Predictors of Accessibility to Health Care under Social Security Scheme among Myanmar Migrant Workers in Hat Yai District, Songkhla Province, Thailand

Aye Myat Myat Win

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Health System Management

Prince of Songkla University

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ABSTRACT

This cross-sectional study was designed to explore accessibility, policy literacy and barriers to health care services. Moreover, it was intended to test predictability of personal factors, i.e., gender, marital status, monthly income, educational level, living period, time taken to access the nearest health care service, policy literacy and barriers on accessibility to health care services under the Social Security Scheme among Myanmar migrant workers. Data was collected from 240 migrant workers in Hat Yai district, Songkhla province. Those living and working in Thailand for at least one year were purposively recruited from four types of factories: seafood, rubber, wood and mechanics.

A structured questionnaire was used to collect the data and consisted of four parts: (1) Personal data form, (2) Policy literacy questionnaire, (3) Barriers on accessibility to health care service questionnaire, and (4) Health care service accessibility questionnaire. Open-ended questions were added to capture qualitative data on policy literacy, barriers and health care accessibility. Content validity of the tool was examined by three experts employed in areas of public health, health systems and community health. The reliability of the questionnaire was tested in 30 Myanmar migrants from one factory. Cronbach’s alpha coefficients for policy literacy, barriers and accessibility to health care service questionnaire were 0.87, 0.84 and 0.72, respectively. Descriptive statistics were used to describe personal data, policy literacy, barriers and accessibility to health care services. A stepwise linear regression model was used to test predictability of individual factors, policy literacy and barriers on

accessibility to health care services. Open-ended questions were analysed using simple content analysis.

Results revealed moderate scores in total, including all domains of policy literacy and in the overall score barriers in accessibility to health care services at both the individual and system level. In addition, the total score of accessibility to health care services and subtotal scores of availability and financial accessibility were moderate. In contrast, geographic accessibility and acceptability were low. From the qualitative analysis we found that migrants would like to have more information sharing about the scheme and experienced barriers such as language issues, lack of knowledge on health care services, and long waiting times at hospital. Concerning with health care accessibility, Myanmar migrants reported that transportation, hospitality and attitudes of health care providers, and cross-culture understanding were important issues.

Regression analysis showed only two factors significantly associated with accessibility of health care services: policy literacy ($\beta = 0.53$, $p < 0.01$) and barriers ($\beta = -0.28$, $p < 0.01$) and these factors could explain 47.2% of the total variance on accessibility to health care services. Therefore, recommendations such as distributing pamphlets and training health volunteers for informing about the scheme are essential to improve health care access for Myanmar migrants.

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CHAPTER 1

INTRODUCTION

Background and Significance of the Problem

Thailand has become an industrialised country over the past few decades and a country for the migration of labour. It is a major destination country for migrant workers from the neighbouring countries due to its economic growth (International Organization for Migration, 2011 cited in Noom & Vergara, 2014). Migrant workers support Thailand in the exportation of products to international markets (Sciortino & Punpuing, 2009 cited in Ford & Holumyong, 2016). Moreover, there is a provision of high daily salary which is three to five times higher than the daily salary in the native countries of the migrant workers (Kantayaporn & Malik, 2013). Therefore, Thailand is a magnet country for migrant workers who fundamentally support the economy of Thailand.

Migrant workers are important for Thailand's economy as they mostly work in the ground sectors that demand the labour. The availability of local Thai people is not enough to fill the labour force, a situation demands the injection of migrant workers (Kantayaporn & Malik, 2013). Migrant workers solve the problem of labour shortage by working in low-skilled jobs such as in industries for exportation of products that are essentially driven to stimulate the economic growth of Thailand (The OECD Development Centre and The International Labour Organization, 2017). Migrant workers mainly come from the neighbouring countries of Myanmar, Cambodia and Laos. The majority are Myanmar migrant workers who comprise 82% of the total migrant population of Thailand (Fujita, Endo, Okamoto, Nakanishi, & Yamada, 2010

cited in Noom & Vergara, 2014). In 2011, there were 1.5 million documented Myanmar migrants in Thailand (World Health Organization Thailand, 2013). They mainly work in the provinces that provide higher employment opportunities.

Songkhla province is one of the main provinces in Thailand that offer job opportunities for migrant workers. It is located on the east coast of the Malay peninsular in the southern region of Thailand. Moreover, it has become the main economic area in the region as it has a variety of industry such as rubber, wood and seafood processing (Naing, Geater, & Pungrassami, 2012). Migrant workers receive their documented status through two processes. The first process is a Memorandum of Understanding (MOU), which is the agreement between Myanmar and Thailand governments to allow Myanmar citizens to work legally in Thailand. The second is a National Verification process which provides a temporary (2-year) passport to workers who entered Thailand illegally (Kantayaporn & Malik, 2013). There were 53,002 documented migrant workers in Songkhla province in 2017, whereas 43,895 were Myanmar citizens, including MOU and Nationality Verified workers in March, 2018 (Foreign Workers Administration Office, 2018). Hat Yai is a popular district in Songkhla province which is located near the Malaysian border. It has the highest number of factories (479) among other districts of the province (Department of Industrial Works) and has a high migrant worker population. Migrant workers are vulnerable to health problems because of living in crowded environments with poor sanitation. Tuberculosis is the most common health problem among migrant workers (Naing et al., 2012). Malaria is also common among migrant workers compared to the Thai population (Rakprasit, Nakamura, Seino, & Morita, 2017). Therefore, health care services are essential for migrant workers to maintain their health status.

Formal health care services have been provided for migrant workers from three countries such as Myanmar, Laos and Cambodia. Two health care schemes have been established. The first scheme (Social Security Scheme) is for documented migrant workers who have work permits and working in formal sector such as factories (Tangcharoensathien, Thwin, & Patcharanarumol, 2017). The second one (Compulsory Migrant Health Insurance Scheme) is for migrants working in informal sectors such as agriculture, fisheries, animal husbandry and domestic service(Kantayaporn & Malik, 2013) and their dependants who are not covered by the Social Security Scheme (Tangcharoensathien et al., 2017). Most of the migrant workers are documented workers nowadays as the government tries to eliminate illegal workers with the National Verification process. Therefore, the documented migrant workers who work in the formal sector are entitled to the Social Security Scheme which is managed by the Social Security Office of the Ministry of Labour. The scheme is financed by the three parties of employers, employees and the government (Kantayaporn & Malik, 2013). However, accessibility to health care services is important for migrant workers to receive the provided health care services.

There are regulations for the accessibility of health care services under the Social Security Scheme. The benefits of the scheme cover seven areas which include accident or sickness, disability, maternity, death, child allowance, unemployment, and old-age pension. Health care services can only be received at a contracted public or private hospital (Hall, 2011). Moreover, the accessibility to health care under the scheme remains low due to influencing factors such as demographic and perceived illness and health-seeking pattern. The coverage of the Social Security Scheme was less than 9 percent in 2011 (Tangcharoensathien et al., 2017) and 46.9 percent in 2013

(Kantayaporn & Malik, 2013). However, most of the documented migrant workers could not access health care services (only 14 percent have access) as they seek health care only in chronic conditions and have support from the family (Khongthanachayopit & Laohasiriwong, 2017). Moreover, there are difficulties for the migrant workers to access health care.

Although health care services are provided under the Social Security Scheme, barriers deter health care access. Poor quality of care, negligence of health care providers and long waiting times due to crowded conditions at the hospital cause migrant workers to seek health care services at nearby private clinics (Webber, Spitzer, Somrongthong, Dat, & Kounnavongsa, 2012). Moreover, migrant workers face with a language difficulty when seeking care (E. Cho, personal communication, August 20, 2018; B. Yee, personal communication, August 23, 2018). In addition, policy literacy on health care services under the Social Security Scheme is important for the migrant workers to access the provided health care services. Migrants with limited literacy have difficulty accessing information about the available services and this situation worsens in combination with cultural and financial barriers (Kreps & Sparks, 2008). Therefore, it is necessary to explore more about accessibility of health care services, policy literacy and barriers that migrant workers face when trying to access health care services.

A study conducted on the accessibility of health care services among documented migrant workers in the Northeast of Thailand found that personal factors, such as chronic illness, are related to health care access and most migrant workers could not access these services (Khongthanachayopit & Laohasiriwong, 2017). A survey in Songkhla province explored about the health seeking behaviour of migrant

workers. The study found that self-medication is common among migrant workers, and they only seek health care when the symptoms worsen (Naing et al., 2012). Moreover, the coverage of the Social Security Scheme is low; only 46.9 percent of eligible workers were covered in August, 2013 (Kantayaporn & Malik, 2013). A study exploring health seeking behaviour and health care access among Shan migrant workers in Hang Dong district of Chiang Mai province showed that most migrant workers buy drugs from a drug store and rest if they have a minor illness and long queues at health care facilities was the most common barrier experienced by them for health care access (Nwi, Katonyoo, & Chiangmai, 2018). Moreover, migrants need to be literated on the health care policy to gain benefit by accessing the health care services (Hannah & Lê, 2012). Therefore, policy literacy under Social Security Scheme is essential for migrant workers on seeking the services. Previous studies on health care accessibility were conducted among documented and undocumented migrants (Khongthanachayopit & Laohasiriwong, 2017; Nwi et al., 2018; Tschirhart, Nosten, & Foster, 2016). However, the Thai government recently launched a policy in March 2018 to register all migrant workers for elimination of undocumented migrant workers (Thailand Business News, 2018). Therefore, all migrant workers become documented workers. Health care access under the Social Security Scheme has become important for migrant workers. Although there are many existing studies on the accessibility of health care services among migrant workers, there are limited studies exploring health care access of documented migrant workers under the Social Security Scheme. Therefore, this study was conducted to explore the current situation of accessibility to health care services under the Social Security Scheme, focusing on Myanmar migrant workers, policy literacy and barriers experienced by them. Results

of this study will help to fill the knowledge gap described above. Moreover, results of the study can improve the health of migrant workers by providing policy recommendations to enhance the health care provision for migrants.

Objectives of the Study

General Objectives

1. To explore the policy literacy, barriers and accessibility to health care services under the Social Security Scheme among Myanmar migrant workers in Hat Yai district, Songkhla province
2. To determine individual factors, policy literacy and barriers of accessibility to health care services the under Social Security Scheme among Myanmar migrant workers in Hat Yai district, Songkhla province

Specific Objectives

1. To explore the level of policy literacy on health care services under the Social Security Scheme.
2. To explore the levels of perceived individual barriers (personal, financial and social) for achieving health care services under the Social Security Scheme
3. To explore the levels of perceived system barriers (barriers related to the health care providers, health care system and work situation) for achieving health care services under the Social Security Scheme
4. To explore the levels of geographic accessibility, availability, financial accessibility and acceptability of health care services under the Social Security Scheme

5. To determine individual factors, policy literacy and barriers of accessibility to health care services under the Social Security Scheme

Research Questions

General Research Questions

1. What is the magnitude of policy literacy, barriers and accessibility to health care services under the Social Security Scheme among Myanmar migrant workers in Hat Yai district, Songkhla province?
2. What individual factors, policy literacy and barriers are associated with accessibility to health care services under the Social Security Scheme among Myanmar migrant workers in Hat Yai district, Songkhla province?

Specific Research Questions

1. What is the level of policy literacy on health care services among Myanmar migrant workers under the Social Security Scheme?
2. What are the levels of perceived individual barriers (personal, financial and social) for achieving health care services among Myanmar migrant workers under the Social Security Scheme?
3. What are the levels of perceived system barriers (barriers related to the health care providers, health care system and work situation) for achieving health care services under the Social Security Scheme?
4. What are the levels of geographic accessibility, availability, financial accessibility, acceptability and quality of health care services under the Social Security Scheme?

5. How individual factors, policy literacy and barriers are associated with accessibility to health care services under the Social Security Scheme?

Conceptual Framework

There are three variables in the study, namely policy literacy, accessibility to health care, and associated barriers among Myanmar migrant workers. The first variable of policy literacy on health care services under the Social Security Scheme is based on the health literacy concept, which is defined as "the degree to which people are able to access, understand, appraise and communicate information to engage with the demands of different health contexts to promote and maintain health across the life-course" (Zumbo et al., 2006). Therefore, policy literacy is the ability related to specific information of services. Policy literacy will be explored in four dimensions: ability to (i) access, (ii) understand, (iii) appraise, and (iv) communicate policy information. The second variable, accessibility to health care, is defined as "the timely use of services according to needs" (Peters et al., 2008 cited in Bigdeli et al., 2012), and is based on four dimensions: (i) geographic accessibility, (ii) availability, (iii) financial accessibility, and (iv) acceptability. The third variable, barriers of access to health care services, is defined in terms of individual level and system level based on previous studies (Hacker, Anies, Folb, & Zallman, 2015; Scheppers, Van Dongen, Dekker, Geertzen, & Dekker, 2006; Webber et al., 2012). Personal, financial and social factors will be identified as the individual level whereas the system level is related to the health care providers, health care system and work situation.

Accessibility to health care is affected by many factors which include individual factors, policy literacy and barriers. Individual factors, such as gender, marital status, income, educational level, living period in Thailand, and time taken to

access health care services, are related to health care accessibility (Aung, Pongpanich, & Robson, 2009; Gonah et al., 2016; Khongthanachayopit & Laohasiriwong, 2017; Musumari & Chamchan, 2016). Policy literacy is also associated with the health care access (Batterham, Hawkins, Collins, Buchbinder, & Osborne, 2016). In addition, barriers such as language, long waiting times, and transportation difficulty affect the accessibility to health care services (Tschirhart et al., 2016; Tschirhart, Nosten, & Foster, 2017; Webber, Spitzer, Somrongthong, Dat, & Kounnavongsa, 2015). Therefore, health care accessibility is influenced by individual factors, policy literacy and barriers. The conceptual framework is shown in Figure 1.

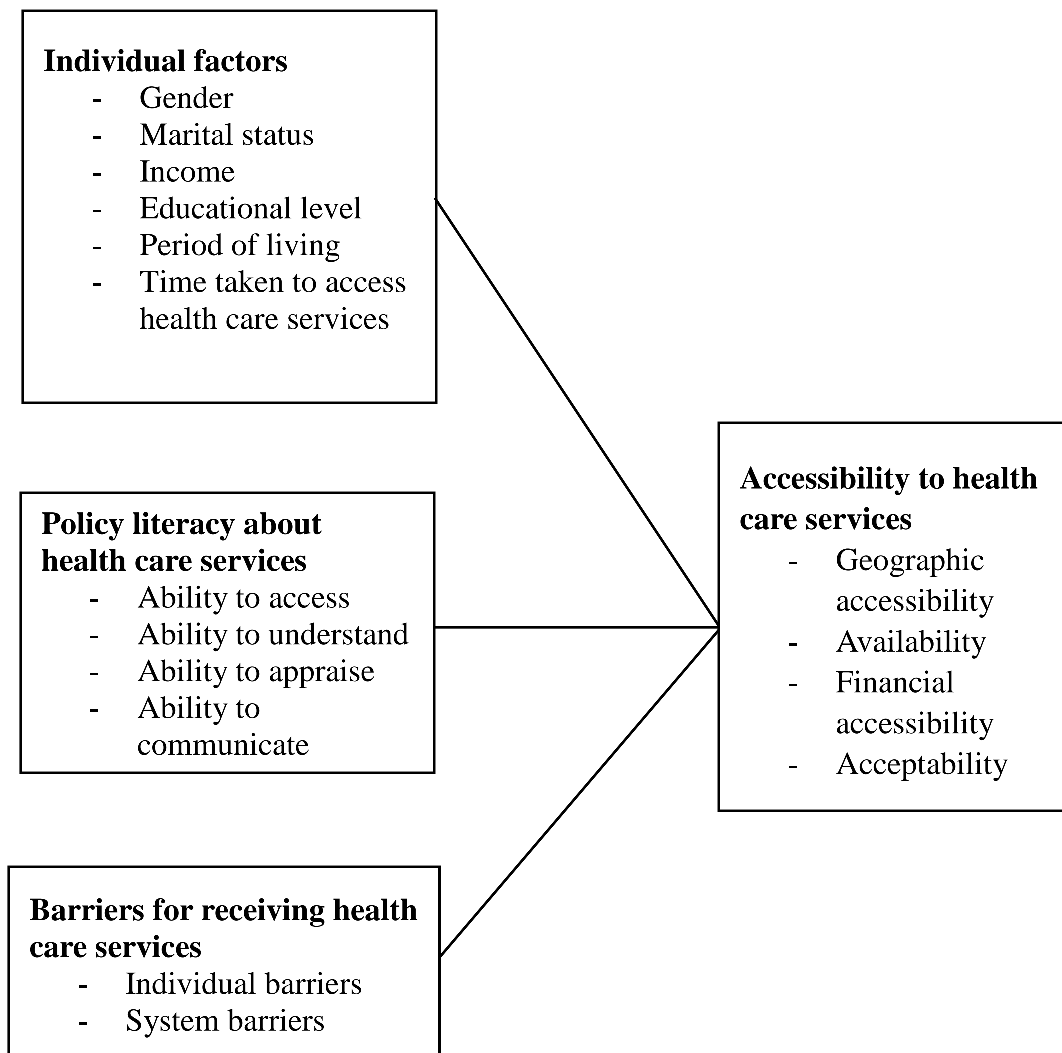

Figure 1. Conceptual framework of the study

Hypothesis

Accessibility to health care services under the Social Security Scheme is associated with individual factors, policy literacy and barriers.

