



**HEALTH INSURANCE STATUS AND ITS ASSOCIATED
FACTORS AMONG MYANMAR MIGRANT WORKERS
IN CHIANG RAI PROVINCE, THAILAND**

TOE YAMONE MYAT NOE

**MASTER OF PUBLIC HEALTH
IN
BORDER HEALTH MANAGEMENT**

**SCHOOL OF HEALTH SCIENCE
MAE FAH LUANG UNIVERSITY**

2025

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**THIS THESIS IS A PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF PUBLIC HEALTH
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THESIS APPROVAL
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FOR
MASTER OF PUBLIC HEALTH
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Thesis Title: Health Insurance Status and Its Associated Factors Among Myanmar
Migrant Workers in Chiang Rai Province, Thailand

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ABSTRACT

Thailand, one of the Southeast Asian countries, the country's geographical location, its economic development and cultural diversity, such characteristics attract millions of migrants, especially its neighboring countries, Cambodia, Lao PDR, Myanmar and Vietnam. Thailand is seen as a pioneer of migrant health coverage in the ASEAN region with the expansion of UHC program. However, the rate of healthcare service utilization by migrants and the enrollment of migrant health insurance schemes still remains lower than the main insurance scheme of Thai citizens (UHC). This community-based cross-sectional study aimed to assess the health insurance status and identify factors associated with insurance enrollment among Myanmar migrant workers in Chiang Rai Province, Thailand. A structured questionnaire was administered to 350 participants recruited via snowball sampling in Chiang Rai Province. Data were collected through face-to-face interviews and analyzed using descriptive statistics, Chi-square or Fisher's Exact tests and logistic regression to identify significant predictors of health insurance status with significance p -value <0.05 . The results revealed that 41.1% of the participants were uninsured, while 58.9% were covered. Among those with insurance, the Social Security Scheme (SSS) was the most common type of coverage (61.5%), followed by the Migrant Health Insurance Scheme (MHIS) at 40%. Among them, some participants are covered by both schemes. The predisposing profile showed a young adult population (mean age 35) largely employed in the construction and factory sectors. Despite 65.1% being long-term residents in Thailand, a significant health security gap remains. Enabling factors highlighted economic barriers, with 50%

of workers earning 9,000 THB or less monthly, forcing insurance costs to compete with basic survival needs. Furthermore, 50.6% possessed poor knowledge regarding insurance schemes and health literacy levels were largely constituted of interactive level (67.7%). Multivariable analysis identified several critical predictors for having no health insurance: residing in Mueang (AOR=6.52) or Mae Sai (AOR=6.68), compared to those who live in other districts of Chiang Rai Province and having no legal documentation (AOR=30.94) compared to those under the MOU system. Most significantly, participants whose family members had no health insurance faced 37.6 times higher odds of being uninsured compared to those with insured family members (AOR=37.64, 95% CI=8.84-160.29). Other significant factors included having never paid out-of-pocket for health services (AOR=3.89) compared to those having out-of-pocket experience, lack of awareness of insurance (AOR=21.8) and holding a negative perception of health insurance (AOR=22.6). To improve enrollment, the study recommends streamlining documentation processes, utilizing Migrant Health Volunteers (MHVs) to bridge language gaps, and implementing community-centered outreach to shift perceptions of insurance from a financial burden to a protective safety net.

Keywords: Myanmar Migrant Workers, Migrant Health Insurance, Health Literacy, Andersen's Behavioral Model, Chiang Rai

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ABBREVIATIONS AND SYMBOLS

AOR	Adjusted Odds Ratio
CSMBS	Civil Service Medical Benefits Scheme
cOR	Crude Odds Ratio
GDP	Gross Domestic Product
GCM	Global Impact for Safe, orderly and regular Migration
ILO	International Labor Organization
IOM	International Organization for Migration
IQR	Interquartile Range
MDG	Millennium Development Goals
MOU	Memorandum of Understanding
MHW	Migrant Health Workers
MHV	Migrant Health Volunteers
MHIS	Migrant Health Insurance Scheme
MOPH	Ministry of Public Health
NCPO	National Council for Peace and Order
OSS	One Stop Service
SD	Standard Deviation
SDG	Sustainable Development Goals
SPSS	Statistical Package for Social Sciences
SSS	Social Security Scheme
SSO	Social Security Office
UN	United Nations
UHC	Universal Health Coverage
UCS	Universal Coverage Scheme
UNHCR	United Nations High Commissioner for Refugees
WHO	World Health Organization
95% CI	95% Confidence Interval

CHAPTER 1

INTRODUCTION

1.1 Background and Rationale

Global migration serves as a fundamental pillar for modern economic system, stability and familial support across diverse societies. These movements are influenced by a complex synergy of demographic, economic, and geographic variables, leading to evolving migratory patterns (World Migration Report, 2024). By the end of 2022, the global migrant population reached 281 million, a figure comparable to the total population of Indonesia. While the COVID-19 pandemic caused temporary disruptions, the international migrant count rose to 304 million by 2024, representing 3.7% of the global population (IOM, 2021). This growth is largely fueled by labor demands and family reunification, as individuals seek improved economic prospects and better living standards amidst regional instability (Engler et al., 2020). Consequently, international migration remains a primary engine for human development and financial growth for both home and host nations (World Migration Report, 2024).

The concept of migration and migrant varies significantly across different academic and legal frameworks. While no single definition is universally accepted, migration generally understood as the movement of individuals from their habitual residence to a new location, whether across international borders or within the same country. The term migrant is increasingly utilized serves as a broad categorization for individuals moving due to various circumstances, regardless of whether the movement is voluntary or coerced (UNHCR, n.d.;Glossary on Migration, 2019).

Throughout the migratory process, migrants often encounter heightened vulnerabilities in all aspects especially maintaining their health conditions. Migrants possess a wide spectrum of health requirements that are influenced by their pre-migration history, the journey itself, and the socio-economic conditions in their destination country (WHO, n.d.). While migrants are not fundamentally less healthy than native populations, their health outcomes are frequently undermined by external

pressures such as legal status, social marginalization, financial constraints, and linguistic barriers. Furthermore, limited health literacy and the constant threat of deportation often prevent them from accessing essential medical services. These obstacles lead to a higher rate of infectious diseases, chronic health issues, and workplace injuries, thereby widening health disparities within migrant communities (Davies et al., 2009).

International governance has long sought to address the inequities of migrants. The 1990 International Convention on the Protection of the Rights of All Migrant Workers highlighted the need for equitable care, a priority echoed in the Millennium Development Goals (MDGs) and the subsequent Sustainable Development Goals (SDGs). Specifically, SDG 3 (Good Health and Well-being) is deeply connected to SDG 10 (Reduced Inequalities), emphasizing the necessity of inclusive healthcare infrastructures (Wong et al., 2016).

Universal Health Coverage (UHC) is a central target within these goals, aiming to provide essential services while protecting individuals from the financial ruin of out-of-pocket medical costs. The 2012 UN General Assembly Resolution further reinforced UHC as a global priority (Tangcharoensathien et al., 2015). The progressive realization of UHC will play a key role in reaching the SDGs to “ensure healthy lives and promote well-being for all, at all ages” and “reducing inequalities in all its forms everywhere” (Pablos-Mendez et al., 2016).

Thailand has emerged as a regional leader in this transition, moving from a low-income to an upper-middle-income economy. Its strategic location and economic growth have established it as a major migration hub, particularly for individuals from Cambodia, Lao PDR, and Myanmar so called the CLM nations (Suphanchaimat et al., 2017). Additionally, Thailand’s aging demographic and the increasing educational attainment of its local workforce have created labor shortages in sectors like agriculture, construction, and manufacturing. This has necessitated a steady influx of migrant labor. As of mid-2024, approximately 5.2 million migrants working in Thailand, contributing between 4.3% and 6.6% to the nation’s GDP (United Nations Thailand, n.d.).

Thailand was a regional pioneer in adopting Universal Health Coverage in 2002 and UHC contributed significantly to the development of Thailand’s healthcare system (ILO, 2016). Since implementing UHC in 2002, Thailand has pioneered migrant-

inclusive health policies in the ASEAN region. The government introduced specific insurance mechanisms: the Social Security Scheme (SSS) for formal sector employees and the Compulsory Migrant Health Insurance (CMHI) for others (König et al., 2022). These programs provide essential care ranging from annual health checkup, standard inpatient and outpatient care, general medical treatment, maternity care, rehabilitation care, dental care, child healthcare, emergency medical treatment and antiretroviral therapy and communicable disease prevention services. The scheme also included immunizations for migrants' dependent children (Suphanchaimat et al., 2019; Wongsuwanphon, Boonrumpai, et al., 2024).

While Thailand achieving UHC scheme in very short time, according to the most recent Thai National Health and Welfare Survey results (2017), 99% of Thai citizens are covered by one of the health insurance schemes under UHC (Tangcharoensathien et al., 2018). For the migrants' health insurance, the percentage of migrants enrolled in the MHIS fell from 29% in 2019 to just 17% in 2020. In 2019, 39 percent of migrant workers in private sectors and formal sectors were enrolled in the SSF and it also declined to 34 percent in 2020 (IOM, 2021). Despite the numerous proactive measures and several benefits, the rate of healthcare service utilization by migrants and the enrollment of these schemes still remains lower than the main insurance scheme of Thai citizens (UHC). This disparity is exacerbated by the lack of strict legal enforcement for employers and the high costs and complexity of the enrollment process (Suphanchaimat et al., 2017).

Furthermore, individuals facing social marginalization are often hindered by low health literacy; the ability to find and apply health information for medical decision-making. health literacy has been found to be associated with many of the drivers of health disparities (Mantwill et al., 2015). Individuals with low health literacy are more likely to experience disparities in healthcare access and quality. They may face barriers to accessing care, such as lack of insurance (Mohammed F et al., 2022). The enrollment in the insurance is associated with not only the individual behaviors of migrants but also other factors like high costs, complex enrollment process, legal status and lack of awareness of information. Migrant's perceptions of health insurance further complicate the issue, as many view it as unnecessary or unaffordable, while others distrust system and policies change due to past experience of discrimination or bureaucratic hurdles.

Language and cultural barriers also hinder their understanding of health insurance benefits and enrollment process (Piancharoen et al., 2022; Srisai et al., 2020).

Although there has been some research on health insurance of migrants in Thailand, the main focus of previous studies is qualitative study design with perceptions and usage of health insurance by migrants in other area like Mae Sot or Bangkok, there is a distinct lack of quantitative research in one of major Thai-Myanmar border areas like Chiang Rai. Furthermore, the exploration of migrant workers individuals' associated factors with health insurance enrollment remains limited. And the importance of migrant workers individuals' health literacy level and association to navigating health insurance remains understudied among migrant workers in Thailand.

This study aims to address a critical gap in current literature with quantitative measures by explicitly examining the role of health literacy level and other individuals' associated factors in determining health insurance enrollment among Myanmar migrant workers in Chiang Rai Province. By exploring the specific factors influencing health insurance status, including health literacy, this study aims to inform policy improvements that enhancing insurance coverage, healthcare access and health outcomes for vulnerable population.

1.2 Research Objectives

1.2.1 To access the current health insurance status of Myanmar migrant workers in Chiang Rai Province.

1.2.2 To determine the factors associated with insurance enrollment among Myanmar migrant workers in Chiang Rai Province.

1.3 Research Questions

1.3.1 What is the current health insurance status among Myanmar migrant workers in Chiang Rai Province?

1.3.2 What kind of factors are associated with health insurance status in Myanmar migrant workers in Chiang Rai Province.

1.4 Operational Definitions

Health insurance status refers the presence or absence of active health coverage, including the SSS, MHIS, M-Funds, or private plans.

Social Security Scheme refers to a type of health insurance that is mandatory for employees working in formal sectors in Thailand under labor law and allows employees to access healthcare services.

Migrant Health Insurance Scheme refers to a type of voluntary health insurance for migrant workers in informal sectors, formal sectors but not covered by Social Security Scheme and their dependents.

Other Types of Health Insurance refers to any types of health insurance plans which includes M-Funds or private health insurance except Migrant Health Insurance Scheme and Social Security Scheme.

Myanmar migrant workers refer to workers who migrate from Myanmar to work in Mueang and Mae Sai districts of Chiang Rai Province with minimum 6months of duration.

Documented migrant workers refer to individuals who work in foreign countries with proper required legal documents to enter, stay and work such as valid passports, border pass and work permits etc.

Undocumented migrant workers refer to individuals who enter into foreign countries seeking employment without proper legal documents, including violation of visa terms or overstaying of authorized period.

Legal status refers to classification of workers as documented (possessing passports/work permits) or undocumented (lacking legal entry or work authorization).

Knowledge of health insurance refers to any information related to health insurance including benefits and procedure which respondent understand.

Perceptions towards health insurance refers to respondents' opinion towards health insurance schemes.

Health literacy level refers to respondent ability to obtain, process, and understand basic health information and services needed to make healthcare decisions.

1.5 Conceptual Framework

This framework is developed based on Andersen's behavioral model.

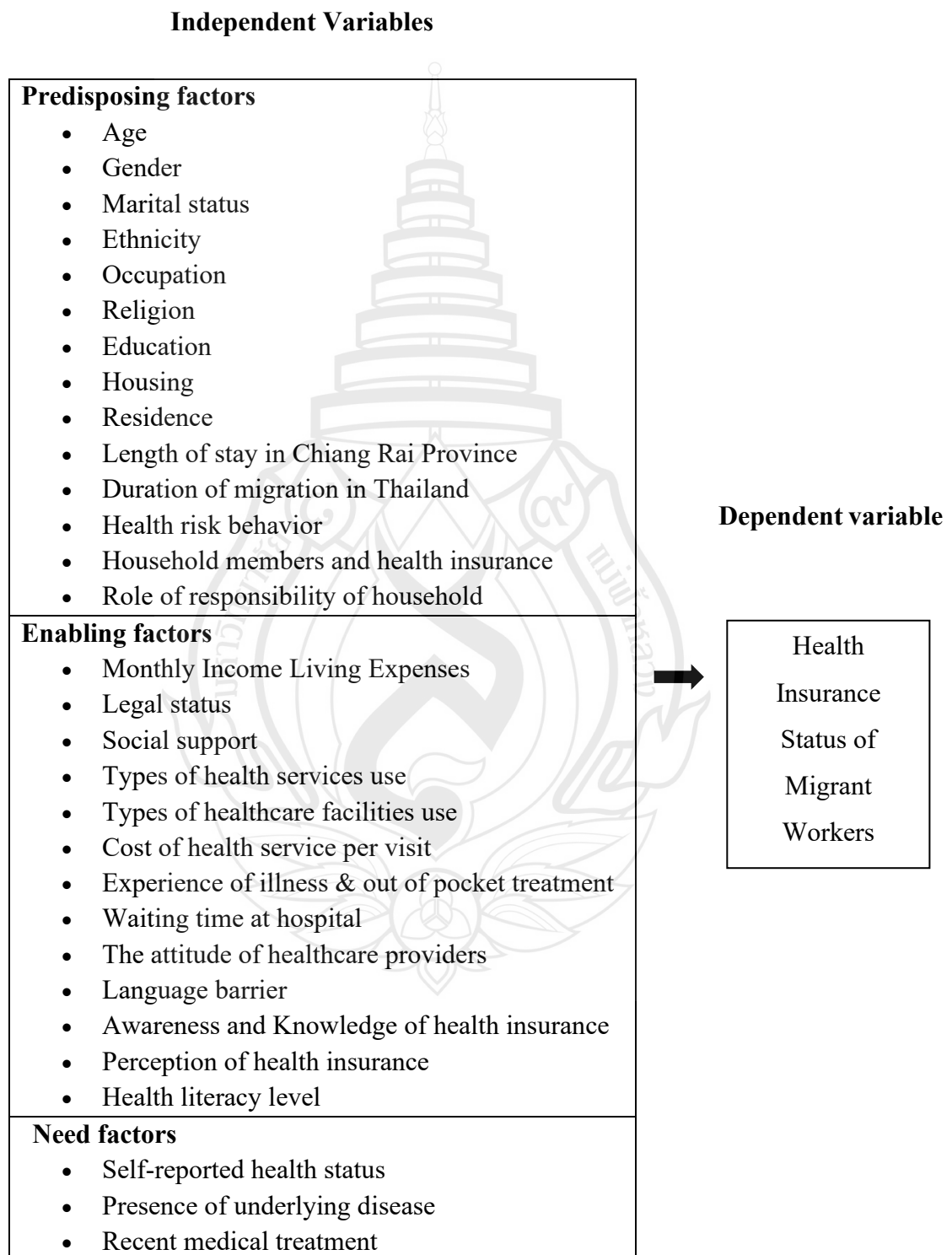


Figure 1.1 Conceptual Framework

CHAPTER 2

LITERATURE REVIEW

Literature review for this study is structured under the following sections:

- 2.1 Migration
- 2.2 Challenges Faced by Migrant Workers
- 2.3 Policies and access to healthcare services of migrants in Thailand
- 2.4 Healthcare Utilization of Migrant Workers
- 2.5 Health Literacy
- 2.6 Health Insurance of Migrant Workers
- 2.7 Review of Related Studies of Factors associated with Health Insurance

2.1 Migration

Human mobility has served as a primary driver of global demographic and cultural shifts throughout history. While early pre-modern migration was largely a survival-driven response to basic physiological needs, the period between the 15th and 18th centuries saw a transition toward movements dictated by emerging global trade and labor demands (Chiswick & Hatton, n.d.). The industrial revolution of the 19th century further accelerated these patterns by integrating labor into the expanding framework of global capitalism. Post-World War II, millions of people migrated from developing countries to industrialized nations in search of better livelihoods. In the modern era, globalization and technological progress have rendered migration increasingly complex and politically multifaceted (Rapoport et al., 2020).

