84.6%	15.4%	0.206	1	0.650
	No	82.5%	17.5%			
My other basic needs are more important than health care	Yes	88.5%	11.5%	4.765	1	0.029
	No	80.5%	19.5%			
I feel shy to see a doctor and share my health problems	Yes	84.5%	15.5%	0.125	1	0.723
	No	82.6%	17.4%			
I had difficulty in finding someone to take care of my child/children	Yes	100%	0.0%	2.331	1	0.123
	No	82.4%	17.6%			

Out of 12 personal factors tested using the Pearson chi-square independence test, only four factors were significant (p-values < 0.05) and selected for logistic regression analysis to predict the likelihood of using medical services in case of mild sickness. The estimation results of the logistic regression are given in Table 4.36. The p-value for "The thinking of illness is not too serious" is significant (0.014). Those who believe their illness was not too serious have 53.1% less possibility of getting treatment (exponentiation of B coefficient (Exp (B)) = 0.531). The p-value of "Unavailability of same-gender doctor" is significant (0.006). Those who had an issue with the unavailability of same-gender doctor has 56% lower possibility of getting medical treatment (Exp(B)=0.565). Preference for traditional medication has a significant p-value of 0.007, and this group has a 38% less possibility of getting treatment (Exp(B)=0.380). The p-value of the "importance of other basic needs" is not significant (p-value= 0.152).

Table 4.36: Personal barriers as determinants of the tendency to get treatment when experiencing mild sickness in logistic regression

	B	S.E.	Wald	df	Sig.	Exp(B)
I thought my illness is not too serious	-0.633	0.258	6.015	1	0.014	0.531
The nearest clinic/hospital did not have same gender doctor	-0.271	0.461	7.587	1	0.006	0.565
I preferred to use traditional medicine like herbal medication	-0.968	0.359	7.257	1	0.007	0.380
My other basic needs are more important than health care	-0.452	0.315	2.049	1	0.152	0.637
Constant	-0.886	0.220	16.251	1	0.000	0.412

4.6.1.2 Impact of Personal Barriers in Case of Severe Sickness

Table 4.37 shows no association between the duration of stay in Malaysia and the tendency to get treatment according to the chi-square independence test (p-value=0.817). The majority of Indonesians (87.9%), Bangladeshis (73.1%), Indian (67.7%), Nepalese (76.9%), Myanmarese (63.9%), and other countries (80%) will get medical treatment for severe sickness. There is a significant association between the country of origin and the tendency of getting therapy according to the chi-square independence test (p-value=0.001). Male (75.3%) has less tendency to get medical treatment in severe sickness than females (94.5%). The association exists between gender and the tendency of getting treatment based on the result of the chi-square independence test (p-value=000).

There is no association between age and the tendency to get treatment according to the chi-square independence test (p-value=0.322). The majority of all the three categories of age tend to get medical treatment in the case of severe sickness (=<30 years old =77.9%, 31-40 years old = 84.3%, and =>40 years old =78.2%). Most of the respondents in all education levels will get medical treatment in severe sickness (Primary=79.6%, secondary=80.7%, and tertiary= 73.7%). The relationship between education and the tendency to get treatment is not significant (p-value=0.494). 85.1% of married and 75% and non-married will get medical treatment in case of severe sickness. The relationship between marital status and the tendency to get treatment is significant (p-value=0.005). The majority of those who prefer to communicate in the Malay language (80.8%) and English (80.7%) will get medical treatment in case of severe sickness, which is higher compared to those who prefer to speak in other languages (58.6%).

There is a significant association between preferred language and the tendency of getting treatment (p-value= 0.016). The majority of workers in government (84.6%) and private sector (79.3%) will get medical treatment in case of severe sickness. The relationship between the employment sector and the tendency to get treatment is not significant (p-value=0.642). Most labourers in the different working sectors will get medical treatment in severe sickness (government=84.5%, private=79.3%). The relationship between the working sector and the tendency to get treatment is significant (p-value=0.000). 90% of those who are working in domestic servant and 93.7% of those who work in the manufacturing sector will go to clinic or hospital to get medical treatment which is considerably higher compared to other sectors (construction (75.2%), service (75.2%), plantation (69.6%, and agriculture (67.4%)). Respondents with a higher income level (82.5% and 80%) have a higher tendency to get medical treatment than those who earn less than RM1000 per month (60.6%). There is an association between income and the tendency to get medical treatment (p-value= 0.017).

Table 4.37: Pearson Chi-square independence test to show the impact of socio-demographic barriers in getting health care services when experiencing severe sickness

		Tendency to get treatment				
		Not go	Will go	value	df	P-value
Lengths of stay	<=1 year	25.0%	75.0%			
	1-5 years	21.4%	78.6%			
	6-10 years	17.1%	82.9%	0.937	3	0.817
	>11 years	17.9%	82.1%			
Country of Origin	Indonesia	12.1%	87.9%			
	Bangladesh	26.9%	73.1%			
	India	32.3%	67.7%			
	Nepal	23.1%	76.9%			
	Myanmar	36.1%	63.9%	19.948	5	0.001
	Others	20.0%	80.0%			
Gender	Male	24.7%	75.3%			
	Female	5.5%	94.5%	19.600	1	0.000
Age	=<30	22.1%	77.9%			
	31-40	15.7%	84.3%	2.269	2	0.322
	=>40	21.8%	78.2%			

‘Table 4.37 continued’						
Education	Primary or equivalent	20.4%	79.6%			
	Secondary or equivalent	19.3%	80.7%			
	Tertiary education /equivalent	26.3%	73.7%	1.409	2	0.494
Marital Status	Married	14.9%	85.1%	7.799	1	0.005
	Non-married	25.0%	75%			
Preferred Language	Malay	19.2%	80.8%			
	English	19.3%	80.7%	8.214	2	0.016
	Others	41.4%	58.6%			
Employment Sector	Government	15.4%	84.6%	0.216	1	0.642
	Private	20.7%	79.3%			
Working Sector	Domestic servant	10.0%	90.0%			
	Construction	24.8%	75.2%			
	Manufacturing	6.3%	93.7%	25.175	5	0.000
	Services	24.8%	75.2%			
	Plantation	30.4%	69.6%			
	Agriculture	32.6%	67.4%			
Income	<RM1000	39.4%	60.6%			
	RM1000-RM2000	20.0%	80.0%	8.103	2	0.017
	>RM2000	17.5%	82.5%			

Based on the Pearson chi-square independence test, country of origin, gender, marital status, preferred language, working sector, and income have been selected from socio-demographic factors for logistic regression analysis. As presented in Table 4.38, Indonesia has a significant p-value of 0.063, with 3.8 times more likely to get medical treatment (Exp(B) of 3.813) compared to other ethnicities as a reference group. Bangladesh, India, Nepal, and Myanmar are not significant in logistic regression (p-value> 0.05). Gender has a significant p-value of 0.001. Male has a 13% lower possibility of getting medical treatment than females (Exp(B) of 0.133). Marital status is not significant, with a p-value of 0.113. Those who prefer the Malay language (p-value= 0.057) and English language (p-value= 0.016) have 3 and 5 times more likely to get medical treatment compared to those who preferred other languages (Exp(B) of 3.067 and Exp(B) of 5.092). Workers in the manufacturing sector have a significant p-value of 0.002, five times more likely to get medical treatment than agriculture sector workers. Other sectors are not significant, with a p-value greater than 0.05. Labourers

with lower than RM1000 per month (p-value= 0.001) have a 22% lower possibility of getting medical treatment than those with an income of more than RM2000.

Table 4.38: Logistic Regression of socio-demographic barriers when experiencing severe sickness

		B	S.E.	Wald	df	Sig.	Exp(B)
Country of Origin	Others	Ref	Ref	Ref	Ref	Ref	Ref
	Indonesia	1.338	0.720	3.452	1	0.063	3.813
	Bangladesh	0.840	0.741	1.286	1	0.257	2.317
	India	1.170	0.893	1.717	1	0.190	3.222
	Nepal	0.894	0.730	1.503	1	0.220	2.446
	Myanmar	0.155	0.801	0.038	1	0.846	1.168
Gender	Female	Ref	Ref	Ref	Ref	Ref	Ref
	Male	-2.017	0.605	11.113	1	0.001	0.133
Marital Status	No-married	Ref	Ref	Ref	Ref	Ref	Ref
	Married	-0.433	0.273	2.517	1	0.113	0.648
Preferred Language	Other	Ref	Ref	Ref	Ref	Ref	Ref
	Malay	1.121	0.588	3.637	1	0.057	3.067
	English	1.628	0.678	5.764	1	0.016	5.092
Working Sector	Agriculture	Ref	Ref	Ref	Ref	Ref	Ref
	Domestic	-0.381	0.790	0.233	1	0.630	0.683
	Construction	-0.063	0.446	0.020	1	0.887	0.939
	Manufacturing	1.610	0.524	9.426	1	0.002	5.000
	Services	-0.024	0.412	0.003	1	0.954	0.976
	Plantation	0.114	0.579	0.039	1	0.844	1.121
Income	<RM1000	-1.514	0.473	10.254	1	0.001	0.220
	RM1000-RM2000	-0.472	0.308	2.340	1	0.126	0.624
	>RM2000	Ref	Ref	Ref	Ref	Ref	Ref
Constant		1.532	1.018	2.267	1	0.132	4.629

Table 4.39 shows that, in the case of severe sickness, there is a considerable difference in the tendency of getting treatment between those who believe their illness is not too serious (76.1%) and those who did not have this belief (90.2%). The Chi-square independence test proves a high association between thinking the illness is not too serious and the tendency to get medical treatment (p-value= 0.001). 34.7% of those who fear medication's side effects will not go to clinics or hospitals to treat their severe sickness, but this number is lower among those who did not have this fear (18.1%). The p-value of the chi-square independence test

shows a high association between fear of medication side effects and the tendency to get medical treatment (p-value=0.001). Only 65.5% of those who had a problem with the doctor's gender will go to a clinic or hospital to get medical treatment, and 80.3% of those who did not have the same issue will treat their severe sickness by using a clinic or hospitals services. The chi-square independence test shows no significant relationship between the doctor's gender and the tendency to get medical treatment (p-value=1.141). In going to a clinic or hospital, there is no noticeable difference between those who could not get medical leave (78.8%) and those who could get medical leave (79.7%). The p-value of the chi-square independence test shows that there is no association between the ability to get medical leave and the tendency of getting medical treatment (p-value= 0.818).

Around 75.5% of those who prefer traditional medicine and 81.0% of those who do not prefer traditional medicine will go to a clinic or hospital in case of severe sickness. There is no significant association between the preference of using traditional medication and the tendency of getting medical services in case of severe sickness (p-value=0.176). There is no noticeable difference between those who had language problems (71.7%) and those who did not have a language barrier (80.4%) going to a clinic or hospital to treat severe sickness. According to the chi-square independence test, there is no association between the communication issue and the tendency of using health care services (p-value=0.138).

In severe sickness, only 60.7% of those who did not trust the doctor's decision will go to a clinic or hospital lower than those who trust on doctor's decision (80.6%). The p-value of the chi-square independence test shows a high association between trust in doctors and the tendency to get medical treatment (p-value=0.011). There is not much difference between those who did not have anyone to accompany them (79%) to go to a clinic or hospital

compared to those who had someone to accompany them (79.5%). There is no significant relationship between the availability of someone to accompany and the tendency of getting treatment according to the result of the chi-square independence test (p-value=0.925). 71.8% of those who reported that they fear diagnosing an illness will go to a clinic or hospital to treat their severe sickness, which is not considerable compared to those who did not have this fear (80.9%). The p-value of the chi-square independence test shows that fear of being diagnosed with any disease and the tendency of getting medical services are not associated (p-value=0.067).

Those who think that their other basic needs are more important than their health (70.9%) have less possibility of getting treatment than those who did not believe (83.1%). The relationship between the importance of other basic needs and the tendency of getting medical treatment is significant (p-value=0.002). 81% of those who feel shy to share their health problem with the doctor, and 79.3% of those who did not have this feeling will go to a clinic or hospital in case of severe sickness. There is no association between feeling shy to share their health problem and the tendency of getting treatment based on the chi-square independence test (p-value=0.756).

63.6% of those who had difficulty in finding someone to take care of their child/children, and 79.8% of those who did not have this issue will go to a clinic or hospital to get medical treatment in the case of severe sickness. There is no significant association between having someone to take care of a child/children and the tendency of getting medical treatment (p-value=0.188).