Definitions of Terms

1. *Policy literacy* refers to the acquired competency on health care services in terms of ability to access, ability to understand, ability to appraise and ability to communicate policy information by Myanmar migrant workers.

Ability to access refers to searching and seeking competency on policy information related to health care services.

Ability to understand refers to understanding competency on policy information related to health care services.

Ability to appraise refers to evaluating competency on policy information related to health care services.

Ability to communicate refers to sharing and distributing competency on policy information related to health care services to other migrant workers.

2. *Barriers for receiving health care services* refer to the obstacles experienced by Myanmar migrant workers for receiving health care services. Individual barriers (personal, financial, social factors) and system barriers (barriers related to the health care providers, health care system, work situation).

Personal barriers refer to the obstacles related to individual factors, such as language and perceived illness.

Financial barriers refer to the obstacles related to the cost for seeking health care.

Social barriers refer to the obstacles related to social support and stigma from other people.

Barriers related to the health care providers refer to the obstacles related to the health care personnel which include discrimination and poor communication skill.

Barriers related to the health care system refer to the obstacles related to the health services provision which include insufficient medical equipment and medicines, and long waiting time.

Barriers related to the work situation refer to the obstacles related to the employment condition.

3. Accessibility to health care services refers to the perceived ability to receive health care services by Myanmar migrant workers in terms of geographic accessibility, availability, financial accessibility and acceptability.

Geographic accessibility refers to the perceived ability to access health care services by Myanmar migrant workers in terms of distance that includes the ease and availability of transportation.

Availability refers to the availability of health care services by Myanmar migrant workers which includes medicines and availability of health care personnel in health care provision areas.

Financial accessibility refers to the coverage of cost for health care access, including cost of treatment and food by Myanmar migrant workers.

Acceptability refers to the Myanmar migrant workers' satisfaction of the provided health care services.

Scope of the Study

Hat Yai district is selected among other districts that have migrant workers in Thailand. Large factories are selected as study setting due to the presence of high number of migrant workers. The two-month study period from February to March, 2019 will limit the adequacy of the information. Moreover, the use of open- and close-ended questions from a quantitative method may reduce the depth and profundity of information compared with a qualitative method.

Significance of the Study

The study explores the current situation of health care service accessibility, policy literacy and barriers of access to health care services under the Social Security Scheme among Myanmar migrant workers in industrial sectors of Hat Yai district, Songkhla province. The information gained from this study will provide recommendations on improving and creating policies for migrant workers regarding the provision of health care services. As a result, migrant workers can maintain their optimal health status by effective utilization of the provided services. Therefore, it is believed that this study can give benefits to the health of Myanmar migrant workers in Thailand.

CHAPTER 2

LITERATURE REVIEW

This was a cross-sectional study aiming to explore the accessibility to health care services, and associated factors, among Myanmar migrant workers in Songkhla province, Thailand. The literature review covers the following topics:

1. Myanmar migrant workers in Thailand
2. Myanmar migrant workers in the industrial system of Hat Yai district, Songkhla province
3. Health care services for Myanmar migrant workers in the industrial system
   - 3.1 Social Security Scheme for Myanmar migrant workers
   - 3.2 Contribution rate and coverage of the Social Security Scheme
   - 3.3 Benefits of the Social Security Scheme
4. Policy literacy, in terms of
   - 4.1 Background and measurement
   - 4.2 Existing knowledge of policy literacy in migrants
5. Barriers of health care accessibility in Myanmar migrant workers
   - 5.1 Concept of barriers of health care accessibility: background and measurement
   - 5.2 Existing knowledge on barriers of health care accessibility in Myanmar migrant workers
6. Accessibility of health care services among Myanmar migrant workers
   - 6.1 Concept of accessibility: background and measurement
   - 6.2 Existing knowledge on accessibility of health care services among Myanmar migrant workers

6.3 Associated factors of accessibility to health care services

Myanmar migrant workers in Thailand

The majority (82%) of the migrant worker population in Thailand come from Myanmar (Noom & Vergara, 2014). In 1992, Myanmar migrant workers were allowed to work as low-skilled labours in four border provinces of Thailand, expanding to nine provinces in 1996 (Limanonda & Peungposop, 2009). Moreover, a Memorandum of Understanding (MOU) between the two countries, established in 2009 and allowing Myanmar migrant workers to work legally in Thailand, continues to encourage labour migration (International Labour Organization, 2019). Many of these migrants are employed in various low-skilled jobs, such as farming, animal husbandry, fishing, factories and domestic services.

However, most migrant workers are employed in the industrial sectors of Thailand. Growth in the industrial sector is necessary for the establishment of ASEAN Economic Community (AEC) and the expanded industrial sector is the source for the migrant workers' employment (Boonsem & Assavarak, 2015). The majority of migrant workers are employed in low technology factories that are labour intensive (Tam & Reynolds, 2014). Myanmar migrant workers are vulnerable to the health problems due to the work conditions in the factories. Although they tend to be healthy before working in the factories, the work environment, such as poor ventilation and exposure to the chemicals in factories can cause serious health problems. The common health problems are hypertension, respiratory diseases (coughing), heart disease and skin problems such as allergic reaction (Boonsem & Assavarak, 2015). Moreover, communicable diseases such as cholera, hepatitis B and low back pain are also common health problems (Srivirojana, Punpuing, Robinson, Sciortino, & Vapattanawong, 2014). Although they are at risk for health problems due

to the work conditions, the growing industrial sector continues to attract Myanmar migrant workers.

Most migrant workers are registered nowadays due to a Thai policy that aims to eliminate illegal workers. In July 2015, there were 1.4 million registered Myanmar migrant workers in Thailand, which comprises 62.7 percent of the total registered migrant workers (Beesey, Limsakul, & McDougall, 2016). In March 2017, there were 53,002 registered migrant workers, 31,350 Nationality verified workers and 21,652 MOU workers in Songkhla province (Foreign Workers Administration Office, 2018). In 2018, Myanmar migrant workers who completed National Verification and MOU process were 81% and 50% of total migrant population (International Labour Organization, 2019). Southern Thailand has the highest number of Myanmar migrant workers in the country. Ninety-two percent of Myanmar migrant workers have work permits, which is the second highest proportion after the Northern region, which has 99 percent (Beesey et al., 2016).

Myanmar migrant workers in industrial system of Hat Yai district, Songkhla province

Migrant workers mainly work in the industrial sectors of Thailand. In 2010, due to the high wage offered in the industrial sectors, there is one migrant worker in every eight workers in this sector. The fisheries industry is one of the top industries that have low-skilled migrant workers. Moreover, as Thai people move to better paying jobs, the industries are more heavily dependent on migrant workers to fill the depleted labour force. The increase in migrant workers is largely seen in the manufacturing sector. Besides this sector, migrant workers are also employed in

private households, mining, construction, electricity, gas and water sectors (The OECD Development Centre and The International Labour Organization, 2017).

Among the provinces in southern Thailand, Songkhla has a fast-growing economic development due to the special economic zone (SEZ) that could be a host area for migrant workers. The SEZ is situated in Sadao district that attracts migrant workers from the neighbouring countries (Thai Health, 2015). It has six industrial categories that include fisheries, textiles, furniture making, logistics, industrial estates and tourism activities support (Songkhla Province Special Economic Zone). Moreover, many factories are situated in Songkhla province. There are total of 1,836 factories in Songkhla province with the most common types being seafood, wood and rubber factories (Department of Industrial Works). As a result, the province has high concentration of migrant workers. In July 2015, there were 77,953 regular migrant workers. In March 2018, there were 43,895 regular Myanmar migrant workers, of which 15,229 were employed under the MOU and 28,666 nationality verified (Foreign Workers Administration Office, 2018).

Hat Yai, a district in Songkhla province, had a population of 159,233 in 2017 (Department of Provincial Administration, 2017). It has an area of 21 square kilometres and is the largest city in Songkhla province (Wikipedia, 2019). It also has the largest number of factories (479) among all districts of Songkhla province. The factory types include seafood, rubber, wood, mechanics and plastic bag manufacturing (Department of Industrial Works). Many workers can be found in Hat Yai, including migrants. Health care needs to be provided for the working migrant population as they are vulnerable to the health problems in the factories. Therefore,

the Thai government has provided health care services for the migrant workers to serve the industrial system.

Health care services for Myanmar migrant workers in the industrial system

The Thai Government provides health care services for both documented and undocumented migrant workers. The Social Security Scheme (SSS) is provided to documented migrant workers, working in the formal sector such as factories and Compulsory Migrant Health Insurance Scheme (CMHI) is provided to both documented and undocumented migrant workers, those working in the informal sector such as agriculture, animal husbandry and fisheries (Tangcharoensathien et al., 2017). Therefore, Myanmar migrant workers working in the industrial system are covered by the Social Security Scheme.

Social Security Scheme for Myanmar migrant workers

Thailand established many social insurance schemes for the different types of population, such as civil servants, public and private formal sector employees of which the Social Security Scheme is one of them. The 1990 Social Security Act allowed the social security protection for private formal sector employees. According to the Act, the Social Security Scheme was established and managed by the Social Security Office which is a department under Ministry of Labour. It is the public social insurance scheme that requires contributions for achieving the benefits. It is compulsory for all registered private sector employees aged between 15 to 59 years (Japan International Cooperation Agency, 2010; Social Security Office, Thailand; Social Security Office, 1997).

The number of eligible enterprises has increased from 1991 to 2002. In 1991, the scheme allowed only private enterprises with 20 or more employees to register. The coverage was gradually increased to those with 10 or more employees in 1993. However, since 1st April, 2002, all the registered private enterprises with one or more employees are now eligible. In addition, different types of employees are allowed to register with the scheme such as those working in the private formal sector and two types of voluntary insured persons, i.e., those who previously worked and who are not employees (Social Security Office, Thailand; Social Security Office, 1997).

Registered Myanmar migrant workers employed in the formal private sector such as factories are covered by the scheme as it is compulsory for them. They make a contribution of 5 percent from the monthly salary - both from the employer and the employee - and receive seven benefits under the scheme such as accident or illness, maternity, death, disability, old-age pension, child allowance and unemployment (Japan International Cooperation Agency, 2010; Social Security Act, 1945). Moreover, there have been many developments to the benefits package compared with the last decade.

The benefits of the scheme have gradually increased from 1991 to 2004. In 1991, the scheme started with four areas of benefit: medical care due to accident or illness, maternity, death and disability. In 1998, the coverage of benefits expanded to include old-age pension and child allowance and in 2004, benefits for unemployment was introduced (Social Security Office, Thailand; Social Security Office, 1997). Contributions from three parties (government, employer and employee) is required in order to receive the seven benefits under the scheme.

Contribution rate and coverage of Social Security Scheme

Two types of registered migrant workers in formal sector are covered by the Social Security Scheme. The first type concerns migrant workers who have passed the nationality verification process and the second type concerns all other workers through the MOU between the government of Thailand and the governments of Myanmar, Laos and Cambodia (Hall, 2011, 2012). There are a few criteria for the registration to the scheme. A passport, work permit and monthly contributions are required for the enrolment to the scheme (Hall, 2011, 2012). Both employer and employee need to pay 5 percent of the employee's monthly salary to the scheme every month. The 5 percent comprises of 1.5% for accident or illness, maternity, disability, death, 3% for child allowance and old-age pension and the remaining 0.5% for the benefit of unemployment. The contribution rate is calculated based on the monthly salary between 1,650 to 15,000 baht which is also the eligible salary rate for the migrant workers. The government pays 2.75 percent for each employee to the scheme on a monthly basis. The contribution rate of 2.75 percent consists of 1.5% for the first four benefits, 1% for the child allowance and pension for the elderly and 0.25% for the unemployment benefit (Social Security Office, Thailand; Social Security Office, 1997). However, there is waiting period to receive the benefits.

The registration fee for workers joining the Social Security Scheme is 500 baht. Activation of the scheme takes around three months to process. During this period, if illness happens, workers can visit a registered hospital and receive treatment after paying a fee of 30 Baht. For the scheme to be active, both the employee and the worker need to pay the monthly contribution. The scheme will be deactivated six months after non-contribution. If the workers want to re-register to the scheme after

six months, they will need to start the process again, which means paying the initial 500baht registration fee and waiting a further three months. Consequently, previous contributions are annulled and the available benefits will be reduced. Not all registered migrant workers are covered by the scheme. The scheme is not accessed by migrant workers in informal sectors such as agriculture, animal husbandry, fisheries and domestic service (Hall, 2011, 2012; Kantayaporn & Malik, 2013). The percentage of migrant workers covered by the scheme was 42.9 percent in February 2013 and 46.9 percent in August 2013 (Kantayaporn & Malik, 2013).

Medical services are available at the registered hospitals with the Social Security Scheme. These hospitals include both public and private hospitals as well as sub-contracted hospitals within the network for referral purposes. In 2014, there were 242 registered hospitals in Thailand under the Social Security Scheme which includes 156 public hospitals and 86 private hospitals. The migrant workers can choose to seek the services of either a public and private hospital where they will receive treatment free of charge (Rousseau, 2014). In 2011, there were 2,141 sub-contracted hospitals under the referral process (Social Security Office, Thailand). However, the choice of the hospital depends on the medical situation. In an emergency, workers can be referred to any hospital. However, there are certain criteria for the hospital to have a contract under the scheme. The contracted hospital must have at least 100 beds, a good referral system, and adequate facilities. The comprehensive health care package is provided for the insured persons. The health care package includes accident and emergency, outpatient and inpatient care, and high cost treatment with some exceptions (Rousseau, 2014). Apart from the medical treatment, the insured persons can receive immunization and health education for prevention and health promotion

services (Japan International Cooperation Agency, 2010; Tangcharoensathien, Supachutikul, & Lertiendumrong, 1999). Apart from health care services, migrant workers can also receive social welfare.

Benefits of the Social Security Scheme

Migrant workers can receive not only health care services but also social security benefits, including compensation. There are seven benefits under the scheme and the criteria for the contribution to be paid for receiving the benefits are different. All the covered expenses at the hospital for the medical treatment are determined according to the rules and rates by the Medical Committee.

Accident or illness

The first benefit is provision of health care services for accident and illness and covers both occupational-related and unrelated injuries. To receive this benefit, the migrant workers must pay the contribution rate for at least three months before starting to use the services. The benefits include the cost for medical investigations, treatment, accommodation, food, medicines and medical equipment, ambulance or transportation and other necessary items. Medical treatment covers services such as operations, renal dialysis, intensive care and dental care. The migrant workers can receive health care free of charge in contracted and sub-contracted hospitals. Moreover, if they receive treatment at a non-contracted hospital (including private hospitals), they need to pay the cost in advance, but they can apply for reimbursement according to the rate of different types of treatment and investigations at the Social Security Office. Migrant workers can receive dental care at the contracted hospital and need to pay only the amount that exceeds the insured limit. Workers can receive treatment if the cost does not exceed 900 baht for dental care such as removing dental

plaque, tooth extraction, tooth fillings and removal of wisdom teeth for one year. It covers a maximum cost of 1,300 baht for artificial tooth insertion of one to five teeth, 1,500 baht for more than five teeth and 4,400 baht for the whole artificial teeth (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997). The compensation can be obtained during medical leave by the migrant workers.

The migrant worker can receive 50 percent of the monthly salary during the period of medical leave upon recommendation of the doctor. This benefit can last for a maximum of 90 days per episode and a maximum of 180 days per year. However, in chronic cases, the benefit can last for a maximum 365 days for the income loss (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997).

Maternity

Maternity benefit covers the cost of delivery and salary during maternity leave. To be eligible, workers must have contributed to the scheme for at least seven months. The migrant worker can receive up to 13,000 baht for the cost of delivery. Copies of the birth certificate and identity need to be submitted to the Social Security Office. Moreover, maternity leave is for 90 days and 50 percent of the monthly salary will be given during the leave period. The benefit is limited to only two episodes. A male migrant worker can also receive the 13,000 baht benefit on behalf of his wife to cover the cost of delivery after the birth certificate and marriage contract have been submitted to the Social Security Office If the marriage contract does not have, a

signature or identity needs to be submitted to the Social Security Office (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997).

Disability

The disability benefit covers the treatment, rehabilitation and compensation for any type of disability. The migrant workers can receive the health care at the registered public hospital for the disability care. Care covers both outpatient and in-patient care, artificial equipment and not more than 500 baht as a lump sum for ambulance and transportation costs per month. If treatment is received at a private hospital, the cost covers a maximum of 2,000 baht for outpatient care and 4,000 baht for in-patient care for a one month period. During the rehabilitation period a compensation of 30 percent of the worker’s daily wage is given up to a period of 180 months in case of minor or moderate disability, defined as not being able to perform daily routines. In cases of severe disability, they can get the 50 percent of the worker’s daily wage for the rest of the worker’s whole life. However, the worker needs to contribute for at least three months to the scheme to receive care and compensation for the disability (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997).