2.1.1 Definitions and Types of Migration and Migrants

Human migration generally understood as the movement of individuals from their habitual residence to a new location, whether across international borders or within the same country. The International Organization for Migration (IOM) highlights the necessity of "safe and regular migration," which emphasizes adherence to legal

frameworks and the protection of human dignity. Migration can be either voluntary or involuntary influenced by a spectrum of economic, political, and environmental factors (Glossary on Migration, 2019; UNHCR, n.d.).

The term "migrant" serves as an expansive umbrella term rather than a rigid legal definition. Generally, it refers to any individual who moves away from usual place whether within country or across an international border temporarily or permanently for a variety of reasons (Glossary on Migration, 2019). Migrants, the same as migration, can be categorized into voluntary migrants and forced migrants. Voluntary migrants fit into one of the reasons such as labor migration, education and family reunification while forced migrants are mostly refugees and asylum seekers due to war or natural disasters (UNHCR, n.d.). The International Labor Organization (ILO) specifically defines a migrant worker as an individual moving to another country for the purpose of employment other than on their own account (ILO, n.d.).

2.1.2 Migration Theories and Factors Driving Migration

The study of human migration is underpinned by diverse theoretical perspectives that have shifted from simple economic models to complex, multi-layered frameworks. Early migration theories were primarily dominated by functionalist paradigms, which viewed migration through the lens of individual rational choice, where actors seek to maximize utility and economic gain. In contrast, historical-structural theories emerged to highlight the role of macro-level forces, arguing that migration is often a byproduct of global power imbalances and structural inequalities inherent in the capitalist system (De Haas, n.d.-a, n.d.-b). More modern approaches link the micro and macro level and also include less economic concepts, for example social capital.

The New Economics of Labor Migration, gaining prominence in the 1980s, posits that migration is not merely an individual endeavor but a collective household strategy aimed at diversifying income and mitigating financial risks. The dual labor market theory (Priore, 1979) suggested that migration is driven by a permanent, structural demand for low-skilled labor in industrialized nations, creating a persistent "pull" for foreign workers. Network Theory emphasizes the critical role of social capital, where kinship and community ties reduce the risks and costs associated with relocation, thereby facilitating self-sustaining migration flows. Lee (1966) was the first

to formulate migration in a push-pull framework on an individual level, looking at both the supply and demand side of migration. Positive and negative factors at the origin and destination push and pull migrants towards (non) migration, hindered by intervening factors. These theories explain why people migrate, how migration flows develop and persist, and the broader social, economic, and political impacts of migration (Hagen-Zanker & Jessica, 2008).

The decision to migrate is rarely the result of a single cause but rather a complex interaction of "push" and "pull" factors. These drivers operate across a spectrum of voluntary and involuntary circumstances (Glossary on Migration, 2019). Migration is a complex and multifaceted phenomenon driven "push" and "pull" factors. Push and pull factors can be categorized into three main sections which are social and political factors, demographic and economic factors and environmental factors (European Parliament, n.d.).

Social and political factors are about persecution about one's ethnicity, religion, race, politics or culture can push people to leave their usual place of residence. Conflict, political oppression, human rights violations, and poor governance are major push factors (Radac et al., 2024; Boyle et al., 2014). These individuals are drawn to destination countries with liberalization of migration policies, political stability, safety, and established social networks that aid integration (Boyle et al., 2014).

Demographic and economic factors is related to poor labor standards, high unemployment, economic stagnation, and substandard labor conditions. A growing or shrinking, aging or youthful population has an impact on economic growth and employment opportunities in the countries of origin or migration policies in the destination countries. Economic hardship, poor working conditions are critical push factors while pull factors include higher wage potential, better career prospects, and improved living standards (European Parliament, n.d.).

Environmental factors have always been a driver of migration, as people flee acute natural disasters (floods, earthquakes) or slow-onset climate change (European Parliament, n.d.) to safer ecological zones and more resilient infrastructure. The decision to migrate is often the result of a complex interplay between push and pull factors. These factors work in tandem with local, national, and global incentives to shape the trajectory of migration.

2.1.3 Global Governance and Development Goals

Migration has evolved into a cornerstone of sustainable development, profoundly influencing global governance frameworks and the realization of international development targets. The historical progression from the Millennium Development Goals (MDGs) to the Sustainable Development Goals (SDGs) represents a paradigm shift in how the international community perceives the role of human mobility. The SDGs recognize migration as a cross-cutting priority. Under the core principle of "leave no one behind," the SDGs integrate migration into multiple targets, acknowledging its impact on inequality, economic growth, and labor standards (McGregor, 2020; Micinski, 2020). The SDGs include specific targets, such as SDG 10.7, which calls for well-managed migration policies to facilitate orderly, safe, and regular migration (Daoudy et al., 2022).

As per the latest estimates of UN, in 2024, approximately 304 million people representing 3.7% of the global population reside outside their countries of origin. Female migrants now constitute 48% of this population. Furthermore, the majority of international migrants (65%) reside in high-income nations, while low-income countries host only about 4% of the total migrant population. Compared to the overall population in countries or areas of destination, international migrants tend to be more concentrated in the working ages. In 2020, 73% of international migrants were between 20 and 64 years old, a significantly higher concentration compared to the 57% average in general populations (International Migration, 2020).

The integration of migration into global governance frameworks has undergone a significant transformation, moving from a peripheral issue to a core component of international development. This shift is most evident in the transition from the Millennium Development Goals (MDGs) to the more inclusive 2030 Agenda for Sustainable Development.

After World War era, the 1951 Convention was formulated for the protection of refugees, overseen by the UN High Commissioner for Refugees (UNHCR). The Intergovernmental Committee on European Migration (ICEM), later known as International Organization for Migration (IOM), was established in 1951 with clear responsibilities for migration matters (United Nations, n.d.).

In December 1990, the UN General Assembly adopted the UN Convention on the Protection of the Rights of All Migrant Workers and Members of their Families (CRMW) to combat labor exploitation. This was further strengthened by the 2016 New York Declaration, which reaffirmed the universal human rights of all migrants regardless of their legal status (United Nations, n.d.).

Adopted in 2018, the GCM provides the first intergovernmental negotiated framework for international cooperation. It promotes a "whole-of-society" strategy, engaging governments and the private sector to maximize the developmental benefits of migration. It acknowledges migrants' contributions to sustainable and inclusive development and pledges to protect their safety, dignity, and human rights, regardless of their migration status (Res & Assembly, 2016).

2.1.4 Regional Perspectives: Migration in Thailand

Southeast Asia represents a highly dynamic economic region, currently hosting an estimated 69 million migrants. While drivers for mobility vary ranging from environmental instability and educational pursuits to family reunification, labor migration remains the dominant catalyst. This movement is often a strategic, multi-generational approach to poverty alleviation (McAdam, M., 2020). An estimated 19 per cent of all migrant workers living in Southeast Asia and the Pacific in 2013 were migrant domestic workers (ILO, n.d.).

Thailand has emerged as a central corridor within this regional landscape due to its robust economic development and geographical accessibility. The nation attracts a diverse migrant population, primarily from the CLMV countries (Cambodia, Lao PDR, Myanmar, and Vietnam), with non-Thai residents totaling approximately 5.34 million by late 2023 (Barber & Sciortino, 2024). This influx is largely sustained by a structural demand for flexible labor in sectors like domestic work, agriculture, and construction.

Over the last three decades, Thailand has transitioned from a labor-exporting to a labor-importing nation (Rungmanee, 2016; Ushakov et al., 2020). This shift is primarily fueled by economic disparities between Thailand and its neighbors, where factors like political instability and severe economic hardship in origin countries act as powerful "push" factors (Eberle & Holliday, 2011; Punpuing et al., n.d.).

The Royal Thai Government has implemented various regulatory frameworks to manage the migration flows. The country has signed memorandum of understanding with Myanmar, Cambodia, and Laos to formalize the migration process and protect worker rights (Jirattikorn, 2015). But in response to the COVID-19 outbreak, this process was halted. The Royal Thai Government carried on cross border recruiting after COVID-19 pandemic via MOU following a Cabinet Resolution together with workers coming in February 2022. Thai Government implemented the border pass employment system with a reason of providing workforce in border provinces, especially along Thailand's borders with Myanmar and Cambodia (Barber & Sciortino, 2024).

The Royal Thai Government implemented periodic cabinet resolutions which allow irregular migrants to legalize their status through registration and "pink card" work permits, providing temporary amnesty and legal standing. Migrant workers in Thailand are theoretically protected under the Labor Protection Act (1998) and are eligible for the Social Security Office (SSO) framework (Barber & Sciortino, 2024).

2.1.4.1 Thailand-Myanmar Cross Border Migration Corridor

The migration corridor between Myanmar and Thailand is one of the most complex and heavily trafficked in the region. Historically, migration was driven by conflict in Myanmar's border regions, leading to the establishment of refugee camps in the 1980s. However, contemporary mobility is increasingly multifaceted, involving individuals from diverse backgrounds seeking both safety and economic opportunity. Myanmar nationals constitute the largest migrant group in Thailand, representing approximately 79% (4.1 million) of the total non-Thai population as of March 2024. Of these, over 2.3 million are officially registered workers. And at least 18 million of migrant workers are still unregistered and become undocumented (IOM Thailand, n.d.). In the aftermath of the military takeover in Myanmar 2021, the political, humanitarian and security situation has continuously deteriorated, resulting in further human rights restrictions and worsening socioeconomic conditions. However, the COVID-19 pandemic in 2020 and following mobility restrictions until the first quarter of 2022 disrupted both internal and cross-border movements, especially from Myanmar to Thailand, which started to grow again after the military takeover (Barber & Sciortino, 2024).

Traditionally, migrants originated from bordering states like Mon, Kayin, and Tanintharyi. As social networks expanded, migration patterns shifted to include "inner" regions such as Yangon, Bago, and Ayeyarwady (Barber & Sciortino, 2024). Major hubs for the Myanmar community include Bangkok and its surrounding industrial provinces (Samut Sakhon), southern fishing/tourism zones (Phuket, Ranong), and northern border provinces like Chiang Rai and Chiang Mai (IOM Thailand, n.d.).

Chiang Rai serves as a critical northern gateway, particularly through the Mae Sai border crossing. As of 2025, over 25,000 Myanmar migrants were registered in the province under cabinet resolutions, with the Mae Sai district alone hosting a population of roughly 32,000. In this region, the labor force is heavily concentrated in agriculture (nearly 80%), followed by the service industry (11.9%) and domestic work industries (8.8%), skill workers (5.16%) and manufacturing sector accounts for 2.33% (Chiang Rai Provincial Labor Office, n.d.; IOM, n.d.).

These migrant workers play a noticeable role in the Thai economy, contributing between 4.3% and 6.6% of the national GDP (United Nations Thailand, n.d.). Despite representing over 10% of the total workforce, migrant workers in Thailand continue to face significant systemic challenges, including wage disparities, social exclusion, and barriers to essential development opportunities and limited access to basic services (United Nations Thailand, n.d.).

2.2 Challenges Faced by Migrant Workers

Migrant workers contribute to the host countries' economic vitality. On the other hand, they often face challenges in various aspects in the host countries including wage disparities, social marginalization, and restricted access to development opportunities (Singh et al., 2024).

Migrant workers experience challenges and risks during the process of migration, which is in all stages of labor migration, especially in recruitment and employment process. Vulnerability begins at the recruitment stage, where high fees often lead to debt-bondage. A lack of transparency regarding employment terms further exposes workers to wage theft and exploitation (IOM, 2016).

Migrant workers face limited access to social protection, discrimination, language barriers, harassment or violence, limited access to freedom of association and no freedom of movement beyond workplace and accommodation and unequal access to healthcare services all of which contribute to a decline in mental and physical health (IOM, 2016).

The challenges faced by migrant workers are often rooted in broader issues such as global economic inequality and the weak enforcement of labor protections. These structural factors create an environment in which migrant workers are vulnerable to exploitation and marginalization (Davlatbek, 2024). Migrant workers lack job security and access to benefits such as health insurance, pension plans, and paid leave. The lack of access to benefits can leave migrant workers without a safety net in case of illness, injury, or unemployment (Anjanadevi & Velmurugan, 2024; Ahonen, 2019).

The challenges faced by migrant workers are often exacerbated by factors such as gender and legal status. Migrant women may face additional challenges such as gender-based violence, discrimination, and limited access to legal protections (Armenta & Gleeson, 2022). Similarly, migrant workers with irregular legal status may face greater risks of exploitation and limited access to essential services (Ahonen, 2019).

2.2.1 Health problems of migrant workers

The health status of migrant workers is a multifaceted issue shaped by the intersection of occupational hazards, substandard living environments, and systemic barriers to care. Beyond the typical health risks faced by general populations, migrant laborers are disproportionately exposed to conditions that compromise both their physical and psychological well-being (Gushulak et al., 2010). Migrant workers are engaged in high-risk jobs also known as 3D jobs (Dirty, Dangerous and Demeaning) are more likely to have a higher chance of occupational injuries and health risks such as musculoskeletal disorders, traumatic injuries and chemical exposures due to poor safety standards. Seasonal farm workers face health problems including infectious diseases, chemical and pesticide-related illness and respiratory conditions due to various socioeconomic factors (Hansen & Donohoe, n.d.; Porru & Baldo, 2022).

Chronic diseases like hypertension, diabetes, respiratory infections as well as acute illness such as urinary tract infections, tuberculosis and other infectious diseases are also found in migrant workers due to their poor working and living conditions

(Holmes, 2006). These physiological risks are often compounded by persistent food insecurity and poor sanitation in food preparation, leading to nutritional deficiencies that undermine long-term well-being (Rodríguez-Guerrero et al., 2024). Social stressors, such as stigma and social exclusion, contribute to mental health issues, including anxiety and depression, affect the quality of life which are prevalent among migrant workers (Farwin et al., 2023).

Despite the significant health risks migrant workers face, their ability to access healthcare services remains limited. Language barriers, discrimination, and lack of legal protection hinder access to healthcare services for migrant workers, leading to untreated health conditions and increased vulnerability and health disparities. Financial constraints, inadequate health insurance, fear of deportation and job loss further limit healthcare access, discourages them from seeking medical care (Sitkulanan et al., 2024; Uansri et al., 2023).

2.3 Policies and Access to Healthcare Services of Migrants in Thailand

The governance of migration in Thailand is a dynamic process shaped by evolving economic needs and security concerns. The legal foundation for managing non-Thai populations rests primarily on two legislative pillars; The Immigration Act of 1979, serves as the primary authority governing the entry, stay, and departure of foreign nationals and Labor and Employment Law which is the Labor Protection Act of 1998, the Royal Decree Concerning the Management of Foreign Workers Employment of 2017 and its amendments, regulate migrant workers' rights, duties, and conditions under which migrant workers can be employed. Thailand uses the Memorandum of Understanding (MOU) system which is a bilateral agreement between Thailand and other countries on labor cooperation, to recruit migrant workers officially. the government has periodically issued cabinet resolutions allowing undocumented workers already in the country to regularize their status. This is facilitated through One-Stop Service (OSS) centers, which integrate the functions of the Ministry of Interior, Ministry of Labor, and Ministry of Public Health. A critical component of both the MOU and OSS processes is the mandatory health screening. Migrants must be cleared

for serious communicable diseases such as tuberculosis, syphilis, and elephantiasis before a work permit is issued (Kunpeuk et al., 2022; Thai, 2019).

While Thailand achieved Universal Health Coverage (UHC) for its citizens in 2002, extending this to the migrant population under the GCM. In order to achieve the equitable and inclusive access to healthcare for all migrants, the UN network on migration in Thailand established a Migrant Health Sub- Working Group in 2021 (IOM Thailand, n.d.). It has required specialized policy actions. These actions generally follow two paths: financial risk protection and the enhancement of migrant-friendly healthcare delivery (Tangcharoensathien et al., 2017). Migrants are divided into two distinct insurance frameworks: (1) the SSS covering migrant workers in the formal sector; and (2) the Health Insurance Card Scheme (HICS) covering migrant workers in the informal sector (Suphanchaimat et al., 2017). HICS was later extended to migrants' dependents including spouses and children in 2005. The scheme has two policy goals: screening for and treatment of certain communicable diseases and enabling access to health care for migrants (Tangcharoensathien et al., 2017).