Table 4.39: Pearson chi-square independence test for personal barriers when experiencing severe sickness

		Tendency to get treatment				
		Not go	Will go	Value	Df	P-value
I thought my illness is not too serious	Yes	23.9%	76.1%	11.276	1	0.001
	No	9.8%	90.2%			
I am afraid of the medications side effects	Yes	34.7%	65.3%	10.399	1	0.001
	No	18.1%	81.9%			
The nearest clinic does not have a same-gender doctor	Yes	34.5%	65.5%	3.918	1	0.141
	No	19.7%	80.3%			
I was not able to get leave from work	Yes	21.2%	78.8%	0.053	1	0.818
	No	20.3%	79.7%			
I preferred to use traditional medicine like herbal medication	Yes	24.5%	75.5%	1.832	1	0.176
	No	19.0%	81.0%			
I was not able to communicate with doctors and nurses (language problem)	Yes	28.3%	71.7%	2.202	1	0.138
	No	19.6%	80.4%			
I did not trust the doctor will make the right decision for me	Yes	39.3%	60.7%	6.405	1	0.011
	No	19.4%	80.6%			
No one was available to accompany me to the clinic/hospital	Yes	21.0%	79%	0.009	1	0.925
	No	20.5%	79.5%			
Fear of being diagnosed with any disease	Yes	28.2%	71.8%	3.346	1	0.067
	No	19.1%	80.9%			
My other basic needs are more important than health care	Yes	29.1%	70.9%	9.377	1	0.002
	No	16.9%	83.1%			
I feel shy to see a doctor and share my health problems	Yes	19.0%	81.0%	0.097	1	0.756
	No	20.7%	79.3%			
I had difficulty in finding someone to take care of my child/children	Yes	36.4%	63.6%	1.732	1	0.188
	No	20.2%	79.8%			

Based on the Pearson chi-square independence test, six personal factors have been selected for logistic regression (Table 4.40). Those who believe their illness was not too serious with a p-value of 0.001 have a 33% lower possibility of getting treatment (Exp(B)=0.337). Respondents with fear of medication side effects with a p-value of 0.085 have a 56% lower possibility of getting treatment (Exp(B)=0.565). There is no significant difference in the likelihood of getting medical treatment between those who did not trust on doctor's decision and those who trust the doctor (p-value=0.386). Those who believe their other basic needs

are more important than health with a p-value of 0.062 have a 60% lower possibility of getting treatment (Exp(B)=0.600).

Table 4.40: Logistic Regression- personal barriers when experiencing severe sickness

	B	S.E.	Wald	df	Sig.	Exp(B)
I thought my illness is not too serious	-1.087	0.339	10.269	1	0.001	0.337
I am afraid of the medications side effects	-0.571	0.332	2.971	1	0.085	0.565
I did not trust the doctor will do the right decision for me	-0.423	0.488	0.752	1	0.386	0.655
My other basic needs are more important than health care	-0.511	0.274	3.478	1	0.062	0.600
Constant	2.558	.328	60.680	1	0.000	12.910

Table 4.41 presents a summary of the impact of personal barriers on the tendency to get medical treatment. In the case of mild sickness, only six factors were significant according to the Chi-square independence test. These factors include: Country of origin, working sector, thinking the illness is not too serious, doctor's gender, prefer to use traditional medicine, and importance of other basic needs compared to health.

In the case of severe sickness, factors are acting differently compared to mild sickness. In the case of severe sickness, only ten factors were significant according to the Chi-square independence test. These factors include: Country of origin, gender, marital status, language, working sector, income, thinking the illness is too serious, trust in the doctor, fear of being diagnosed with any disease, and importance of other basic needs compared to health.

Table 4.41: Summary of the impact of personal barriers on the tendency of getting medical treatment

	Mild Sickness		Severe Sickness	
	Association (Chi-square independence test)	Odds Ratio (Logistic regression)	Association (Chi-square independence test)	Odds Ratio (Logistic regression)
Duration of stay	×		×	
Country of origin	✔	Insignificant	✔	Indonesian are 3.8 times more likely to get treatment Ref: other countries
Gender	×		✔	
Age	×		×	Male 7.6 less likely Ref: female
Education	×		×	
Marital Status	×		✔	Insignificant
Preferred Language	×		✔	Malay 3 times, English 5 times more likely Ref: other languages
Employment Sector	×		×	
Working Sector	✔	Domestic servant 6 times more likely Ref: Agriculture	✔	Manufacturing 5 times more likely Ref: Agriculture
Income	×		✔	<RM1000, 4.5 times less likely
I thought my illness is not too serious	✔	(0.531), 1.8 times less likely	✔	(0.337), 3 times less likely Ref: >RM2000
I am afraid of the medications side effects	×		✔	
The nearest clinic does not have a same-gender doctor	✔	(0.565), 1.7 times less likely	×	
I was not able to get leave from work	×		×	
I preferred to use traditional medicine like herbal medication	✔	(0.380), 38% less likely	×	
I was not able to communicate with doctors and nurses (language problem)	×		×	
I did not trust the doctor will make the right decision for me	×		✔	Insignificant
No one was available to accompany me to the clinic/hospital	×		×	
Fear of being diagnosed with any disease	×		×	
My other basic needs are more important than health care	✔	Insignificant	✔	Insignificant
I feel shy to see a doctor and share my health problems	×		×	

'Table 4.41 continued'

I had difficulty in finding someone to take care of my child/children	×	×

Note: ✔ represents significant at 0.05 significance level

4.6.2 Structural Barriers

Table 4.42 shows questions related to structural barriers. Around 19.7% of respondents avoided seeking health care due to fears of payment method, 10.2% mentioned clinic or hospital not operating after working time, and 8.2% did not have any issue with nurses, doctors, or staff behavior. Making an appointment was an issue for 12.5% of the sample population, and 3.8% mentioned the doctor was not available in the nearest clinic. Around 29.9% decided not to go to the clinic or hospital because the waiting time was too long, 16.7% stated that transportation was not available, and 15.9% mentioned clinic or hospital was far from their living area.

Table 4.42: The structural reasons of respondents avoided going to clinic/ hospital

	Reasons	Frequency of answering "Yes."	Percentage
Structural factors	I was worried about the payment method (like paying a deposit, paying cash, etc.…)	99	19.7
	Clinics or hospitals nearby my residential area does not operate out of office working hours	51	10.2
	Nurses, doctors, or staffs are not behaving friendly	41	8.2
	I had a problem making an appointment	63	12.5
	The nearest clinic does not have a doctor	19	3.8
	The waiting time is too long	150	29.9
	Transportation was not available for me	84	16.7
	Clinic or hospital too far from my house	61	12.2

4.6.2.1 Impact of Structural Barriers in Case of Mild Sickness

Table 4.43 shows that in case of mild sickness between those who worry about the payment method (17.2%) and those who do not have these worries (17.4%), there is no noticeable difference in the tendency to get medical treatment. The Chi-square independence test shows no association between worries about payment method and the tendency to get medical treatment (p-value=0.963). There is no noticeable difference between those participants who reported that the nearest clinic or hospital does not operate out of office hours (13.7%) and those who noted that the nearest clinic and hospital operate out of office hours (17.7%) getting medical treatment for mild sickness. But, a p-value of the chi-square independence test is not significant in the case of mild sickness (p-value=0.473).

There is considerably no difference in medical treatment between those who had a problem with nurses, doctors, and staff behavior (19.5%) and those who did not have this issue (17.1%). There is no association between doctors, nurses, or other staff behavior and the tendency of getting medical treatment in mild sickness (p-value=0.700). There is not a noticeable difference between those who had a problem in making an appointment (23.8%) and those who did not have this barrier (16.4%) in the case of mild sickness. The Chi-square independence test shows no association between making appointments and the tendency to get medical treatment (p-value=0.146).

There is not a noticeable difference between those who reported that the nearest clinic or hospital does not have a doctor (21.1%) and those who did not face this issue (17.2%) in the case of mild sickness. Based on the p-value in the chi-square independence test, there is no association between a doctor's availability and the tendency to get medical treatment (p-value=0.662). Long waiting time has a considerable effect on getting treatment during mild

sickness. Only 7.3% of those who had a problem with waiting time are going to a clinic and hospital, and 21.6% of those who did not have this problem will refer to a clinic or hospital to treat mild sickness. Long waiting time has a high association with the tendency of getting medical treatment in case of mild sickness (p-value=0.000). 19% of those who had a problem of availability of transportation and 17% of those who did not have this problem will go to the clinic or hospital to get treatment. There is no relationship between transportation availability and the tendency to get medical treatment in mild sickness (p-value= 0.649). 21.3% of those who live too far from a clinic or hospital will go to the clinic to treat their mild sickness, and 16.8% of those who did not have the issue will go to a clinic or hospital to treat mild sickness. There is no relationship between long distance to the health care provider and the tendency of getting medical services (p-value=0.381).

Table 4.43: Pearson Chi-square independence test for structural barriers when experiencing mild sickness

		Tendency to get treatment				
		Not go	Will go	Value	df	P-value
I was worried about payment method	Yes	82.8%	17.2%	0.002	1	0.963
	No	82.6%	17.4%			
Clinics or hospitals nearby my living area does not operate out of office hour	Yes	86.3%	13.7%	0.515	1	0.473
	No	82.3%	17.7%			
Nurses, doctors, or staffs are not behaving friendly	Yes	80.5%	19.5%	0.148	1	0.700
	No	82.9%	17.1%			
I had a problem making an appointment	Yes	76.2%	23.8%	2.111	1	0.146
	No	83.2%	16.4%			
The nearest clinic does not have a doctor	Yes	78.9%	21.1%	0.191	1	0.662
	No	82.8%	17.2%			
The waiting time is too long	Yes	92.7%	7.3%	14.923	1	0.000
	No	78.4%	21.6%			
Transportation was not available for me	Yes	81.0%	19.0%	0.208	1	0.649
	No	83.0%	17.0%			
The clinic or hospital was too far from my house	Yes	78.7%	21.3%	0.768	1	0.381
	No	83.2%	16.8%			

Only one factor has been selected for logistic regression based on the result of the chi-square independence test (Table 4.44). Long waiting time has a p-value of 0.000, and those who have an issue with long waiting time have a 28% lower possibility of getting treatment (Exp(B)=0.287).

Table 4.44: Logistic Regression- structural barriers when experiencing mild sickness

	B	S.E.	Wald	df	Sig.	Exp(B)
The waiting time is too long	-1.247	0.339	13.533	1	.000	.287
Constant	-1.290	0.130	99.114	1	.000	.275

4.6.2.2 Impact of Structural Barriers in the Case of Severe Sickness

Table 4.45 shows that in case of severe sickness 80.8% of those who had worries about payment method and 79.2% of those who did not have these worries will use medical services provided in clinics or hospitals. The Chi-square independence test proves no association between worries about payment method and willingness to get treatment (p-value=0.715). Crosstab analysis shows that there is not a considerable difference in medical services between those who reported clinic/hospital does not operate out of office work (78.4%) and those who did not have a problem with clinic or hospital operation hours (79.6%). A p-value of the chi-square independence test proves that there is no relationship between operation hours and the tendency of getting medical treatment (p-value=0.845). 70.7% of respondents who had an issue with nurses, doctors, and staff behavior and 80.3% of those who did not have this issue will get health care services when experiencing severe sickness. There is no association between nurses, doctors, or staff behavior and the tendency of getting medical treatment (p-value=0.148).

71.4% of those who had a problem making an appointment and 80.6% of those who did not have this issue will use health care services in severe sickness. There is no association between the difficulty of making appointments and the tendency of getting medical services (p-value=0.091). 68.4% of those who reported a doctor were not available, and 79.9% of those who did not have an issue with the availability of a doctor will get medical treatment in the case of severe sickness. The Chi-square independence test shows no association between the availability of a doctor and the tendency of getting medical treatment (p-value=0.224).

Those who mentioned long waiting time as the barrier (72%) have a lower possibility of getting medical treatment in the case of severe sickness compared to those who did not have any problem with waiting time (82.7%). Long waiting time and the tendency of getting health care services are associated (p-value=0.007).

82.1% of those who mentioned transportation was not available, and 78.9% of those who did not have transportation problems will use medical treatment in case of severe sickness. There is no relationship between transportation availability and the tendency to get health care services (p-value=0.508).

Around 62.3% of those who said the clinic was far from my living area will go to a clinic or hospital to treat their severe sickness, which is a lower possibility than those not living far from the clinic or hospital (81.9%). There is a significant relationship between clinics or hospitals' availability and the tendency to use health care services (p-value=0.000).