Death

In cases where the worker dies, designated family members can receive compensation for the funeral cost (40,000 baht) and a death benefit described below. However, the worker must have made contributions to the scheme for at least one

month. The person specified, in writing, by the worker before their death is eligible to get the benefit. If the worker did not specify the person in writing, the spouse, parents or children are eligible to get the benefit. The amount of benefit depends on the duration of contributions to the scheme. 50% of the worker's average salary can get for 4 months if the worker makes the contribution for the period between up to three years and 10 years. If the contribution is given for over 10 years, 50% of average salary for 12 months can be received as compensation (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997).

Child allowance

The migrant worker can receive the allowance for his or her child if they have made contributions to the scheme for at least 12 months. They can get the benefit of 400 baht per month for a child aged under 6 years. The benefit is limited to two children (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997).

Old age pension

Another benefit is payment after retirement from the job. The age for the retirement is 55 years and if the worker makes the contribution for more than 180 months, the worker will receive 20 percent of the average wage of the previous 60 months and 1.5% for every additional 12 months. This pension is paid monthly. Moreover, if the contribution is made for more than 12 months and less than 180

months, workers can receive a lump sum pension equal to the contribution rate from both employer and employee in combination with interest. The lump sum pension with the same as the employee contribution can achieve for the worker who has made less than 12 months contribution (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997).

Unemployment

The last benefit is payment for the migrant workers after they have terminated their employment. The benefit is divided into three types and workers needed to make contributions for at least 6 months. The first type is for the dismissed worker who can get 50 percent of their salary for not more than 180 days per time. The second type is for the worker who resigns; they can receive 30 percent of their salary for not more than 90 days within one year. However, the above two types of worker need to register at the Public Employment Office within 30 days of unemployment for seeking a new job. The final type is loss of job due to force majeure. In this situation, the insured person can receive 50 percent of their salary for not more than 180 days per time as compensation (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997).

Although there are seven benefits under Social Security Scheme, three benefits, namely old age pension, unemployment, and disability are inaccessible by the migrant workers due to the work contract, the limited unemployment time, dependence upon the work status and long contribution rate. The available benefits are restricted in some circumstances. For example, if the injury happens due to

intentional use of alcohol or illegal drugs, then no compensation will be given (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997). As migrants are eligible to receive benefits under the Social Security Scheme, they need to know about the available health care services, rights and regulations. Therefore, policy literacy becomes important for them.

Policy literacy

Policy literacy on the Social Security Scheme refers to the acquired competency related to information on health care services under the Social Security Scheme in terms of ability to access, understand, appraise and communicate the information. Policy literacy becomes an important issue for health care accessibility. As policy literacy is a novel concept, this study constructs the concept to be specific for the Social Security Scheme from a health literacy perspective.

Background and measurement

Health literacy is a multidimensional concept with many definitions. According to the World Health Organization, health literacy is “the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand, and use information in ways which promote and maintain good health” (Batterham et al., 2016). Another definition is “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” (U.S. Department of Health and Human Services, 2000). Moreover, it is also described as “the degree to which people are able to access, understand, appraise and communicate information to engage with the

demands of different health contexts to promote and maintain health across the life-course" (Zumbo et al., 2006).

There are also many scales to measure health literacy. Rapid Estimate of Adult Literacy in Medicine (REALM), Test of Functional Health Literacy in Adults-Short form (S-TOFHLA) and the Newest Vital Sign are three tests of the abilities of individuals directly. Functional, Communicative, and Critical Health Literacy Scales, and the Set of Brief Screening Questions are two scales that measure the abilities of self-reports and the National Assessment of Adult Literacy and the Health Activities Literacy Scale are population-based proxy measures (Ishikawa & Kiuchi, 2010). The REALM and S-TOFHLA scales are the most popular ones (Han, Kim, Kim, & Kim, 2011). In this study, policy literacy will be measured based on the definition of health literacy which includes ability to access, ability to understand, ability to appraise and ability to communicate health information (Zumbo et al., 2006). Many factors influence the health literacy that include individual and system factors. Individual factors such as age, education, culture, language (Han, Kim, Kim, & Kim, 2011; U.S. Department of Health and Human Services, 2000) and system factors such as access to health care resources, communication skill of health care personnel and demand of the health system and situation (U.S. Department of Health and Human Services, 2000) can all affect health literacy. People with low health literacy have been shown to have low use of health care services (Han, Kim, Kim, & Kim, 2011) and bad health outcomes compared to those with high health literacy (Batterham, Hawkins, Collins, Buchbinder, & Osborne, 2016). Moreover, people with limited health literacy have lack of knowledge about the disease, use health care services when they are sick and are more likely to have chronic diseases as health literacy affects their ability to

navigate the health system and access health information (U.S. Department of Health and Human Services, 2000). Therefore, it is obvious that health literacy is associated with health care accessibility. This study will measure the health literacy in terms of policy literacy for the access to health care services.

Existing knowledge of policy literacy in migrants

Policy literacy is essential for local population groups to access health care particularly for migrants who are a vulnerable group in a foreign country. A study among Southeast Asian migrants in Taiwan (Tsai & Lee, 2016) indicated that migrants who lack adequate health literacy skills have difficulty understanding the health system, seeking health care, and communicating with health care providers. It is also suggested that health literacy is an important aspect for the development of health care provision policy to improve the health status of migrants. Another study in Norway (Gele, Pettersen, Torheim, & Kumar, 2016) showed that increased health literacy can improve health outcomes among migrant populations, thereby achieving health equity. Therefore, policy literacy plays a vital role in increasing access to health care which aims to improve health outcomes of migrants by reducing health disparities in the society.

Barriers on health care accessibility in Myanmar migrant workers

Barriers of accessibility to health care services are important to consider as they hinder health care accessibility. It is essential to explore the barriers that migrants face in order to reduce them and enhance their health care accessibility.

Concept of barriers on health care accessibility: background and measurement

Barriers are obstacles for the access to health care services and they are viewed from various models. Two studies (Donnell, 2016 and Ensor & Cooper, 2004) described the barriers from the two sides; the demand side and the supply side. Demand side barriers concern consumers' use of health care services while supply side barriers concern the health care system which provides health care services (Jacobs, Bigdeli, Annear, & Van Damme, 2011). The CAB (Health Care Access Barriers) model viewed health care access barriers in three categories: financial barriers related to the cost and health insurance status, structural barriers related to the health system, and cognitive barriers related to health knowledge and language. They are measured with a quantitative analysis and evaluated in terms of hours of health care provision, waiting time, etc (Carrillo et al., 2011). In this study, barriers are divided in terms of individual factors and system factors as described by the following details.

Barriers related to the individual factors. Individual barriers include the obstacles due to the migrant workers and include personal, financial and social factors (Hacker et al., 2015; Scheppers et al., 2006; Webber et al., 2012).

1. Personal barriers

Personal barriers are important as they affect the accessibility of health care. Firstly, language difficulty is commonly found among migrants as a personal barrier (Entz, Prachuabmoh, van Griensven, & Soskolne, 2001; Hickey, Gagnon, & Jitthai, 2014; Holumyong, Ford, Sajjanand, & Chamratrithirong, 2018; Murray, DiStefano,

Yang, & Wood, 2016; Rakprasit et al., 2017; Tschirhart et al., 2016, 2017; Vittaporn & Boonmongkon, 2016). Secondly, cultural factor is related to seeking some health care such as Human Immunodeficiency Virus (HIV), sexually transmitted diseases and tuberculosis (Entz et al., 2001; Ford & Holumyong, 2016; Holumyong et al., 2018; Vittaporn & Boonmongkon, 2016). Cultural barriers mean the difficulties that the particular migrants experience due to the differences in religion and beliefs in receiving health care (Li, 2017) and will be measured in terms of structured questionnaires about religion, choice of health care provider (same sex) and is related to the person's religious beliefs. Thirdly, lack of knowledge about health, the health service system, and the right to receive available health care services results in low use of health care services (Rakprasit et al., 2017; Tschirhart et al., 2016, 2017; Webber et al., 2012). Moreover, personal belief about health seeking prevents the migrants from seeking health services (Tschirhart et al., 2016). A study about the reproductive health care access showed that migrant workers do not seek care due to the shyness and fear (Webber et al., 2012).

In comparison with studies in other countries, personal barriers faced by migrant population are similar. Language (Aung, Rechel, & Odermatt, 2010; Czapka & Sagbakken, 2016; de Vries et al., 2017; Faturiyele et al., 2018; Vázquez et al., 2016) is the most common barrier faced by migrants. Inadequate knowledge about the available health service system is also a common barrier (Aung et al., 2010; Czapka & Sagbakken, 2016; Faturiyele et al., 2018; Lee et al., 2014; Mengesha, Perz, Dune, & Ussher, 2017). Migrants' perception of discrimination is also an obstacle to seek care (Czapka & Sagbakken, 2016; de Vries et al., 2017). In addition, personal factors such as low education level (Faturiyele et al., 2018; Rosano et al., 2017), past health care

experience (Mengesha et al., 2017), and period of stay in the host country (Vázquez et al., 2016) also hinder the health care access.

2. Financial barriers

Lack of money is a common obstacle for migrant workers wanting to seek care. Fear of income lost due to time spent seeking health care and the cost to reach the health care facility hinders the migrant's accessibility to health care. There is evidence that financial status and the cost of transportation to the health service area prevents migrant workers' accessing health care (Holumyong et al., 2018; Tschirhart et al., 2016). The treatment and service fees are also common barriers for migrants for the continuity of care (Hickey et al., 2014; Khongthanachayopit & Laohasiriwong, 2017; Murray et al., 2016; Tschirhart et al., 2017). The barriers are also consistent with the findings from studies in other countries where low economic status (Lee et al., 2014; Vázquez et al., 2016) and unaffordability for the travel cost (Faturiyele et al., 2018) affect the migrants' health care access. Furthermore, unpredicted cost for the treatment is also a barrier for migrants (Czapka & Sagbakken, 2016).

3. Social barriers

Social factors play an important role for the health care access by migrant workers as this determines whether they can get the health information from the social network; for example, stigma can lower a migrant's access to health care. Migrants cannot access health care without a supportive social network and information about the available health care services. Lack of social support and discrimination from the local people about spread of disease can cause them to avoid seeking care (Tschirhart et al., 2016; Vittaporn & Boonmongkon, 2016). Moreover, stigma related to disease

in the workplace and marginalization from the local people are the barriers for utilization of health care (Murray et al., 2016). Studies indicated the importance of social support such as family and friends to share information of available services (Holumyong et al., 2018; Webber et al., 2012).Family also plays a role in the migrants health seeking and lack of health service information due to limited availability of social networks such as internet websites and pamphlets in migrants' language are the barriers for health care access (Czapka & Sagbakken, 2016; Mengesha et al., 2017). Studies indicated that discrimination and fear of stigmatization from society hinders the use of health care services by the migrants (Hacker et al., 2015; Thomson, Chaze, George, & Guruge, 2015).

Barriers related to the system factors. System barriers are difficulties, faced by the migrants, that are from the aspect of health services system and employment. They include the barriers related to the health care providers, health system and work situation (Hacker et al., 2015; Scheppers et al., 2006; Webber et al., 2012).

1. Barriers related to health care providers

The role of health care providers is important in the provision of health care for migrant workers. The skills, attitudes, behaviours and communication of the providers are important because the negative experience with them causes reluctance of the migrant workers to seek care. One study on the migrant beer promotors showed that migrants experience negative attitudes and poor communication with health care personnel that causes hesitancy to receive care (Webber et al., 2012). A study in Norway also revealed that communication and attitude of health providers pose barrier for the access to quality health care (Czapka & Sagbakken, 2016). Inadequate

training of health care personnel and inaccurate diagnoses are also obstacles for treatment seeking (de Vries et al., 2017).

2. Barriers related to the health system

Obstacles in access to health care by migrant workers, such as lack of available services and facilities, waiting time, and the quality of provided service, can occur because of the health system. Unavailability of services is a barrier for the migrants (Tschirhart et al., 2016) as well as long waiting time and inadequate supplies (Webber et al., 2012). The influence of "long waiting time" in health care access is also shown in other studies conducted in Thailand (Aung et al., 2009; Naing et al., 2012; Webber et al., 2015). The findings of two studies in Australia and England also showed that long waiting time is a common barrier (Aung et al., 2010; Mengesha et al., 2017). Other health system related barriers such as poor structure of health facilities, inaccessible diagnostic services, ineffective follow-up care (de Vries et al., 2017), quality of the service, difference in referral system, and technique of treatment in comparison with other health care system (Czapka & Sagbakken, 2016) are experienced by migrants.

3. Barriers related to the work situation

Difficulties related to the employment affect the health care access as migrant workers consider their job as a priority. Many studies found that being busy at work by working long hours and reluctance to take leave from work for health care, as it lowers their income, can negative affect a migrant's decision to seek health care. These situations become obstacles for health care access (Ford & Holumyong, 2016; Naing et al., 2012; Tschirhart et al., 2016; Webber et al., 2012). Workplace rules and regulations also prevent the migrants' use of public health care services (Holumyong

et al., 2018). A study in Canada showed that difficulty in making an appointment with a health care provider was experienced by migrant workers due to long working hours (Carlos & Wilson, 2018). Other studies in Singapore and Spain revealed that few holidays (Lee et al., 2014), worse work conditions, clashes between work hours and health service hours (Vázquez et al., 2016) were the main obstacles for the accessibility of health care.

Existing knowledge on barriers of health care accessibility in Myanmar migrant workers

Myanmar migrant workers face many barriers in access to health care including language and communication difficulties, high cost of health care and transportation, stigma and discrimination from the society, and lack of knowledge about health problems (Murray et al., 2016; Veerman & Reid, 2011; Vittaporn & Boonmongkon, 2016). Moreover, workplace policies also hinder migrant workers access to health care services, especially for factory workers who live within the compound of designated areas of the factories where they work. This situation limits their exposure to the community and causes them to receive less information about health care (Holumyong et al., 2018). Moreover, policy literacy is also essential to access care because migrant workers can get the health care services only if they know about their right to receive it.

Accessibility of health care services among Myanmar migrant workers

Although there is provision of health care services for Myanmar migrant workers, “accessibility to health care” is important to evaluate the effectiveness of the provided health care services. It needs to consider many aspects of accessibility such

as geographic accessibility, availability, financial accessibility and acceptability to improve health care access of migrants.

Concept of accessibility: background and measurement

The concept of accessibility to health care becomes important in the provision of health care services. Access to health care is essential to improve health by facilitating the use of health care services. There are four features for health care access. Firstly, if there is adequate provision of available health care services, the population may have access to these services. Secondly, the extent of the population to access health care is important as it is influenced by other factors such as financial resources, geographical distance, social and cultural factors. Therefore, an adequate supply of health care services does not equate to adequate access to health care. Thirdly, the services provided must be effective in achieving satisfaction from the population and achieve the best health outcome. Finally, the evaluation of available health care services and barriers to access them needs to be done to improve the health care accessibility (Gulliford et al., 2002).

Moreover, accessibility to health care is influenced by many factors. Studies conducted among Myanmar migrants in Thailand indicated that demographic factors such as sex, age, income, marital status, occupation, education level, place of residence, experience of illness, presence of health insurance, knowledge about health insurance card, cost of consultation with a doctor and time taken travelling to a health service area are factors that influence health care access (Musumari & Chamchan, 2016). Moreover, studies in other countries showed that age, educational level, financial status, language, work situation, period of stay in the host country, previous experience of receiving health care services and self-rated health are factors that affect

the health care access by migrants (Aung et al., 2010; Carlos & Wilson, 2018; Gonah et al., 2016; Mengesha et al., 2017; Vázquez et al., 2016). Health care access is defined as "the timely use of services according to needs" (Peter et al., 2008 cited in Bigdeli et al., 2012). Peter et al. (2008) measured the health care access based on the four dimensions of geographic accessibility, availability, financial accessibility and acceptability.

Geographic accessibility

The geographical distance from an individual's home to the nearest health care provision area is important for the health care access as migrants are reluctant to seek health care if it is very far from their home. Geographic accessibility refers to the distance from the place of migrants to the health services provision areas. A study about the health seeking behaviour of Myanmar migrant workers conducted in Ranong province indicated that there is a significant relationship between time taken to go to the health care facility and utilization of health care (Aung et al., 2009). Another study conducted in Songkhla province concerning the preference of health care seeking for tuberculosis showed that long distance is a factor for not utlizing government health care services (Naing et al., 2012). Moreover, location affects the accessibility of health care (Webber et al., 2012; Webber et al., 2015). Studies in Spain and Canada indicated that distance to the service area is one of the influencing factors for health care access (Carlos & Wilson, 2018; Vázquez et al., 2016).

Availability

The available treatment and medical equipment influences the ability, and therefore the decision, of migrant workers to seek health care. Availability means all the health care services that are provided to the migrants, including equipment and

medicines. Health service facility opening hours and availability of medical equipment and medicines are factors that are considered by the migrant workers when seeking health care (Webber et al., 2012). The availability of services also influences health care access (Naing et al., 2012; Tschirhart et al., 2016). A study in Spain showed that the opening hours at health care facilities affects the accessibility of health care (Vázquez et al., 2016).