Despite these mechanisms, institutional barriers persist. A primary challenge is the hospital-tie policy, where migrants must register at a specific public hospital and are restricted to that facility for all non-emergency services. This lack of "portability" is particularly problematic for migrants in seasonal industries who may need to relocate for work, as they cannot easily transfer their coverage to a different district (IOM, 2021).

2.4 Healthcare Utilization of Migrant Workers

Healthcare utilization refers to the actualized use of medical services by individuals to prevent or treat illness, maintain physical and mental well-being, or seek diagnostic information regarding their health status (Orbell et al., 2013). The utilization of healthcare services by migrant workers is shaped by various personal, systemic and cultural determinants. Migrants often demonstrate a higher frequency of emergency department visits. This is frequently a result of delayed care-seeking for conditions that could have been managed through primary care (Grochtdreis et al., 2024).

Migrants frequently encounter obstacles in utilizing healthcare which can lead to unmet medical needs and health disparities. Utilization of healthcare services by migrants is hindered by various factors. Documentation status remains a primary determinant of healthcare-seeking behavior. Fear of legal repercussions or lack of formal insurance coverage often discourages individuals from approaching public facilities. Financial instability and the direct costs of treatment compounded by indirect costs like transport and lost wages serve as significant deterrents. Language barriers and a lack of "health literacy" make navigating complex medical environments difficult. Furthermore, perceived or actual discrimination can erode trust in healthcare providers, leading to a total withdrawal from the formal system (Li et al., 2024; Peng & Ling, 2023; Uyanik & Seymen, 2024). These barriers create a cycle of delayed medical attention. This delay typically results in the progression of treatable conditions into acute health crises, which imposes a higher long-term financial and clinical burden on both the migrant and the host nation's public health infrastructure.

2.5 Health Literacy

Health literacy is an evolving and multidimensional concept that extends beyond the traditional focus on individual reading and numeracy skills. It encompasses the interaction between individuals, their communities, and the healthcare systems they navigate. Broadly, it represents the degree to which people can access, process, and apply health-related information to make informed decisions that promote long-term well-being (NIH, n.d.; WHO, n.d.).

The widely used definition of health literacy from Institute of Medicine is the degree to which individual have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions. expanded this by describing it as a constellation of cognitive and social skills that determine an individual's motivation and ability to maintain good health. This model is widely utilized to differentiate between the simple acquisition of facts and the empowerment of the individual. According to Nutbeam, health literacy contains three different levels which are functional health literacy, communicative or interactive literacy and critical

health literacy. Functional health literacy means the baseline level, involving the application of basic literacy and numeracy. It allows individuals to follow simple health messages, read appointment cards, and understand medication labels. Interactive health literacy is more advanced stage involves social and cognitive skills that enable individuals to extract meaning from different forms of communication and apply new information to changing life circumstances. Critical health literacy is the most sophisticated level to analyze information critically. Individuals at this level can exert greater control over life events and navigate the social and political determinants of health (Nutbeam & Kickbusch, 1998).

Health literacy level is accessed by using various tools. Health literacy assessment tools are essential for evaluating individuals' ability to understand and use health information effectively. Most instruments are designed to measure overall literacy in a healthcare context and are often translated and culturally adapted for diverse populations (Haun et al., 2012). However, the other tools are narrowed to focus on specific medical conditions, such as diabetes, hypertension, or oral health, ensuring that the literacy being measured is relevant to the patient's actual health needs (Olecka & Jurenikova, 2019; Vihari et al., 2023). Some tools are tailored for specific populations including children, adolescents and older adults (Guo et al., 2022; Huang et al., 2023; Michael et al., n.d.).

2.5.1 Role of health literacy in healthcare utilization

Health literacy serves as a critical determinant of how individuals navigate the healthcare continuum, directly influencing service utilization patterns, health outcomes, and the economic burden on the public health system. The relationship is characterized by a "literacy-utilization gap," where lower proficiency in health-related information often leads to inefficient and costly patterns of care. Individuals with low health literacy level tend to use emergency and inpatient services more frequently, as they may struggle with disease management and preventive care, leading to more serious health conditions requiring emergency care. This is primarily due to a failure in early disease management and a lack of engagement with preventive care, allowing manageable conditions to escalate into acute crises (Mohammed F, 2022). Low literacy is linked to increased healthcare spending. The reliance on expensive emergency interventions over

cost-effective primary care measures results in higher individual and institutional expenditures (Mohiuddin, 2023; Rasu et al., 2015).

Individuals with limited health literacy face challenges in advocating for themselves in healthcare settings. They may feel intimidated or overwhelmed by the healthcare environment, making it difficult for them to claim their healthcare needs and preferences.

Major challenges to health care utilization include low health insurance literacy, high health-related expenditure, and lack of insurance. Health insurance literacy is defined as the specific capacity of an individual to search for, evaluate, and utilize health insurance plans that best suit their financial and medical needs (Nancy D. Berkman, 2012). Higher health insurance literacy was associated with more cost-effective healthcare choices. Conversely, a lack of insurance literacy acts as a significant barrier to enrollment, leaving many migrants vulnerable to high out-of-pocket expense. Limited literacy often leads to a power imbalance in clinical settings. Migrants may feel overwhelmed by the healthcare environment, preventing them from advocating for their needs or fully understanding their rights under a specific insurance plan (Diaz et al., 2022; Yagi et al., 2022).

2.6 Health Insurances of Migrant Workers in Thailand

The principle of equitable access to healthcare is a foundational pillar of Thailand's public health strategy. The right to receive standardized medical services is enshrined in the Thai Constitution, which mandates that all individuals regardless of legal status or nationality should be protected under public health schemes. While Thai citizens are covered by the Civil Servant Medical Benefit Scheme (CSMBS) or the Universal Coverage Scheme (UCS), migrant populations navigate a separate, dual-track insurance; The Social Security Scheme (SSS), a mandatory program for migrants employed in the formal sector and Migrant Health Insurance Scheme (MHIS), operated by the Ministry of Public Health, this scheme (also known as the Health Insurance Card Scheme) is designed for migrants in the informal economy (ILO, 2021, n.d.).

In comparison with Thailand's achievement of UHC, health insurance schemes of migrants are still underutilization and still remains lower enrollment with the result. In recent years, enrollment in the MHIS has remained notably low. Data from 2020 revealed that only approximately 823,420 migrants and their dependents were registered representing only 29% of the eligible population. Alarming, by late 2020, active memberships plummeted to roughly 510,211, covering only 17% of the total migrant community. The formal sector also faces challenges in maintaining coverage. While 1.08 million migrant workers were enrolled in the Social Security Fund in 2019 (accounting for 39% of regular migrants), this figure dropped to approximately 950,564 (34%) by 2020 (IOM, 2021).

2.6.1 Migrant Health Insurance Scheme

The Migrant Health Insurance Scheme (MHIS), established in 1994 by the Ministry of Public Health (MOPH), serves as a critical safety net for non-Thai populations not covered by the formal Social Security Scheme (SSS). Originally designed for those in industries like agriculture and construction, the scheme has evolved to include undocumented workers and the dependents of migrant laborers. After a period, this scheme has undergone several modifications to expand its coverage and improve its effectiveness. In 2005, the scheme was extended to include the dependents of migrant workers such as their children (Tangcharoensathien et al., 2017).

The MHIS is a premium-based system where coverage is contingent upon an annual payment. Over the years, the financial structure has been adjusted to balance affordability with the cost of healthcare delivery. MHIS is funded by an annual premium paid by the workers. Premiums have fluctuated to include costs for medical screenings and specialized treatments, such as Antiretroviral (ARV) therapy for HIV/AIDS. Currently, the premium for workers is approximately 1,600 THB (excluding the check-up fee), while non-working migrants pay a higher rate of 2,200 THB. For those aged less than seven years, the insurance premium was 365 baht. Since 2014, the registration for MHIS has been integrated into the OSS framework. This inter-ministerial cooperation ensures that the issuance of a work permit by the Ministry of Labor is tied to a successful health screening and insurance enrollment overseen by the MOPH (Chalernpol et al., 2016., n.d).

The MHIS is often termed the "Compulsory Migrant Health Insurance" because it is a legal prerequisite for employment. A migrant worker cannot secure or renew a work permit without proof of enrollment and a clean health screening report. This interconnectivity makes the health of the migrant central to their legal right to remain and work in Thailand (Migrant Health Insurance Scheme in Thailand, n.d.).

The scheme offers a comprehensive range of services that align closely with the Universal Coverage Scheme provided to Thai citizens, annual physical examinations, vaccinations for children, and screenings for communicable diseases such as tuberculosis, syphilis, and filariasis, access to the National List of Essential Medicines (NLEM), outpatient and inpatient care, maternity services, and dental treatment and targeted interventions for Myanmar migrants often include specific screenings for intestinal parasites and leprosy (Prakongsai, n.d.). The scheme also included immunizations for migrants' dependent children (Suphanchaimat et al., 2019; Wongsuwanphon, Boonrumpai, et al., 2024).

MHIS is designated to cover both documented and undocumented migrants. Migrant workers who are legally employed in informal sector of Thailand and their dependents, including spouse and children are eligible for this scheme. For undocumented migrants, the registration process may involve efforts to legalize their status. This process often involves the assistance of private intermediaries or brokers who may charge additional fees for their services. Due to the complexity of the registration process and language barriers, many undocumented migrants rely on private brokers. This often adds an extra financial burden and creates opportunities for exploitation (Srisai et al., 2020). Furthermore, those with irregular status often avoid registration due to a pervasive fear of legal repercussions or deportation. Additionally, the limitation of services to a single designated public hospital also restrict access to enroll in the scheme for the migrant workers (Orawan et al., 2022; Migrant Health Insurance Scheme in Thailand, n.d.).

2.6.2 Social Security Scheme

The Social Security Scheme (SSS) represents the primary framework for formal sector employees in Thailand, established under the Social Security Act, B.E. 2533 (1990). Unlike the MHIS, which is managed by the Ministry of Public Health, the SSS is overseen by the Social Security Office (SSO). It is a compulsory insurance program

designed to provide documented migrant workers in the formal sector (such as factory and industrial labor) with the same level of health and social protection as Thai nationals. Dependents of migrant workers and undocumented migrant workers are not eligible for this scheme with exception of maternity protection for spouses. The scheme is sustained through a unique tripartite contribution model, ensuring shared responsibility between the worker (5%), the employer (5%), and the state (2.75%) (ILO, 2021, n.d.;Kunpeuk et al., n.d.).

In terms of medical benefits, the SSS is comprehensive and provides parity with the Thai workforce. Covered services include primary care, specialist consultations, inpatient and outpatient services, and essential medications listed in the National List of Essential Medicines (NLEM). It also extends to high-cost interventions such as cardiac and neurological surgeries, as well as alternative medicine practices. However, the eligibility for these benefits will require the contribution of minimum three months period to the fund or at least three months of monthly premium payments. Those migrant workers who have contributed for less time are encouraged to enroll on or purchase other insurance schemes like MHIS to cover for this three-month period (Chalernpol et al., 2016., n.d).

2.6.3 Role of Health Insurance in Healthcare Utilization of Migrants

Health insurance status serves as a primary determinant of healthcare-seeking behavior among migrant populations. Insured migrants are more likely to utilize inpatient care and preventive services, which correlates with improved overall health outcomes(Mou et al., 2009;F. Zhang et al., 2020). Conversely, those without coverage often experience catastrophic financial burdens, leading to the total avoidance of necessary medical interventions until conditions reach a critical stage (Chen et al., 2017).

Migrants often lack awareness about the benefits of health insurance schemes due to unclear communication and inadequate announcements, leading to low enrollment rates among migrants. Migrants' lack of awareness about the benefits of health insurance schemes limits their enrollment and utilization (Srisai et al., 2020). Adequate support from employers is also a key determinant of migrants' participation in health insurance schemes. Improving policy literacy and awareness among migrants is essential for maximizing the benefits of health insurance (Naing et al., 2020).

2.6.4 Application of Anderson's Behavioral Model

Anderson's health services utilization behavioral model was developed by Ronald Andersen, a framework widely recognized for its ability to predict and explain how individuals engage with healthcare systems, particularly within vulnerable and immigrant populations (Alkhawaldeh et al., 2023). This model has been widely used in general, as well as in immigrants' populations and vulnerable populations and adapted over time to include various factors including contextual and individual characteristics and health outcomes. The model mainly focuses on three key categories of factors that influence health services use: predisposing factors, enabling factors and need factors (Chen & Gu, 2021).

The predisposing factors are characteristics that predispose individuals to use the health services or not such as sociodemographic factors. Enabling factors are resources that enable individuals to access and utilize the healthcare services like income and social support while need factors represent the actual need of that healthcare services, influenced by factors like illness or health conditions (Chen & Gu, 2021).

Health Insurance is also one of the available health related services. By applying this model, the research can systematically identify which factors of predisposing, enabling and needs factors play crucial role in determining health insurance enrollment and utilization and can predict how an individual's situation affect to enroll in the health insurance. This comprehensive approach allows for a deeper understanding of the systemic and individual barriers that contribute to the current coverage gap in Thailand. (Alkhawaldeh et al., 2023).

2.7 Factors Associated with Health Insurance Status

2.7.1 Predisposing factors

2.7.1.1 Age

Age is a significant factor in insurance enrollment, often reflecting a transition from immediate economic survival to long-term health awareness. In both China and Thailand, age is a significant factor influencing health insurance and healthcare access among older migrant workers (Long & Tang, 2024;X. Zhang et al.,

2018). Conversely, younger populations often exhibit lower enrollment rates, where immediate financial needs and lower income levels are prioritized over potential health risks (Amu et al., 2022; Cha & Cohen, 2021).

2.7.1.2 Gender

Gender has important role in health insurance status, with significant differences between male and female. In some contexts, women show higher enrollment rates due to public health interventions focused on maternal and reproductive health (Akokuwebe & Idemudia, 2022). For instance, a study in Ranong, Thailand, found that females utilized the MHIS at significantly higher rates than males (Suphanchaimat et al., 2019). In contrast, other studies suggest that men may have higher coverage through greater exposure to formal employment opportunities that mandate SSS enrollment (Amu et al., 2022; Hnin & Mon, 2014).

2.7.1.3 Marital Status

Generally, married individuals are more likely to have active insurance, benefiting from dual-income stability or family-based health goals (Badu et al., 2018). Conversely, unmarried couples particularly those who are divorced or widowed are less likely to have health insurance (Dong & Keyong, 2009). Another study in sub-Saharan Africa presented marital status is one of the significant factors of insurance ownership (Shao et al., 2022). However, this correlation is not universal; research among Myanmar migrants in Bangkok found no statistical significance between marital status and insurance ownership (Hnin & Mon, 2014).

2.7.1.4 Religion and Ethnicity

Religion and ethnicity can also shape health insurance status among migrant workers. Religious beliefs can act as both a bridge and a barrier. While some religious networks facilitate health access, others may foster a mistrust of formal medical systems, leading to lower enrollment (Bellini et al., 2023; Ibok & Ibok, 2012). Ethnicity is also a predictor of health insurance. Furthermore, ethnic minorities often face systemic marginalization and linguistic barriers that hinder their ability to navigate complex insurance registration processes (Badu et al., 2018).

2.7.1.5 Occupation

Migrant workers' occupation is one of the significant factors associated with health insurance status with the p-value of 0.019 in the study among Myanmar

migrant workers in Bangkok (Hnin & Mon, 2014). And a cross-sectional study conducted in Kenya show that being unemployed was significantly associated with lower odds of having insurance (Otieno et al., 2019). Another study conducted in Malawi among women also showed that having an occupation gave twice the odds of having (Chauluka et al., 2022).

2.7.1.6 Education

There are a lot of studies that showed higher levels of education are associated with better awareness of health insurance and greater likelihood of enrolling in health insurance programs (Vargas Bustamante et al., 2014). Secondary educational level is statistically significant (AOR=0.44; 95% CI=0.41-0.47) with health insurance status (Nursalam et al., 2022; Amu et al., 2022) conducted factors associated with health insurance coverage and result showed that men and women with higher education, for instance, had 7.61 times (95%CI = 6.50–8.90) and 7.44 times (95%CI = 6.77–8.17) higher odds of being covered by health insurance than those with no formal education. Another study identifying factors associated with health insurance ownership presented that participants in the higher educational categories were more likely to have a health insurance plan (AMR = 1.41, 95%CI = 1.37,1.45) (Shao et al., 2022).

2.7.1.7 Length of stay and Duration of Migration

Newly arrived migrants are the most vulnerable, as they often lack the social capital and system knowledge required to register for insurance. Probability of enrollment typically increases as migrants gain more experience and stability in the host country (Kao et al., 2010).

2.7.1.8 Health risk Behaviors

There is also a reciprocal relationship between health behaviors and insurance. Insured individuals are more likely to report health-conscious behaviors and seek preventive care, whereas those with high-risk behaviors and no insurance face the greatest risk of catastrophic health outcomes (Zhao et al., 2021).

2.7.1.9 Role of Responsibility in household

Household responsibility roles also influence health insurance status among migrants. Migrants who carry heavy financial responsibilities for families in their home country may perceive insurance premiums as an unnecessary deduction from the remittances they send back (Liu, 2021).