Table 4.45: Pearson Chi-square independence test for structural barriers when expecting severe sickness

		Tendency to get treatment				
		Not go	Will go	Value	df	P-value
I was worried about payment method	Yes	19.2%	80.8%	0.133	1	0.715
	No	20.8%	79.2%			
Clinics or hospitals nearby my living area does not operate out of office work	Yes	21.6%	78.4%	0.038	1	0.845
	No	20.4%	79.6%			
Nurses, doctors, or staffs are not behaving friendly	Yes	29.3%	70.7%	2.096	1	0.148
	No	19.7%	80.3%			
I had a problem making an appointment	Yes	28.6%	71.4%	2.865	1	0.091
	No	19.4%	80.6%			
The nearest clinic does not have a doctor	Yes	31.6%	68.4%	1.481	1	0.224
	No	20.1%	79.9%			
The waiting time is too long	Yes	28.0%	72.0%	7.343	1	0.007
	No	17.3%	82.7%			
Transportation was not available for me	Yes	17.9%	82.1%	0.438	1	0.508
	No	21.1%	78.9%			
The clinic or hospital was too far from my house	Yes	37.7%	62.3%	12.577	1	0.000
	No	18.1%	81.9%			

Table 4.46 presents logistic regression of structural barriers in severe sickness. According to the Pearson chi-square of independence test, three significant factors have been selected for logistic regression. Among these three factors, making an appointment was not significant, with a p-value of 0.724. Those who had an issue with long waiting time (p-value=0.043) has a 61% lower possibility of getting treatment (Exp(B)=0.619), and unavailability of the clinic or hospital nearby living area (p-value=0.047) has a 50% negative effect on the tendency of getting medical treatment (Exp(B)=0.503).

Table 4.46: Logistic Regression- structural barriers in severe sickness

	B	S.E.	Wald	df	Sig.	Exp(B)
The waiting time is too long	-0.480	0.237	4.094	1	0.043	0.619
Clinic or hospital was too far from my house	-.688	.345	3.963	1	0.047	0.503
Constant	1.697	0.152	124.366	1	0.000	5.459

Table 4.47 shows the summary of the impact of the structural barrier on the tendency to get medical treatment. In the case of mild sickness, only one factor is significant in the chi-square independence test, and logistic regression analysis shows the number of times that this factor can increase or decrease the possibility of getting treatment. Those who selected long waiting time as a barrier have a 3.5 times less possibility of getting medical treatment than those who did not have an issue with waiting time.

In severe sickness, two structural factors have an association with the tendency to get medical treatment. These factors include; long waiting times and distance to a healthcare provider.

Table 4.47: Summary of the impact of structural barrier in the tendency of getting medical treatment

	Mild Sickness		Severe Sickness	
	Association (Chi-square independence test)	Odds Ratio (Logistic regression)	Association (Chi-square independence test)	Odds Ratio (Logistic regression)
I was worried about the payment method	×		×	
Clinics or hospitals nearby my living area does not operate out of office work	×		×	
Nurses, doctors, or staffs are not behaving friendly	×		×	
I had a problem making an appointment	×		×	
The nearest clinic does not have a doctor	×		×	
The waiting time is too long	✔	(0.287) 3.5 times less likely	✔	(0.619) 1.6 times less likely
Transportation was not available for me	×		×	
The clinic or hospital was too far from my house	×		✔	(0.503) 2 times less likely

Note: ✔represents significant at 0.05 significance level

4.6.3 Financial Barriers

Table 4.48 shows that 44.8% had a fear of losing daily income. Consultancy fees, medication costs, and transportation costs are not affordable for 21.6%, 25.1%, and 15.5% of respondents. 12.4% stated that their insurance does not cover the costs of their needed services.

Table 4.48: The financial reasons of respondents avoided going to clinic/ hospital

	Reasons	Frequency of answering "Yes."	Percentage
Financial factors	I had a fear of losing my daily income	225	44.8
	The consultancy fee was not affordable for me	131	26.1
	Medication cost was not affordable for me	126	25.1
	Transportation cost was not affordable for me	78	15.5
	My insurance policy does not cover the cost of service I needed	62	12.4

4.6.3.1 Impact of Financial Barriers in Case of Mild sickness

According to Table 4.49, there is less possibility of getting treatment among those who fear losing daily income (10.2%) than those who did not have this fear (23.1%). The Chi-square independence test proves a high association between fear of losing daily income and the tendency to get treatment (p-value=0.000). There is less possibility of getting treatment among those who reported consultancy fee was not affordable (11.5%) compared to those who did not have this issue (19.4%). A P-value of 0.039 shows a significant relationship between consultancy affordability and the tendency to get health care services. There is a big difference in the tendency of getting medical treatment between those who reported

medication cost was not affordable (8.7%) and those who did not face this issue (20.2%). There is an association between medication costs affordability and the tendency to get treatment. There is no noticeable difference between those who had a problem with the affordability of transportation costs (10.3%) to get medical treatment and those who did not have an issue with transportation costs (18.6%). Affordability of transportation cost is not associated with the tendency of getting medical services (p-value=0.072). There is no considerable difference in getting treatment for mild sickness among those who mentioned their insurance policy does not cover the costs of services they need (14.5%) and those who did not have this issue (17.7%). Chi-square independence test shows no association between insurance policy coverage and getting medical services in mild sickness (p-value=0.532).

Table 4.49: Pearson Chi-square independence test for financial barriers when experiencing mild sickness

		Tendency to get treatment				
		Not go	Will go	Value	df	P-value
I had a fear of losing my daily income	Yes	89.8%	10.2%	14.381	1	0.000
	No	76.9%	23.1%			
The consultancy fee was not affordable for me	Yes	88.5%	11.5%	4.278	1	0.039
	No	80.6%	19.4%			
Medication cost was not affordable for me	Yes	91.3%	8.7%	8.685	1	0.003
	No	79.8%	20.2%			
Transportation cost was not affordable for me	Yes	89.7%	10.3%	3.226	1	0.072
	No	81.4%	18.6%			
My insurance policy does not cover the cost of service I needed	Yes	85.5%	14.5%	0.391	1	0.532
	No	82.3%	17.7%			

Table 4.50 shows logistic regression- financial barrier when experiencing mild sickness. Among the five factors in financial barriers, four elements have been selected for logistic regression. Fear of losing daily income with a p-value of 0.004 has a negative impact on getting treatment. Those who fear losing daily income have a 43% lower likelihood of getting treatment (Exp(B)=0.437). There is no significant difference in getting medical treatment between those who reported consultancy fee is not affordable and those who report it was affordable (p-value of 0.618). The affordability of medication costs with a p-value of 0.090 is not significant (Table 4.51).

Table 4.50: Logistic Regression- financial barrier when experiencing mild sickness

	B	S.E.	Wald	df	Sig.	Exp(B)
I had a fear of losing my daily income	-0.828	0.289	8.206	1	0.004	0.437
Consultancy fee was not affordable to me	0.205	0.411	0.248	1	0.618	1.227
Medication cost was not affordable to me	-0.849	0.501	2.875	1	0.090	0.428
Constant	-1.161	0.146	63.047	1	0.000	0.313

4.6.3.2 Impact of Financial Barriers in Case of Severe Sickness

Table 4.51 shows the Pearson Chi-square independence test for financial barriers when experiencing severe sickness. There is no noticeable difference in severe sickness in the tendency to get medical treatment between those who fear losing their daily income (78.7%) and those who did not have this fear (80.1%). A p-value of the chi-square independence test shows no association between fear of losing daily income and the tendency of getting treatment (p-value=0.683). There is not a noticeable difference between those respondents who reported consultancy fee was not affordable (82.3%) and those who did not face this barrier (77.9%) in seeking medical treatment in the case of severe sickness. According to

Chi-square independent test, there is no significant association between the affordability of consultancy fees and the tendency of getting treatment (p-value= 0.139).

77% of those who mentioned medication costs were not affordable, and 80.3% did not mention this issue as a barrier to a clinic or hospital to get medical treatment. There is no association between medication cost affordability and the tendency of getting treatment (p-value=0.422). There is no difference in the tendency of getting medical treatment between those who mentioned transportation costs were not affordable (79.5%) and those who did not have this problem (79.5%). The Chi-square independence test proves no association between transportation cost affordability and the tendency of getting medical treatment. Those who reported their medical insurance policy do not cover the cost of service they needed (82.3%) have slightly more possibility of getting treatment than those who did not report this issue (79.1%). According to Chi-square independent test, there is no significant association between insurance coverage and the willingness to get medical treatment.

Table 4.51: Pearson Chi-square independence test for financial barriers when experiencing severe sickness

		Tendency to get treatment				
		Not go	Will go	Value	df	P-value
I had a fear of losing my daily income	Yes	21.3%	78.7%	0.166	1	0.683
	No	19.9%	80.1%			
Consultancy fee was not affordable to me	Yes	16.0%	84.0%	2.189	1	0.139
	No	22.1%	77.9%			
Medication cost was not affordable to me	Yes	23.0%	77.0%	0.644	1	0.422
	No	19.7%	80.3%			
Transportation cost was not affordable to me	Yes	20.5%	79.5%	0.000	1	0.999
	No	20.5%	79.5%			
My insurance policy does not cover the cost of the service I needed.	Yes	17.7%	82.3%	0.334	1	0.563
	No	20.9%	79.1%			

Table 4.52 shows a summary of the impact of financial barriers on the tendency to get medical treatment. Four financial barrier factors are associated with the tendency of getting medical treatment in the case of mild sickness, while in the case of severe sickness; financial factors are not playing any role.

According to the chi-square independent test, the three significant factors in mild sickness include; Fear of losing income is associated with getting medical and 2.3 times reducing the likelihood of getting medical treatment. Unaffordability of consultancy fees is associated with getting medical treatment in the chi-square independence test, but it is insignificant in logistic regression. Unaffordability of medication cost is associated with getting medical and 2.3 times reducing the possibility of getting medical treatment.

Table 4.52: Summary of the impact of financial barriers on the tendency of getting medical treatment

	Mild Sickness		Severe Sickness
	Association (Chi-square independence test)	Odds Ratio (logistic regression)	Association (Chi-square independence test)
I had a fear of losing my daily income	✔	(0.437) 2.3 times less	×
The consultancy fee was not affordable to me	✔	insignificant	×
Medication cost was not affordable to me	✔	insignificant	×
Transportation cost was not affordable to me	×		×
My insurance policy does not cover the cost of the service I needed	×		×
Note: ✔ represents significant at 0.05 significance level			

4.7 Hypothesis Testing

H1: Association exists between certain types of socio-demographic factors and barriers (personal, structural, and financial) in getting healthcare services.

According to the Chi-Square independence test analysis, the association exists between certain socio-demographic factors and personal, structural, and financial barriers to healthcare services. The association of socio-demographic characteristics varies for each element in personal, structural, and financial barriers. The results are consistent with that of other studies done by (Kehinde (2020), Ogunlesi & Olanrewaju, 2010), and (Kalule-Sabiti, Amoateng, & Ngake, 2014). Therefore, hypothesis 1 was accepted.

H2: Certain socio-demographic factors influence the extent of exposure to personal, structural, and financial barriers in getting healthcare services.

According to the non-parametric test of socio-demographic factors, certain socio-demographic factors influence the extent of exposure to personal, structural, and financial barriers in getting healthcare services. This result is in line with other studies like Samkange-Zeeb et al. (2020). Therefore, hypothesis 2 was accepted.

H3: The effects of certain types of personal, structural, and financial barriers to getting medical treatment are not the same for different levels of sickness.

According to the Chi-Square independence test analysis, the barriers were not the same for different levels of sickness. The impact of each barrier varied, and the tendency to use healthcare services depending on the severity of the illness. The result was consistent with

that of other studies done by (Corso et al. (2003), ICRC (2015), Name (2015)) and (WHO (2003)). Therefore, hypothesis 3 was accepted.

4.8 Conclusion

This chapter presented the analysis of the results data. The next chapter will discuss the analysis. Considering the critical role of using health care services, this study makes an effort to investigate health care utilization, accessibility, the association between socio-demographic factors and barriers, investigate the influence of socio-demographic characteristics on exposure to barriers, and find the barriers of using health care services. This study used self-administrated primary data. The discussion and conclusion of the research will be discussed in the following chapters.

CHAPTER 5

DISCUSSION

5.1 Introduction

This chapter contains the interpretation of the results and discusses the findings of the research. The findings of the research are compared and contrasted with previous studies. This chapter starts with discussing research questions 1 to 3.

5.2 Discussion of the Findings

Following the data provided by the Malaysian Ministry of Human Resources (MOHR, 2017), this study attempted to select respondents mainly from Indonesia, Bangladesh, and Nepal. The majority were less than 30 years old and had been educated up to primary or secondary levels.