Financial accessibility

The ability to receive health care services is affected by the financial resources, which include covering transportation costs. Financial accessibility means the financial coverage of the provided health care services, including the cost of transportation to the service area. Studies showed that the cost of treatment and consultation influence the health care access by migrant workers (Aung et al., 2009; Tschirhart et al., 2016; Webber et al., 2012; Webber et al., 2015). The cost of transportation is another factor that affects accessibility (Thetkathuek, Jaidee, & Jaidee, 2017; Webber et al., 2012). A study among migrant farm workers in Thailand showed that the cost of food also influences the access from the economic perspective (Thetkathuek et al., 2017). Studies from Australia and Spain found that the cost of health care service influences health care access (Mengesha et al., 2017). This finding is also similar with study in Spain that cost of treatment and medicines as factors for the use of health care (Vázquez et al., 2016).

Acceptability

The acceptance and satisfaction of the provided health care influence the health care access by migrant workers. Acceptability refers to the patients' satisfaction of health care services that depends on the attitude and willingness of

health care personnel in provision of health care services and the ability to achieve health care that meet cultural and social expectations that are related to the sex of the health care provider and the race, religion and belief of the patient. Hospitality (Webber et al., 2015) and positive attitudes of health care providers stimulate the migrant workers to seek health care. Stigmatizing the migrants for their low socioeconomic status from the providers also negatively affects a migrant worker's decision to utilize the health care services and affects their accessibility (Webber et al., 2012). Satisfaction of health care services is also important for health care access (Thetkathuek et al., 2017). The influence of health care personnel attitude on migrants' health care access is also similar with the findings from the study in European countries (Rosano et al., 2017). Moreover, mistrust of available services and diagnoses from the doctor affect the health care accessibility (Jackowska et al., 2012; Kozłowska, Dallah, & Galasiński, 2008 cited by Czapka & Sagbakken, 2016).

Existing knowledge on accessibility of health care services among Myanmar migrant workers

Although there are existing studies on the accessibility of health care services for migrant workers, few have focussed on Myanmar migrant workers. Studies on health care accessibility among Myanmar migrant workers are mainly done for both documented and undocumented workers. Studies indicated that migrant workers have low use of health care services and they only seek care when the symptoms become worse (Naing et al., 2012; Rakprasit et al., 2017). A study conducted among Myanmar migrant workers in Ranong province of Thailand showed that they buy drugs and rely on self-medication for minor illnesses and only go to health centres for major illnesses (Aung et al., 2009). A study conducted among Shan migrant workers in Chiang Mai

province indicated that, although they have health insurance, they do not seek care. Migrants buy drugs from the drug store and take a rest (Nwi et al., 2018). Therefore, accessibility among Myanmar migrant workers is low and it needs to be focused.

Predictors of accessibility to health care services

Many factors are associated with the health care accessibility among migrants, including individual factors, policy literacy and barriers. Individual factors such as sex, marital status, income, and educational level are associated with health care accessibility (Aung et al., 2009; Khongthanachayopit & Laohasiriwong, 2017; Musumari & Chamchan, 2016). Policy literacy is also associated with health care accessibility and the term 'policy literacy' is used for health literacy in this study. Health literacy is related to the health care accessibility and important for health outcomes (Batterham et al., 2016). A systematic review showed that low health literacy is associated with the low utilization of health care services (Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011). Other studies have shown a strong association between health literacy and access to health care. People with low health literacy have poor access to health care services (Sudore et al., 2006) and delay health care access compared with those with sufficient health literacy (Levy & Janke, 2016). In addition to this, barriers prevent the health care access for migrant workers. Language, long waiting time and transportation difficulty are the obstacles for the accessibility to health care services (Tschirhart et al., 2016, 2017; Webber et al., 2015). Therefore, studies have shown that individual factors, policy literacy and barriers can influence health care accessibility and they are the potential predictors for health care accessibility in this study.

Accessibility to health care is a critical issue for the migrant workers despite having health insurance. Studies indicated that access to health care is not enough with the provision of health care services. Migrants cannot access health services fully despite having the right to achieve health care services and require knowledge of the health service system and help from their social network (Czapka & Sagbakken, 2016; Vignier et al., 2018). Studies conducted among Myanmar migrant workers in industrial sectors of Thailand revealed that migrant workers rely on self-medication (Aung et al., 2009; Wongkongdech, Srisaenpang, & Tungsawat, 2015) and only seek health care when their health becomes worse (Khongthanachayopit & Laohasiriwong, 2017; Naing et al., 2012). A study in Songkhla province of southern Thailand revealed that migrant factory workers have low use of government provided health care services due to long waiting time, large distance to health facility, the availability of factory clinics for minor illnesses and linkage with private clinics for severe illnesses, being busy, and the perception of unavailable health care services (Naing et al., 2012).

Moreover, in a multi-country qualitative study of migrant workers, those from Thailand covered by the Social Security Scheme did not go to the provided hospital because of the long waiting time, poor quality of service, and perceived negligence of doctors, and chose a clinic that was near to their home where there was no need to wait for receiving the service (Webber et al., 2012). Migrant workers do not know about the available rights and rules under the scheme and this condition becomes worse with their inability to speak the Thai language (Thai Health, 2013). Although there are studies about the accessibility of health care among migrant workers in Thailand, most of them focus on health care access under the Migrant Health

Insurance Scheme. There are limited studies investigating health care access of migrant workers under the Social Security Scheme. Therefore, this study aims to explore the accessibility to health care services, policy literacy and barriers among Myanmar migrant workers under the Social Security Scheme.

Summary

Migrant workers are important for the economy of the Thailand as they work in low-skilled jobs that demand labour. The majority of migrant workers in Thailand are Myanmar nationals and most of them work in the formal sectors such as factories. Songkhla is one of provinces of Thailand that has high economic growth as there are many factories and has a large number of Myanmar migrant workers. The Social Security Scheme is provided for the formal sector migrant workers. They can receive seven benefits which include not only health care services but also the welfare benefits with a contribution of 5 percent from their monthly salary. However, studies indicated that migrant workers rely on self-medication and only seek care when symptoms worsen. Most of the migrant workers cannot access health care. There are also barriers, such as language and discrimination, that hinder their access to essential health care services. In addition to this, policy literacy about the scheme is essential in order for them to seek health care. Studies indicated that individual factors such as sex, marital status, income, educational level, policy literacy and barriers influence the accessibility of health care. Therefore, a better understanding of the situation of migrant workers' access to health care, policy literacy and barriers in Thailand can help provide the policy recommendations thereby improving the health care utilization and the health status of migrant workers.

CHAPTER 3

RESEARCH METHODOLOGY

The study is a cross-sectional study design. This chapter describes the research methodology including study setting, population and sample, sampling, instruments, ethical considerations, data collection procedures and data analysis.

Study setting

Study settings were four types of factories, i.e., seafood, rubber, wood and mechanics in Hat Yai district which are setting representatives of Myanmar migrants' common workplaces which provide the Social Security Scheme.

Population and sample

The study population was Myanmar migrant workers who have been living in Thailand for at least one year.

Sample size estimation

According to the rule of thumb for multiple regression, 30 participants for one predictor were taken if possible (VanVoorhis & Morgan, 2007). As there were 8 predictors in this study, the sample size of 240 was taken to maintain internal validity of the study result.

Sample Selection

Sample were obtained from both large and medium-sized factories in Hat Yai district, Songkhla province. Three large factories with more than 200 workers such as seafood, rubber and wood factory and two medium-sized mechanic factories were

included. Purposive selection was used in this study. Firstly, factory types were selected purposively to cover the common types of factories in Hat Yai district. Secondly, 60 subjects were selected from each factory. Subjects who met the inclusion criteria in various factory departments were recruited purposively. However, Myanmar migrant workers in the selected mechanics factory moved to a factory in another province and only 39 participants were obtained from this factory. The remaining 21 participants were obtained from another mechanics factory. Therefore, two mechanics factories which are medium-sized factories with 50 – 200 number of workers were included in this study.

Instruments

The instruments consisted of four parts: (1) Personal Data Form, (2) Policy Literacy Questionnaire, (3) Barriers for receiving health care service Questionnaire and (4) Accessibility to health care service Questionnaire.

Part 1: Personal Data Form

This form contained three parts, which were developed by the researcher. There are 18 items in total which contains demographic data, health information and work situation of the participants (Appendix B).

Part 2: Policy Literacy questionnaire

This questionnaire contains four parts: ability to access, ability to understand, ability to appraise and ability to communicate. Open-ended questions were provided for exploration of migrants' opinions (Appendix B). There were 33 items in total developed by the researcher based on the information related to the Social Security Scheme (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand;

Social Security Office, 1997). A four-point Likert scale was used with scores ranging from 1 (strongly disagree) to 4 (strongly agree). There were 20 items for positive responses and 13 items for negative responses. The scores for negative items were reversed before summing up the total score. Total scores ranged from 33 to 132. Policy literacy was categorised into low, moderate, and high based on the theoretical quartiles (Q_1, Q_2 + Q_3, Q_4) and presented with frequency and percentage. Therefore, the level of policy literacy in this study was categorised as follows.

Levels	Total score
Low	≤ 80.00
Moderate	80.01 – 96.00
High	≥ 96.01

Part 3: Barriers on accessibility to health care service questionnaire

This questionnaire contained two parts and included individual and system barriers. Moreover, open-ended questions were provided for exploration of migrants' opinions (Appendix B). The first part of the questionnaire (individual barriers) consisting of 15 items and was divided to personal, financial and social barriers. The second part (system barriers), consisting of 13 items, was divided into the barriers of health care providers, health care system and work situation. There were 28 items in total developed by the researcher based on a review of the literature (Hacker et al., 2015; Scheppers et al., 2006; Tschirhart et al., 2016, 2017; Webber et al., 2012). A four-point Likert scale was used with scores ranging from 1 (strongly disagree) to 4 (strongly agree). All items required negative responses. Total scores ranged from 28 – 112. The level of each barrier was categorised into low, moderate, and high based on the theoretical quartiles (Q_1, Q_2 + Q_3, Q_4) and presented with frequency and

percentage. Therefore, the level of barriers on accessibility to health care services in this study was categorised as follows.

Levels	Total score
Low	≤ 56.25
Moderate	56.26 – 67.00
High	≥ 67.01

Part 4: Accessibility to health care service questionnaire

This questionnaire contained four parts: geographic accessibility, availability, financial accessibility and acceptability. Moreover, open-ended questions were provided for exploration of migrants' opinions (Appendix B). There were 22 items in total developed by the researcher based on information from the Social Security Scheme (Japan International Cooperation Agency, 2010; Social Security Act, 1945; Social Security Office, Ministry of Labour, 2017; Social Security Office, Thailand; Social Security Office, 1997). A four-point Likert scale was used with scores ranging from 1 (strongly disagree) to 4 (strongly agree). There were 17 items for positive responses and 5 items for negative responses. The scores for negative items were reversed for summing up the total score. Total scores ranged from 22 to 88. The level of accessibility was categorized into low, moderate, and high based on the theoretical quartiles (Q_1, $Q_2 + Q_3$, Q_4) and interpreted with frequency and percentage. Therefore, the level of accessibility to health care services in this study was categorised as follows.

Levels	Total score
Low	≤ 61.00
Moderate	61.01 – 70.00

High	≥ 70.01

Validity of the instruments

The content validity of the instruments was examined by three experts in areas of (1) public health, (2) health system and (3) community health. The researcher modified the instruments based on each expert's recommendations.

Translation of the instruments

All questionnaires were initially developed in English and translated into the Myanmar language using the following steps.

1. The first bilingual translator translated the English version into Myanmar.
2. The second bilingual translator translated the instruments from the Myanmar version back into English.
3. The third bilingual translator clarified and identified the differences in all items of both versions. Modifications were made in order to establish the same meaning within acceptable limits.

Reliability of the instruments

Pre-testing of the structured questionnaire was performed on 30 Myanmar migrant workers not included in the study and who had been living in Thailand for at least one year from one of the factories in Hat Yai district. The reliability of the instruments was calculated using Cronbach's Alpha Coefficient. The alpha coefficients for policy literacy, accessibility and barriers items were 0.87, 0.72 and 0.84, respectively. The instruments were considered to be reliable as the values of the reliability coefficients were equal to or greater than 0.70 (Cronbach, 1990).

Ethical Considerations

This study was conducted with the intention of protecting the human rights of the participants following approval by the Institutional Review Board of Health System Management Institute, Prince of Songkla University, Thailand. Moreover, permission was obtained from the authorized persons from the factories in which the study was conducted. The participants were given the consent form in order to assess their willingness to participate in the study. Explanation was given about the issues of objective of the study and the right to withdraw from the study at any time. Study participants were told that their names and given information would be kept confidential by using the code number.

Data Collection Procedures

The data collection procedures were divided into preparation and data collection phase. All procedures were conducted step by step as follows.

1. Preparation Phase

The researcher submitted a letter to the Health System Management Institute, Prince of Songkla University, Hat Yai, Thailand to ask for permission to collect data. Authorized persons from two factories that allowed data collection were informed about the objectives of the study and data collection procedures. Data collection was conducted outside of the remaining three factories. Migrant workers who had been working for a long time in the selected factories were initially contacted for recruitment of participants from different factory departments.

2. Data collection Phase

Data was collected using structured questionnaires with a face to face approach and in groups of 4 – 10 participants. Personal data were asked firstly. The scales of policy literacy, barriers on accessibility to health care service and accessibility to health care service questionnaire were explained. The policy literacy questionnaire was given followed by the barriers on accessibility to health care service questionnaire and accessibility to health care services questionnaire.

Data Analysis

Data assessment was done to observe incompleteness of the responses from the questionnaires. After data assessment, coding of the data was done. The scores of negative responses were reversed during the coding stage. Personal factors such as sex, marital status, monthly income, educational level, living period and time taken to go to health care service areas were dummy coded for regression analysis. Data was analysed using SPSS version 17.0. Personal data was presented using frequency, percentage, mean, standard deviation (SD), minimum and maximum. The variables of policy literacy, barriers of accessibility to health care services and accessibility to health care services were analysed using frequency and percentage. Stepwise linear regression analysis was used to test predictability of independent variables, such as personal factors (gender, marital status, monthly income, educational level, period of living in Thailand and time taken to go to health care service areas), policy literacy and barrier on accessibility to health care services on the dependent variable, i.e., accessibility to health care.

The open-ended questions were analysed using simple content analysis. The domains of content analysis were policy literacy on health care services, accessibility to health care services and barriers on accessibility to health care services.

CHAPTER 4

RESULTS AND DISCUSSION

This chapter presents and discusses the results of the study.

Results

The findings of the study are presented in five sections: (1) personal data of Myanmar migrant workers, (2) policy literacy on the Social Security Scheme, (3) barriers on health care accessibility, (4) accessibility to health care services, and (5) associated factors of accessibility to health care services.

Personal data of participants

Personal data of 240 participants include demographic data, health information and work situation. They were recruited in equal proportion from four factory types: seafood, rubber, wood and mechanics. Table 1 presents a summary of their demographic characteristics. Their ages ranged from 19 to 54 years and more than half were aged between 25 and 34 years (57.40%). The percentages of male and female workers were 50.40% and 49.60% respectively. All participants were Buddhists (100%) and the majority were married (70.40%). Nearly two thirds of their educational background were below high school level (62.90%). Just over half had a monthly income between 8,000 and 9,600 Baht (55.80%) and nearly half had an income of more than 9,600 baht (43.30%). Most came to Thailand under the MOU (60.40%) and nearly half had been living in Thailand for one to five years (48.30%). More than half said that they could speak the Thai language a little (59.60%), whereas some could not speak Thai at all (35.40%). Most were living in the dormitory provided by the factory situated within or just outside the factory (30.40%, 39.20%,

respectively). The remaining were living in a dormitory outside the factory that was rented by themselves (17.90%). The majority lived with their family (73.80%). Some lived with others such as friends (17.90%), whereas a few lived alone (8.30%).

Table 1. *Demographic characteristics of Myanmar migrant workers (N = 240).*

Characteristic	**N**	**%**
Age (years) (Mean = 30.64, SD = 7.56, Max-Min = 54 - 19)		
19 - 24	41	17.10
25 - 34	138	57.50
35 - 44	46	19.20
45 - 54	15	6.30
Sex		
Male	121	50.40
Female	119	49.60
Marital status		
Single	63	26.30
Married	169	70.40
Divorced/Separated	8	3.30
Religion		
Buddhist	240	100.00
Educational level		
High school or higher	79	32.90
Below high school	151	62.90
Monastery education	7	2.90
None	3	1.30
Monthly income (Baht) (Mean = 9,464.58, SD = 1,120.95, Max-Min = 7,500 – 15,000)		
7,500 – 7,999	2	0.80
8,000 – 9,600	134	55.80
9,601 – 15,000	104	43.30

Table 1 (continued)

Characteristic	**N**	**%**
Condition of employment		
Memorandum of Understanding	145	60.40
Nationality Verification	95	39.60
Living period in Thailand (years) (Mean = 6.03, SD = 3.79, Range = 1 – 20)		
1 - 5	116	48.30
6 - 10	96	40.00
11 - 15	25	10.40
16 - 20	3	1.30
Ability to speak Thai language		
Fluently	12	5.00
A little bit	143	59.60
Not at all	85	35.40
Place of residence		
Inside factory	73	30.40
Outside factory (provided by factory)	94	39.20
Outside factory (renting by themselves)	73	30.40
Living status		
Alone	20	8.30
With family	177	73.80
With friends	43	17.90

Table 2 presents health care service information and work situation of the workers. Most did not have any illness within the past 4 weeks since the interview (80.4%); only a few had minor illnesses such as low grade fever, headache, and toothache (19.6%) which did not necessitate seeking health care services. All had social security card and most were taking with them (95.00%) and fews did not take the card from factory office although they have been enrolled (5.00%). Their health seeking behaviour indicated that most used health care services provided by the Social Security Scheme. A number of them went to a health care centre (39.90%), followed

by hospital and private clinic (25.40% and 3.80%) respectively. However, some had no experience on getting health care due to having no health problem and usually took medications by themselves when having illness (15.10%). The majority did not have any difficulty taking leave from work when they were ill (82.50%). Nearly half did not seek care under the Social Security Scheme (46.30%) and just over half received health care services less than 10 times (51.70%) during the last two years. Most reported that the duration of time taken travelling to a health care service area was 5 to 30 minutes (79.60%).