2.7.2 Enabling Factors

2.7.2.1 Income level

Financial stability is a primary enabler of insurance ownership. High income levels are consistently associated with a greater likelihood of insurance enrollment, as they mitigate concerns regarding the affordability of premiums. Conversely, lower-income migrants often prioritize immediate survival costs over the proactive expense of health coverage (Scherer et al., 2020; Shao et al., 2022). Another study identifying factors associated with coverage of health insurance among Women in Malawi also stated that women having high income level had positive likelihood to own health insurance (OR=15.98; 95%CI=1.55-5.92; p-value <0.001) (Chauluka et al., 2022).

2.7.2.2 Legal Status

Legal status is the most critical determinant of access to health insurance. Legal status significantly impacts health insurance coverage among migrants. Undocumented immigrants have the lowest rates of health insurance (Goldman et al., 2005). Migrants without legal documents face significant barriers to obtaining health insurance not only for themselves but also for their dependents like spouses and children as seen in Thai-Myanmar border study area (Chamchan & Apipornchaisakul, 2022). The study done among Myanmar migrant workers in Bangkok found that there is significant association between migrants' registration status and ownership of migrant health insurance card with p-value 0.001 (Hnin & Mon, 2014). Another study conducted among migrant workers in Indonesia reported that migrant workers face challenges in accessing health insurance due to differences in legal and administrative procedures between countries (Izziyana et al., 2019).

2.7.2.3 Social Support

Adequate support from social communities and employers was a key determining factor that encouraged migrants to participate in the registration process and purchase the insurance card as stated in the case study among migrants in Ranong (Srisai et al., 2020). Social networks serve as information hubs, helping migrants navigate complex administrative processes and reducing the "fear of the unknown" associated with government programs (Gee & Giuntella, 2011; H. Guo et al., 2024).

2.7.2.4 Attitude of healthcare provider

The attitudes of healthcare providers play a significant role; a lack of cultural competence or poor communication from hospital staff can alienate migrants and discourage them from maintaining active insurance status (Alghazali & Ahmed, 2024; Srisai et al., 2020).

2.7.2.5 Language Barrier

A lot of studies consistently shown that individuals who speak a language other than the mother language of host countries are less likely to have health insurance coverage. Migrants who face language barriers are significantly more likely to have unmet medical needs and remain uninsured, as they struggle to understand the terms and conditions of available health plans (Wongsuwanphon, Chottanapund, et al., 2024).

2.7.2.6 Knowledge and Perception of health insurance

Studies among Myanmar migrants in Ranong and broader Thailand indicate that many are unaware of their eligibility to purchase insurance or the specific procedures for registration. This is often attributed to poor institutional communication and a lack of outreach tailored to migrant communities (Srisai et al., 2020; Chamchan & Apipornchaisakul, 2022). Lower health insurance literacy which is measured via confidence knowing health insurance terms ($aOR = 1.78, p = 0.035$) is significantly associated with health insurance enrollment (Scherer et al., 2020). Regarding the perception, the study conducted in Bangkok found that migrant workers' perception of the Compulsory Migrant Health Insurance Scheme (CMHI) is influenced by their experiences with healthcare services, including satisfaction, accessibility, and the necessity of having an illness (Hnin & Mon, 2014).

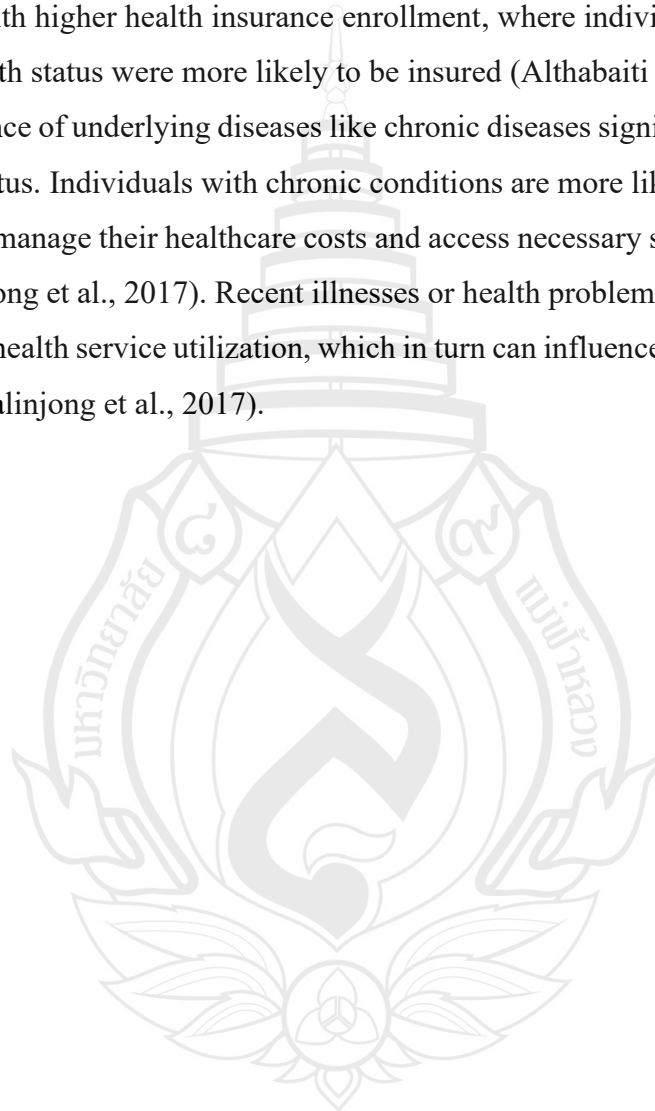
2.7.2.7 Health literacy level

Health literacy level is a critical factor influencing the health insurance status among migrants and migrant workers. Low health literacy is a profound barrier that hinders the ability to understand eligibility requirements and administrative procedures. Consequently, enhancing the health literacy of migrant populations is essential for improving the actualized enrollment rates in national insurance programs (Berens et al., 2022; Ferreira-Alfaya, 2024).

2.7.3 Need Factors

Individual health status is also a factor associated with health insurance enrollment. People with poor or fair health status was significantly associated with increased odds of health insurance affordability concerns (aOR=1.88, $p=0.020$) (Scherer et al., 2020). A study in Saudi Arabia presented that perceived good health is associated with higher health insurance enrollment, where individuals with better self-reported health status were more likely to be insured (Althabaiti et al., 2024).

Presence of underlying diseases like chronic diseases significantly impact health insurance status. Individuals with chronic conditions are more likely to enroll in health insurance to manage their healthcare costs and access necessary services (Becker et al., 2022; Dalinjong et al., 2017). Recent illnesses or health problems are strong predictors of increased health service utilization, which in turn can influence insurance enrollment decisions (Dalinjong et al., 2017).



CHAPTER 3

MATERIALS AND METHODS

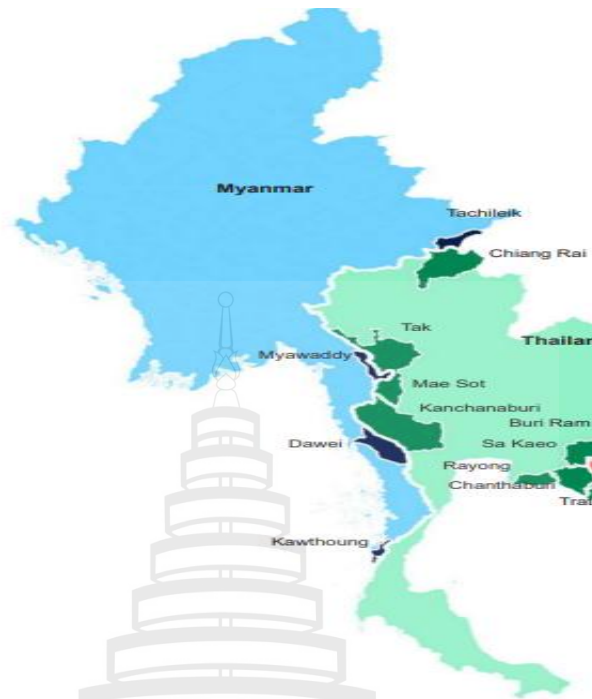
This chapter represents the research methodology, including study design, study setting, study population, sample size estimation with sampling technique, research tools and process of its development, testing of validity and reliability of research tools, ethical consideration, process of data collection and data analysis.

3.1 Study Design

This study utilized a community-based, cross-sectional analytic design. The study aimed to identify the status of insurance enrollment and the specific factors that associated with health insurance among Myanmar migrant workers in Chiang Rai Province.

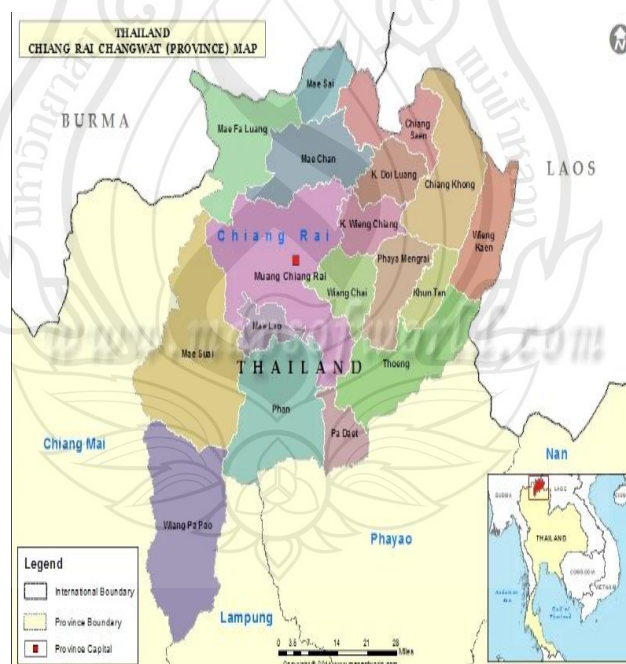
3.2 Study Setting

The study focused on Chiang Rai Province, a major primary hub for Myanmar migrant workers. This study area was selected by data from Chiang Rai Provincial Labor Office data, as of April, 2025, Myanmar migrants estimate of 25,416 populations who are working under Cabinet Resolutions recorded. (Chiang Rai Provincial Labor Office, n.d.).



Source International Organization for Migration (IOM) (2021)

Figure 3.1 Border pass locations in Thailand (Chiang Rai), Myanmar (Tachileik)



Source Map of Chiang Rai Province, Thailand (n.d.)

Figure 3.2 Chiang Rai Province Map showing 18 districts

3.3 Study Population

The study population consisted of Myanmar migrant workers, aged 18 years and above with various legal statuses who has been residing in Chiang Rai Province at least minimum 3 months.

Eligible Population

Inclusion Criteria

1. Myanmar migrant workers, both documented and undocumented
2. Aged 18 years and above.
3. Myanmar migrant workers with minimum of 3 months of living and working in Chiang Rai Province.

Exclusion Criteria

1. Individuals unwilling to give informed consent.
2. Myanmar migrant workers who come with one-day border pass and work.
3. Individuals who can't communicate with interviewer, having disability such as hearing loss, blindness and mental health problems.

3.4 Sample Size Estimation

The sample size was calculated by using Cochran's formula for cross-sectional study. Based on a previously reported health insurance coverage proportion of 70.7% among Myanmar migrants (Min et al., 2025).

$$n = \frac{z^2 P (1-P)}{E^2}$$

Where;

n = sample size

Z=Z-score corresponding to the 95% confidence level (Z=1.96)

P=estimated prevalence of health insurance coverage among Myanmar Migrant workers (70.7% or 0.707) from previous study (Min et al., 2025).

E =margin of error (5% or 0.05)

$n = 318$

The initial calculation required 318 participants. To account for potential withdrawals or non-responses from the study, an additional 10% was added. Therefore, the final required sample size was 350 participants.

3.5 Sampling Technique

This study employed snowball sampling, a non-probability chain-referral method, to recruit Myanmar migrant workers residing in Chiang Rai Province, Thailand. This approach is particularly appropriate to this study due to the hidden, mobile and hard-to-reach nature of the target population, which includes both documented and undocumented migrants, for whom official records are incomplete or inaccessible.

To minimize the initial participants' selection bias, participants were identified through collaboration with local leaders, local organizations and migrant health volunteers and also set up a referral limit to prevent over-presentation of certain networks and to ensure a more diverse and heterogeneous sample of the migrant population. The initial participants "seeds" represented different demographic and occupational backgrounds, including variations in age, gender, legal status, and employment sectors. The recruited participants referred other eligible migrant workers through chain-referral process with referral limit up to ten participants per seed until the target sample size was reached. While recruitment initially centered on the Mueang and Mae Sai districts due to their high migrant density, the chain-referral process naturally expanded the study's reach, eventually including workers from the Phan and Mae Chan districts. This expansion provided a more diverse geographical representation of the migrant experience in Chiang Rai.

3.6 Research Tools and Development

A structured questionnaires was used as a primary instrument, adopted and developed from standardized tools and various existing literature reviews. The questionnaires were organized into seven sections based on Andersen's behavioral model for healthcare service utilization.

The first segment of the tool gathered personal background information, categorized as predisposing factors. This included basic demographics and household details such as age, gender, residence district, marital status, religion, occupation, ethnicity, education, length of stay in Thailand, length of stay in Chiang Rai Province, housing conditions, health risk behaviors, household members and role of responsibility in the household.

The second section consisted of enabling components such as monthly income per person, cost of living per person, about healthcare services usage related questions like, experience of illness, hospital visit and out of pocket treatment, waiting time at hospital, types of healthcare facilities use, types of health services use, cost of health service per visit, legal status of migrant workers, social support, language barrier, attitude of healthcare provider, awareness of health insurance and source of knowledge of insurance.

Third section contained assessment of knowledge of health insurance by using a group of questionnaires which included migrants' understanding of health insurance, including benefits, eligibility, enrollment process and annual fees. The total score was summed up and categorized into three levels which are poor, moderate and good based on Bloom's Taxonomy criteria(Bloom et al., 1956).

Table 3.1 Knowledge score of health insurance

Knowledge level	Percentage	Total Score
Poor	0-59%	0-5
Moderate	60-79%	6-7
Good	80-100%	8-10

Fourth section assessed the migrants' perception of health insurance. Perception of health insurance was assessed using a short series of five structured questions, each measured on a 5-point Likert scale. These questions were designed to capture core aspects of perception: trust, usefulness, affordability, and willingness to participate. A total perception score was calculated by summing the responses, categorized into three level positive, neutral and negative perception based on Bloom's Taxonomy (Bloom et al., 1956).

Table 3.2 Perception of health insurance

Perception	Percentage	Score
Negative	<60%	5-14
Neutral	60-79%	15-19
Positive	80-100%	20-25

Positive perception (scores 20–25) reflects a high level of trust, understanding, and positive attitude towards health insurance.

Neutral perception (scores 15–19) reflects an ambivalent or partially informed view of health insurance.

Negative perception (scores 5–14) reflects negative attitudes, misunderstandings, or lack of trust in the system.

Section 5 contained assessment of health literacy level of migrant workers by using the questionnaires which are adopted and developed based on the standardized tools of health literacy assessment. The questionnaire included functional, interactive and critical health literacy dimensions which divide into five domains; access to health information and services, communication and social support, health information processing and application, health information critical analysis and decision-making and health self-management. The responses were measured with 5-point Likert scale. The total score was summed up and categorized into three health literacy levels; low, moderate and high based on total possible score using Bloom's Taxonomy (Bloom et al., 1956).

Table 3.3 Health literacy level

Health Literacy level	Percentage	Total Score
Functional	<75%	25-75
Interactive	75-89%	76-99
Critical	90-100%	100-125

Functional health literacy: basic understanding of health-related knowledge

Interactive health literacy: ability to apply knowledge, engage meaningfully with others, and integrate information in a relevant context

Critical health literacy: They are capable of questioning assumptions, critiquing sources, and making informed judgments.

Section 6 (need factors) comprised of questions like self-reported health status, presence of underlying disease, health problems in previous 6months and health problems of family members.

The last section included the questions for outcome variable, health insurance status with “YES” and “NO” options and if participants answered “YES”, additional question, specific type of insurance and insurance provider were answered from available options. If participants answered with “NO”, further question like if they seek medical care how they paid the costs of healthcare services.

All tools were initially created in English language and translated into the Burmese language using the forward-and-backward translation method by bilingual professionals to ensure linguistic accuracy.

3.7 Testing Validity and Reliability of Instruments

3.7.1 Testing validity of instruments

To ensure the instrument’s accuracy, three experts performed a content validity review, calculating the Index of Item-Objective Congruence (IOC). A panel of experts including a public health specialist and field researchers reviewed the items. The necessary revisions of questionnaires were made based on the expert feedback and

comments. Only items meeting IOC score > 0.7 were retained, while those between 0.5 and 0.7 were revised based on feedback.

3.7.2 Testing reliability of instruments

The internal consistency of the Burmese-translated questionnaire was verified via a pilot study of 30 Myanmar migrant workers in the Mae Fah Luang district. The reliability was confirmed when the Cronbach's alpha coefficient with a threshold of $\alpha > 0.7$ for high reliability.