According to the report on the population provided by the Ministry of Human Resources, Malaysia, they were mainly employed in the private, service, construction, and manufacturing sectors. The majority of the respondents earned a monthly income of less than RM2000 and resided in Malaysia for less than five years. There was a difference among the respondents in getting medical treatment in cases of mild and severe sickness. In the case of a mild sickness, most respondents avoided seeking healthcare services, as recommended in research by Keller and Baune (2005). However, most respondents would seek treatment at a clinic or hospital when it came to severe sickness. The possibility of obtaining treatment among the different sectors depended on the level of the sickness (mild or severe).

Private clinics are the most available health service providers and are ranked as the highest regular source of healthcare services followed by pharmacies because they are easier to reach, have a shorter waiting time, and are not overcrowded. This preference for private clinics is in line with studies done by Balarajan, Selvaraj, and Subramanian (2011) and Aitken, Backliwal, Chang, and Udeshi (2013).

The leading travel option to get to a clinic or hospital was by private vehicle. Public transportation played a minor role compared to personal transportation. Therefore, healthcare services were available for almost the entire sample population, but most did not fully access these services. This finding was in line with that of Noh, Wahab, Bakar, and Islam (2016).

Overall, the majority of the respondents were in a good state of health. Most of them had not experienced hospitalization, and only one person had been hospitalized for more than a month.

5.3 Research Question 1: Which Socio-Demographic Factor is Associated with Barriers (Personal, Structural, and Financial) in Getting Healthcare Services?

Association exists between certain types of socio-demographic factors and barriers (personal, structural, and financial) in getting healthcare services.

5.3.1 Thinking That the Illness Was Not Too Serious

According to Chi-square independent test analysis, associations exist between four socio-demographic factors (country of origin, gender, preferred language to communicate, and working sector), and "I did not think that my illness was too serious." Most foreign workers

from Bangladesh, Myanmar, other countries, and Nepal stated that they do not seek treatment because they feel the disease is not too severe. However, this could be a misinterpretation due to their cultural and health belief background. This finding supplements the research by Ma, Sanchez, and Ma (2019), Uddin et al. (2020), and Widayanti, Norris, Heydon, and Green (2019). The majority of males believe their illness was not too serious about seeking medical treatment. It could be due to the tendency of ignoring illness symptoms by the male. Thus, they are unaware of signs that females feel acute, so they may be less willing and able to seek medical care for perceived symptoms. The finding is consistent with Verbrugge (1982), World Bank (2001), and Brown, Sagar-Ouriaghli, and Sullivan, (2019).

Most foreign workers who prefer "other language" to communicate with doctors or nurses stated their illness was not too serious about seeking medical treatment. Ignoring illness symptoms could be due to the inability to communicate with the healthcare provider, acquiring knowledge on sickness, making an appointment, and locating a health facility. The results are similar to other studies like Kim and Keefe (2010) and Lloyd et al. (2018). The most significant proportion of participants who answered yes to this barrier was from the agriculture, construction, and plantation sectors. The reason could be working and living in poor accommodation areas and traveling to see a health care provider. Therefore, they may ignore their health needs to reduce their costs. This finding was in line with Loganathan et al. (2019).

5.3.2 Fear of Medication Side Effect

According to the Chi-square independence test results, an association exists between fear of medication side effects and education level, preferred language to communicate, and income level. The majority of those who had a fear of medication side effects had a higher education

level. The reason could be having more knowledge and ability to search about medication side effects than those with lower education levels. This finding supplements the research by Petelinsek and Korajlija (2020).

The majority of respondents who stated that they feared medication side effects preferred to communicate in other languages. This could be a misinterpretation due to communication issues and fear of misunderstanding how and why they have to use medications. The results are similar to the study by Karliner et al. (2012). The proportion of answering yes to fear of medication side effects is higher among foreign workers with a lower income level, related to medication adherence. They may believe the medication's side effect is higher than its benefit, and it may cause more health care expenditure. The finding is in line with Ji and Hong (2020) and Mishra, Gioia, Childress, Barnet, and Webster (2011).

5.3.3 Doctor's Gender

Chi-square independence test result shows the association between doctor's gender and working sector and income. Those working in construction, manufacturing, and plantation have the highest proportion of answering "yes" to this barrier. This could be a misinterpretation due to country of origin, gender, communication issue, and cultural belief. The majority of workers in these sectors are male, and they may prefer to see a male doctor. The result is in line with other studies like Amir et al. (2018) and Anoosheh, Zarkhah, Faghihzadeh, and Vaismoradi (2009). The highest proportion of answering yes to the doctor's gender as a barrier to seeking medical treatment belongs to those with monthly income below RM1000. The finding is unique to evaluate the association between income and preferring same-gender doctors. The cultural norms or values mean little when it comes to personal preference for the doctor's gender. However, the transformation of a personal

preference to the actual selection may encounter socio-cultural influences and systemic barriers (Ahmad, Gupta, Rawlins, & Stewart, 2002).

5.3.4 Not Being Able to Get Medical leaves

There is an association between not getting leave from work and country of origin, working sector, and income level. The highest proportion of answering yes to not getting leave as a barrier to getting medical treatment belongs to respondents from Indonesia and Bangladesh, workers in the plantation and agriculture sector, and those who had below RM1000 monthly income. The majority of Indonesian have a salary below RM1000 (69.7%). The majority of workers from Bangladesh are working in the construction and service sectors. Working/living are, income level and fear of being less competent can increase their fear of losing their job. Therefore, it can influence their tendency to get medical leave for medical treatment. The finding is similar to studies done by Maunsell, Brisson, Dubois, Lauzier, and Fraser (1999), Pérez-Escamilla, Garcia, and Song (2010), and Peipins et al. (2012).

5.3.5 Prefer to Use Traditional Medications

The association exists between preferring to use traditional medicine and preferred language to communicate and income. Those who preferred to use other languages to communicate and those who had income below RM1000 per month had the highest proportion of respondents who preferred traditional medicine as a barrier seeking medical treatment. The reasons could be due to a communication problem, medication costs, or cultural beliefs. Many workers bring herbal medication from their country of origin, which has lower prices than chemical medications. The finding supplements the research by Loganathan et al. (2019).

5.3.6 Communication Issue

According to the Chi-square independence test results, an association exists between the inability to communicate with doctors/nurses and six socio-demographic factors (gender, age, education level, marital status, preferred language to communicate, and working sector). The majority of those who stated they had communication issues were male, younger than 30 years old, had higher education levels; they were single. They preferred to communicate in English and other languages. Men have different strategies from women when ill, attaching less importance to their treatment and the disease; they might have more communication issues than women. This finding is in line with other studies like Madsen (2015). In terms of age, youngers have shorter lengths of stay in Malaysia, and they may not be familiar with the language, culture, and health care system in Malaysia. Therefore, they may report more communication barriers. Other studies showed that doctors communicate better with higher education levels due to better understanding (Yip, 2017). However, higher education levels may increase patients' expectations and ask more questions from health care providers in their communication, leading to dissatisfaction. The assumption is supported by Verlinde, De Laender, De Maesschalck, Deveugele, and Willems (2012). Non-married have more communication issues, which could be due to being younger and shorter lengths of stay and unfamiliarity with the healthcare system in Malaysia. This finding is similar to research done by Bradley, Sparks, and Nesdale (2001) and Sanz et al. (2011). Language has a substantial influence on the quality of communication with health care providers. Therefore, it seems those who do not prefer the Malay language have a communication issue. This finding is in line with studies carried out by Ferguson and Candib (2002), Samkange-Zeeb et al. (2020), Adhikary, Keen, and Van Teijlingen (2019), and Karliner et al. (2012).

There is no substantial evidence to show the association between the working sector itself and the communication barrier. Yet, the majority of those who stated that they had communication issues were from the services sector. According to data, most of this group are males and non-married and residing in Malaysia for less than five years. This study is not in line with (Willems, De Maesschalck, Deveugele, Derese, & De Maeseneer, 2005). Willems et al. (2005), believe there is a positive relationship between patient jobs classification and social class and communication with doctors.

5.3.7 Trust on Doctor's to make the right decision

Chi-square independent test result shows that the association between socio-demographic factors and trust in doctor's decision making does not exist. The result supplements the research by Nguyen, Schwei, Zhao, Rathouz, and Jacobs (2020), but it is inconsistent with Gupta, Brenner, Ratanawongsa, and Inadomi (2014), Loganathan et al. (2019), Rawaf and Kressin (2007), and Schnittker (2004). The inconstancy can be due to different cultures and differences in country of residency.

5.3.8 Unavailability of Someone to Accompany

According to Chi-square independent test results, an association exists between the unavailability of someone to accompany and the level of education. Those with higher education levels had the highest proportion of answering yes to this barrier. While studies investigated the various influence of the availability of someone to accompany on health care utilization like Koblinsky, Anwar, Mridha, Chowdhury, and Botlero (2008), none of them deal with the association between this barrier and education. It could be misapprehension by other factors, like culture, anxiety, stress, lack of information, and having severe sickness.

5.3.9 Fear of Being Diagnosed With Any Disease

Chi-square independent test results show an association between fear of being diagnosed with any disease and education level, preferred language to communicate, and working sector. Foreign workers with higher education levels ranked the highest proportion to answer yes to "fear of being diagnosed with any disease" as a barrier to seek medical treatment. Some studies show that a higher level of education increases the fear of diagnosis and leads to avoiding seeking medical treatment like Baghiani-Moghadam et al. (2015). In contrast, Dubayova et al. (2010) prove that lower education increases the possibility of getting medical treatment and fear of diagnosis. Those who prefer to communicate in the English language ranked higher percentage compared to the other two groups. Since language fluency can cause miscommunication, it may increase individuals' fear. Those working in the service sector ranked the highest proportion to select fear of being diagnosed with any disease as a barrier to seeking medical treatment. None of the researches deals with the relation between the working sector and fear of being diagnosed with any disease. The results should be interpreted with caution because there is a possibility of misinterpretation by other factors. The underlying causes may come from social and personal issues. It could be a social stigma, fear of being less competent, or fear of being fired by the employer (Kadyk, McCarter, Achen, and Belsito (2003); Maunsell et al. (1999)).

5.3.10 Importance of Other Basic Needs Compared to Health

An association exists between five demographic factors and the importance of other basic needs compared to health (education level, marital status, preferred language, working sector, and income). Other studies stated that higher education levels increase health care utilization. But the result of this study shows those with a higher level of education had the highest proportion of saying their other basic needs are more important than their health. This

difference in the study outcome could be due to the difference in target group or other issues like marital status (61.4% of respondents with higher education are non-married).

Therefore, the result of this study is not similar to other studies like Sok et al. (2018). The results show that non-married faced more with this barrier compared to married. The reason could be lower attention to health and lower health care utilization among non-married than married, as Joung, Van der Meer, and Mackenbach (1995) study suggested. The result shows those who prefer to use the English language for communication had the highest percentage of facing this barrier than the other two groups. Since language is a barrier to communication, it can be a reason to neglect health care needs. They may not be fluent in the English language and just selected "English language" as the best answer. Those who were working on the plantation had the highest proportion to answer yes to this barrier. It can be affected by heavy work, the feeling of lower job safety, or financial barriers. There is not enough evidence to directly show the association between the importance of other basic needs and the working sector. The finding of this study indicates that those with lower income levels had a more significant proportion of answering yes to having this barrier. Lower financial resources can limit individuals' ability to overcome their living costs and prioritize their basic needs. The result is consistent with Kreuter, McQueen, Boyum, and Fu (2016).

5.3.11 Feeling Shy To See the Doctor and Share the Health Information

Feeling shy is associated with the country of origin. Foreign workers from Indonesia had the highest proportion of answering yes to "I feel shy to see a doctor and share my health information." The reason can be cultural factors. Some studies in Indonesia show that feeling shy is a barrier to using health care services among Indonesian females (Lukito Setiawan,

2006; Spagnoletti, Bennett, Wahdi, Wilopo, & Keenan, 2019). There is a study in the US that show south east Asian are generally more shy compared to other nations (Yang, 2004).

5.3.12 Difficulty of Finding Someone to Take Care of the Participants' Child/Children

Chi-square independent test results show that the association exists between income and difficulty finding someone to take care of the participants' child/children. Those who had the lowest monthly payment had the highest proportion of answering yes to "difficulty finding someone to take care of my child." Due to a lower financial situation, they could not send their child/children to daycare, being a single parent or both parents need to work to cover their living costs. There are researches with the focus on single parent and homeless parent's low health care utilization like (Gelberg et al. 1997; Schlossstein, Clair, & Connell, 1991).