Table 2. *Health care service information and work situation of Myanmar migrant workers (N = 240).*

Characteristic	**N**	**%**
Health care service information		
Current illness during the previous 4 weeks		
Yes	47	19.60
No	193	80.40
Social security card	240	100.00
Keeps with self at all times	228	95.00
Leaves at the factory	12	5.00
Experience of receiving health care in Thailand		
Never	51	15.10
Hospital visit using social security card	86	25.40
Health care centre visit using social security card	135	39.90
Private clinic visit using social security card	13	3.80
General practitioner visit	46	13.60
Factory clinic visit	7	2.10

Table 2 (continued)

Characteristic	N	%
Number of health care visits using social security card within past two years		
(Mean = 1.8, SD = 2.9, Range = 0 – 20)		
None	111	46.30
1 – 10	124	51.70
> 10	5	2.10
Time taken travelling from home to health care area (minutes)		
(Mean = 26.71, SD = 21.73, Range = 5 – 120)		
5 - 30 minutes	191	79.60
31 - 120 minutes	49	20.40
Work situation		
Difficulty taking leave from work		
Yes	42	17.50
No	198	82.50

Policy literacy on Social Security Scheme

Table 3 presents results of the worker's policy literacy on the Social Security Scheme. Most migrants had a moderate level of overall policy literacy on health care services under the scheme (52.1%). The majority had a moderate level of all four domains of policy literacy which included ability to access (55.40%), ability to understand (52.50%), ability to appraise (50.00%) and ability to communicate (55.40%).

Table 3. Policy literacy of Myanmar migrant workers on Social Security Scheme (N = 240).

Domain	Frequency	Percentage
Total		
Low (≤ 80.00)	63	26.30
Moderate (80.01 – 96.00)	125	52.10
High (≥ 96.01)	52	21.70
Ability to access		
Low (≤ 19.00)	65	27.10
Moderate (19.01 – 26.00)	133	55.40
High (≥ 26.01)	42	17.50
Ability to understand		
Low (≤ 14.00)	71	29.60
Moderate (14.01 – 18.00)	126	52.50
High (≥ 18.01)	43	17.90
Ability to appraise		
Low (≤ 27.00)	72	30.00
Moderate (27.01 – 31.00)	120	50.00
High (≥ 31.01)	48	20.00
Ability to communicate		
Low (≤ 18.00)	64	26.70
Moderate (18.01 – 24.00)	133	55.40
High (≥ 24.01)	43	17.90

Out of the 240 participants, only 218 responded to the open-ended questions on policy literacy. Table 4 presents results of the data analysis of 218 participants on open-ended questions of policy literacy, including four dimensions of ability to access, understand, appraise and communicate about the Social Security Scheme. Firstly, ability to access involved ways to make known and key points of the policy that migrants should know. Most migrant workers described that technique that can inform the scheme policy was sharing from organizations, responsible factory staffs, translators and Myanmar migrants who know about the scheme through meetings and

discussion. Moreover, sharing information about the scheme from social security officers and organizations should be provided in factories, especially in small factories and for migrants who do not work in factories. Most migrants requested important information on available hospital/health care centres and health care services. Secondly, the majority reported that they asked any persons who know, understand and experience the scheme such as employers, factory leaders, translators, clerks, factory/dormitory supervisors and SSS officers or responsible organizations when they did not understand the scheme. Lastly, most evaluated high cost of monthly contribution and were unable to share information to others because they did not know and understand it very well.

Table 4. *Analysis on open-ended questions of respondents classified by most predominant to least predominant recommendations to improve policy literacy (n = 218).*

Policy literacy domain	Sub-category
Ability to access	Ways to make known
	Sharing in migrant group
	Pamphlets
	Mass media
	Key points needed
	Available hospital/health care centres
	Health care services
	Compensation
	Monthly contribution
	Necessary documents
	Expiration date
Ability to understand	Ways to gain understanding
	Ask persons who know, understand

Table 4 (continued)

Policy literacy domain	Sub-category
Ability to understand (cont.)	Ways to gain understanding
	Pamphlets
	Mass media
Ability to appraise	Opinions on SSS policy
	High monthly contribution
	Donation for underserved people
	Reimbursement in all SSS offices
Ability to communicate	Telling about SSS policy to others
	Unable
	A little
	Reluctant on monthly contribution

Barriers on accessibility to health care services

Table 5 shows a summary of the barriers of accessibility to health care services. Most migrants perceived that they had a moderate degree of barriers on health care accessibility under the Social Security Scheme (51.70%), including individual (46.70%) and system aspects (55.80%). In the individual aspect, most migrants perceived a moderate degree of personal barriers (46.70%) and social barriers (43.30%), but a low degree of financial barriers (53.30%) to health care accessibility. In system aspect, a large number of migrants reported a moderate degree of barriers related to health care providers (58.80%) and the health system (52.50%), whereas a low degree of barriers related to their work situation (50.80%).

Table 5. Barriers of accessibility to health care services among Myanmar migrant workers (N = 240).

Type of barrier	Frequency	Percentage
Total		
Low (≤ 56.25)	60	25.00
Moderate (56.26 – 67.00)	124	51.70
High (≥ 67.01)	56	23.30
Individual barriers		
Low (≤ 31.00)	74	30.80
Moderate (31.01 – 37.00)	112	46.70
High (≥ 37.01)	54	22.50
Personal		
Low (⩽ 15.00)	72	30.00
Moderate (15.01 – 18.00)	112	46.70
High (≥ 18.01)	56	23.30
Financial		
Low (≤ 8.00)	128	53.30
Moderate (8.01 – 9.00)	54	22.50
High (≥ 9.01)	58	24.20
Social		
Low (≤ 8.00)	97	40.40
Moderate (8.01 – 10.00)	104	43.30
High (≥ 10.01)	39	16.30
System barriers		
Low (≤ 24.00)	62	25.80
Moderate (24.01 – 31.00)	134	55.80
High (≥ 31.01)	44	18.30
Health care providers		
Low (≤ 6.00)	63	26.30
Moderate (6.01 – 9.00)	141	58.80
High (≥ 9.01)	36	15.00

Table 5 (continued)

Type of barrier	Frequency	Percentage
Health system		
Low (≤ 12.00)	74	30.80
Moderate (12.01 – 15.00)	126	52.50
High (≥ 15.01)	40	16.70
Work situation		
Low (≤ 6.00)	122	50.80
Moderate (6.01 – 8.00)	93	38.80
High (≥ 8.01)	25	10.40

Table 6 summarises the open-ended questions related to the barriers of accessibility to health care services. Only 139 participants answered these open-ended questions. Individual barriers involved domains of personal, financial and social barriers. For individual barriers, most migrants said that they faced language difficulties and did not know well enough about available treatments and the way to seek health care service areas. Difficulty in paying for a translator was a barrier described by most migrants in financial barrier. Few indicated that they did not have people who could support them for information and going to health care service areas. Few migrants reported that they experienced racial discrimination and discrimination based on payment of health care cost from health care providers. Health care personnel preferred to serve local people and people who gave out-of-pocket money, not for the migrants who receive health care services in contracted health care centres. The majority of migrants reported experiencing long waiting times in hospital. Concerning with work related difficulty, most migrants complained about insufficient translators and difficulty to get transportation.

Table 6. *Analysis on open-ended questions of respondents classified by most predominant to least predominant barriers on accessibility to health care services (n = 139).*

Aspect	**Sub-category**
Individual barriers	Personal barriers
	Language differences
	Lack of knowledge on available health care/service areas
	Financial barriers
	Cost of translator
	Transportation fare
	Health care cost
	Fear of losing income
	Social barrier
	Lack of social support
System barriers	Barrier related to health care providers
	Discrimination from health care personnel
	Barriers related to health services
	Long waiting time
	Inadequate health care providers and provided service areas
	Inadequate medicines
	Barriers related to work situation
	Insufficient translator service
	Difficulty to get transportation service
	Difficulty to take working leave, especially in minor illness

Accessibility to health care services under Social Security Scheme

Table 7 presents a summary of the accessibility to health care services under the Social Security Scheme. Most migrants had a moderate level of accessibility to health care services (50.00%). Although most migrants perceived a moderate level of availability (46.30%) and financial accessibility (47.50%), most perceived a low level of geographic accessibility (49.20%) and acceptability (47.90%) towards health care services.

Table 7. Accessibility to health care services among Myanmar migrant workers (N = 240).

Accessibility domain	Frequency	Percentage
Total		
Low (≤ 61.00)	62	25.80
Moderate (61.01 – 70.00)	120	50.00
High (≥ 70.01)	58	24.20
Geographic accessibility		
Low (≤ 5.00)	118	49.20
Moderate (5.01 – 6.00)	76	31.70
High (≥ 6.01)	46	19.20
Availability		
Low (≤ 25.00)	72	30.00
Moderate (25.01 – 29.00)	111	46.30
High (≥ 29.01)	57	23.80
Financial accessibility		
Low (≤ 13.00)	84	35.00
Moderate (13.01 – 16.00)	114	47.50
High (≥ 16.01)	42	17.50
Acceptability		
Low (≤ 18.00)	115	47.90
Moderate (18.01 – 20.00)	74	30.80
High (≥ 20.01)	51	21.30

Table 8 presents a summary of the analysis of open-ended questions classified by most predominant to least predominant comments on accessibility to health care services by 103 participants. In order to improve accessibility to health care services from their work/living place, the majority of participants pointed out that transportation was important. It was essential to get an ambulance in time and car from factory anytime. Availability covered both health care services and available health care resources. Only few reported that there were unavailable treatments such

as hand operation and some reported that the opening hours of health care centres was limited and the number of contracted health care centres was not enough and should be increased. Most reported that the Thai government should provide official translators in hospital/health care centres free of charge to improve financial accessibility. There were two concerns for improving acceptability of health care services: firstly, the relationship between health care providers and migrants, and secondly, reliability of the services. Some migrants said that friendliness of health care personnel was essential to improve relationship with health care providers. Moreover, most migrants indicated that providing information about health care services should be done to improve reliability of services under the Social Security Scheme.

Table 8. *Analysis of open-ended questions classified by most predominant to least predominant comments on accessibility to health care services (n = 103).*

Accessibility domain	**Sub-category**
Geographic	Ways to improve accessibility
	Transportation (hospital ambulance, car from factory)
	Phone numbers of hospital /ambulance
	Health care centres in factory or nearby factory
	Translator/Assistant for getting car
Availability	Health care service availability
	Unavailable treatments (hand operation)
	Need information on service availability

Table 8 (continued)

Accessibility domain	Sub-category
Availability (cont.)	Coverage of available health care resources (health care providers, service hours)
	Not enough and should increase contracted health care centre number and their opening hours
Financial	Ways to make affordable cost
	Provide official translator
	Fully coverage in contracted health care centre (including injection cost in treatment)
	Reduce monthly contribution
	Reduce advance payment (e.g. operation cost)
	SSS should contract every health care centre
	Supportive groups (e.g. financial support organizations for migrants)
Acceptability	Improve service hospitality
	Friendliness of health care staffs without racial discrimination
	Improve attitude of health care providers (patience on migrants)
	Improve staffs' understanding on cultural difference
	Improve reliability of health care services
	Provide service information
	Depend on factory for registration
	Improve quality of services by giving more care
	Increase eligible service areas

Associated factors of accessibility to health care services

Table 9 presents results of the linear regression analysis to find associated factors for accessibility to health care services under the Social Security Scheme. Assumptions for multiple regression such as normal distribution of accessibility variable, multivariate normality, multicollinearity with tolerance and Variance Inflation Factor (VIF) scores, homoscedasticity, independent values of residuals

(Durbin-Watson = 1.220) and Cook's distance (0.000 – 0.090) were tested before the analysis. The results of testing these assumptions are presented in Appendix D.

Findings of the regression analysis showed that only two factors were significantly and independently associated with accessibility of health care services: policy literacy ($\beta = 0.53$, $p < 0.01$) and barriers ($\beta = -0.28$, $p < 0.01$). These two factors were able to explain 47.2% of the variance in accessibility to health care services. The other factors such as sex, marital status, monthly income, educational level, living period, and time taken to go to health care service areas were not significant. This indicates that Myanmar migrant workers with a high policy literacy level and a low degree of perceived barriers had high health care accessibility based on the Social Security Scheme. As a result, predicted equation was constructed as follows:Accessibility to health care services = 52.29 + 0.31 (Policy literacy) + (-0.22) (Barriers)

Table 9. *Linear regression results for accessibility to health care services among Myanmar migrant workers*

Predictor	B^a	Std. Error	β^b	t-value	p-value
Policy literacy	0.31	.03	0.53	10.41	<0.01
Barriers	-0.22	.04	-0.28	-5.52	<0.01

Note. Constant = 52.29; R Squared = 0.47; Adjusted R Squared = 0.47

[a] = Unstandardized coefficient; [b] = Standardized coefficient

Discussion

This section discusses the findings of study according to (1) personal data of Myanmar migrant workers (2) levels of accessibility, policy literacy and barriers on accessibility to health care services in combination with simple content analysis of open-ended questions, (3) predictability of personal factors such as gender, marital status, monthly income, educational level, living period and time taken to go to health care service areas, policy literacy and barriers on accessibility to health care services.

Personal data

More than half of participants were aged 25 to 34 years (57.50%). It is evident that most migrants came to Thailand within their productive age as their purposes were to earn a living. The average age was 30 years as found in previous studies, the majority of migrant workers were middle-aged of around 30 years (Jaidee, Jaidee, & Nunthawarasilp, 2016; Khongthanachayopit & Laohasiriwong, 2017). Male and female were likely equal in number with 50.40% and 49.60%, respectively because industrial sector could offer jobs for both male and female. This data was supported by the number of male and female migrants who held work permits in Thailand in 2017 (58% and 42%, respectively) (United Nations Thematic Working Group on Migration in Thailand, 2019). All participants in this study were Buddhists as the majority of Myanmar people follow Buddhism. Majority of them were married (70.40%) which was consistent with others studies (Holumyong et al., 2018; Khongthanachayopit & Laohasiriwong, 2017). As they came to Thailand in their youth and had been living for a long time to work, most of them were married with Myanmar. Regarding their education, most had below high school level (62.90%). They had only attended in primary and middle school levels due to their family socio-

economic status in Myanmar. This finding was supported by a previous study in which most migrant workers had low and middle education level (Aung et al., 2009). More than half received 8,000 - 9,600 Baht per month (55.80%) which was the average monthly salary of migrant workers in Thailand. This data was consistent with the studies conducted among Myanmar migrant workers in northeastern and greater Mekong subregion areas of Thailand (Holumyong et al., 2018; Khongthanachayopit & Laohasiriwong, 2017).

Most migrants lived in the dormitories provided by the factories (69.60%), whereas only a few lived in the places rented by themselves (30.40%). Most migrants chose to live in factory dormitories because factories generally provide dormitories for migrant workers free of charge. The majority of respondents were married, lived with other family members and few lived alone that were congruent with a previous study in northeastern Thailand (Khongthanachayopit & Laohasiriwong, 2017). More than half came to Thailand under the Memorandum of Understanding (60.40%) and the remaining were employed based on the Nationality Verification system. Most factories, especially the large ones, employed migrant workers with the MOU process nowadays since Thai government encouraged migrant workers to register their employment status through the MOU (United Nations Thematic Working Group on Migration in Thailand, 2019). Nearly half had been living in Thailand for at least five years (48.30%) and most had low proficiency in speaking the Thai language (59.60%) as migrants usually focused more on jobs for their living than learning a foreign language. These findings were similar to an earlier study (Holumyong et al., 2018).

The majority of migrants utilised health care services under the Social Security Scheme. Most of them went to the health care centres (39.90%) because

these facilities were nearer to their homes than to a hospital and some went to the hospital (25.40%). Of those who visited a hospital, the main reasons were serious illness, delivery and to have an operation. Only a few went to a private clinic (3.80%). Some had no experiences on seeking care as they either did not get ill or they self-medicated when they were ill (15.10%). This finding is different from previous studies in which self-medication was common and they rarely sought health care except in major illness (Aung et al., 2009; Naing et al., 2012). However, unlike these other studies, migrant workers in this study could access health care services under the Social Security Scheme free of charge, and therefore many avoided self-medication.