3.8 Data Collection Process

Data collection was done after ethical approval, community leaders, migrant workers organizations and other local organizations were contacted to initiate the process. Participants were explained about the nature and purposes of the study and then informed consent was obtained from every participant. Face-to-face interviews were conducted at the participants' homes or workplaces, depending on their preference and availability with each interview lasted around 15-20 minutes. Participants' health insurance status was verified by insurance card for MHIS and their monthly contribution towards SSS. To ensure confidentiality, the anonymity was maintained through the coded identifiers. Data were stored securely and access was restricted only to researcher.

3.9 Data Analysis Process

Following the completion of field interviews, the raw data underwent a cleaning and coding process in excel before being exported to SPSS version 20. Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to summarize participant characteristics. The relationship between independent variables and insurance status was tested using Chi-square or Fisher's exact tests. Subsequently, univariable logistic regression was done to analyze the association between variables and outcome with crude odds ratio. Variables with p-value < 0.2 in univariate analysis were entered into the final stage, multivariable logistic regression with adjusted odds

ratio to identify the primary predictors of insurance enrollment, with the significance level set at $p < 0.05$. Prior to running the multivariable logistic regression, a multicollinearity diagnostic test was conducted. All included variables yielded a VIF < 5 , and Tolerance values were well > 0.10 .

3.10 Ethical Consideration

The research protocol and research instruments was submitted and approved by the Ethical Committee on Human Research at Mae Fah Luang University (EC 25135-18). Every participant was given comprehensive information about the research objectives, procedures, their privacy and confidentiality before obtaining informed consent. The informed consent form included participating in the study did not have any consequences or impact on their healthcare service access, personal life and professional work. Participation was entirely voluntary and participants who have willingness signed an informed consent form in Burmese language through written form. No cash incentives were provided, and anonymity was strictly maintained by using coded identifiers. Data were stored securely and handled only by the researcher. The participants were treated with respect and thankfulness for their contribution to this study.

CHAPTER 4

RESULTS

This chapter presents the findings of the study, focusing on the factors that lead to a lack of health insurance among Myanmar migrant workers in Chiang Rai Province, Thailand. The results are organized into the following sections to provide a clear picture of the situation.

1. Descriptive Analysis.
2. Comparison of factors related with health insurance status.
3. Predictors of health insurance status involving a univariable analysis to screen individual variables, and a multivariable model to determine the final, most significant predictors.

4.1 Predisposing Factors

A total of 350 Myanmar migrant workers participated in this study. The majority of participants were young adults, with 58.3% falling in the 18–35 age range; the mean age was approximately 35 years. Women made up a slightly larger portion of the group (54.9%) compared to men (45.1%). Most workers resided in the Mueang district (74%), are married (67.7%), and identified as Buddhist (85.4%). The vast majority were of Burmese ethnicity (88.6%).

Occupationally, construction (27.7%) and factory work (21.7%) were the most common sectors. Regarding education, 30.6% had finished middle school and 29.6% had completed high school. Regarding their time in Thailand, significant portion of the participants were long-term residents, with 65.1% having stayed in Thailand for 13 to 120 months while 56.60% were stayed in Chiang Rai for 13 to 120 months.

The living conditions and social structures of the workers showed that more than half lived in dormitories (59.7%), while 20.6% stayed in apartments. Most participants lived with groups (84.9%). About 67.2% lived in households with 2–3 members. Notably, in 30% of these households, no family members had health

insurance, while 64.3% had between one and three insured members. When it came to role of responsibility in households, 69.1% identified themselves as the primary decision-maker.

Regarding lifestyle behaviors, only 34.0% of the participants reported engaging in regular physical activity. 30.6% of the workers consumed alcohol, 23.1% smoked, and 15.1% practiced betel chewing. (Table 4.1)

Table 4.1 Predisposing Factors (n=350)

Predisposing Factors	n	%
Age (years)		
18-35	204	58.3
36-50	117	33.4
>50	29	8.3
Mean= 34.75, SD ±10.535, Min=18, Max=67		
Sex		
Male	158	45.1
Female	192	54.9
Residence (District)		
Mueang	259	74.0
Mae Sai	52	14.9
Mae Chan & Phan	39	11.1
Marital Status		
Single	86	24.6
Married	237	67.7
Divorced	14	4.0
Widowed	13	3.7

Table 4.1(continued)

Predisposing Factors	n	%
Religion		
Buddhist	299	85.4
Christian	50	14.3
Islam	1	0.3
Occupation		
Factory Workers	76	21.7
Agriculture	30	8.6
Construction Workers	97	27.7
General Workers	65	18.6
Housemaid	22	6.3
Vendor	34	9.7
Cleaner	26	7.4
Ethnicity		
Burmese	310	88.6
Karen	26	7.4
Shan	9	2.6
Kachin	5	1.4
Education		
Illiterate	24	6.9
Primary School	91	26.0
Middle School	107	30.6
High School	104	29.6
Graduate	24	6.9

Table 4.1 (continued)

Predisposing Factors	n	%
Length of stay in Thailand (months)		
3-6	34	9.7
7-12	58	16.6
13-120	228	65.1
>120	30	8.6
Median=36; IQR=74; Min=3; Max=300		
Length of stay in Chiang Rai (months)		
3-6	53	15.1
7-12	74	21.1
13-120	198	56.6
>120	25	7.2
Median=24; IQR=51; Min=3; Max=300		
Housing		mn
Apartment	72	20.6
Town House	37	10.6
Family House	32	9.1
Dormitory	209	59.7
Live with Anyone		
No	53	15.1
Yes	297	84.9

Table 4.1 (continued)

Predisposing Factors	n	%
Family Members		
Live Alone	53	15.1
2-3	235	67.2
>3	62	17.7
Median=2; IQR=1; Min=1; Max=11		
Family members with Health Insurance		
No one	105	30.0
1-3	225	64.3
>3	20	5.7
Median=1; IQR=2; Min=0; Max=6		
Decision-Maker		
Self	242	69.1
Partners	86	24.6
Parents	10	2.9
Relatives	12	3.4
Physical Activity		
No	231	66.0
Yes	119	34.0
Alcohol Drinking		
No	243	69.4
Yes	107	30.6

Table 4.1 (continued)

Predisposing Factors	n	%
Smoking		
No	269	76.9
Yes	81	23.1
Betel Chewing		
No	297	84.9
Yes	53	15.1

4.2 Enabling Factors

Financial and legal resources showed exactly half of the participants (50%) earned 9,000 THB or less per month, and most (80.3%) spent between 3,001 and 9,000 THB monthly. Documentation status was diverse which 29.4% held a Pink Card, while 22.3% reported having no legal documents at all. The study found 75.7% of workers reporting good social support. Regarding personal experiences with the Thai healthcare system, a significant majority (80.3%) had experienced illness while living in Thailand, and 64.6% had paid out-of-pocket for their medical expenses. While 80.6% of workers paid 500 THB or less per visit and 83.4% waited an hour or less. Over half (57.4%) faced a language barrier, and 63.7% lacked access to interpreter services. However, 63.1% of workers perceived a good attitude from Thai healthcare providers.

Although 86.6% had awareness of health insurance, their actual understanding was limited. Half of the participants (50.6%) possessed poor knowledge about insurance schemes. Their perceptions were also split almost equally into three groups: 34.6% held a positive perception, 31.1% were neutral, and 34.3% maintained a negative perception toward health insurance. Additionally, health literacy levels were largely constituted of interactive level (67.7%). (Table 4.2)

Table 4.2 Enabling Factors (n=350)

Enabling Factors	n	%
Income (Thai Baht)		
≤ 9000	175	50.0
9001-15000	167	47.7
>15000	8	2.3
Median=9250; IQR=4000; Min=4000; Max=25000		
Expense (Thai Baht)		
≤3000	55	15.7
3001-9000	281	80.3
>9000	14	4.0
Median=5000; IQR=2000; Min=2000; Max=15000		
Legal Status		
Undocumented	78	22.3
Passport	64	18.3
Certificate of Identity	68	19.4
Pink card with work permit	103	29.4
Memorandum of Understanding (MOU)	37	10.6
Social Support		
Poor	23	6.6
Moderate	62	17.7
Good	265	75.7

Table 4.2 (continued)

Enabling Factors	n	%
Illness in Thailand		
No	69	19.7
Yes	281	80.3
Experience of out-of-pocket medical experience		
No	124	35.4
Yes	226	64.6
Cost per visit (Thai Baht)		
≤500	282	80.6
>500	68	19.4
Median=300; IQR=400, Min=0; Max=10000		
Waiting Time (hour)		
≤1	292	83.4
>1	58	16.6
Language Barrier		
No	79	22.6
Yes	201	57.4
Not Known	70	20.0
Interpreter Services		
No	223	63.7
Yes	56	16.3
Not Known	70	20.0

Table 4.2 (continued)

Enabling Factors	n	%
Attitude of Healthcare providers		
Moderate	59	16.9
Good	221	63.1
Not known	70	20.0
Awareness of Health Insurance		
No	47	13.4
Yes	303	86.6
Knowledge of Health Insurance		
Poor	177	50.6
Moderate	115	32.8
Good	58	16.6
Perception towards Health Insurance		
Negative	120	34.3
Neutral	109	31.1
Positive	121	34.6
Health Literacy Level		
Functional	38	10.9
Interactive	237	67.7
Critical	75	21.4

4.3 Need Factors

Most participants perceived their health as good (61.1%), though nearly 11% rated it as poor. A small but significant group (16.9%) reported having underlying diseases. When looking at recent health history, 28.3% had sought medical treatment recently and 16.3% reported that a family member had required recent medical treatment. (Table 4.3)

Table 4.3 Need Factors (n=350)

Need Factors	n	%
Self-reported health status		
Poor	38	10.9
Fair	98	28.0
Good	214	61.1
Underlying disease		
No	291	83.1
Yes	59	16.9
Recent medical treatment		
No	251	71.7
Yes	99	28.3
Recent medical treatment within family members		
No	293	83.7
Yes	57	16.3

4.4 Health Insurance Status

Regarding the primary focus of this study, 41.1% of the participants currently have no health insurance, while 58.9% are covered. Among those with insurance, the Social Security Scheme (SSS) was the most common type of coverage (61.5%), followed by the Migrant Health Insurance Scheme (MHIS) at 40%. Among them, some participants are covered by both schemes. Notably, employers were the primary buyers of insurance for 64.4% of the workers, while 35.6% of workers purchased their own coverage. (Table 4.4)

Table 4.4 Health Insurance Status (n=350)

Health Insurance Status	n	%
Health Insurance		
No	145	41.1
Yes	205	58.9
Type of Health Insurance (n=205) *		
Migrant Health Insurance Scheme	82	40.0
Social Security Scheme	126	61.5
Insurance Buyer (n=205)		
Self	73	35.6
Employer	132	64.4

Note*Percentages and total more than 250(100%); three (1.5%) participants held both insurance schemes simultaneously.

4.5 Comparison of Predisposing Factors between Health Insurance Status

Regarding comparison of predisposing factors relation with health insurance status, several characteristics showed having statistically significant relationship with health insurance status: age(p-value=0.006), residence(p-value=0.044), marital status(p-value=0.003), occupation(p-value=0.012), length of stay in Thailand and Chiang Rai with both p-value <0.001, decision-makers(p-value=0.024) and having family members who were already insured with p-value < 0.001. (Table 4.5)

Table 4.5 Comparison of Predisposing factors between health insurance status(n=350)

Predisposing factors	Health Insurance Status				p-value
	No(n=145)		Yes(n=205)		
	n	%	n	%	
Age(years)					
18-35	92	63.5	112	54.6	0.006*
36-50	36	24.8	81	39.5	
>50	17	11.7	12	5.9	
Sex					
Male	67	46.2	91	44.4	0.737
Female	78	53.8	114	55.6	
Residence					
Mueang	112	77.2	147	71.7	0.044*
Mae Sai	24	16.6	28	13.7	
Mae Chan & Phan	9	6.2	30	14.6	

Table 4.5 (continued)

Predisposing Factors	Health Insurance Status				p-value
	No(n=145)		Yes(n=205)		
	n	%	n	%	
Marital Status					
Single	47	32.4	39	19.0	0.003*
Married	85	58.6	152	74.1	
Divorced	4	2.8	10	4.9	
Widowed	9	6.2	4	2.0	
Religion					
Buddhist	118	81.4	181	88.3	0.109
Christian	27	18.6	23	11.2	
Islam	0	0.0	1	0.5	
Occupation					
Factory Workers	21	14.5	55	26.8	0.012*
Agriculture	8	5.5	22	10.7	
Construction Workers	41	28.3	56	27.3	
General Workers	37	25.5	28	13.7	
Housemaid	9	6.2	13	6.3	
Vendor	16	11.0	18	8.8	
Cleaner	13	9.0	13	6.3	
Ethnicity					
Burmese	122	84.1	188	91.7	0.090
Karen	15	10.3	11	5.4	
Shan	4	2.8	5	2.4	
Kachin	4	2.8	1	0.5	

Table 4.5 (continued)

Predisposing Factors	Health Insurance Status				p-value
	No(n=145)		Yes(n=205)		
	n	%	n	%	
Education					
Illiterate	13	9.0	11	5.4	0.137
Primary School	32	22.1	59	28.8	
Middle School	51	35.2	56	27.3	
High School	37	25.5	67	32.7	
Graduate	12	8.3	12	5.9	
Length of stay in Thailand (months)					
3-6	32	22.1	2	1.0	<0.001*
7-12	30	20.7	28	13.7	
13-120	76	52.4	152	74.1	
>120	7	4.8	23	11.2	
Length of stay in Chiang Rai (months)					
3-6	41	28.3	12	5.9	<0.001*
7-12	31	21.4	43	21.0	
13-120	67	46.2	131	63.9	
>120	6	4.1	19	9.3	
Housing					
Apartment	25	17.2	47	22.9	0.368
Town House	19	13.1	18	8.8	
Family House	12	8.3	20	9.8	
Dormitory	89	61.4	120	58.5	

Table 4.5 (continued)

Predisposing Factors	Health Insurance Status				p-value
	No(n=145)		Yes(n=205)		
	n	%	n	%	
Live with Anyone					
No	22	15.2	31	15.1	0.990
Yes	123	84.8	174	84.9	
Family Members					
Live Alone	22	15.2	31	15.1	0.889
2-3	99	68.2	136	66.3	
>3	24	16.6	38	18.5	
Family members with Health Insurance					
No one	94	64.8	11	5.4	<0.001*
1-3	48	33.1	177	86.3	
>3	3	2.1	17	8.3	
Decision-Maker					
Self	94	64.8	148	72.2	0.024*
Partners	37	25.5	49	23.9	
Parents	4	2.8	6	2.9	
Relatives	10	6.9	2	1.0	
Physical Activity					
No	95	65.5	136	66.3	0.873
Yes	50	34.5	69	33.7	

Table 4.5 (continued)

Predisposing Factors	Health Insurance Status				p-value
	No(n=145)		Yes(n=205)		
	n	%	n	%	
Alcohol Drinking					
No	99	68.3	144	70.2	0.694
Yes	46	31.7	61	29.8	
Smoking					
No	107	73.8	162	79.0	0.253
Yes	38	26.2	43	21.0	
Betel Chewing					
No	125	86.2	172	83.9	0.554
Yes	20	13.8	33	16.1	

Note*Statistically significant level at p-value <0.05.