5.3.13 Worries about Payment Method

Gender and the working sector are the two socio-demographic factors associated with worries about payment methods. It seems women have more concerns about the medical bill and payment method. The data shows a significant association between gender and income. Therefore, women may have more payment issue due to a lower income. The result is supported by other studies like Rustgi, Doty, and Collins (2009), Doty, Edwards, and Holmgren (2005), and Njaya (2016). Those who are working in the service sector had the highest proportion of stating this barrier. The result could be misapprehension by other factors like working situation or unavailability of panel clinics. In contrast, there are many studies about medical bill payments; none deal with the relationship between the working sector and worries about payment methods.

5.3.14 Limited Operation Hours

There are two significant socio-demographic factors associated with operation hours (education and working sector). Foreign workers with secondary education and those working in the service sector had the highest proportion to answer yes to operation hours as a barrier to seeking medical treatment. Participants with secondary education level had the highest proportion of having this barrier unclear and could be related to other factors. Working hours for those working in the services sector may overlap with the clinic/ hospital's operation hours. There are many studies about limited operation hours as a barrier (Cheung, Wiler, Lowe, & Ginde, 2012; Clouse et al., 2014; Tusubira et al., 2020), but there is no study with a focus on the association between these two socio-demographic factors and operation hours.

5.3.15 Nurses, Doctors, or Staffs Behavior

Gender, working sector, and income are the three associated factors with the nurse, doctors, or staff's behavior. Male foreign workers, those working in construction and manufacturing, and those with lower than RM1000 salary per month had a higher proportion of stating this barrier as a reason for avoiding seeking medical treatment. Some previous studies in Malaysia prove that nurses, doctors, or staffs behavior are a barrier to access health care services (Ghafari et al., 2014; Heller, 1982).

5.3.16 Difficulty of Making Appointment

Country of origin, gender, education, working sector, and income are the associated socio-demographic factors with the difficulty of making an appointment. Foreign workers from India and Nepal, male workers, those who had a higher level of education, workers in construction and manufacturing, and those who had lower salaries had the highest proportion

of answering yes to this barrier. There are many studies like Teo, Ng, Booth, and White (2016), Wang, Lam, Wu, and Fielding (2014), Dern and Sappok (2016); and Mason et al. (2019) which investigated the effect of the difficulty of making an appointment on health care utilization, but none of the deal with the association of these socio-demographic factors and this barrier. The underlying reasons can be due to different cultures in seeking medical treatment or delays in seeking treatment. They might ignore their symptom until it becomes worse and they could not find a provider immediately, which is more likely to happen for men and those with lower income. The other reason can be they think they need to see the doctor immediately, but nurses or staff did not agree to give an immediate appointment. However, interpreting the finding requires more caution.

5.3.17 Unavailability of Doctor

Income is the only socio-demographic factor associated with the unavailability of the doctor. The primary health care providers in Malaysia are private providers, which the doctor solely provides. It is less likely to face the doctor's unavailability in the clinic unless the patient refers to the clinic before or after office hours. Those who have lower income had the highest proportion to answer yes to this barrier. It could be due to living far from the clinic or hospital. Therefore, they may mean the doctor was not available nearby their living area. Studies are limited to investigate the effect of income and availability of doctors. While many of studies investigated the barrier from a broader perspective. There is a study which shows the negative effect of low income on access to doctors' offices like Unnithan-Kumar, Mcnay, and Castaldo (2008).

5.3.18 Long Waiting Time

Education is the only socio-demographic factor associated with the long waiting time. Those who had higher education had the highest proportion of stating they had this barrier. The relation between these two factors is not well studied, but it can be due to satisfaction. Those who have a higher level of education may have higher expectations; therefore, if waiting time becomes longer, it can lead to unsatisfactory and avoidance to seek medical treatment (Xie & Or, 2017).

5.3.19 Unavailability of Transportation

Age, working sector, and income are the three socio-demographic factors associated with the unavailability of transportation. Those who are younger than 30 years old, working in the manufacturing and service sector, and those with a lower income ranked the highest proportion of answering yes to "unavailability of transportation" as a reason for not seeking medical treatment. According to the data, most participants use their vehicles to go to the clinic or hospital. Younger workers have a shorter duration of stay in Malaysia, and they may not own any vehicle, which results in a more significant proportion of answering yes to this question. It seems there is a relationship between the working sector and age. The majority of those working in manufacturing (62.2%) and the service sector (79.5%) are younger than 30 years old. In terms of income, there is a higher possibility of living without owning a vehicle among those with lower income, and public transport is costly for this group (Waller, 2005).

5.3.20 Long Distance to Provider

Country of origin, gender, preferred language to communicate, working sector, and income are associated with long-distance to the provider. According to data, foreign workers from

Myanmar had the highest proportion of state long distance to the provider, which was a barrier to seeking medical treatment. The effect of ethnicity on the distance to the provider was outlined in previous studies (Graboyes et al., 2018; Hanchate et al., 2019). Male foreign workers ranked higher proportion of answering yes to this barrier. It could be due to living conditions that may male workers live far from cities with lower facilities and more distance to providers. Those who prefer other languages reported more distance barriers. The association between distance to provider and language is not well studied. It may cause communication issues that they may not be able to find a provider that can communicate in their preferred language near their living area. Those who are working in the construction sector have ranked higher proportion of facing this barrier. The accommodation has been provided for workers in construction on or off-site by their employers. Besides, their accommodations are very poor. Some foreign workers lived in "cramped, dirty, and unhygienic conditions in this country (Marhani, Adnan, Baharuddin, Esa, & Hassan, 2012). Therefore, this condition increases the possibility of living far from the health care provider. Those who had lower income had the highest proportion of distance issues to the provider as a barrier to medical treatment. The lower-income level may increase the possibility of poor accommodation areas and living far from a provider, increasing the cost to seek medical treatment (Qian et al., 2009).

5.3.21 Fear of Losing Daily Income

Country of origin, employment sector, and working sector are associated with fear of losing daily income. The result of the study elucidated foreign workers from Myanmar and India, those working in the private sector and those working in Agriculture and plantation sector, ranked the highest proportion to state they feared losing daily income as a reason for avoiding seeking medical treatment. Inequality in the workforce, such that some groups of employees

and feelings of having lower job safety are associated with the likelihood of experiencing a severe financial problem if they miss work (Blake et al., 2010).

5.3.22 Unaffordability of Consultation Fee

Country of origin, marital status, and working sector are the associated socio-demographic factors with the unaffordability of consultation fees. The results show that foreign workers from Myanmar had the highest proportion to select unaffordability of consultation fee as a reason to avoid seeking medical treatment. The result is in line with Jatrana, Crampton, and Norris (2011), which shows the relationship of ethnicity and consultation fee as a barrier to seeking medical treatment. But, Scott, Marwick, and Crampton (2003) demonstrated no significant association between ethnic and consultation costs. Non-married and those working in the plantation sector are those with the highest proportion to answer "yes" to this barrier. This could be due to other factors such as family and living conditions and living in deprived areas. These groups may prefer to allocate their income for other living costs or their employer may not provide a panel clinic. However, the underlying cause is not clear. There is no specific study to investigate the associated between socio-demographic factors and unaffordability of consultation fees. Some studies revealed consultation fee is a barrier to use health care services (Bhat, 2020; O'Connell, Hom, Aung, Theuss, & Huntington, 2011).

5.3.23 Unaffordability of Medication Cost

Country of origin and working sector are the two significant associated factors with the unaffordability of medication costs. Foreign workers from Myanmar and those working in plantations and agriculture ranked the highest proportion that stated they avoided seeking medical treatment due to the unaffordability of medication. The association between

ethnicity and medication costs has been proven by other studies (Hong, 2009; Jatrana et al., 2011). The finding should be interpreted with caution since the association between the working sector and medication costs are not well studied yet, so there is a possibility of being affected by other factors like preferring to use herbal medication at lower prices or prepare a cheaper medication from their country of origin (Loganathan et al., 2019).

5.3.24 Unaffordability of Transportation Cost

Country of origin, marital status, and working sector are associated with socio-demographic factors with unaffordability transportation costs. Foreign workers from Myanmar, non-married, and those working in the agriculture and plantation sector had the highest proportion to answer yes to the unavailability of transportation cost as a barrier to seeking medical treatment. For marital status, there is a possibility that non-married may not have their vehicle. Therefore, using public transportation costs may not be affordable for them. In terms of the working sector, the reason may come from their living area, which could be far from cities or health care providers. Many studies prove the relationship between ethnic minorities, lack of own transportation, living in a rural area, transportation costs, and low health care utilization (Guidry, Aday, Zhang, & Winn, 1997; Johnson, Carlson, & Hearst, 2010; Probst, Laditka, Wang, & Johnson, 2007; Wallace, Hughes-Cromwick, Mull, & Khasnabis, 2005).

5.3.25 Insufficient Insurance Policy Coverage

Country of origin and working sector is associated with insufficient insurance coverage. Foreign workers from Myanmar and those working in the plantation and agriculture sector have the highest proportion to select insufficient insurance coverage due to not seeking medical treatment. It is known that the current compulsory insurance policy is not covering outpatient visits. On the other hand, panel clinic is not provided for 60% of Myanmar's, 57%

of workers in plantation, and 46.2% that stated insufficient insurance coverage was a barrier for them. Therefore it can be a reason for these groups to avoid seeking medical treatment. There are many studies like Li, Tang, and Wang (2019), Alipio and Pregoner (2020), and Lerner and Robles (2017) which focused on the effect of insurance policy on health care utilization

5.4 Research Question 2: How Socio-demographic factors influence the extent of exposure to Personal, Structural, and Financial Barriers in Getting Healthcare Services?

According to the non-parametric test of socio-demographic factors, certain socio-demographic factors influence the extent of exposure to personal, structural, and financial barriers in getting healthcare services. The non-parametric test results indicated foreign workers from different countries of origin are differently exposed to personal and financial barriers. Foreign workers from Bangladesh faced more personal barriers and financial barriers than their counterparts. The main reasons for avoiding seeking medical treatment among Bangladeshi workers in Malaysia could be; 1) The language barrier, 2) lack of familiarity with the Malaysian health care system, 3) believing that Malaysian health treatment plans and medicine are not effective, 4) communication issue, 5) providing medication from Bangladesh and 6) consultation and medications costs were the main reasons of avoiding seeking medical treatment in Malaysia when they need it (Loganathan et al., 2019). The result is also in line with Karim and Diah (2015a), who studied the health-seeking behaviour of the Bangladeshi migrant workers in Malaysia. According to Rahman et al. (2020), low trustworthiness, structural issues as well as financial complexities were acknowledged as significant barriers among Bangladeshi people.

Exposure to the personal barrier is different for different genders, while it is the same for structural and financial barriers. Male foreign workers faced more personal barriers than female workers, which can be due to masculinity, lack of awareness of the need for primary care, religious beliefs, and peer influences. The result is similar to Cheatham, Barksdale, and Rodgers (2008). According to Schlichthorst, Sanci, Pirkis, Spittal, and Hocking (2016), men use health services less often than women and frequently delay seeking help even if experiencing serious health problems. This may put men at higher risk for developing serious health problems which, in part, may explain men's higher rates of some serious illnesses and shorter life span relative to women.

Participants from different levels of education are differently exposed to personal and structural barriers and similarly exposed to financial barriers. The participants with higher education levels had more personal and structural barriers compared to those with a lower level of education. It could be due to a lower level of trust in doctors and the health care system, try to do self-medication, and different expectations from the health care system. The finding is inconsistent with Clark and Royer (2009), and Fletcher and Frisvold (2009). Pappa, Kontodimopoulos, Papadopoulos, Tountas, and Niakas (2013), is also dissimilar to this result as it showed individuals with primary and secondary education were associated with significantly more accessibility and availability barriers compared with those with tertiary education.

Foreign workers with different language preferences are differently exposed to personal and structural barriers and similarly exposed to financial barriers. Those who preferred to use other languages to communicate faced more personal and structural barriers than those who preferred Malay and English. The language barrier is a significant barrier in accessing health

care services and being well-studied. The finding is in line with other studies like Ferguson and Candib (2002), Samkange-Zeeb et al. (2020), and Lloyd et al. (2018).

Participants from different working sectors are differently exposed to structural and financial barriers and similarly exposed to personal barriers. Those who work in the service sector faced more structural barriers, and those who worked in the plantation sector faced more financial barriers than other sectors' workers. The reason could be the medical coverage facility provided by the employer or living area. The result is in line with another study by Uddin et al. (2020).