On the other hand, some did not utilize health care services under the Social Security Scheme and went to the nearest general practitioner, a health service that cannot be reimbursed by the Social Security Scheme. The main reasons migrant workers did this was the long waiting time in hospital. A similar situation was found in a study conducted among Myanmar migrant workers in Ranong Province (Aung et al., 2009). Only few received health care from other areas such as a factory clinic in case of having minor illness (2.10%). A large factory generally provides primary care/basic medical treatment for their workers**.** This finding was seen in previous study conducted in Songkhla province (Naing et al., 2012).

Generally, most migrants took 5 to 30 minutes travelling to health care service areas (79.60%) as they went to the health care centres. On the other hand, the time taken was more than that for migrants who went to the hospital (20.40%). Majority of participants could take leave from work without difficulty when they were ill (82.50%). In factories, they could tell the responsible factory staff and take leave

when they felt sick except a few factory leaders in some departments. Therefore, the sample represents the population of Myanmar migrant workers who enrolling Social Security Scheme of Thailand in this study.

Policy literacy on Social Security Scheme

Results showed that most migrants had a moderate (52.10%) level of policy literacy, while less had a low (26.30%) and high (21.70%) level in overall policy literacy on health care services under the Social Security Scheme. Moreover, the majority had a moderate level of literacy in the four domains of ability to access (55.40%), understand (52.50%), appraise (50.00%) and communicate information(55.40%). Although migrants had already recognised their right to receive SSS and enrolled to the scheme without any difficulty, they had limited literacy on SSS health care services that they were entitled to receive. Policy literacy is related to educational attainment and economic status (Batterham et al., 2016). Most migrants attended below high school level (62.90%) and had monthly incomes between 8,000 - 9,600 Baht (55.80%) that affected their policy literacy. Since migrants came to Thailand for employment, they did not pay much attention to the policy information despite being eligible to access it. Moreover, they were unable to seek information due to their low proficiency of the Thai language (59.60%) because language affects health literacy (U.S. Department of Health and Human Services, 2000). The qualitative data analysis confirmed that migrants would like to have sharing about the scheme in factories from social security office and needed pamphlets about SSS information in the Myanmar language. A variety of materials, including leaflets, were needed to improve the literacy, especially to the socio-economic disadvantaged groups such as migrants (UCL Institute of Health Equity, 2015). The finding of

necessity for information in the Myanmar language was congruent with a previous study among migrant workers in Singapore which revealed that most migrants did not receive health information in their own language (Ang et al., 2017). Therefore, most were unable to_share the information to others due to lack of clear understanding. Previous studies in Singapore and Norway found that migrants had poor awareness about health insurance information, lack of health information and services, including poor understanding about health insurance (Ang et al., 2017; Gele et al., 2016; Lee et al., 2014).

However, most migrant workers in this study lived in dormitories provided by the factory in which they were employed (69.60%) and reported that they asked each other when they did not understand about the scheme. Policy literacy was influenced by presence of social support (Batterham et al., 2016). As a result, social integration had enhanced migrants' policy literacy as mentioned by a previous study (Gele et al., 2016). Therefore, most migrants had moderate in overall and four domains of policy literacy.

Barriers on accessibility to health care services under Social Security Scheme

Most migrants perceived that they had a moderate level of overall barriers to access health care services under the Social Security Scheme (51.70%), including individual (46.70%) and system barriers (55.80%). Migrants experienced both demand and supply side barriers which were barriers related to individual and system level in accessing health care (Jacobs, Ir, Bigdeli, Annear, & Van Damme, 2011). Even though most migrants were eligible to access health care, they reported language difficulty, financial constraint for translator cost, unexpected health care costs and

long waiting times to access health care. These findings were supported by previous studies conducted among migrants in Singapore, London, Canada, Thailand, Cambodia, Laos and Vietnam (Ang et al., 2017; Aung et al., 2010; Hennebry, McLaughlin, & Preibisch, 2016; Naing et al., 2012; Tschirhart et al., 2017; Webber et al., 2012). However, most migrants in this study were able to access health care free of charge and their factory provides a translator for health care access. In addition, migrants had the support of their family and friends when they needed to access health care. This finding was consistent with a previous study which confirmed the importance of social support in health care accessibility (Holumyong et al., 2018). Therefore, overall barriers on accessibility to health care services was moderate among migrants.

The majority of migrants perceived a moderate level of barriers in the aspects of personal (46.70%), social (43.30%), health care providers (58.80%) and the health system (52.50%). Migrants experienced language difficulty because only a few could speak the Thai language fluently (5.00%). Moreover, a lack of knowledge on available health care services and service areas was reported by some migrants. This finding was consistent with studies in which migrants had language difficulty and lack of knowledge to access health care (Czapka & Sagbakken, 2016; Gonah et al., 2016; Musumari & Chamchan, 2016; Tschirhart et al., 2017; Veerman & Reid, 2011). Although migrants lived in the dormitory provided by the factories, they had difficulty in getting information on available health care services in Myanmar language as social support. Difficulty to get information in multiple languages was also described as a barrier in a previous study conducted in Australia (Mengesha et al., 2017). Some migrants in this study reported experiencing feelings of

discrimination from health care providers in hospitals and contracted health care centres. This finding was congruent with studies in Norway and Bangkok, Thailand in which migrants were dissatisfied with health care personnel and they experienced discrimination from them (Czapka & Sagbakken, 2016; Gonah et al., 2016). Most migrants reported long waiting times as a barrier to health care access, a result consistent with a previous study in the United States (Velez, Palomo-Zerfas, Nunez-Alvarez, Ayala, & Finlayson, 2017). However, availability of translators and the presence and support of family and friends reduced the level of these barriers.

On the other hand, financial barriers (53.30%) and barriers related to work situation (50.80%) were found to be low among our study migrants. Nearly half had monthly incomes more than 9,600 Baht (43.30%) and only few reported fear about unexpected health care cost such as coverage of operations, and co-payment for high cost dental care. In addition, barriers related to work situation was low because factories provided translator and transportation services. Importance of workplace for health care access was indicated in a study carried out in the Greater Mekong Subregion (Holumyong et al., 2018). Most migrants in our study stated that they did not have difficulty taking sick leave. This finding was inconsistent with a previous study conducted among migrant workers in Thailand, Cambodia, Laos and Vietnam in which working hours and difficulty to take leave from work deterred health care access (Webber et al., 2012).

In summary, language difficulty, insufficient information on available health care services and long waiting times were common barriers among migrants to access health care services. However, ability to inquire health service information from

responsible factory staff and translator including request for transportation services from factory decreased migrants' barriers to health care access.

Accessibility to health care services under the Social Security Scheme

Results of this study indicated that overall health care accessibility among most migrant workers was moderate (50.00%). Only a few migrant workers had minor illnesses such as fever and headache (19.60%). Some received health care at the factory clinics because a large factory usually provides a clinic for migrant workers. Moreover, they received care from uncontracted general practitioner clinics nearby with out-of-pocket payment (13.60%) which were convenient and provided short waiting times. These findings were different from a previous study in the Northeast of Thailand where migrant workers had poor access to health care, especially in those who lacked family support (Khongthanachayopit & Laohasiriwong, 2017). However, most migrants in this study were married (70.4%) and had family support to help them access health care. Therefore, migrants' overall health care accessibility was at a moderate level.

Most migrants perceived a moderate level of availability (46.30%) and financial accessibility (47.50%) to health care services. Regarding availability of health care services, migrant workers have the right to access health care services just as Thai citizens do under the Social Security Scheme. Only a few reported about unavailable treatments. This result was inconsistent from a previous study in Songkhla province in 2012 in which migrants perceived that available health care services were limited (Naing et al., 2012). However, migrants in that study were not under the Social Security Scheme and the study was conducted 7 years ago when availability of health care services was limited. Nonetheless, some migrants reported

that health care centres' opening hours were limited and the number of contracted health care centres were not enough and should be increased. In addition, most migrants had a moderate level of financial accessibility to health care services. Migrants could access health care free of charge in contracted hospitals and health care centres. Nevertheless, co-payment for dental care was needed when the cost exceeded a certain amount. Reimbursement from the social security office was difficult to take out and did not cover advanced payments. Cost of health care is as a crucial factor for health care access (Peters et al., 2008). Some migrants reported that they would like to reduce their monthly contribution. Importance of health care cost in health care access was consistent with previous studies in Ranong and Tak Provinces, Thailand (Aung, Pongpanich, & Robson, 2009; Tschirhart, Nosten, & Foster, 2016).

Most migrants perceived a low level of geographic accessibility (49.20%) and acceptability of health care services (47.90%). Some migrants accessed health care at contracted health care centres (39.90%) and rarely received care at a hospital (25.40%), with reasons not seeking care at a hospital being the long distance to travel. Those who did visit a hospital did so to receive maternity care and major operations. Long distance to a health care facility is important for health care access (O'Donnell, 2007). The finding of low geographic accessibility in this study was different from a study in the Northeast of Thailand which revealed that migrants did not receive health care although the distance to health care services was not far (Khongthanachayopit & Laohasiriwong, 2017). The result was congruent with a study conducted in Songkhla province in which migrants had poor geographic accessibility due to long distances (Naing et al., 2012). Moreover, most migrants had a low level of acceptability to health care services. Migrants reported friendliness of health care personnel and

improving quality of provided services by providing more care were essential. This finding was inconsistent with previous study in Thailand in which migrants were satisfied with the quality of services (Charoenmukayananta, Sriratanaban, Hengpraprom, & Trarathep, 2014).

In summary, migrants had a moderate level of overall accessibility to health care services due to factors such as unsuitable service hours of contracted health care centres and unforeseen co-payments even though they knew that they were enrolled in the Social Security Scheme. Migrants perceived a low level of acceptability and geographic accessibility to health care services due to long distance.

Associated factors of accessibility to health care services

This study found two significant factors of accessibility to health care services: policy literacy ($\beta = 0.53$) and barriers ($\beta = -0.28$), and these two factors contributed 47.2% to the overall variance of health care services. Although health care services under the Social Security Scheme are available for migrant workers as same as Thai citizens, policy literacy and barriers had an effect on migrants' health care access under the scheme. A discussion of factors associated with accessibility to health care services is provided as follows.

Policy literacy was associated with health care accessibility among migrants. Policy literacy plays a vital role in increasing health care access and improving health outcome (Batterham et al., 2016). Results of this study showed that increasing policy literacy could increase accessibility to health care ($\beta = 0.53$). High policy literacy on available health care services and service areas, monthly contribution, increased availability of pamphlets and sharing information from responsible factory staff enhanced health care accessibility of migrants. This finding was consistent with

previous studies which revealed an association between health literacy and health care access (Edward et al., 2018; Levy & Janke, 2016; Tipirneni et al., 2018).

Barriers also had a significant association with accessibility to health care services. Barriers are known to affect health care access and cause health outcome disparities (Carrillo et al., 2011; Hacker et al., 2015). Findings of this study indicated that an increasing level of barriers to health care access decreased health care accessibility among Myanmar migrants (β = -0.28). Migrants experienced barriers such as language, lack of knowledge on available health care services, financial difficulty for unexpected health care costs, long waiting times for health care access which affected health care accessibility. These findings were congruent with previous studies conducted among migrants in various countries (Czapka & Sagbakken, 2016; Gonah et al., 2016; Schmidt, Fargnoli, Epiney, & Irion, 2018; Tschirhart et al., 2017; Veerman & Reid, 2011; Webber et al., 2012).

Results showed that individual factors such as sex, marital status, monthly income, educational level, living period and time taken to go to health care service areas were not significantly associated with accessibility to health care services, a result contradictory with previous studies (Aung et al., 2010; Aung, Pongpanich, & Robson, 2009; Gonah et al., 2016; Hannah & Lê, 2012; Khongthanachayopit & Laohasiriwong, 2017; Musumari & Chamchan, 2016; Naing, Greater, & Pungrassami, 2012). Most migrants had experience on getting health care services under the scheme within the last two years (53.80%) could access health care not only at contracted hospitals but also at contracted health care centres regardless of their individual status. Therefore, individual factors did not have any effect on health care accessibility under the Social Security Scheme.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

This chapter presents conclusion of the research findings, strengths and limitations of the study, ideas for future research and recommendations to improve accessibility to health care services under the Social Security Scheme for migrant workers.

Conclusion

This cross-sectional study aimed to explore accessibility, policy literacy and barriers to health care services and to determine associated factors of accessibility to health care services among Myanmar migrant workers under Thailand's Social Security Scheme. Data were collected from 240 Myanmar migrant workers employed in various factories of Hat Yai district, Songkhla province..

Results revealed that most migrants had a moderate level of policy literacy. Considering each literacy domain, the majority of migrants had a moderate level in all domains. The overall level of barriers of health care service accessibility was moderate, involving sub-domains of both individual and system barriers. Most migrants perceived a moderate level in personal and social barriers, and barriers related to health care providers and the health care system. However, they had a low level of financial barriers and barriers related to their work situation. In addition, overall, most migrants had a moderate level of accessibility to health care services. Considering each domain, migrant workers had a moderate level of availability and financial accessibility but a low level of geographic accessibility and acceptability. Two associated factors, namely policy literacy and barriers, significantly contributed

to accessibility of health care services ($\beta = 0.53$ and $\beta = -0.28$, respectively. However, individual factors such as sex , marital status, monthly income, educational level, living period, time taken to go to health care service areas had no association with health care accessibility under the Social Security Scheme.

Regarding the qualitative analysis of open-ended questions, most migrants expressed that they would like to have more information sharing from organisations and responsible factory staff, distribution of pamphlets, especially about available hospital/health care centres and health care services. Most migrants were unable to share the information to others as they did not understand the details clearly. The qualitative analysis of barriers on health care service accessibility revealed language difficulty, lack of knowledge on health care services, and unforeseen translator costs as being common personal barriers among the migrants. In addition, long waiting times in hospital, inadequate translators and transportation from the factory were experienced by the migrants. The qualitative analysis of open-ended questions on health care accessibility showed that migrants reported getting transportation in time such as ambulance from hospital and car provided from factory were necessary to improve geographic accessibility. Some migrants reported that the number of contracted health care centres and opening hours were not adequate and should be increased. The migrants requested provision of government translators at hospital/health care centres. Moreover, they reported that their own ability to speak Thai, the hospitality and attitude of health care providers and their understanding of the migrant’s own culture were important when forming a good relationship with health care providers to enhance acceptability of health care services under Social Security Scheme.

Recommendations

As most migrants perceive a moderate level of accessibility to health care services, policy literacy and barriers, it is essential to provide recommendations for improving the health care provision under the Social Security Scheme. Recommendations from these research findings are proposed for policymakers (government, relevant organisations), health care providers and factory as follows.

Policymakers (government)

1. The Thai Government should provide translators in all contracted hospitals and health care centres for migrant workers.

Policymakers (relevant organisations)

1. Pamphlets about the Social Security Scheme should be distributed to every migrant registering at the Social Security Office and migrant workers' support organisations.
2. Ability to access health care at private clinics without payment should be informed to migrant workers to reduce long waiting time in hospital and health care centres.
3. The Social Security Office website (www.sso.go.th) should be offered in the Myanmar language to facilitate access to information to migrants from Myanmar.

Training of health volunteers

1. Health volunteers from migrant workers' support organisations should be

provided with training to distribute information of the Social Security Scheme because migrants prefer personal communication to self-learning about the

scheme.

Factory

1. Factories should provide enough translators to provide information about the Social Security Scheme and to go to hospitals and health care centres, transportation service to go to health care service areas anytime for migrants.

Strengths

1. Using both close- and open-ended questions can explore more about policy literacy, barriers and accessibility among Myanmar migrant workers under the Social Security Scheme compared with the use of only close-ended questions.
2. Myanmar migrant workers with both experience and no experience of health care access under the Social Security Scheme were included in the sample to capture the different perceptions from both types of migrants.

Limitations

1. Myanmar migrant workers from 31 percent of factories in large and medium-sized factory types such as seafood, wood, rubber and mechanics factory in Hat Yai district were involved. Therefore, caution should be taken when generalising the findings of this study to all Myanmar migrant workers registered with the Social Security Scheme in Hat Yai district.

2. Non-probability purposive sampling was used to select study subjects, which may limit the representativeness of migrant workers in factories compared with probability sampling methods.

Future research study

This study found that Myanmar migrant workers have a moderate level of policy literacy, barriers on health care accessibility and health care service accessibility. Two factors, namely policy literacy and barriers, were significantly associated with health care accessibility under the Social Security Scheme. Therefore, further qualitative studies including in-depth interviews and focus group discussions should be conducted to explore in more depth health care accessibility among all migrant workers under the Social Security Scheme because most migrants who work in formal sectors are registered with the Social Security Scheme.

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APPENDICES

APPENDIX A

Informed Consent Form

This Informed Consent Form is for those who are invited to participate in the research entitled “Policy Literacy, Accessibility to Health Care, and Its Barriers to the Services under Social Security Scheme among Myanmar Migrant Workers in Hat Yai District, Songkhla Province, Thailand (Research project topic)”. I would like to request you for your co-operation in this study and your decision to participate in this study will be greatly appreciated.