4.6 Comparison of Enabling Factors between Health Insurance Status

In comparison of enabling factors with health insurance status, enabling factors showed strongly statistically significant across almost all measured variables: income(p-value=0.025), legal status, having social support, illness in Thailand, experience of out-of-pocket medical expenses, language barrier, having interpreter services, attitude of healthcare providers, awareness of health insurance, knowledge level, perception towards health insurance and health literacy level with all p-value <0.001 and lastly waiting time to get health services with p-value=0.040. (Table 4.6)

Table 4.6 Comparison of enabling factors between health insurance status (n=350)

Enabling Factors	Health Insurance Status				p-value
	No(n=145)		Yes(n=205)		
	n	%	n	%	
Income (Thai Baht)					
≤9000	85	58.6	90	43.9	0.025*
9001-15000	57	39.3	110	53.7	
>15000	3	2.1	5	2.4	
Expense (Thai Baht)					
≤3000	26	17.9	29	14.1	0.214
3001-9000	116	80.0	165	80.5	
>9000	3	2.1	11	5.4	
Legal Status					
Undocumented	74	51.0	4	2.0	<0.001*
Passport	8	5.5	56	27.3	
Certificate of Identity	23	15.9	45	22.0	
Pink Card with work permit	38	26.2	65	31.6	
Memorandum of Understanding	2	1.4	35	17.1	
Social Support					
Poor	16	11.0	7	3.4	<0.001*
Moderate	37	25.5	25	12.2	
Good	92	63.5	173	84.4	
Illness in Thai					
No	52	35.9	17	8.3	<0.001*
Yes	93	64.1	188	91.7	

Table 4.6 (continued)

Enabling Factors	Health Insurance Status				p-value
	No(n=145)		Yes(n=205)		
	n	%	n	%	
Experience of out-of-pocket medical expenses					
No	80	55.2	44	21.5	<0.001*
Yes	65	44.8	161	78.5	
Cost per visit (Thai Baht)					
≤500	123	84.8	159	77.6%	0.091
>500	22	15.2	46	22.4%	
Waiting Time					
≤1hr	128	88.3	164	80.0	0.040*
>1hr	17	11.7	41	20.0	
Language Barrier					
No	23	15.9	56	27.3	<0.001*
Yes	69	47.5	132	64.4	
Not Known	53	36.6	17	8.3	
Interpreter Services					
No	71	49.0	152	74.1	<0.001*
Yes	21	14.5	35	17.1	
Not Known	53	36.5	18	8.8	
Attitude of healthcare providers					
Moderate Attitude	33	22.8%	26	12.7%	<0.001*
Good Attitude	59	40.7%	162	79.0%	
Not Known	53	36.5%	17	8.3%	

Table 4.6 (continued)

Enabling Factors	Health Insurance Status				p-value
	No(n=145)		Yes(n=205)		
	n	%	n	%	
Awareness of Health Insurance					
No	45	31.0	2	1.0	<0.001*
Yes	100	69.0	203	99.0	
Knowledge level of Health Insurance					
Poor	114	78.6	63	30.7	<0.001*
Moderate	22	15.2	93	45.4	
Good	9	6.2	49	23.9	
Perceptions towards health insurance					
Negative	95	65.5	25	12.2	<0.001*
Neutral	37	25.5	72	35.1	
Positive	13	9.0	108	52.7	
Health Literacy Level					
Functional	27	18.6	11	5.4	<0.001*
Interactive	104	71.7	133	64.9	
Critical	14	9.7	61	29.8	

Note*Statistically significant level at p-value < 0.05.

4.7 Comparison of Need Factors between Health Insurance Status

In terms of health needs, the analysis showed that recent medical treatment was strongly statistically significant with $p\text{-value} < 0.001$. (Table 4.7)

Table 4.7 Comparison of need factors between health insurance status (n=350)

Need Factors	Health Insurance Status				p-value
	No(n=145)		Yes(n=205)		
	n	%	n	%	
Self-reported health status					
Poor	17	11.7	21	10.2	0.185
Fair	33	22.8	65	31.7	
Good	95	65.5	119	58.0	
Underlying disease					
No	121	83.4%	170	82.9%	0.898
Yes	24	16.6%	35	17.1%	
Recent medical treatment					
No	123	84.8%	128	62.4%	<0.001*
Yes					
Recent medical treatment within family members					
No	125	86.2%	168	82.0%	0.288
Yes	20	13.8%	37	18.0%	

Note*Statistically significant level at $p\text{-value} < 0.05$.

4.8 Univariable Analysis to Determine Factors Related with Having no Health Insurance

The univariable logistic regression revealed that 21 variables were significantly associated to insurance status. Among predisposing factors, age, residence, marital status, occupation, length of stay in Thailand and Chiang Rai, decision-makers, having family members who were already insured were significant with all p-value <0.05.

Among enabling factors, legal status, having social support, illness in Thailand, experience of out-of-pocket medical expenses, waiting time, language barrier, having interpreter services, attitude of healthcare providers, heard of health insurance, knowledge level, perception towards health insurance and health literacy level were significant with p-value <0.05. In need factors, recent healthcare utilization, medical treatment recently had significant association with having no health insurance with p-value <0.05. (Table 4.8)

Table 4.8 Univariable Analysis to determine factors related with having no health insurance (n=350)

Factors	cOR	95%CI	p-value
Age			
18-35	1.85	1.14-2.99	0.012*
36-50	1		
>50	3.19	1.38-7.36	0.007*
Sex			
Male	1		
Female	0.93	0.61-1.43	0.737
Residence (District)			
Mueang	2.54	1.16-5.57	0.020*
Mae Sai	2.86	1.14-7.19	0.026*
Mae Chan & Phan	1		

Table 4.8 (continued)

Factors	cOR	95%CI	p-value
Marital Status			
Married	1		
Single	2.16	1.31-3.56	0.003*
Divorced	0.715	0.22-2.35	0.715
Widowed	4.02	1.20-13.46	0.024*
Religion			
Buddhist	1		
Christian	1.80	0.99-3.29	0.056
Islam	0.00	0.000	1.000
Occupation			
Factory Workers	1		
Agriculture	0.95	0.37-2.47	0.920
Construction Workers	1.92	1.01-3.65	0.048*
General Workers	3.46	1.71-6.99	0.001*
Housemaid	1.81	0.68-4.87	0.238
Vendor	2.33	1.01-5.40	0.049*
Cleaner	2.62	1.05-6.56	0.040*
Ethnicity			
Burmese	1		
Karen	2.10	0.93-4.73	0.073
Shan	1.23	0.33-4.68	0.759
Kachin	6.16	0.68-55.80	0.106

Table 4.8 (continued)

Factors	cOR	95%CI	p-value
Education			
Illiterate	1.18	0.38-3.67	0.773
Primary School	0.54	0.22-1.34	0.187
Middle School	0.91	0.38-2.21	0.836
High School	0.55	0.23-1.35	0.194
Graduate	1		
Length of stay in Thailand (months)			
3-6	52.57	9.99-276.57	<0.001*
7-12	3.52	1.31-9.48	0.013*
13-120	1.64	0.68-4.00	0.274
>120	1		
Length of stay in Chiang Rai (months)			
3-6	10.82	3.53-33.19	<0.001*
7-12	2.28	6.38	0.115
13-120	1.62	4.25	0.327
>120	1		
Housing			
Apartment	1		
Town House	1.98	0.89-4.45	0.096
Family House	1.13	0.48-2.68	0.785
Dormitory	1.39	0.80-2.43	0.242

Table 4.8 (continued)

Factors	cOR	95%CI	p-value
Decision-makers			
Self	1		
Partner	1.19	0.72-1.96	0.497
Parents	1.05	0.29-3.82	0.941
Relatives	7.87	1.69-36.72	0.009*
Live with Anyone			
No	1		
Yes	0.99	0.55-1.80	0.990
Family Members			
Live alone	1		
2-3 members	1.03	0.56-1.88	0.934
>3 members	0.89	0.42-1.88	0.760
Family members with Health Insurance			
No one	48.42	12.22-191.93	<0.001*
1-3members	1.54	0.43-5.46	0.507
>3members	1		
Physical Activity			
No	1		
Yes	1.04	0.66-1.63	0.873
Smoking			
No	1		
Yes	1.34	0.81-2.21	0.254
Alcohol Drinking			
No	1		
Yes	1.10	0.69-1.74	0.694

Table 4.8 (continued)

Factors	cOR	95%CI	p-value
Betel Chewing			
No	1		
Yes	0.83	0.46-1.52	0.554
Income (Thai Baht)			
≤9000	1.57	0.37-6.79	0.543
9001-15000	0.86	0.20-3.74	0.845
>15000	1		
Expenses (Thai Baht)			
≤3000	1		
3001-9000	0.78	0.44-1.40	0.411
>9000	0.30	0.08-1.21	0.091
Legal Status			
Undocumented	323.75	56.58-1852.56	<0.001*
Passport	2.50	0.50-12.46	0.263
Certificate of Identity	8.94	1.97-40.53	0.004*
Pink Card with work permit	10.23	2.33-44.95	0.002*
Memorandum of Understanding	1		
Social Support			
Poor	4.30	1.71-10.82	0.002*
Moderate	2.78	1.58-4.91	<0.001*
Good	1		
Illness in Thai			
No	6.18	3.39-11.28	<0.001*
Yes	1		

Table 4.8 (continued)

Factors	cOR	95%CI	p-value
Experience of out-of-pocket medical expenses			
No	4.50	2.82-7.19	<0.001*
Yes	1		
Cost per Visit (Thai Baht)			
≤500	1.62	0.92-2.83	0.092
>500	1		
Waiting Time (hour)			
≤1hr	1.88	1.02-3.47	0.042*
>1hr	1		
Language Barrier			
No	1		
Yes	1.27	0.72-2.24	0.404
Not Known	7.59	3.66-15.76	<0.001*
Interpreter Services			
No	1		
Yes	1.29	0.70-2.36	0.421
Not Known	6.30	3.44-11.54	<0.001*
Attitude of Healthcare Providers			
Not Known	8.56	4.59-15.95	<0.001*
Moderate	3.49	1.92-6.31	<0.001*
Good	1		
Awareness of Health Insurance			
No	45.68	10.86-192.10	<0.001*
Yes	1		

Table 4.8 (continued)

Factors	cOR	95%CI	p-value
Knowledge of Health Insurance			
Poor	9.85	4.54-21.37	<0.001*
Moderate	1.29	0.55-3.01	0.559
Good	1		
Perception towards Health Insurance			
Negative	31.57	15.30-65.16	<0.001*
Neutral	4.27	2.12-8.59	<0.001*
Positive	1		
Health Literacy Level			
Functional	10.70	4.30-26.58	<0.001*
Interactive	3.41	1.81-6.43	<0.001*
Critical	1		
Self-reported Health Status			
Poor	1.01	0.51-2.03	0.969
Fair	0.64	0.39-1.05	0.075
Good	1		
Underlying disease			
No	1		
Yes	0.96	0.55-1.70	0.963
Recent Medical Treatment			
No	3.36	1.97-5.74	<0.001*
Yes	1		
Recent medical Treatment within family members			
No	1		
Yes	0.73	0.40-1.31	0.726

Note*Statistically significant level at p-value <0.05.

4.9 Multivariable Analysis to Determine Factors Related with Having no Health Insurance

After adjusting for potential confounders, six key factors remained statistically significantly associated with health insurance status: residence, having family members who were already insured, legal status, out-of-pocket experience, heard of health insurance and perception towards health insurance.

Migrant workers who live in Mueang district and Mae Sai district of Chiang Rai Province had 6.52 (95% CI=1.52-27.90; p-value=0.011) and 6.68 (95% CI=1.20-37.12; p-value=0.030) times higher odds of having no insurance than those lives in other districts, Mae Chan and Phan. Participants who had no insured family members were 15.5 times higher odds of being uninsured themselves compared to those living in households where more than three family members had insurance (95%CI=2.95–82.15; p-value=0.001). Individuals with no legal documents were almost 31 times more likely to be uninsured compared to those under the MOU system (95%CI=4.06–235.73; p-value=0.001). The odds of having no insurance were 4 times higher in those who had never experienced out-of-pocket medical expenses than those who had paid for services themselves in the past (95%CI=1.66-9.11; p-value= 0.002). Migrant workers who were not aware of health insurance faced 21.8 times higher odds of being uninsured compared to those who were familiar with it (95%CI=3.30-144.28; p-value = 0.001). Workers with a negative perception towards health insurance had 22.6 times higher odds of being uninsured (95%CI=7.63-67.44; $p < 0.001$), while the odds of lacking coverage of health insurance were 3.7 times higher in those with a neutral perception compared to those with a positive perception (95%CI=1.28-10.76; $p < 0.016$). (Table 4.9)

Table 4.9 Multivariable analysis to determine factors related with having no health insurance (n=350)

Factors	AOR	95%CI	p-value
Residence (District)			
Mueang	6.52	1.52-27.90	0.011*
Mae Sai	6.68	1.20-37.12	0.030*
Mae Chan & Phan	1		
Legal Status			
Undocumented	30.94	4.06-235.73	0.001*
Passport	1.87	0.28-12.47	0.520
Certificate of Identity	3.15	0.53-18.77	0.207
Pink Card with work permit	3.81	0.68-21.32	0.128
Memorandum of Understanding	1		
Experience of out-of-pocket medical expenses			
No	3.89	1.66-9.11	0.002*
Yes	1		
Awareness of Health Insurance			
No	21.82	3.30-144.28	0.001*
Yes	1		
Perception towards Health Insurance			
Negative	22.69	7.63-67.44	<0.001*
Neutral	3.70	1.28-10.76	0.016*
Positive	1		

Table 4.9 (continued)

Factors	AOR	95%CI	p-value
Family Member with Health Insurance			
No one	15.57	2.95-82.15	0.001*
1-3	0.59	0.12-2.88	0.516
>3	1		

Note*Statistically significant level at p-value < 0.05.



CHAPTER 5

DISCUSSION AND CONCLUSION

This chapter presents the discussion, conclusion and recommendations of the study based on the findings from the study and the theoretical framework of Anderson's Behavioral Model of Health Services Utilization. The primary objective of this study was to assess the health insurance status and identify the factors associated with insurance enrollment among Myanmar migrant workers in Chiang Rai Province, Thailand.

5.1 Discussion of Findings

5.1.1 Health Insurance Coverage

The main objective of this study was to assess the current health insurance status of Myanmar migrant workers in Chiang Rai Province. The findings reveal a critical gap between universal health coverage policies and practical implementation on the ground. While a majority of the participants (58.9%) hold some form of health insurance, a substantial proportion (41.1%) remain completely uninsured. Among the insured participants, the Social Security Scheme (SSS) was the most prevalent (61.5%), followed by the Migrant Health Insurance Scheme (MHIS) (40%). The high prevalence of SSS coverage reflects a positive trend toward formal employment registration and employer compliance within private-sector enterprises in Chiang Rai. Interestingly, the data revealed that some participants held concurrent coverage under both the SSS and MHIS. This dual-coverage phenomenon can be explained by the structural transitions embedded within Thailand's migrant registration policy. When migrant workers first register or enter via formal channels (such as the Memorandum of Understanding or regular verification windows), they are frequently required to purchase a temporary, out-of-pocket MHIS package to cover them during an initial waiting period (typically three months) before their formal SSS benefits legally activate. The overlap in data suggests that workers maintain both to avoid any gaps in healthcare access. Employers

were the primary buyers of insurance for 64.4% of the workers, which matches the legal design of the contributory SSS framework where employers are mandated to enroll and co-pay for their staff. However, the fact that more than one-third of the workers (35.6%) had to purchase their own coverage is a significant cause for concern. Self-purchasing typically applies to informal laborers buying into the MHIS or situations where employers shirk their legal duties, forcing low-wage migrants to bear the full financial burden of health security out-of-pocket.

5.1.2 General Characteristics of the Study Population

The predisposing profile of the participants reveals a predominantly young adults (58.3% aged 18-35), with a mean age of approximately 35 years. The high concentration of young workers in this study reflects the healthy migrant effect, where younger individuals are more likely to seek employment. While younger age is often associated with lower health service utilization, previous literature suggests that younger migrants often prioritize immediate financial needs over health insurance. Women constituted a slightly larger portion of the group (54.9%). A significant 74% of participants lived in the Mueang district. Most identified as Burmese (88.6%) and Buddhist (85.4%). The geographic concentration in these areas likely reflects where the labor demand is highest. The homogeneity in ethnicity and religion suggests that social networks within these communities may play a role in how health information is shared. The majority of participants were married (67.7%), being married often indicates a higher level of responsibility and a long-term intention to stay in Thailand. However, the study shows that being married does not automatically enroll insurance. Instead, it may actually increase the financial burden. This study's findings reflect a similar social structure to a study in Ranong Province, where the ratio of married to single workers was roughly 1.2:1 (Suphanchaimat et al., 2019). Participants were largely employed in construction (27.7%) and factory work (21.7%) which are the characteristic of the labor force in "3D" (Dirty, Dangerous, and Demeaning). Education levels were moderate, with 30.6% finishing middle school and 29.6% high school. Despite being long-term residents with 65.1% having stayed in Thailand for over a year and 56.6% stayed in Chiang Rai for over a year, there is a notable health security gap. The fact that many are long-term residents yet still uninsured suggests that time in country does not naturally resolve the barriers to insurance. Most live with family members (84.9%), yet

30% of these households have no one covered by insurance. This suggests a household-level vulnerability, if the primary decision-maker (which 69.1% of participants identified as being themselves) is uninsured, the entire family remains at high risk. This gap aligns with existing literature indicating that migrant enrollment rates often remain lower than those of Thai citizens due to the non-punitive nature of current enrollment policies. Furthermore, the prevalence of alcohol consumption (30.6%), (15.1%) practicing betel chewing and smoking (23.1%) among the participants indicates long-term health risks that the current lack of insurance fails to address.