Foreign workers with different income levels are differently exposed to personal barriers and similarly exposed to structural and financial barriers. Participants with monthly income below RM1000 faced more personal barriers compared to those with higher income. The reason is that low-income labourers may prefer to use herbal medication, have more fear of medication side effects, bring medicines from their own country and do self-medication. They may think their other basic needs are more important. The finding is in line with Ji and Hong (2020), Mishra et al. (2011), Uddin et al. (2020), and Kreuter et al. (2016).

5.5 Research Question 3: How have the barriers (personal, structural, and financial) impacted healthcare utilization among foreign labourer?

According to the Chi-Square independence test analysis, the barriers were not the same for different levels of sickness. The barriers were different, depending on the level of sickness. Some factors were insignificant in mild illness but were significant in severe disease and vice

versa. Since the factors selected from other research and models which has been designed for other countries to be tested in Malaysia, there are many insignificant factors in the results.

5.5.1 Personal Barriers

A Chi-Square independence test of personal barriers in the case of mild illness showed that some factors tested about personal barriers were associated with the tendency to get medical treatment in mild sickness. Meanwhile, based on Pearson's Chi-Square independence test, some personal factors were related to the tendency to get medical treatment in severe sickness. All the significant factors were selected for logistic regression in the case of severe sickness.

There was no association between the length of stay and the tendency to get treatment in mild sickness and severe sickness cases. This could have been because since most of the residents in this study had been residing in Malaysia for less than six years, their awareness about the services provided, medical insurance coverage, and facilities, such as panel clinics, remained the same no changes. This finding was in contrast to the results of a study done in Europe by Karl-Trummer, Novak-Zezula, and Metzler (2010). The inconsistency could be due to differences in the region where the study was carried out and the sample population.

There was no significant association between gender and the tendency to get medical treatment in mild sickness. Since this study measured healthcare utilization for two different levels of sickness, the result was not in line with that of other studies such as by Balarajan et al. (2011), Simkhada et al. (2018) and Keller and Baune (2005). In severe sickness, there was an association between gender and the tendency to get treatment. This result was in line with studies such as by Balarajan et al. (2011) and Keller and Baune (2005). The result showed

that males had a 13% lower possibility of getting medical treatment when the illness was more severe than females.

There was a significant relationship between the country of origin and the tendency to get medical treatment in mild and severe sickness cases. This result was similar to other studies carried out in Spain by Malmusi et al. (2010) and Sanz et al. (2011). Logistic regression analysis showed that Indonesian had a 3.8 times higher possibility of getting medical treatment in the case of severe sickness compared to other ethnic groups as a reference group.

There was no association between age and the tendency to get medical services in mild and severe sickness cases. The result is not in line with Bradley et al. (2001). Differences in results can be due to a different target group.

Education was not a significant factor in both cases of mild sickness and severe sickness. This result was not in line with a study done in India by Butsch et al. (2012) and Shahid etal. (2021), since, working as an unskilled workers in Malaysia, they do not need to have a high-level education, and having a primary school grade is sufficient. Butsch et al. (2012) focused on urban Indians, while this study focused on foreign labourer in Malaysia. The other possible reason for getting different results could be; respondents' highest level of education is considerably similar.

Marital status is not associated with the tendency to get medical treatment in mild sickness, while it is significant in severe sickness. The result is in line with Joung et al. (1995). However, there was no difference between different marital statuses.

Preferred Language is not significant in the case of mild sickness, but it is a significant factor in the case of severe sickness. In severe sickness, those who prefer to communicate in Malay and three times more possibility of getting medical treatment than those who preferred other languages. Participants with English language preferences had five times more possibility of getting medical treatment than those who preferred other languages. The result is consistent with other studies like Samkange-Zeeb et al. (2020), Lloyd et al. (2018), and De Moissac and Bowen (2019).

The employment sector is not a significant factor in both cases of mild and severe sickness. While many studies are focusing on various aspects of healthcare utilization and its barriers, the effect of the employment sector on the tendency of getting medical treatment is not well studied yet.

The working sector is associated with getting medical treatment in both cases of mild and severe sickness. In mild sickness, foreign workers from domestic servants had a 6.2 times higher possibility of getting medical treatment than the agriculture sector as a reference group. In severe sickness, foreign workers from manufacturing had a five times higher possibility of getting medical treatment than workers from the agriculture sector as a reference group. While many studies have focused on various aspects of health care utilization, none of them deal with this particular research area.

Income was not a significant factor in the case of mild sickness. This finding contrasted with studies done in the Netherlands and Canada by Venema et al. (1995) and Asanin and Wilson (2008) but was in line with the study by Griffiths and Stephenson (2001) in India. Since the ethnic groups, cultures, and facilities in each region differ, the results varied. In the case of

severe sickness, income was associated with the tendency to get medical services. Foreign workers with a salary below RM1000 per month had a 20% lower possibility of getting medical treatment compared with those who earn more than RM2000 per month as a reference group. This finding was similar to studies done in the Netherlands and Canada by Venema et al. (1995) and Asanin and Wilson (2008). Still, it was in contrast to a study in India by Griffiths and Stephenson (2001). This significant difference could be due to the lower cost of healthcare services for mild sickness than severe sickness.

Thinking that the illness is not too serious was associated with getting medical treatment in mild sickness and severe sickness. This finding was in line with Jesse Tyler Young (2004) Lee et al. (2014). In mild sickness, those who had this belief were 2 times less likely to get medical treatment than those who did not have this belief.

In the case of severe sickness, those who believed their sickness was not too serious were three times less likely to get medical treatment. This finding was in line with Jesse Tyler Young (2004).

Fear of the side effects of medication had no significant impact on getting medical treatment in mild sickness. This result was not in line with studies in the UK and US by Ashton (2002) and Neuman (2012). This result was different from that of other studies was probably the difference in the level of sickness. This result was for mild sickness, while the other studies focused on more serious illnesses. In the case of severe sickness, the fear of the side effects of the medication was significant. This result was consistent with Jesse Tyler Young (2004). The results showed that patients are more worried about the side effects of medicines because

doctors may prescribe more complicated medication or a higher dosage of medicines, which patients are not familiar with.

The doctor's gender was a significant factor in the case of mild sickness. This result was consistent with past studies like Taft, Broom, and Legge (2004). The doctor's gender was not a significant factor in the case of severe sickness. This result was not consistent with a study done in Australia and the Netherlands by Taft et al. (2004) and Bensing, Van Den Brink-Muinen, and De Bakker (1993). The difference in the results could be due to the different levels of measurement. This study investigated the factors at different levels of illness, while others measured the utilization in general. According to the results, those who had an issue with the unavailability of a doctor of the same gender were less likely to get medical treatment (1.7 times) for their mild sickness. According to the results of this study, those who had an issue with the doctor's gender had a higher possibility of avoiding seeing the doctor for a mild sickness when the doctor was not of the same gender. In the case of more serious sicknesses, they did not consider the doctor's gender and did not avoid getting medical treatment or the doctor's gender ceased to be an important issue when the illness was more serious.

Not being able to get medical leave was a not significant factor in both mild and severe sickness cases. This was different from a study done in the US by Lovell (2004). According to the results of this study, the participants were able to obtain medical leave whenever they need to seek medical treatment.

A preference for traditional medication was a significant factor in the case of mild illness. This finding was similar to the study by Welch et al. (1973). Those who preferred to use traditional medicine had a lesser possibility (2.6 times) of getting medical treatment than

those who preferred not to use traditional medicine. A preference for the traditional medication was not a significant hindering factor in the case of severe sickness, and this was inconsistent with the finding by Ensign and Panke (2002). This difference in the results was due to the level of illness. This result showed that the participants believed that their mild illness could be treated with traditional medication, but they did not rely on that and preferred to use healthcare services in the case of severe sickness.

There was no association between the language barrier and the tendency to get medical treatment in mild sickness and severe sickness. This result was inconsistent with G. L. Weiss and Lonnquist (2017) and Angel and Angel (1996). The difference in the results was due to the different ethnic groups in this country compared to studies in other countries. In Malaysia, the majority of the respondents were from a neighboring country and shared the same language. The rest of the participants could speak in English or be familiar with the Malay language.

There was no relationship between trust in the doctor's decision-making ability and the tendency of using medical services in the case of mild illness. This was also not in line with studies done in the US by Morrison, Zayas, Mulvihill, Baskin, and Meier (1998), and Whetten et al. (2006). A different result was probably obtained because of the different levels of sickness. In severe sickness, the tendency to get treatment was associated with trust in the doctor's decision-making ability. This result was consistent with studies done in the US by Whetten et al. (2006) and Morrison et al. (1998). It proved that it was easier for the participants to trust the doctor for simple illnesses. Still, in the case of complicated sicknesses, they were worried about the doctor's decision-making ability in treating their

sickness. However, a logistic regression analysis showed no difference in the tendency of getting medical treatment between those who did not trust the doctor and those who did.

The unavailability of someone to accompany them was not significant in both cases of mild and severe illness. The result was not similar to a study in Bangladesh by Koblinsky et al. (2008). The difference could be due to the difference in target group and region of study.
The fear of being diagnosed with any disease was not a significant factor in both cases of mild and severe illness. This finding was not the same as that of Leydon et al. (2003), which was focused on cancer. The difference could be due to the different scope of the study and the level of sickness.

The importance of other basic needs was associated with getting medical treatment in both cases of mild and severe illness. This was in line with Jesse Tyler Young (2004). However, according to the logistic regression analysis, there was no difference between those who believe their other basic needs are more important than their health and those who did not believe.
There was no association between feeling shy to share their health problem and the tendency of getting medical treatment in both cases of mild sickness and severe sickness. This was inconsistent with the findings of other studies conducted in the Netherlands, like Schoevers et al. (2010). The different results could have been due to the different study regions, cultures, and sample populations.

The difficulty in finding someone to take care of a child was an insignificant factor in both cases of mild sickness and severe sickness. This result contrasted with that of another study

by Gelberg et al. (1997). Since the majority of the unskilled labourers in Malaysia are male and single, thus they do not have to face the issue of childcare.

5.5.2 Structural Barriers

There was no association between worries about the payment method and the tendency of getting medical treatment in both cases of mild sickness and severe sickness. This was in contrast to the finding of Lu and Hsiao (2003) and Yip and Hsiao (2009). The difference in the results could have been because most foreign labourers in Malaysia have a panel clinic or insurance policy.

The clinic or hospital operation hours (out of office hours) were not significant to using healthcare services in both cases of mild and severe sickness. This finding was inconsistent with that of other studies done in India by (Aitken et al. (2013); Balarajan et al. (2011)). The possibility of using emergency services after regular working hours to treat their severe sickness could have been the reason for the difference in the results.

There was no association between the behaviour of doctors, nurses, or other staff and the tendency of getting medical treatment in both the cases of mild sickness and severe sickness. This result was different from other studies in Malaysia by Heller (1982) and Ghafari et al. (2014). Those studies focused on Malaysian citizens and the urban young population in Malaysia, while this study focused on the foreign labourer population in Malaysia. This result revealed the expectations of citizens and foreign labourer about the behaviour of healthcare service providers.

There was no association between the difficulty in making an appointment and the tendency to get medical treatment in both cases of mild and severe sickness. This result was not in line with a study carried out in China by Wang et al. (2014). This result showed that making an appointment is not an issue because outpatient treatment does not require them to make an appointment.

The results showed no association between the availability of a doctor and the tendency to get medical treatment in both mild and severe sickness cases. This finding was different from other studies done in the US and India by Takanishi (2004) and Aitken et al. (2013). The difference in the study region and the ethnic group could be why different results were obtained. The unavailability of doctors in Malaysia is not an issue because doctors solely provide healthcare services in private clinics (as the main healthcare provider).

According to the results of this study, a long waiting time was associated with the willingness to get medical treatment in both cases of mild and severe sickness. This finding was consistent with other studies in Malaysia by Heller (1982) and Ghafari et al. (2014). Those who had an issue with a long waiting time were 3.5 times less likely to get medical treatment in the case of a mild sickness and 1.6 times less likely to get medical treatment in severe sickness.

The results showed no relationship between the availability of transportation and the tendency to get medical treatment in both mild and severe sickness cases. This result was not in line with a study in India by Aitken et al. (2013). The difference in the results was probably due to the different regions of research and the sample population. The transportation system

in Malaysia is well developed, and the majority of the people in the sample population were using their vehicles.