I have been invited to take part in the research on “Research project topic”. I have been told about this research as follows: (Please provide summary of each items)

- The purpose of the research is to explore the policy literacy, accessibility and barriers to health care services under Social Security Scheme

- Procedures, participants will be asked the questionnaire about personal data, policy literacy, health care accessibility and barriers to health care services under Social Security Scheme

- Risks and discomforts, participants will be free to refuse to answer any questions that make them feel discomfort and to withdraw from the interview at any time.
- Benefits of the research, Myanmar migrant workers will experience improvement in accessibility of health care services under Social Security Scheme by making policy recommendations for migrant workers

- Confidentiality of all information will be kept strictly confidential. Information will not be released to anyone who is not associated with the research.
- Contact information, for further information or any questions about the research project, please feel free to contact the principal investigators (name, contact address, telephone number)

  Aye Myat Myat Win

  Dormitory 10, Prince of Songkla University

  0994859100
- Complaints

  On the condition that you are not treated as indicated in this information sheet, you can contact the Chair of Human Research Ethics Committee (HREC), Office of HREC, 4th floor, Administrative Building, Faculty of Medicine, Prince of Songkla University, Thailand, Tel +66-7-4451157, E-mail: medpsu.ec@gmail.com.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study and understand that I have the right to withdraw from the [discussion/interview] at any time without in any way affecting my medical care. And, thanks so much for your participation in this research.

I confirm that the individual has given consent freely.

Signature of participant ....

Printed name of participant ....

Date (Day/ Month/ Year) ....

If illiterate, I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Signature of impartial witness ....

Printed name of witness ....

Date (Day/ Month/ Year) ....

Thumb print of a participant

Printed name of Researcher Aye Myat Myat Win

Signature of Researcher ....

Date (Day/ Month/ Year) ....

Please make a photocopy of this form for participant

Subject ID…..……….

Date/Time…………

APPENDIX B

Instruments

The questionnaire is composed of four parts: part 1 - personal data form, part 2 - policy literacy, part 3 - accessibility to health care services and part 4 – barriers on accessibility to health care services.

Part 1: Personal Data Form

Instruction: The following items are some information about yourself. There are three main parts in this form, (1) Demographic data, (2) Health information and (3) Working situation. Please choose the best choice by marking (✓) in the box "☐" and write your answer in the blank that is appropriate for you. If you do not understand the questions clearly, you can ask to the researcher.

Part 1: Personal Data Form

1.1 Demographic data

No	Characteristic	Researcher
1.	Age………………. Years…………………. months	A1 ( )
2.	Sex ☐ 1. Male ☐ 2. Female	A2 ( )
3.	Marital status ☐ 1. Single ☐ 2. Married ☐ 3. Divorced/Separated	A3 ( )

4.	Religion ☐ 1. Buddhist ☐ 2. Christian ☐ 3. Hindu ☐ 4. Muslim ☐ 5. Others, please specify …………………………….	A4 ( )
5.	Educational level ☐ 1. Formal education ☐ 1.1 high school or higher ☐ 1.2 below high school level ☐ 1.3 none ☐ 2. Informal education (e.g. monastery education) ☐ 2.1 please identify …………………………….	A5 ( ) A5.1 ( ) A5.2 ( )
6.	Monthly income ………………… Baht/month	A6 ( )
7.	Condition of employment ☐ Memorandum of Understanding ☐ Nationality Verification	A7 ( )
8.	Living period in Thailand ………………. years …………… months	A8 ( )
9.	Ability to speak Thai language ☐ 1. Fluently ☐ 2. a little bit ☐ 3. Not at all	A9 ( )
10.	Place of residence ☐ 1. Inside factory ☐ 2. Outside factory (provided by factory) ☐ 3. Outside factory (renting by themselves)	A10 ( )

11.	Living with ☐ 1. Alone ☐ 2. Family, identify …………………………………… ☐ 3. Others, identify ………………………………….....	A11 ( )

1.2 Health information

No	Characteristic	Researcher
12.	Current illness during the previous 4 weeks ☐ 1. Yes ☐ 2. No If Yes, please identify ……………………	A12 ( )
13.	Social security card ☐ 1. Yes ☐ 2. No	A13 ( )
14.	Experiences of receiving health care in Thailand (you can choose more than one option) ☐ 1. Never Please identify ……………………………………….. ☐ 2. Hospital visit using social security card ☐ 3. Health care centre visit using social security card ☐ 4. Private clinic visit using social security card ☐ 5. General practitioner visit ☐ 6. Others, identify ……………………………………	A14 ( )
15.	Number of health care visits using social security card within past two years …….………………times	A15 ( )
16.	How long does it take from your residence to health care area ……….. hours ………… minutes	A16 ( )

1.3 Working situation

No	Characteristic	Researcher
17.	Factory type ☐ 1. Seafood factory ☐ 2. Rubber factory ☐ 3. Wood factory ☐ 4. Mechanic factory	A17 ( )
18.	Difficulty to take leave from work in getting health care ☐ 1. Yes ☐ 2. No	A18 ( )

Part 2: Policy literacy Questionnaire

Instruction: This tool measures the certain degree of your ability to access, ability to understand, ability to appraise and ability to communicate the policy related to Social Security Scheme. Please circle (O) the number corresponding to each statement to which you agree or most applicable to you. The meaning of numbers is as follows: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree.

No	Questionnaire	1	2	3	4	Researcher
1.	The information about availability of health care services of Social Security Scheme can be accessed.	1	2	3	4	B1 ( )
2.	You can understand the information on eligibility of the scheme.	1	2	3	4	B2 ( )
3.	The contribution is affordable to everyone including you.	1	2	3	4	B3 ( )
4.	Even you expect to get information about the right on Social Security Scheme, it is difficult to obtain.	1	2	3	4	B4 ( )
5.	You share information of available health care services based on Social Security Scheme.	1	2	3	4	B5 ( )
6.	Getting right to enrol in the Social Security Scheme is informed to you.	1	2	3	4	B6 ( )
7.	Seeking a health care service is easy because you have already known about available health care services.	1	2	3	4	B7 ( )
8.	You do not understand on the contribution of Social Security Scheme.	1	2	3	4	B8 ( )
9.	You can seek the information on criteria to register Social Security Scheme.	1	2	3	4	B9 ( )

No	Questionnaire	1	2	3	4	Researcher
10.	Discussing freely on the health care services with health care providers is impossible.	1	2	3	4	B10( )
11.	You can share information regarding contribution of the scheme to your friends.	1	2	3	4	B11( )
12.	The available health care services from the scheme are not met with your expectation.	1	2	3	4	B12( )
13.	The criteria to enrol in the Social Security Scheme are appropriate.	1	2	3	4	B13( )
14.	The information about eligible health care service areas such as contracted care services can be obtained.	1	2	3	4	B14( )
15.	When you tried to find the information on contribution of the scheme, it is difficult to obtain.	1	2	3	4	B15( )
16.	You have no difficulty to apprehend the information about available health care services.	1	2	3	4	B16( )
17.	You are unhappy to pay the contribution because it is not worth enough.	1	2	3	4	B17( )
18.	You are satisfied with the number of available contracted care services under the scheme.	1	2	3	4	B18( )
19.	You hesitate to tell your friends on available contracted care services.	1	2	3	4	B19( )
20.	The factory staff provide you the information about contribution of Social Security Scheme such as three-party payment and 5% deduction from your monthly salary.	1	2	3	4	B20( )
21.	It is difficult to register to the scheme although you meet with the criteria.	1	2	3	4	B21( )

No	Questionnaire	1	2	3	4	Researcher
22.	You are willing to pay for the contribution of the scheme because you are satisfied with the benefits.	1	2	3	4	B22( )
23.	Asking on the available health care services of Social Security Scheme is difficult.	1	2	3	4	B23( )
24.	The information about contribution can be understood.	1	2	3	4	B24( )
25.	Sharing the information on available health care services to other migrants is difficult for you.	1	2	3	4	B25( )
26.	You will get advantages on your health by using the available health care services.	1	2	3	4	B26( )
27.	You realize that your care need is not met by the contracted care services.	1	2	3	4	B27( )
28.	It is difficult to explain the eligibility of Social Security Scheme to others.	1	2	3	4	B28( )
29.	You enrol to the scheme because you are confident to get benefits from the scheme.	1	2	3	4	B29( )
30.	The available sources of information about health care services under Social Security Scheme are insufficient for you.	1	2	3	4	B30( )
31.	You always share information on eligibility of the Social Security Scheme to your friends.	1	2	3	4	B31( )
32.	You are satisfied with the available health care services from Social Security Scheme.	1	2	3	4	B32( )
33.	Suggesting your friends on available hospital/clinics to get care is easy.	1	2	3	4	B33( )

1. How to make known on the Social Security Scheme policy for the migrants?

   ………………………………………………………………………………………

   ………………………………………………………………………………………

2. What are the key points that other migrants should know about Social Security Scheme policy?

   ………………………………………………………………………………………

   ………………………………………………………………………………………

3. How do you do when you do not understand about Social Security Scheme policy for the migrants?

   ………………………………………………………………………………………

   ………………………………………………………………………………………

4. How do you judge about policy on Social Security Scheme for the migrants?

   ………………………………………………………………………………………

   ………………………………………………………………………………………

5. What difficulties do you face in telling about Social Security Scheme policy to other migrants?

   ………………………………………………………………………………………

   ………………………………………………………………………………………

Part 3: Barriers on accessibility to health care service Questionnaire

Instruction: This tool measures the certain degree of your perceived ability to barriers on accessibility to health care services: individual barriers and system barriers related to Social Security Scheme. Please circle (O) the number corresponding to each statement to which you agree or most applicable to you. The meaning of numbers is as follows: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree.

No	Questionnaire	1	2	3	4	Researcher
1.	You are reluctant to seek care because you do not know the available health care services.	1	2	3	4	D1 ( )
2.	You do not want to seek care at the contracted care services due to long waiting time.	1	2	3	4	D2 ( )
3.	You have difficulty to get permission from your boss for getting health care services.	1	2	3	4	D3 ( )
4.	You have difficulty to seek care because you worried about the cost that will not be covered by the scheme.	1	2	3	4	D4 ( )
5.	You hesitate to go to the health service due to feeling of embarrassment.	1	2	3	4	D5 ( )
6.	It is not easy to get information in Myanmar language on available health care services (e.g. pamphlet).	1	2	3	4	D6 ( )
7.	You do not want to get care services because of difficulty to build relationship with health care providers.	1	2	3	4	D7 ( )
8.	You give up to get care from the contracted care services due to inappropriate service hours.	1	2	3	4	D8 ( )
9.	You do not seek care because you believe that some health problems do not need treatment.	1	2	3	4	D9 ( )

No	Questionnaire	1	2	3	4	Researcher
10.	You will not seek care at the contracted care services because of high transportation cost.	1	2	3	4	D10( )
11.	No friend recommends you to seek services based on Social Security Scheme.	1	2	3	4	D11( )
12.	You are reluctant to seek care because of language difficulty.	1	2	3	4	D12( )
13.	You do not want to seek care because of feeling discrimination by health care providers.	1	2	3	4	D13( )
14.	You do not want to get care from the contracted care services because of inadequate medication.	1	2	3	4	D14( )
15.	Although translators are provided by the factory, you are not happy to get their help.	1	2	3	4	D15( )
16.	You do not seek care because you are afraid of losing job income.	1	2	3	4	D16( )
17.	You do not seek care because you cannot freely discuss your health problems with health care providers.	1	2	3	4	D17( )
18.	You have difficulty to get health care service because of long working hour.	1	2	3	4	D18( )
19.	You will not seek care because you think traditional healing is better than modern health care services.	1	2	3	4	D19( )
20.	No one supports you to get care at the contracted care services.	1	2	3	4	D20( )
21.	You are unable to get care because medical equipment in the contracted care services is inadequate.	1	2	3	4	D21( )

No	Questionnaire	1	2	3	4	Researcher
22.	Although you want to seek care, you have financial difficulty to pay for the translators.	1	2	3	4	D22( )
23.	You do not want to go to see health care providers because you are afraid of bad news on your health.	1	2	3	4	D23( )
24.	You are afraid of discrimination as migrants when you seek the contracted care services.	1	2	3	4	D24( )
25.	Having difficulty to get transportation provided by the factory, you always give up to get health care services.	1	2	3	4	D25( )
26.	You do not want to seek care as there are many procedures to access.	1	2	3	4	D26( )
27.	You do not seek care because health care providers do not pay attention to your health problems.	1	2	3	4	D27( )
28.	You feel embarrassed to see a doctor due to the inhospitality of medical staff.	1	2	3	4	D28( )

1. What kind of other barriers do you face when you try to get health care from contracted care services as an individual person?

   ……………………………………………………………………………………

   ……………………………………………………………………………………

2. Please describe more about economic difficulties to get care from Social Security Scheme?

   ……………………………………………………………………………………

   ……………………………………………………………………………………

3. What other difficulties related to society prevent you from accessing health care?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

4. Please describe other barriers related to health care personnel when you go to the contracted hospitals?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

5. Please explain on health system barriers to get care from Social Security Scheme?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

6. Please describe about work related barriers to get care from Social Security Scheme?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

Part 4: Accessibility to health care service Questionnaire

Instruction: This tool measures the certain degree of your perceived ability to accessibility of health care services: geographic accessibility, availability, financial accessibility and acceptability related to Social Security Scheme. Please circle (O) the number corresponding to each statement to which you agree or most applicable to you. The meaning of numbers is as follows: 1 = strongly disagree, 2 = disagree, 3 = agree,

4 = strongly agree.

No	Questionnaire	1	2	3	4	Researcher
1.	In case of accident/emergency, you can go to every hospital.	1	2	3	4	C1 ( )
2.	The available equipment and medication of the contracted care services is satisfactory.	1	2	3	4	C2 ( )
3.	You receive health care at the contracted hospitals because it is free of charge.	1	2	3	4	C3 ( )
4.	Apart from general treatment, you receive high cost treatment in contracted hospitals.	1	2	3	4	C4 ( )
5.	The distance between your living place and contracted care services is far for you.	1	2	3	4	C5 ( )
6.	No worriness on staying in contracted hospitals because food is provided during your hospitalization.	1	2	3	4	C6 ( )
7.	Numbers of health care personnel are sufficient and qualified for providing care services for you.	1	2	3	4	C7 ( )
8.	You feel free to tell all health condition/suffering to the health care providers.	1	2	3	4	C8 ( )

No	Questionnaire	1	2	3	4	Researcher
9.	In case of delivery of baby as maternity care, it is easy to get services.	1	2	3	4	C9 ( )
10.	It is easy to get access in-patient care and out-patient care.	1	2	3	4	C10( )
11.	Getting reimbursement for the cost of care at uncontracted care services does not work in reality.	1	2	3	4	C11( )
12.	Health care providers welcome you to the service.	1	2	3	4	C12( )
13.	The available medicines at the contracted care services are adequate for you.	1	2	3	4	C13( )
14.	It is difficult for you to get transportation to the contracted care services.	1	2	3	4	C14( )
15.	You can access health promotion and prevention services.	1	2	3	4	C15( )
16.	You are informed by health care providers about your treatment.	1	2	3	4	C16( )
17.	You can receive major operations at the contracted hospitals without any payment.	1	2	3	4	C17( )
18.	The health care services based on Social Security Scheme is good.	1	2	3	4	C18( )
19.	You receive dental care without difficulty under Social Security Scheme.	1	2	3	4	C19( )
20.	You could not trust on diagnosis provided by health care providers.	1	2	3	4	C20( )
21.	No extra money for delivery of baby is needed because the reimbursement from the Social Security Scheme is sufficient	1	2	3	4	C21( )
22.	You usually get care from uncontracted providers in your areas.	1	2	3	4	C22( )

1. What are the things to improve accessing services from your work/living place?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

2. What are the services that are not available although they are described in Social Security Scheme?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

3. What do you think about the coverage of available resources such as health care providers and service hours?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

4. What measures need to be taken to make cost of all services to be affordable to every migrant?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

5. How to improve the relationship between health care providers and migrants?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

6. How can be made to be more reliable for the services under Social Security Scheme?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

APPENDIX C

Testing Reliability

Table 1

Reliability statistics of policy literacy questionnaire (N = 33).

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
.87	.87	33

Table 2

Reliability statistics of barriers on accessibility to health care service questionnaire (N = 28).

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
.84	.83	28

Table 3

Reliability statistics of accessibility to health care service questionnaire (N = 22).