For enabling factors, economic and legal resources act as the primary "enablers" for insurance. With 50% of workers earning 9,000 THB or less, while the majority (80.3%) had monthly living expenses ranging from 3,001 to 9,000 THB, the cost of insurance premiums competes directly with survival needs. With a narrow margin between income and basic survival costs, the upfront premium for the Migrant Health Insurance Scheme (MHIS) or the monthly deductions for the Social Security Scheme (SSS) represent a significant financial sacrifice. This is consistent with findings in Ranong Province, where most low-paid workers simply found the cost of signing up too expensive, which kept them from getting insured (Srisai et al., 2020). While 29.4% of participants held a Pink Card, 22.3% were completely undocumented. However, this result differs from the study in Mueang district, Chiang Rai Province, where minority was undocumented (Min et al., 2025) but the result matches with a study on Migrant Insurance Coverage in Thailand that formal sector enrollment increased, irregular migrants remained "left behind" because insurance enrollment is frequently linked to having a valid work permit or legal status. While social support was generally perceived as good (75.7%), a language barrier was present (Zaw & Kongsin, 2011) for 57.4% of workers, and 63.7% lacked access to interpreter services. While social support from peers is high, it cannot compensate for the lack of formal linguistic access in healthcare settings. Without clear, translated information, if migrants cannot communicate the ability to enroll is effectively disabled. Similarly, research in the Northeast of Thailand found that migrants with no ability to communicate in Thai had significantly lower health insurance uptake (Chamchan & Apipornchaisakul, 2022). Experience with the healthcare system was high, with 80.3% having been ill in Thailand and 64.6% having paid out-of-pocket for medical expenses. Migrants often do not perceive the value of

an insurance card until they have personally felt the financial burden of a direct hospital bill. Despite the high level of need, with many relying on private clinics due to long waiting times at public facilities. This is consistent with studies in Mae Sot, where migrants frequently bypass formal healthcare systems due to time constraints (Zaw & Kongsin, 2011). Although 86.6% of participants had heard of health insurance, knowledge levels were a major divide: 50.6% had poor knowledge of insurance schemes. This implies that while awareness of the existence of insurance is high, the quality of that information is low. A study in Ranong found that inadequate official announcements led to widespread confusion among Myanmar migrants regarding their right to purchase health cards (Srisai et al., 2020). Perception was measured based on trust, attitude, and perceived value, with 34.3% of participants holding a negative perception of the insurance system. This mirrors findings in Bangkok where migrants' distrust of policy changes led them to view insurance as a burden rather than a benefit (Hnin & Mon, 2014). Additionally, health literacy levels were largely constituted of interactive level (67.7%) and this finding also aligns with (Mantwill et al., 2015), who stated that individuals facing social disparities like Myanmar migrants are structurally more likely to have lower health literacy, which directly leads to worse health outcomes and lower insurance uptake.

While 61.1% of participants perceived their health as good and approximately 16.9% reported having underlying diseases. This gap between perceived good health and the presence of underlying disease suggests that many migrants may be underestimating the severity of their long-term health risks. This aligns with studies in Bangkok, where Myanmar migrants often self-rate their health as "good" despite high occupational risks, a phenomenon known as "health optimism." (Hnin & Mon, 2014). This optimism can lead to a delay in seeking insurance until an illness becomes unmanageable. The study found that 28.3% of participants required medical treatment in the six months prior to the study, and 16.3% reported that a family member had required care. Similar results were found in Ranong Province, where acute illness was the only factor that drove undocumented migrants to risk visiting a government hospital (Srisai et al., 2020).

5.1.3 Factors Associated with Having No Health Insurance

Initially, univariable analysis was performed to screen all potential predisposing, enabling, and need factors. In this stage, 38 variables were tested at a 95% Confidence Interval (CI), with crude odds ratios (OR) and with statistical significance $p\text{-value} \leq 0.05$. In univariable analysis, 21 variables are found to be statistically significant with having no health insurance. Subsequently, all 38 variables were adjusted into a multivariable logistic regression model. The model automatically filtered out confounding factors, leaving six significant variables that independently influence the health insurance status of Myanmar migrant workers: place of residence, immigration status, previous out-of-pocket experience, awareness of health insurance, perception towards the insurance system, and family members' insurance status.

The multivariable analysis revealed that migrants living in Mueang (AOR 6.52) and Mae Sai (AOR 6.68) faced significantly higher odds of being uninsured compared to other districts. This is a critical finding for Chiang Rai, as these areas are hubs for informal and cross-border labor. This geographic disparity is consistent with research conducted along the Thai-Myanmar border, where "border-zone effects" often lead to lower insurance coverage due to the high mobility of the population and the prevalence of daily-wage labor (Tangcharoensathien et al., 2017). The most significant finding in the final model is the impact of immigration status. Undocumented workers faced the most extreme disparity, with 30.94 times higher odds of being uninsured compared to those with full documentation ($p=0.001$). While Thailand's Universal Health Coverage policy is inclusive on paper, legal status remains as the key to access. For the undocumented, the fear of arrest or deportation acts as a functional barrier that overrides their need for health security. In Thailand, studies on the Social Security Scheme (SSS) show that even when eligible, irregular migrants remain "left behind" due to the complexities of registration without a valid passport or work permit (Suphanchaimat et al., 2017). This aligns perfectly with literature stating that legal status is the primary functional barrier to healthcare access. Fear of deportation and administrative hurdles effectively "un-compulsory" the Compulsory Migrant Health Insurance (CMHI) for this group.

Migrants who had not previously paid for medical services themselves were 3.89 times more likely to be uninsured ($p=0.002$). Many migrants do not see the value of insurance as a preventive financial tool; they only recognize its importance after experiencing the financial shock of paying a large hospital bill. This mirrors findings from low-and-middle-income countries where "catastrophic health expenditure" is often the only catalyst that drives low-income families to seek formal insurance coverage. Those who were not aware of insurance schemes faced 21.8 times higher odds of being uninsured ($p=0.001$). As noted in (Srisai et al., 2020) inadequate official announcements regarding the right to purchase health cards lead to widespread confusion and lower uptake among Myanmar migrants. Workers with a negative perception were 22.6 times more likely to be uninsured ($p<0.001$). Negative views are likely fueled by past stories of discrimination, long wait times, or the belief that the insurance doesn't really cover anything. This finding aligns with (Hnin & Mon, 2014) in Bangkok, where migrants' distrust led them to view insurance as a financial burden rather than a protective benefit. Having no family members with insurance increased the odds of the participant being uninsured by 15.5 times ($p<0.001$). This reflects a social normalization of insurance, if a worker's immediate circle is not insured, they are far less likely to seek it out themselves. In Myanmar culture, where family units are tight-knit, the decision to enroll is rarely individual. If the head of the household or the majority of family members remain uninsured, the individual is unlikely to break that social norm. Similar "clustering" of insurance status has been observed in migrant communities in China, where the household's collective social capital determines the health security of its members (Liu, 2021).

5.1.4 Linkage between Awareness, Knowledge Level, Perception, Health Literacy Level and Health Insurance Status

The study's findings suggest joining health insurance is a mental step-by-step process rather than a single decision. A migrant worker does not simply decide to enroll in insurance; they move through a process of information exposure, comprehension, and attitude formation. In this study, while awareness of health insurance and perception towards health insurance were the final significant predictors, they are deeply rooted in the participants' knowledge and health literacy levels. Awareness was a powerful predictor in the multivariable model with AOR 21.8. Hearing about

insurance (awareness) is the necessary first step, but it is often passive. Most participants heard about it from friends or employers. Without this initial awareness, the odds of being uninsured are nearly absolute, as the migrant is unaware that a safety net even exists. While awareness was high, half of participants had poor knowledge of the specific rules and benefits of insurance schemes. This indicates a gap where migrants have heard of the insurance, but they do not know how it works. This is where health literacy level of participants plays a role. Even if a migrant is functionally literate (can read the forms), they may lack the critical health literacy to navigate the Thai healthcare bureaucracy. The linkage suggests that knowledge is the data the migrant holds, while health literacy is the tool they use to process that data. Perception was the most significant psychological predictor, with a negative perception leading to 22.6 times higher odds of being uninsured. If a migrant has low knowledge and low critical literacy, they are more likely to develop a negative perception. They may view the insurance as an unnecessary expense because they do not fully understand the purpose of long-term financial protection. This linkage aligns with the Health Belief Model (HBM), where awareness and perception are the primary drivers of health behavior. It also reflects (Mantwill et al., 2015), who argued that for marginalized populations, health literacy is not just a personal skill but a social one, if the community's knowledge is poor, the individual's perception will likely be negative, regardless of their personal ability.

An important observation in this study is the shifting significance of health literacy across different statistical tests. In the univariable analysis, health literacy level was highly associated with health insurance status ($p < 0.001$). However, when entered into the final multivariable model, health literacy did not remain a statistically significant independent factor. This transition suggests that while a link between literacy and insurance status exists, health literacy is not a primary driver of insurance enrollment in the presence of more dominant factors. In this study, a migrant's personal ability to understand the system is often cancelled out by their legal inability to join it. Even when a worker has the skills to read a form and navigate a hospital, they are effectively blocked by their immigration status and a deep distrust of the bureaucracy. In conclusion, migrants have the awareness about health insurance that required to enroll, but the legal and administrative barriers make that knowledge impossible to use.

5.2 Conclusion

This research represents the first study to comprehensively analyze the predisposing, enabling, and need factors associated with health insurance status among Myanmar migrant workers in Chiang Rai Province by using Andersen Behavioral Model of Health Services Use. The findings reveal a significant health security gap, where a notable portion of the migrant population remains uninsured despite being long-term residents. While the demographic profile shows a predominantly young workforce, this "healthy migrant effects" often leads individuals to prioritize immediate financial survival over health insurance. Through multivariable analysis, the study identifies six independent predictors that significantly influence insurance status: place of residence in Mueang and Mae Sai districts, immigration status, previous out-of-pocket medical experiences, awareness of insurance schemes, perception toward the insurance system, and the insurance status of family members. Among these factors, immigration status emerged as the most critical barrier. While Thailand's health policies are inclusive on paper, legal and administrative hurdles effectively create a functional barrier for those without valid permits. Furthermore, the study highlights that enrollment is a mental step-by-step process where high initial awareness is often undermined by poor quality of information and a lack of critical health literacy to navigate the bureaucracy. The results suggest that health insurance enrollment is a collective social decision heavily influenced by family circles and the "catastrophic" realization that follows paying high out-of-pocket hospital bills. This research concludes that bridging the health insurance gap requires addressing the fundamental legal and economic vulnerabilities that force migrants to view health coverage as a financial burden rather than a protective benefit.

5.3 Strengths and Limitations

By utilizing Anderson's Behavioral Model of Health Services Utilization, the study provides a robust theoretical framework to identify the complex interplay between legal status, economic barriers, and social networks. By employing a cross-

sectional study design combined with a snowball sampling method, the research successfully included participants who are often excluded from formal surveys, such as undocumented migrants. This approach allowed for a more authentic situational analysis of the health security gap.

Despite its strengths, certain limitations must be acknowledged. First, while the snowball sampling method was effective for reaching hidden populations, it is a non-probability sampling technique that may lead to selection bias, as participants are likely to refer others within their own social and professional networks. Second, the cross-sectional nature of the study design means that the findings represent a snapshot in time and cannot establish a causal relationship between the identified factors and insurance status. Third, the study relied on self-reported data, which may be subject to recall bias or social desirability bias, particularly regarding sensitive topics like income or legal status. Finally, because the majority of participants were concentrated in the Mueang district, the findings may not be fully generalizable to migrant populations living in more remote or rural areas of Thailand with different labor demands.

5.4 Recommendations

5.4.1 Recommendations for Policy Makers and Authorities

The findings indicate that undocumented migrant workers were substantially more likely to be uninsured than documented workers. To bridge the health security gap, policy makers should strengthen existing migrant registration and documentation processes by improving accessibility, reducing administrative complexity, and increasing multilingual support during registration. Mobile registration services and periodic registration campaigns in high-migrant areas may help increase legal enrollment and subsequent insurance coverage. Awareness of health insurance was strongly associated with insurance enrollment, government agencies should collaborate with employers, local authorities, and healthcare facilities to provide standardized health insurance information in Myanmar language. Information should clearly explain eligibility criteria, enrollment procedures, benefits, and renewal requirements. Given the concentration of uninsured migrants in specific districts, local-level interventions

should be prioritized through targeted outreach and monitoring programs rather than relying solely on province-wide approaches. In addition, stronger monitoring of employer compliance with Social Security Scheme enrollment requirements should be implemented to ensure that eligible migrant workers receive legally mandated health insurance protection. Policies should be reformed to allow for universal registration regardless of visa or work permit status. Policy makers must also address the exploitative role of unregulated brokers by simplifying the registration process and making it more direct. By reducing administrative complexity and providing official, multilingual assistance, the government can eliminate the need for third-party intermediaries who often charge high fees to vulnerable workers. Additionally, since the high upfront cost of premiums often forces migrants to choose between insurance and basic survival, the authorities should introduce flexible, installment-based payment plans for premiums to prevent insurance from competing with immediate survival needs.

5.4.2 Recommendations for Public Health and Healthcare Professionals

The study demonstrates that awareness and perception toward health insurance are among the strongest determinants of insurance status. To improve health insurance enrollment and healthcare utilization among Myanmar migrant workers, health providers should prioritize the expansion of linguistic and administrative support services. Furthermore, healthcare facilities must address the quality of information gap. Therefore, public health interventions should move beyond simply informing migrants that insurance exists and focus on improving understanding of how insurance functions and the benefits it provides to counteract the negative perceptions. Educational activities should use culturally appropriate materials in Myanmar language and address common misconceptions regarding costs, eligibility, and service coverage. Healthcare facilities should strengthen the role of Migrant Health Volunteers and interpreter services to facilitate communication between migrants and healthcare providers. These personnel can support both insurance education and navigation of healthcare services. Because family members' insurance status was strongly associated with individual insurance enrollment, health promotion activities should adopt family-centered and community-based approaches. Insurance education sessions should target households and community leaders, encouraging enrollment for the entire family unit and shifting

the community's view of insurance from a financial burden to a protective safety net, as insurance decisions among migrant populations are often influenced by family members and social networks. Healthcare providers should also promote positive healthcare experiences through respectful communication and culturally sensitive care, as negative experiences may contribute to unfavorable perceptions of insurance and healthcare services.

5.4.3 Recommendations for Future Research

Future research should transition from cross-sectional snapshots to longitudinal study designs to examine how changes in immigration status, employment conditions, and government policies influence health insurance enrollment over time. There is also a significant need for qualitative exploration into the reasons behind negative perceptions of health insurance, barriers faced by undocumented migrants, household decision-making processes related to insurance enrollment and the health optimism phenomenon, where migrants self-rate their health as good despite working in high-risk 3D environments. Future studies should investigate district-level factors that contribute to lower insurance coverage, including labor market characteristics, mobility patterns, employer practices, and accessibility of registration services and expand geographically to include rural agricultural sectors. Lastly, future intervention studies should evaluate the effectiveness of family-centered education programs, Migrant Health Volunteer initiatives, and multilingual communication strategies in improving insurance enrollment among migrant workers.

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APPENDIX A

ETHICAL APPROVAL



The Mae Fah Luang University Ethics Committee on Human Research
333 Moo 1, Thasud, Muang, Chiang Rai 57100
Tel: (053) 917-170 to 71 Fax: (053) 917-170 E-mail: rec.human@mfu.ac.th

CERTIFICATE OF APPROVAL

COA: 161/2025

Protocol No: EC 25135-18

Title: Health insurance status and its associated factors among Myanmar migrant workers in Chiang Rai, Thailand

Principal investigator: Miss Toe Yamone Myat Noe

School: Health Science

Funding support: Personal budget

Approval:

- | | |
|---|--|
| 1) Research protocol | Version 2 Date August 13, 2025 |
| 2) Information sheet and informed consent documents | Version 2 Date August 13, 2025 |
| 3) Questionnaire | Version 1 Date May 27, 2025 |
| 4) Advertising information sheet | Version 2 Date August 13, 2025 |
| 5) Principal investigator and Co-investigators | |
| - Miss Toe Yamone Myat Noe | - Asst. Prof. Phitsanuruk Kanthawee, Ph.D. |
| - Asst. Prof. Pamornsri Inchon, Ph.D. | |

The aforementioned documents have been reviewed and approved by the Mae Fah Luang University Ethics Committee on Human Research in compliance with international guidelines such as Declaration of Helsinki, the Belmont Report, CIOMS Guidelines and the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use - Good Clinical Practice (ICH - GCP)

Date of Approval: August 18, 2025

Date of Expiration: August 17, 2026

Frequency of Continuing Review: 1 year

(Jullapong Achalapong, M.D.)

Chairperson of the Mae Fah Luang Ethics Committee on Human Research

APPENDIX B

VALIDITY ASSESSMENT OF QUESTIONNAIRE

The validity assessment of questionnaire was performed by three experts who provided evaluation scores using the Item-Objective Congruence (IOC) method. The questionnaire consists of seven sections: predisposing factors, enabling factors, knowledge of health insurance, perception towards health insurance, health literacy assessment, need factors and health insurance status.