There was no relationship between the long distance to the healthcare provider (availability of a clinic/hospital) and the tendency of using medical services in the case of a mild sickness. This result was not in line with Peters et al. (2008), (Balarajan et al. (2011), Deogaonkar (2004), Heller (1982)), and Ghafari et al. (2014). The difference could be due to the different levels of sickness because there was a high association between distance to a clinic/hospital and the tendency to get medical treatment in severe sickness. This result was in line with Peters et al. (2008), (Balarajan et al. (2011), Deogaonkar (2004), Heller (1982)), and Ghafari et al. (2014). The distance to the healthcare provider (clinic/hospital) was not an issue in the case of a mild sickness, but the results showed that the participants expected a shorter distance in severe sickness. For Mild sickness treatment, they just need to go to clinics (generally close to residential area), but for Severe sickness treatment they need to go to hospital (generally far away from residential area). Those who mentioned that the clinic/hospital was far from their living area had 2 times less possibility of getting treatment compared to those who were near to the clinic/hospital.

5.5.3 Financial Barriers

There was an association between the fear of losing a daily income and the tendency to get treatment in the case of a mild sickness. This finding was in line with López-Acuña (2008) and Widera, Chang, and Chen (2010). Those who feared losing a daily income were 2.3 times less likely to get medical treatment than those who did not have this fear. In the case of a severe illness, there was no association between the fear of losing a daily income and the tendency to get treatment. This finding was not in line with López-Acuña (2008) and Widera

et al. (2010). According to the result, the fear of losing a daily income did not affect getting treatment when the sickness was more serious. The participants were not avoiding medical treatment in the case of a severe sickness, probably because it would have been easier for them to convince their employer of severe sickness, which would have been difficult if the illness was mild.

There was a significant relationship between the affordability of the consultancy fee and the tendency to use healthcare services in the case of a mild sickness, as recommended by Lawson (2004). But the logistic regression analysis showed no significant difference between those who reported that the consultancy fee was not affordable and those who did not say this. There was no relationship between the affordability of the consultancy fee and the tendency of getting treatment in the case of severe sickness. This finding was in contrast to Lawson (2004). The affordability of the consultancy fee was not the same for different levels of sickness. In severe sickness, the participants tried not to avoid getting medical treatment due to the unaffordability of the consultancy fee. This could have been due to insufficient insurance coverage for the treatment of a mild sickness.

There was an association between the affordability of the cost of medication and the tendency of getting treatment in the case of a mild sickness, as recommended by other studies in India like Deogaonkar (2004) and Balarajan et al. (2011). According to Logistic regression analysis, there is no difference between those who mentioned that medication cost was not affordable for them and the other group. There was no association between the affordability of medication and the tendency to get treatment in severe sickness. The result was inconsistent with other studies done in India, like Deogaonkar (2004) and Balarajan et al. (2011). Since this study divided the level of sickness into two categories, the result for each

category could be different. Hence, it may not be consistent with other studies. In severe sickness, the participants were willing to pay for medication despite being unaffordable, which could be due to insurance coverage for hospitalization costs. But, they avoided seeking treatment in the case of a mild sickness.

The affordability of the transportation cost was not significant, with the tendency to get medical services in both mild and severe sickness cases. This was not similar to a study done in the US by Khammash (2003).

There was no association between the insurance policy not covering the cost of the service they needed and getting medical services in both cases of a mild sickness and a severe sickness. This finding was not in line with other studies done in the US, like Lerner and Robles (2017) and Peters et al. (2008). This could be because a panel clinic was provided for almost 50% of the sample population in this study that offers out-patient treatment without the need to use medical insurance. Personal factors would have played a more critical role in avoiding medical care.

5.4 Conclusion

This study has aimed to investigate the accessibility of health care services for foreign immigrants working in Malaysia. The study investigated and examined the impact of various barriers affecting immigrants in getting medical treatment and investigated the value of compulsory medical insurance. In particular, the study investigated the overall medical mandatory insurance scheme in Malaysia for unskilled foreign labourer in covering primary healthcare costs. The following section summarises the study's main findings, including implications, limitations, and suggestions for future research.

CHAPTER 6

CONCLUSION

6.1 Introduction

This chapter concludes and summarizes the finding of the study. The implication of the study, recommendation, limitation, and suggestions for future research are discussed in this chapter.

6.2 Main Findings

The main findings from this study reveal the relationship between socio-demographic factors varies for each element in personal, structural, and financial barriers. According to the non-parametric test of socio-demographic characteristics, certain socio-demographic factors influence the extent of exposure to personal, structural, and financial barriers in getting healthcare services. There are many factors that are not significant because they are selected from other researches and models which has been designed for other countries. These factors used to be tested in Malaysia to find specific framework which represents the barriers faced by foreign workers in "Malaysia". The other main finding of this study is the difference in obtaining medical treatment for mild and severe sickness cases. In the case of mild sickness, the majority of respondents tend to avoid seeking health care services. In contrast, most respondents tended to visit a clinic or hospital for treatment for severe sickness. The possibilities of obtaining treatment among different sectors are similar in both cases of mild and severe sickness.

6.2.1 Socio-Demographic Factor Association with Barriers

Table 6.1 presents the summary of relationships between socio-demographic factors and personal barriers in getting healthcare services. It shows the chances of being affected by the barriers.

Table 6.1: Summary of relationships between socio-demographic factors and personal barriers in getting healthcare services

Barriers	Associated factors	Chances of being affected by the barrier
I did not think that my illness was too serious	Country of Origin	**Higher:** Bangladesh, Myanmar, other countries, and Nepal **Lower:** Indonesia, India
	Gender	**Higher:** Male **Lower:** Female
	Language	**Higher:** Other languages **Lower:** Malay, English
	Working Sector	**Higher:** Agriculture, construction, and plantation **Lower:** domestic servant, manufacturing, and service sector
I am afraid of the medications side effect	Education	**Higher:** Tertiary **Lower:** Primary and secondary
	Language	**Higher:** Other languages, English **Lower:** Malay
	Income	**Higher**: =<RM1000 **Lower:** RM1001-RM2000, >=RM2001
The nearest clinic does not have the same-gender doctor	Working Sector	**Higher:** construction, manufacturing, plantation **Lower:** domestic servant, service sector, agriculture
	Income	**Higher:** =<RM1000 **Lower:** RM1001-RM2000 >=RM2001
I was not able to get medical leave from work	Country of Origin	**Higher:** Indonesia, Bangladesh, Myanmar, and Nepal **Lower:** India and Other countries
	Working Sector	**Higher:** Plantation and agriculture **Lower:** Domestic servant, construction, manufacturing, services
	Income	**Higher:** =<RM1000 **Lower:** RM1001-RM2000, >=RM2001
I preferred to use traditional medicine like herbal	Language	**Higher:** Other languages **Lower:** Malay and English
	Income	**Higher:** =<RM1000 **Lower:** RM1001-RM2000, >=RM2001
I was not able to communicate with doctors and nurses	Gender	**Higher:** Male **Lower:** Female
	Age	**Higher:** =<30 **Lower:** 31-40, =>40
	Education	**Higher:** Tertiary education **Lower:** Primary and secondary
	Marital Status	**Higher:** Non-married **Lower:** Married
	Language	**Higher:** Other languages and English **Lower:** Malay
	Working sector	**Higher:** service sector, construction, manufacturing **Lower:** domestic servant, plantation, agriculture

‘Table 6.1 continued’		
I did not trust the doctor will make the right decision for me	-	-
No one was available to accompany me to the clinic	Education	**Higher:** Tertiary **Lower:** Primary and secondary
Fear of being diagnosed with any disease	Education	**Higher:** Tertiary **Lower:** Primary and secondary
	Language	**Higher:** English **Lower:** Malay, other languages
	Working Sector	**Higher:** Domestic servant, construction, manufacturing, service sector **Lower:** Plantation and agriculture
My other basic needs are more important than health care	Education	**Higher:** Tertiary **Lower:** Primary and secondary
	Marital Status	**Higher:** Non-married **Lower:** Married
	Language	**Higher:** English **Lower:** Malay and other languages
	Working Sector	**Higher:** Service, plantation, and domestic servant **Lower:** Agriculture, manufacturing, and construction
	Income	**Higher:** =<RM1000 **Lower:** RM1001-RM2000, >=RM2001
I feel shy to see the doctor and share my health information	Country of Origin	**Higher:** Indonesia, Myanmar, and Bangladesh **Lower:** India, Nepal, and other countries
I had difficulty finding someone to take care of my child	Income	**Higher:** =<RM1000 **Lower:** RM1001-RM2000, >=RM2001

Table 6.2 presents the summary of relationships between socio-demographic factors and structural barriers in getting healthcare services. It shows the chances of being affected by the barriers.

Table 6.2: Summary of relationships between socio-demographic factors and structural barriers in getting healthcare services		
Structural barriers	Associated factors	Chances of being affected by the barrier
Payment method (like paying the deposit, paying cash, etc.…)	Gender	**Higher:** Female **Lower:** Male
	Working Sector	**Higher:** Domestic servant, construction, manufacturing, and service sector **Lower:** Agriculture and plantation
Clinics or hospitals nearby my living area does not operate out of office work	Education	**Higher:** Secondary **Lower:** Primary, tertiary
	Working Sector	**Higher:** Service sector and construction **Lower:** Domestic servant, manufacturing, plantation, and agriculture
Nurses, doctors, or staffs are not behaving friendly	Gender	**Higher:** Male **Lower:** Female
	Working Sector	**Higher:** Construction, manufacturing, and service sector **Lower:** Domestic servant, plantation, agriculture
	Income	**Higher:** =<RM1000 **Lower:** RM1001-RM2000, >=RM20001
I had difficulty making an appointment	Country of Origin	**Higher:** Nepal and India **Lower:** Indonesia, Bangladesh, Myanmar, and other countries
	Gender	**Higher:** Male **Lower:** Female
	Education	**Higher:** Tertiary **Lower:** Primary and secondary
	Working Sector	**Higher:** Construction, manufacturing, and domestic servant **Lower:** Service, plantation, and agriculture
	Income	**Higher:** =<RM1000 **Lower:** RM1001-RM2000, >=RM2001
The nearest clinic does not have doctor	Income	**Higher:** =<RM1000 **Lower:** RM1001-RM2000, >=RM2001
The waiting time is too long	Education	**Higher:** Tertiary **Lower:** Primary and secondary
Transportation was not available for me	Age	**Higher:** =<30, 31-40 **Lower:** =>40
	Working Sector	**Higher:** Domestic servant, construction, manufacturing, and service sector **Lower:** Plantation and agriculture
	Income	**Higher:** =<RM1000 **Lower:**RM1001-RM2000, >=RM2001
The clinic or hospital was too far from my house	Country of Origin	**Higher:** Myanmar, Bangladesh, and India **Lower:** Indonesia, Nepal, and other countries
	Gender	**Higher:** Male **Lower:** Female
	Language	**Higher:** Other languages **Lower:** Malay and English

	'Table 6.2, continued'	
	Working Sector	**Higher:** Construction and manufacturing **Lower:** Domestic servant, service sector, plantation, and agriculture
	Income	**Higher:** =<RM1000 **Lower:** RM1001-RM2000, >=RM2001

Table 6.3 presents a summary of relationships between socio-demographic factors and structural barriers in getting healthcare services. It shows the chances of being affected by the barriers.

Table 6.3: Summary of relationships between socio-demographic factors and financial barriers in getting healthcare services		
Financial barriers	Associated factors	Chances of being affected by the barrier
I had a fear of losing my daily income	Country of Origin	**Higher:** Myanmar and India **Lower:** Indonesia, Bangladesh, Nepal, and other countries
	Employment Sector	**Higher:** Private **Lower:** Government
	Working Sector	**Higher:** Plantation, agriculture, and construction **Lower:** domestic servant, manufacturing, and service sector
The consultation fee was not affordable for me	Country of Origin	**Higher:** India, Nepal, Myanmar, and other countries **Lower:** Indonesia and Bangladesh
	Marital Status	**Higher:** Non-married **Lower:** Married
	Working Sector	**Higher:** Plantation, agriculture, and domestic servant **Lower:** Construction, manufacturing, and service sector

"Table 5.3 continued'		
Medication cost was not affordable for me	Country of Origin	**Higher:** Myanmar and Nepal **Lower:** Indonesia, Bangladesh, India, and other countries
	Working Sector	**Higher:** Agriculture and plantation **Lower:** Domestic servant, construction, manufacturing, and service sector
Transportation cost was not affordable for me	Country of Origin	**Higher:** Myanmar and Nepal **Lower:** Indonesia, Bangladesh, India, and other countries
	Marital Status	**Higher:** Non-married **Lower:** Married
	Working Sector	**Higher:** Plantation and agriculture **Lower:** Domestic servant, construction, manufacturing, and service sector
My insurance policy does not cover the cost of service I needed	Country of Origin	**Higher:** Myanmar, Nepal, and India **Lower:** Indonesia, Bangladesh, and other countries
	Working Sector	**Higher:** Plantation and agriculture **Lower:** Indonesia, Bangladesh, and other countries

6.2.2 The Influence of Socio-Demographic Factors on the Extent of Exposure to Barriers

Workers from different countries of origin are differently exposed to personal and financial barriers and similarly exposed to structural barriers. Foreign workers from Bangladesh, Myanmar, Indonesia, and Nepal are more exposed to personal and financial barriers than India and other countries.