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
.72	.77	22

APPENDIX D

Testing assumptions of multiple regression

Table 1

Tests of Normality on scores of accessibility to health care services, policy literacy and barriers on accessibility to health care services

Variables	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Policy literacy total score	.073	240	.003	.982	240	.004
Barriers total score	.095	240	.000	.969	240	.000
Accessibility total score	.071	240	.005	.974	240	.000

Note. [a] = Lilliefors Significance Correction

Table 2

Descriptives of policy literacy and barriers on accessibility to health care services

			Statistic	Std. Error	Value/SE
Policy literacy total score	Mean		88.04	.89	
	95% Confidence Interval for Mean	Lower Bound	86.29		
		Upper Bound	89.78		
	5% Trimmed Mean		88.06		
	Median		88.50		
	Variance		188.13		
	Std. Deviation		13.72		
	Minimum		42		
	Maximum		125		
	Range		83		
	Interquartile Range		16		
	Skewness		-.11	.16	-.70
	Kurtosis		1.03	.31	3.30
Barrier total score	Mean		61.60	.89	
	95% Confidence Interval for Mean	Lower Bound	60.30		
		Upper Bound	62.89		
	5% Trimmed Mean		61.56		
	Median		62.00		
	Variance		103.81		
	Std. Deviation		10.19		
	Minimum		30		
	Maximum		98		
	Range		68		
	Interquartile Range		11		

Table 2 (continued)

Descriptives of barriers and accessibility to health care services

			Statistic	Std. Error	Value/SE
Barrier total score	Skewness		-.02	.16	-.12
	Kurtosis		1.55	.31	4.94
Accessibility total score	Mean		65.92	.66	
	95% Confidence Interval for Mean	Lower Bound	64.90		
		Upper Bound	66.93		
	5% Trimmed Mean		66.07		
	Median		66.00		
	Variance		63.87		
	Std. Deviation		7.99		
	Minimum		34		
	Maximum		87		
	Range		53		
	Interquartile Range		9		
	Skewness		-.31	.16	-.95
	Kurtosis		1.42	.31	4.52

Table 3

Test of Multicollinearity with Tolerance and Variance Inflation Factor (VIF) scores

Model		Collinearity Statistics		
		Tolerance	VIF	Minimum Tolerance
1.	Gender Dummy	.99	1.00	.99
	Maritalstatus Dummy	.99	1.00	.99
	Monthlyincome Dummy	.99	1.00	.99
	Educationlevel Dummy	.99	1.00	.99
	Livingperiod Dummy	.94	1.05	.94
	Timetaken Dummy Coding	1.00	1.00	1.00
	Barrier Total Score	.85	1.16	.85
2.	Gender Dummy	.99	1.00	.85
	Maritalstatus Dummy	.99	1.00	.85
	Monthlyincome Dummy	.97	1.02	.84
	Educationlevel Dummy	.97	1.02	.83
	Livingperiod Dummy	.94	1.06	.82
	Timetaken Dummy Coding	.99	1.00	.85

Note. Model 1. Predictors: (Constant), Policy literacy Total Score

Model 2. Predictors: (Constant), Policy literacy Total Score, Barrier Total Score

Dependent Variable: Accessibility Total Score

Table 4

Correlations among personal factors, policy literacy, barriers, and accessibility to health care services (N = 240).

Variables	Gender	Marital status	Monthly income	Educational level	Living period	Time taken	Policy literacy	Barrier
Gender								
Marital status	.05							
Monthly income	.33**	.01						
Educational level	.18*	.05	-.03					
Living period	-.19*	-.16*	-.22**	-.02				
Time taken	-.11*	-.15*	.07	-.02	.20*			
Policy literacy	.04	.05	.09	-.05	-.23**	-.02		
Barrier	.05	-.07	.07	.16*	.13*	.02	-.38**	
Accessibility	-.07	.08	-.05	-.05	-.15*	.07	.64**	-.48**

Note. * = p < .05, ** = p < .001

Table 5

Testing statistical significance of multiple regression (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	6175.062	1	6175.062	161.69	.00[a]
Residual	9089.271	238	38.190		
Total	15264.333	239			
2 Regression	7210.240	2	3605.120	106.08	.00[b]
Residual	8054.093	237	33.984		
Total	15264.333	239			

Note. a. Predictors: (Constant), Policy literacy Total Score

b. Predictors: (Constant), Policy literacy Total Score, Barrier Total Score

Dependent Variable: Accessibility Total Score

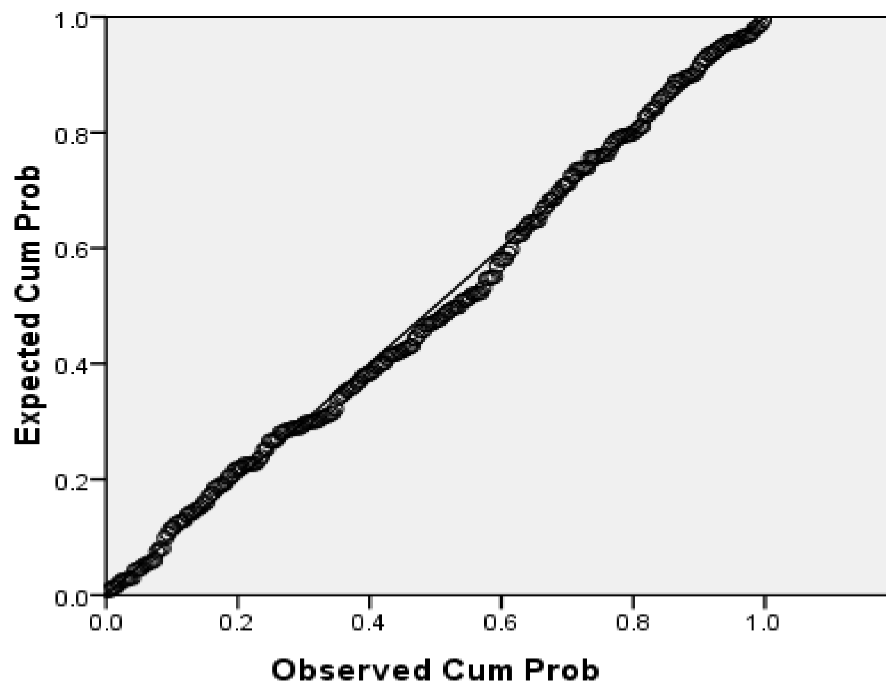

Figure 2. Probability-Probability (P-P) Plot showing multivariate normality

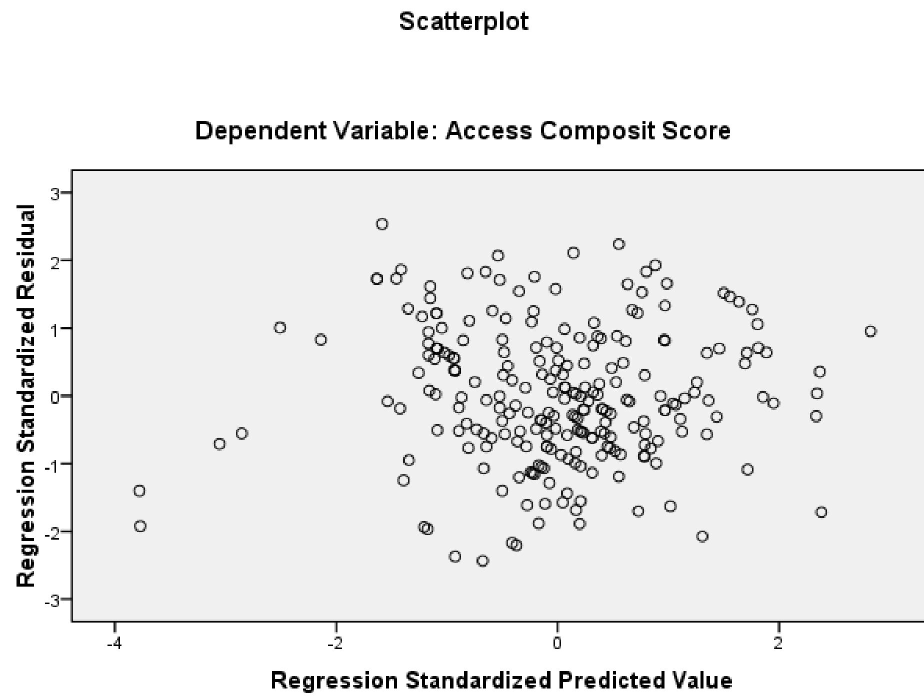

Figure 3. Scatterplot showing homoscedasticity

APPENDIX E

Additional Results

Means and Standard Deviations of policy literacy items

Table 1

Means and Standard Deviations of policy literacy items with the highest to lowest mean score (N = 240).

Item No.	Policy literacy items	Mean	SD
	Ability to access		
6.	Getting right to enrol in the Social Security Scheme is informed to you.	3.00	.81
14.	The information about eligible health care service areas such as contracted care services can be obtained.	2.94	.84
1.	The information about availability of health care services of Social Security Scheme can be accessed.	2.68	.89
23.	Asking on the available health care services of Social Security Scheme is difficult.	2.50	.92
20.	The factory staff provide you the information about contribution of Social Security Scheme such as three-party payment and 5% deduction from your monthly salary.	2.30	1.02
9.	You can seek the information on criteria to register Social Security Scheme.	2.28	.90
30.	The available sources of information about health care services under Social Security Scheme are insufficient for you.	2.24	.92
15.	When you tried to find the information on contribution of the scheme, it is difficult to obtain.	2.22	.90

Table 1 (continued)

Item No.	Policy literacy items	Mean	SD
4.	Even you expect to get information about the right on Social Security Scheme, it is difficult to obtain.	2.20	.93
	Ability to understand		
7.	Seeking a health care service is easy because you have already known about available health care services.	3.03	.71
27.	You realize that your care need is not met by the contracted care services.	2.77	.77
8.	You do not understand on the contribution of Social Security Scheme.	2.65	.94
24.	The information about contribution can be understood.	2.62	.98
16.	You have no difficulty to apprehend the information about available health care services.	2.52	.86
2.	You can understand the information on eligibility of the scheme.	2.40	.94
	Ability to appraise		
21.	It is difficult to register to the scheme although you meet with the criteria.	3.30	.79
26.	You will get advantages on your health by using the available health care services.	3.12	.67
22.	You are willing to pay for the contribution of the scheme because you are satisfied with the benefits.	2.99	.75
29.	You enrol to the scheme because you are confident to get benefits from the scheme.	2.99	.74
13.	The criteria to enrol in the Social Security Scheme are appropriate.	2.94	.75
32.	You are satisfied with the available health care services from Social Security Scheme.	2.93	.73

Table 1 (continued)

Item No.	Policy literacy items	Mean	SD
18.	You are satisfied with the number of available contracted care services under the scheme.	2.73	.83
12.	The available health care services from the scheme are not met with your expectation.	2.73	.82
17.	You are unhappy to pay the contribution because it is not worth enough.	2.72	.83
3.	The contribution is affordable to everyone including you.	2.44	.89
	Ability to communicate		
33.	Suggesting your friends on available hospitals/clinics to get care is easy.	2.98	.86
19.	You hesitate to tell your friends on available contracted care services.	2.91	.86
11.	You can share information regarding contribution of the scheme to your friends.	2.63	.89
25.	Sharing the information on available health care services to other migrants is difficult for you.	2.61	.92
31.	You always share information on eligibility of the Social Security Scheme to your friends.	2.53	.94
5.	You share information of available health care services based on Social Security Scheme.	2.48	.92
28.	It is difficult to explain the eligibility of Social Security Scheme to others.	2.38	.99
10.	Discussing freely on the health care services with health care providers is impossible.	2.31	.94

Means and Standard Deviations of barriers on accessibility to health care services items

Table 2

Means and Standard Deviations of barriers items with the highest to lowest mean score (N = 240).

Item No.	Barriers items	Mean	SD
	Personal barriers		
9.	You do not seek care because you believe that some health problems do not need treatment.	2.78	.88
12.	You are reluctant to seek care because of language difficulty.	2.77	.96
15.	Although translators are provided by the factory, you are not happy to get their help.	2.54	.99
19.	You will not seek care because you think traditional healing is better than modern health care services.	2.45	.95
1.	You are reluctant to seek care because you do not know the available health care services.	2.39	.77
23.	You do not want to go to see health care providers because you are afraid of bad news on your health.	1.96	.75
5.	You hesitate to go to the health service due to feeling of embarrassment.	1.62	.73
	Financial barriers		
22.	Although you want to seek care, you have financial difficulty to pay for the translators.	2.46	.93
4.	You have difficulty to seek care because you worried about the cost that will not be covered by the scheme.	2.10	.73
16.	You do not seek care because you are afraid of losing job income.	2.03	.79

Table 2 (continued)

Item No.	Barriers items	Mean	SD
10.	You will not seek care at the contracted care services because of high transportation cost.	1.96	.73
	Social barriers		
6.	It is not easy to get information in Myanmar language on available health care services (e.g. pamphlet).	3.01	.94
24.	You are afraid of discrimination as migrants when you seek the contracted care services.	1.98	.82
11.	No friend recommends you to seek services based on Social Security Scheme.	1.92	.70
20.	No one supports you to get care at the contracted care services.	1.88	.71
	Barriers related to health care providers		
17.	You do not seek care because you cannot freely discuss your health problems with health care providers.	2.07	.78
13.	You do not want to seek care because of feeling discrimination by health care providers.	1.88	.73
7.	You do not want to get care services because of difficulty to build relationship with health care providers.	1.88	.61
27	You do not seek care because health care providers do not pay attention to your health problems.	1.84	.66
	Barriers related to health system		
2.	You do not want to seek care at the contracted care services due to long waiting time.	3.18	.79
26.	You do not want to seek care as there are many procedures to access.	2.81	.92

Table 2 (continued)

Item No.	Barriers items	Mean	SD
8.	You give up to get care from the contracted care services due to inappropriate service hours.	2.27	.81
21.	You are unable to get care because medical equipment in the contracted care services is inadequate.	1.79	.69
14.	You do not want to get care from the contracted care services because of inadequate medication.	1.75	.66
28.	You feel embarrassed to see a doctor due to the inhospitality of medical staff.	1.71	.70
	Barriers related to work situation		
18	You have difficulty to get health care service because of long working hour.	2.28	.88
3	You have difficulty to get permission from your boss for getting health care services.	2.22	.85
25	Having difficulty to get transportation provided by the factory, you always give up to get health care services.	2.07	.85

Means and Standard Deviations of accessibility to health care services items

Table 3

Means and Standard Deviations of accessibility items with the highest to lowest mean score (N = 240).

Item No.	Accessibility items	Mean	SD
	Geographic accessibility		
14.	It is difficult for you to get transportation to the contracted care services.	3.08	.79
5.	The distance between your living place and contracted care services is far for you.	2.48	.89
	Availability		
9.	In case of delivery of baby as maternity care, it is easy to get services.	3.44	.60
10.	It is easy to get access in-patient care and out-patient care.	3.31	.58
13.	The available medicines at the contracted care services are adequate for you.	3.29	.59
7.	Numbers of health care personnel are sufficient and qualified for providing care services for you.	3.22	.66
19.	You receive dental care without difficulty under Social Security Scheme.	3.18	.71
1.	In case of accident/emergency, you can go to every hospital.	3.13	.79
4.	Apart from general treatment, you receive high cost treatment in contracted hospitals.	3.10	.72
15.	You can access health promotion and prevention services.	2.50	1.02
22.	You usually get care from uncontracted providers in your areas.	2.05	.76

Table 3 (continued)

Item No.	Accessibility items	Mean	SD
	Financial accessibility		
6.	No worriness on staying in contracted hospitals because food is provided during your hospitalization.	3.20	.70
21.	No extra money for delivery of baby is needed because the reimbursement from the Social Security Scheme is sufficient.	3.06	.71
3.	You receive health care at the contracted hospitals because it is free of charge.	2.98	.80
17.	You can receive major operations at the contracted hospitals without any payment.	2.85	.84
11.	Getting reimbursement for the cost of care at uncontracted care services does not work in reality.	2.28	.95
	Acceptability		
16.	You are informed by health care providers about your treatment.	3.18	.67
18.	The health care services based on Social Security Scheme is good.	3.18	.58
12.	Health care providers welcome you to the service.	3.16	.65
20.	You could not trust on diagnosis provided by health care providers.	3.08	.79
8.	You feel free to tell all health condition/suffering to the health care providers.	3.08	.72
2.	The available equipment and medication of the contracted care services is satisfactory.	3.07	.72

Table 15

Model summary of stepwise multiple regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.64[a]	.41	.40	6.18	
2	.69[b]	.47	.47	5.83	1.22

Note. a. Predictors: (Constant), Policy literacy Total Score

b. Predictors: (Constant), Policy literacy Total Score, Barrier Total Score

Dependent Variable: Accessibility Total Score

APPENDIX F

List of Experts

Content validity of personal data form, policy literacy questionnaire, accessibility to health care service questionnaire and barriers on accessibility to health care service questionnaire was validated by three experts as follows.

1. Associate Professor Dr. Bhunyabhadh Chaimay

   Faculty of Health and Sport Science, Thaksin University

2. Dr. Wirat Eungpoonsawat

   National Health Security Office, Region 12 Songkhla

3. Assistant Professor Dr. Umaporn Boonyasopun

   Faculty of Nursing, Prince of Songkla University

APPENDIX G

Letter of Ethical Consideration

EC 014/61

Health System Management Institute
Prince of Songkla University
Hat Yai, Songkhla, Thailand
90110

Certificate of Approval

Title of project: Predictors of Accessibility to Health Care under Social Security Scheme among Myanmar Migrant Workers in Hat Yai District, Songkhla Province, Thailand

Principal investigator: Miss Aye Myat Myat Win

Responsible department: Health System Management Institute, Prince of Songkla University

This document is a record of review and approval of a study protocol. The Health Human Research Ethics Committee of Health System Management Institute, Prince of Songkla University has approved the above study and the accompanying documents in the study.

Date of approval: December 26, 2018

Pongthep S.

Associate Professor Dr.Pongthep Sutheravut
Director of Health System Management Institute
Prince of Songkla University

VITAE

Name Aye Myat Myat Win

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Educational Attainment

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Scholarship Awards during Enrolment

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