Expert 1

Name: Dr. Surasak Thanaisawanyangkoon

Designation: Migrant Health Specialist

Institution: Health Systems Research Institute (HSRI), Thailand

Email: settha@gmail.com

Expert 2

Name: Dr. Zaw Lin

Designation: Former National Program Manager

Institution: Vector Born Disease Control, Ministry of Health, Myanmar

Email: zawlinmcp@gmail.com

Expert 3

Name: Dr. Zaw Min

Designation: Assistant Director

Institution: Health Inspection and Quarantine, Yangon International Airport,
Department of Public Health, Ministry of Health, Myanmar

Email: drzawmin88@gmail.com

Part 1: Questionnaire Regarding Predisposing Factors

No	Expert 1			Expert 2			Expert 3			Total Score	IOC	Result
	-1	0	1	-1	0	1	-1	0	1			
Item 1			✓			✓			✓	3	1	Valid
Item 2			✓			✓			✓	3	1	Valid
Item 3			✓			✓			✓	3	1	Valid
Item 4			✓			✓			✓	3	1	Valid
Item 5			✓			✓			✓	3	1	Valid
Item 6			✓			✓			✓	3	1	Valid
Item 7			✓			✓			✓	3	1	Valid
Item 8			✓			✓			✓	3	1	Valid
Item 9			✓			✓			✓	3	1	Valid
Item10			✓			✓			✓	3	1	Valid
Item 11			✓			✓			✓	3	1	Valid
Item 12			✓			✓			✓	3	1	Valid
Item 13			✓			✓			✓	3	1	Valid
Item 14			✓			✓			✓	3	1	Valid
Item 15			✓			✓			✓	3	1	Valid
Item 16			✓			✓			✓	3	1	Valid
Item 17			✓			✓			✓	3	1	Valid
Item 18			✓			✓			✓	3	1	Valid
Item 19			✓			✓			✓	3	1	Valid

Overall IOC = 1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1=19/19=1

Part 2: Questionnaire Regarding Enabling Factors

No	Expert 1			Expert 2			Expert 3			Total Score	IOC	Result
	-1	0	1	-1	0	1	-1	0	1			
Item 1			✓			✓			✓	3	1	Valid
Item 2			✓			✓		✓		2	0.66	Valid
Item 3			✓			✓			✓	3	1	Valid
Item 4			✓			✓			✓	3	1	Valid
Item 5			✓			✓			✓	3	1	Valid
Item 6			✓			✓			✓	3	1	Valid
Item 7			✓			✓			✓	3	1	Valid
Item 8			✓			✓			✓	3	1	Valid
Item 9			✓			✓			✓	3	1	Valid
Item10			✓			✓			✓	3	1	Valid
Item 11			✓			✓			✓	3	1	Valid
Item 12			✓			✓			✓	3	1	Valid
Item 13			✓			✓			✓	3	1	Valid
Item 14			✓			✓			✓	3	1	Valid
Item 15			✓			✓			✓	3	1	Valid
Item 16			✓			✓			✓	3	1	Valid
Item 17			✓			✓			✓	3	1	Valid
Item 18			✓			✓			✓	3	1	Valid
Item 19			✓			✓			✓	3	1	Valid
Item 20			✓			✓			✓	3	1	Valid
Item 21			✓			✓			✓	3	1	Valid

Overall IOC = 1+1=21/21=1

Part 3: Knowledge About Migrant Health Insurance

No	Expert 1			Expert 2			Expert 3			Total Score	IOC	Result
	-1	0	1	-1	0	1	-1	0	1			
Item 1			✓			✓			✓	3	1	Valid
Item 2			✓			✓			✓	3	1	Valid
Item 3			✓			✓			✓	3	1	Valid
Item 4			✓			✓			✓	3	1	Valid
Item 5			✓			✓			✓	3	1	Valid
Item 6			✓			✓			✓	3	1	Valid
Item 7			✓			✓			✓	3	1	Valid
Item 8			✓			✓			✓	3	1	Valid
Item 9			✓			✓			✓	3	1	Valid
Item10			✓			✓			✓	3	1	Valid

Overall IOC = $1+1+1+1+1+1+1+1+1+1=10/10=1$

Part 4: Perception towards Migrant Health Insurance

No	Expert 1			Expert 2			Expert 3			Total Score	IOC	Result
	-1	0	1	-1	0	1	-1	0	1			
Item 1			✓			✓			✓	3	1	Valid
Item 2			✓			✓			✓	3	1	Valid
Item 3			✓			✓			✓	3	1	Valid
Item 4			✓			✓			✓	3	1	Valid
Item 5			✓			✓			✓	3	1	Valid

Overall IOC = $1+1+1+1+1=5/5=1$

Part 6: Need Factors

No	Expert 1			Expert 2			Expert 3			Total Score	IOC	Result
	-1	0	1	-1	0	1	-1	0	1			
Item 1			✓			✓			✓	3	1	Valid
Item 2			✓			✓			✓	3	1	Valid
Item 3			✓			✓			✓	3	1	Valid
Item 4			✓			✓			✓	3	1	Valid

Overall IOC = $1+1+1+1=4/4=1$

Part 7: Health Insurance Status

No	Expert 1			Expert 2			Expert 3			Total Score	IOC	Result
	-1	0	1	-1	0	1	-1	0	1			
Item 1			✓			✓			✓	3	1	Valid
Item 2			✓			✓			✓	3	1	Valid
Item 3			✓			✓			✓	3	1	Valid
Item 4			✓			✓			✓	3	1	Valid

Overall IOC = $1+1+1+1=4/4=1$

APPENDIX C

QUESTIONNAIRE (ENGLISH)

Version 1 Date 27.5.2025

QUESTIONNAIRE (ENGLISH VERSION)

Questionnaire on Health Insurance Status and Its Associated Factors Among
Myanmar Migrant Workers in Chiang Rai Province, Thailand

Respondent ID code _____		Date of interview _____	
Interviewer _____		Community _____	
Instruction			
Please mark a tick (✓) in the appropriate box ☐ to mark your answer and fill in the blank with correct answer.			
Section 1: Predisposing Factors			
1	Age	_____ years (completed)	
2	Gender	☐ 1. Male	☐ 2. Female
3	Place of residence	☐ 1. Mueang	☐ 2. Mae Sai
4	Marital Status	☐ 1. Single	☐ 2. Married
		☐ 3. Divorced	☐ 4. Widow
5	Religion	☐ 1. Buddhist	☐ 2. Christian
		☐ 3. Islam	☐ 4. Others (specify) _____

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6	Occupation	☐ 1. Fishery ☐ 2. Factory worker ☐ 3. Agriculture ☐ 4. Construction worker ☐ 5. Labor ☐ 6. Housemaid ☐ 7. Vendor sellers ☐ 8. Others(specify) _____
7	Ethnicity	☐ 1. Burmese ☐ 2. Karen ☐ 3. Shan ☐ 4. Mon ☐ 5. Rakhine ☐ 6. Others(specify) _____
8	Education	☐ 1. Illiterate ☐ 2. Primary School ☐ 3. Middle School ☐ 4. High School ☐ 5. Graduate
9	Duration of migration in Thailand	_____ months /years
10	Length of stay in Chiang Rai	_____ months/years
11	Housing Conditions	☐ 1. Apartment ☐ 2. Town House ☐ 3. Single family House ☐ 4. Dormitory ☐ 5. Others(specify) _____

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12	Do you live with family?	☐ 1. Yes ☐ 2. No
13	If yes, with whom?	☐ 1. Partner ☐ 2. Parents ☐ 3. Sons/Daughters ☐ 4. Others(specify) _____
14	Number of members in household	_____ members
15	Number of people who have health insurance in household	_____ members
16	Who is in charge of decision making in the household?	☐ 1. Myself ☐ 2. Partner ☐ 3. Parents ☐ 4. Others (specify) _____
17	Do you exercise?	☐ 1. Yes ☐ 2. No
18	Do you smoke any tobacco products, such as cigarettes?	☐ 1. Yes ☐ 2. No
19	Do you drink alcohol?	☐ 1. Yes ☐ 2. No



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Section 2: Enabling Factors		
1	Monthly Income	_____ THB
2	Cost of Living person per month	_____ THB
3	What type of documents do you have while staying here?	☐ 1. Passport with valid visa ☐ 2. Certificate of Identity ☐ 3. Pink Card ☐ 4. MOU ☐ 5. Work Permit ☐ 6. No document
4	Do you have family, friends, or community members you can rely on when you need health-related information?	☐ 1. Yes ☐ 2. No
5	Do you have someone who helps take care of you when you are sick?	☐ 1. Yes ☐ 2. No
6	Do you have an experience of visiting hospital and had to pay	☐ 1. Yes ☐ 2. No

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	out-of-pocket for treatment?	
7	What kind of health facilities that you mostly go when you are ill?	☐ 1. Public hospital ☐ 2. Private hospital ☐ 3. Clinic ☐ 4. Pharmacy ☐ 5. Others(specify) _____
8	How many times do you use healthcare services per month?	_____ times/month
9	What types of services in the health care facility that you mostly use?	☐ 1. Outpatient services ☐ 2. Preventive services ☐ 3. Inpatient services ☐ 4. Rehabilitative services ☐ 5. Emergency services ☐ 6. Others(specify) _____
10	What is the average cost of health services per visit?	_____ THB/visit
	How much do you spend average for	_____ THB/month

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11	healthcare services per month?	
12	How long do you have to wait for health services?	_____ minutes/hours
13	Do you face difficulties in communicating with Thai language in healthcare facilities?	☐ 1. Yes ☐ 2. No
14	Did the healthcare facilities provide translator when you have difficulties in communication?	☐ 1. Yes ☐ 2. No
15	Did the healthcare provider treat you with respect when you seek medical care?	☐ 1. Yes ☐ 2. No
16	Did the healthcare provider listen to your	☐ 1. Yes ☐ 2. No

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	concerns during the consultation?	
17	Did the healthcare provider explain your diagnosis or treatment clearly?	☐ 1. Yes ☐ 2. No
18	Did the provider seem concerned about your well-being?	☐ 1. Yes ☐ 2. No
19	Did the healthcare provider make an effort to communicate clearly with you?	☐ 1. Yes ☐ 2. No
20	Do you know about health insurance?	☐ 1. Yes ☐ 2. No
21	Where do you get information about health insurance? (select all that apply)	☐ 1. Healthcare providers ☐ 2. Family ☐ 3. Friends ☐ 4. Employer ☐ 5. Social media ☐ 6. Others(specify) _____

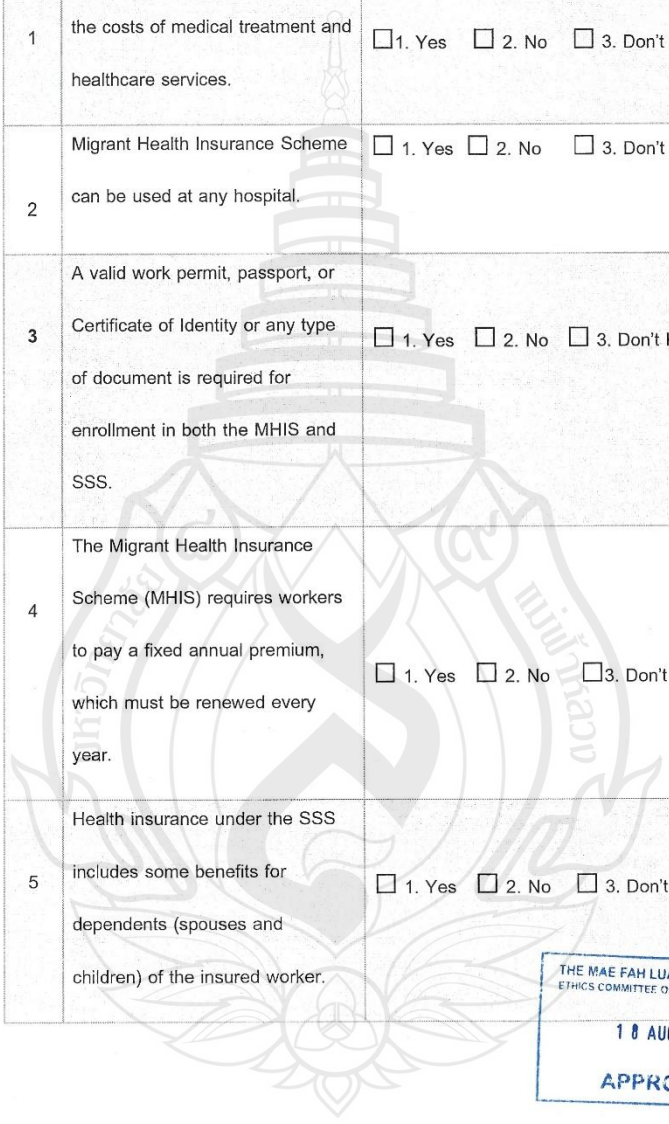
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Section 3: Knowledge about Health Insurance		
1	Health insurance can help cover the costs of medical treatment and healthcare services.	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know
2	Migrant Health Insurance Scheme can be used at any hospital.	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know
3	A valid work permit, passport, or Certificate of Identity or any type of document is required for enrollment in both the MHIS and SSS.	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know
4	The Migrant Health Insurance Scheme (MHIS) requires workers to pay a fixed annual premium, which must be renewed every year.	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know
5	Health insurance under the SSS includes some benefits for dependents (spouses and children) of the insured worker.	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know



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6	Workers in informal jobs, such as domestic work, agriculture, or construction, can apply for the Migrant Health Insurance Scheme (MHIS).	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know
7	Employers are responsible for enrolling their workers in the Social Security Scheme (SSS).	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know
8	Both MHIS and SSS cover medical check-ups, inpatient and outpatient care and maternity care.	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know
9	The Social Security Scheme (SSS) is financed by workers monthly salary only.	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know
10	The Migrant Health Insurance Scheme (MHIS) is available for all migrant workers who do not qualify for the Social Security Scheme (SSS).	☐ 1. Yes ☐ 2. No ☐ 3. Don't Know

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Section 4: Perception of Health Insurance

Please read each statement carefully and select the response that best represents your opinion and mark a tick (✓).

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1	I believe that having health insurance is beneficial for me and my family.					
2	I would prefer to pay at the time of illness instead of paying for insurance.					
3	I trust the health insurance system provided in Thailand.					
4	I do not expect to spend money for seeking health care because I am healthy.					
5	Health insurance is too expensive for migrant workers like me.					

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Section 5: Health Literacy Level Assessment

Please read each statement carefully and select the response that best represents your opinion and mark a tick (✓).

(A) Access and understanding to health information and services

		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1	I can find health information in a language I understand.					
2	I can understand the health information provided by healthcare providers.					
3	I am always open to new health information because I want to be healthy.					
4	I can understand the instructions on medicine labels and how to take my medication properly.					

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5	I know where to go for medical help when I feel sick.					
(B) Communication and support						
		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
6	I have someone to help me when I get sick.					
7	I have people who are ready to help me.					
8	I am confident asking healthcare provider to explain something I don't understand.					
9	I can discuss and exchange knowledge about health with healthcare providers.					
10	I can explain health information to others clearly.					
(C) Health Information Processing and Application						

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		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
11	I can fill in health forms given by healthcare providers correctly by myself.					
12	I try to find out which behaviors affect my health.					
13	I compare health information from different sources before making decision.					
14	When I receive health information, I check the reliability of the source before deciding to believe or follow that information.					
15	I know how to use health information to prevent diseases and maintain my well-being.					
(D) Health Information Critical Analysis & Decision-Making						

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16	I feel confident making decisions about my health when I understand the information well.					
17	I decide whether to go to the hospital or treat myself based on how serious the illness feels.					
18	I think carefully about the risks and benefits before deciding to take a new treatment or medicine.					
19	I help my family make health decisions by finding and explaining health information.					
20	I can recognize when a health message is trying to scare or trick people instead of giving helpful advice.					
(E) Health Self-Management						
		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree



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21	I have good health knowledge and information for managing my health.					
22	I spent a lot of time on self-care activities.					
23	I follow recommended guidelines for health checkup, vaccinations to take care of my health.					
24	I engage in health-promoting behaviors.					
25	I have a plan for what to do in case of a medical emergency.					

Section 6: Need factors

1	In general, how would you describe your current health status?	☐ 1. Poor	☐ 2. Fair	☐ 3. Good
---	--	----------------------------------	----------------------------------	----------------------------------



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2	Do you have any underlying diseases or chronic medical conditions?	☐ 1. Yes ☐ 2. No If yes, please specify _____
3	In the past 6 months, have you experienced any health problems that required medical attention?	☐ 1. Yes ☐ 2. No If yes, please specify _____
4	In the past 6 months, has anyone in your household or family experienced any health problems that required medical attention?	☐ 1. Yes ☐ 2. No If yes, please specify _____

Section 7: Health Insurance Status

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Version 1 Date 27.5.2025

1	Do you currently have a health insurance card?	☐ 1. Yes ☐ 2. No If you answer No, skip question 2 and 3.
2	If answer Yes in question 1, what type of health insurance do you have?	☐ 1. Migrant Health Insurance Card ☐ 2. Social Security Scheme ☐ 3. M-Fund ☐ 4. Private Health Insurance ☐ 5. Others(specify) _____
3	If you have health insurance, who buy it for you?	☐ 1. Myself ☐ 2. Employer ☐ 3. Family ☐ 4. Friend ☐ 5. Others(specify) _____
4	If answer NO in question 1, how do you pay when you seek healthcare services?	☐ 1. Out of pocket ☐ 2. Not seeking medical care ☐ 3. Others(specify) _____

Thank You for Your Participation



CURRICULUM VITAE

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EDUCATIONAL BACKGROUND

2023 Bachelor of Medicine, Bachelor of Surgery
University of Medicine (1) Yangon

2023 Diploma in Banking & Finance ABE (UK)
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WORK EXPERIENCE

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