Different gender is differently exposed to the personal barrier and similarly exposed to the structural and financial barriers. Male foreign workers are more exposed to emotional barriers than female workers.

Foreign workers with different age groups are similarly exposed to personal, structural, and financial barriers. Participants from different levels of education are differently exposed to personal and structural barriers and similarly exposed to financial barriers. The participants with tertiary education levels are more exposed to personal and structural barriers than those with lower education levels.

Both married and non-married are similarly exposed to personal, structural, and financial barriers. Foreign workers with different language preference are differently exposed to personal, structural barriers and similarly exposed to financial barriers. Those who preferred to use other languages to communicate are more exposed to the personal barrier. Those who preferred to communicate in English and other languages are more exposed to structural barriers.

Foreign workers who work in the private or government sector are similarly exposed to personal, structural, and financial barriers. The Participants from different working sectors are differently exposed to structural and financial barriers and are similarly exposed to personal barriers. Those who work in the service sector, construction, manufacturing, and domestic servant are more exposed to structural barriers. Foreign workers who work in the plantation and agriculture sectors are more susceptible to financial barriers than other groups.

Foreign workers with different income levels are differently exposed to personal barriers and similarly exposed to structural and financial barriers. Participants with monthly income below RM1000 are more exposed to personal barriers than those with higher income.

6.2.3 Barriers

6.2.3.1 Personal Barriers

Six personal factors were found to be associated with obtaining medical treatment in the case of mild sickness. These factors included:

- Country of origin;
- Working sector;
- I thought my illness is not too serious;
- The nearest clinic/hospital did not have same gender doctor;
- I preferred to use traditional medicine like herbal medication; and
- My other basic needs are more important than health care.

All of the mentioned factors above were shown to have a negative effect on obtaining medical treatment and reducing the possibility of seeking medical treatment except when someone was not available to accompany the person to the clinic/hospital, which had a positive effect.

Eight personal factors were identified in the study that was associated with the tendency of obtaining medical treatment in the case of severe sickness, which included:

- Gender;
- Country of origin;
- Marital status;
- Language;
- Working sector;
- Income;
- Thinking the illness is not too serious;
- Fear of the medication side effects;
- Lack of trust in the doctor to make the right decision; and
- The importance of other basic needs.

Among these eight factors, gender, country of origin, thinking the illness was not considered serious. In contrast, fear of medication side effects and the importance of other basic needs had a negative impact on obtaining medical treatment and reducing the possibility of using medical treatment.

6.2.3.2 Structural barriers

Only one structural factor was found to be associated with the tendency of obtaining medical treatment in the case of mild sickness, which was:

- Long waiting time.

This factor had a negative impact on obtaining medical treatment and reducing the possibility of using health care services. Similarly, worries and concerns about the payment method, operational hours, nurses, doctors, and staff behaviour, the problem of making an appointment, unavailability of a doctor, unavailability of transportation, and the long-distance to a clinic or hospital were not associated with the tendency of obtaining medical treatment in the case of mild sickness.

Two structural factors were found to be associated with the tendency of obtaining medical treatment in the case of severe sickness, which included:

- Long waiting time; and
- Long-distance to the clinic/hospital.

Long waiting time and long-distance to clinic/hospital had a negative impact on obtaining medical treatment and reducing the possibility of using health care services. Similarly, worries about the payment method, operational hours, nurses, doctors and staff behaviour, unavailability of a doctor, and unavailability of transportation, were not associated with obtaining medical treatment in the case of severe sickness.

6.2.3.3 Financial barriers

Three financial factors were found to be associated with the tendency of obtaining medical treatment in the case of mild sickness, which included:

- Fear of losing my daily income;
- Unaffordability of consultancy fee;
- Unaffordability of medication cost.

Fear of losing daily income and unaffordability of medication costs were shown to negatively impact the tendency of obtaining medical treatment and reduce the possibility of using health care services. No association was observed between the insurance policy does not cover the cost of service they needed and getting medical services in mild sickness. Further, there was no association found between all the factors in the financial barriers and the tendency to obtain medical treatment in severe sickness.

6.3 Implication of this Study

6.3.1 Theoretical implication: Most theories and models regarding health care utilization and access to health care services have been designed in developed countries like Europe and the US. This study demonstrated that the barriers are different in the South East Asian region, given the diverse and different cultures and beliefs about health. The foreign worker in Malaysia is dissimilar to foreign populations in the other areas globally. The majority of foreign labourers in Malaysia originate from neighbouring countries with similar cultures and languages. Therefore, this study combined the IOM model of access to personal health care (Millman, 1993), the supply and demand model, and other factors adapted from other

studies undertaken in different countries to determine a specific pattern for foreigners in Malaysia.

This study identified many significant factors in the US and other developed countries that are not significant in Malaysia. Furthermore, this study applied the tendency to obtain medical treatment using two different situations compared to other models and frameworks used in general. Therefore, the findings of this study demonstrate that people act differently when their illness is severe or mild, although the barriers are marginally different in these two situations. Therefore, this study proposes a new conceptual framework for health care utilization among foreign workers in Malaysia.

6.3.2 Practical Implication: The arrangement and structure of an efficient health care system have always been challenging regardless of the country. Similarly, health care issues have become essential elements in developing policy since the 1980s due to resource availability. Even though the government of Malaysia is attempting to improve accessibility to health care services for the entire population, human resource barriers and financial constraints, and other issues impede the ability to implement more cohesive and comprehensive health care systems. Notwithstanding, health care managers and policymakers can use the result of this study to reduce the barriers in healthcare utilization by increasing foreign labourers' information about Malaysia's health care system, and available resources to ensure that foreign deliveries do not overburden Malaysian public health facilities and that health care services are freely and fully accessible and affordable for foreign labourer. Accordingly, this study will aid both health care managers and senior management, as well as foreign labourers.

6.4 Recommended Policy

According to the results of the study, the majority of the significant barriers are personal barriers. The governments of both the countries of origin and destination should disseminate information about the serious consequences of self-medication, particularly as it might affect their health in the future. In addition, a pre-departure orientation program should be developed to familiarize migrant workers with the Malaysian healthcare system and procedures, as well as basic courses in Malay (Bahasa Malaya) and English to facilitate their access to and use of health-care services. Providing more information regarding panel clinics, private or government clinics and hospitals locations, public transportation facilities and options like providing buses or trains routes can help labourers to find the nearest clinic or hospital and reduce the transport barrier's effect.

6.5 Limitation of this Study

There are several limitations inherent in this study. One limitation is that this study only addresses legal foreign labourer while the number of illegal immigrants increases every year in Malaysia. The data also shows that most foreign labourers legally entering Malaysia have false or unreliable medical certificates issued from their country of origin. Therefore, this adds to the lack of information about their health status and healthcare services utilization. A second limitation concerns the focus of this study only on the Klang Valley area.

6.6 Suggestions for Future Research

Considering the limitations mentioned above, future research should investigate foreign labours in the other Malaysian States, such as Johor and Penang. Also, the mixed-methods approach can be designed to obtain further information regarding barriers to accessing health care services. A further extension of this study could focus on the satisfaction of health care services. Additionally, this study could be extended to measure the effect of the underutilization of health care services on the quality of life. Lastly, studying the health care cost ratios in Malaysia would be of value for future research.

Figures 6.1 and 6.2 illustrate the proposed conceptual frameworks for foreign labourers in Malaysia, which can be helpful for future research based on the results of this study in the case of mild and severe sickness.

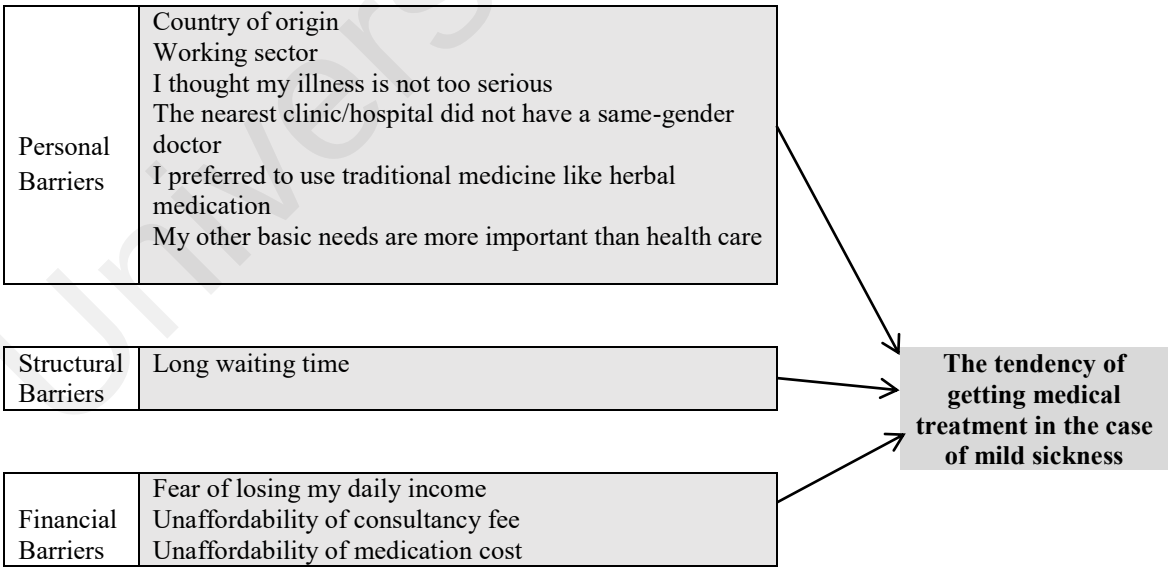

Figure 6.1: Proposed Conceptual Framework in the case of mild sickness

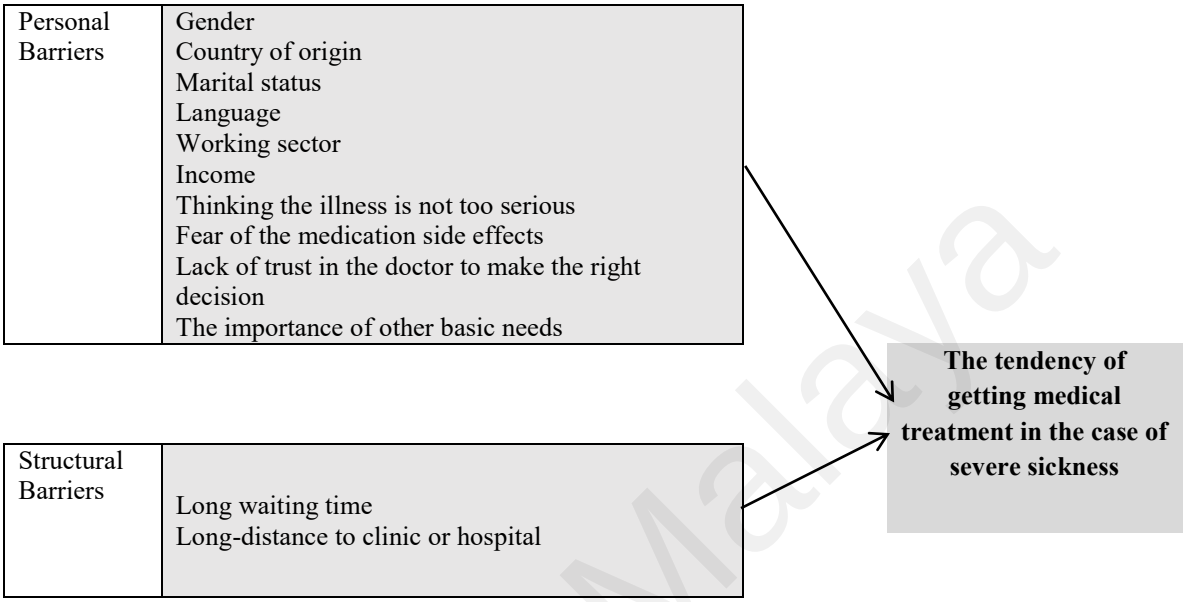

Figure 6.2: Proposed Conceptual Framework in the case of severe sickness

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