MIGRATION AND MENTAL HEALTH ON THE THAILAND-BURMA BORDER: A MIXED METHODS STUDY

by

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Abstract

Statement of problem: For individuals who migrate from Burma to Thailand, experiences during migration from Burma to Thailand, and within Thailand, and subsequent working conditions can expose them to exploitation and abuse. Existing literature on migration and mental health focuses primarily on migration from low-resource settings to industrialized settings.

Methods: The qualitative phase of research employed in-depth interviews (n=61) with migrant workers, exploring the themes of experiences during migration processes and working conditions in and around Mae Sot, Thailand. These results informed development of a survey instrument designed to assess prevalence of exposure to migration and post-migration stressors, as well as symptoms of depression and anxiety, amongst three samples of migrants: migrants working in agriculture (n=203), migrants working in factories (n=258), and migrants working in the sex industry (n=128). The quantitative study utilized respondent-driven sampling, a sampling approach designed for use with hidden and marginalized populations. Quantitative analyses included mediation analysis and multivariate linear regression, to explore the prevalence of symptoms of depression and anxiety amongst the sub-samples of migrant workers, to explore the relationship between experiences of deceit during migration, coercive working conditions and mental health outcomes, depression and anxiety, and to identify post-migration experiences that are associated with increased symptoms of depression and anxiety in this sample.

Results: Qualitative interviews with migrant workers on the Thailand-Burma border revealed migratory processes that often include debt, deceit, and entry into exploitative workplaces in Thailand. Migrants in various industries described experiences of forced labor, violence and abuse, and salary deductions. Mediation analysis of the whole sample indicated that the relationship between deceit during migration and depression and anxiety outcomes is partially mediated by coercive working conditions. Multivariate regression analyses showed that the impact of other working conditions, and safety and security, on depression and anxiety varied by sub-sample, and outcome.

Conclusions: Aspects of migratory processes, working conditions, and safety and security amongst migrant workers working in agriculture, factories and the sex industry, have significant influence on depression and anxiety outcomes. Implications for these findings for policy, service provision and future research are discussed, including the need for integrated prevention and treatment approaches to mental health needs of this specific population, and development of frameworks to address gaps in policy and services for migrant workers within the field of global mental health.

Readers: Courtland Robinson, PhD; Caitlin Kennedy, PhD; Susan Sherman, PhD; Wietse Tol, PhD.

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ACRONYMS

ASEAN	Association of South-East Asian Nations
DALY	Disability Adjusted Life Years
DSM	Diagnostic and Statistical Manual
GMS	Greater Mekong Sub-region
HSCL	Hopkins Symptoms Checklist
ILO	International Labor Organisation
IOM	International Organisation for Migration
JHSPH	Johns Hopkins School of Public Health
MHAP	Mental Health Access Project
mhGAP	Mental Health Gap Action Programme
MHPSS	Mental Health and Psychosocial Support
MNS	Mental, neurological and substance use disorders
PTSD	Post-Traumatic Stress Disorder
RDS	Respondent Driven Sampling
SAW	Social Action for Women
TAP	Trafficking Assessment Project

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I. Research objectives and background to the study

1. Study aims and objectives

The primary objective of this study is to identify and describe experiences of migrants from Burma to Mae Sot, Thailand, during and after migration, and to assess the association between these experiences and symptoms of depression and anxiety.

This study is nested within the Trafficking Assessment Project [TAP], a collaborative project between Johns Hopkins School of Public Health [JHSPH] and Social Action for Women [SAW], a Burmese community-based organization located in Mae Sot, Thailand. TAP was a 2-year project, involving a multi-phase research study, as well as the introduction and evaluation of monitoring systems to support and improve SAW's services for victims of trafficking and migrant workers in Thailand.

The over-arching goal of the research component of TAP was to estimate the prevalence of trafficking amongst migrant workers from Burma living and working in and around Mae Sot, Thailand, a town and district bordering Burma. This research question was developed to respond to the lack of data on patterns, dynamics and prevalence of trafficking from Burma to Thailand. Moreover, the project was developed in recognition of the fact that data concerning the prevalence of trafficking and its associated risk factors, within the major transit location of Mae Sot, Thailand, could inform the development and refinement of anti-trafficking policies and programs, and improve efforts to assist and protect individuals who have been trafficked by enhancing

understanding of the population and their needs. The emerging evidence base linking trafficking to adverse physical and mental health outcomes establishes this research question as central in efforts to improve the health and human rights of vulnerable individuals in this context (Oram, Stockl, Busza, Howard, & Zimmerman, 2012; Tsutsumi, Izutsu, Poudyal, Kato, & Marui, 2008). *Chapter V – Study Design* includes further detail on the formative, qualitative and quantitative research phases of TAP.

From previous research projects conducted in Mae Sot (Feinstein International Center, 2011), and with Burmese migrant workers in other parts of Thailand (Robinson & Branchini, 2011), it is evident that trafficking dynamics in this context are embedded within migration patterns and processes. Based on this understanding, TAP utilized sampling approaches throughout the study that focused on the broader population of migrant workers, who may or may not have experienced trafficking. This approach enabled insight not only into prevalence and dynamics of trafficking, as per the primary research objective of TAP, but also broader migration dynamics and processes, and forms of exploitation and abuse in workplaces in Thailand. This allowed for development of this present study, which analyses both the qualitative and quantitative data from TAP from the perspective of migration and health, exploring the association between migration experiences, subsequent working and living conditions, and mental health.

Specific Aims 1 and 2 are based on data from a qualitative study, consisting of in-depth interviews with 61 migrant workers from Burma, working in various industries in and around Mae Sot, Thailand.

Specific Aim 1: To describe experiences of migrant workers in Mae Sot, Thailand, during their migration processes from Burma to Thailand;

Specific Aim 2: To describe working conditions for the same population in Mae Sot, Thailand, including modes of entry into work and specific forms of exploitation experienced in workplaces;

The subsequent aims are based on analysis of data from a prevalence study of three distinct groups of migrants (working in agriculture, in factory work, and in the sex industry in Mae Sot, Thailand):

Specific Aim 3: Determine the prevalence of symptoms of depression and anxiety amongst the sample population of migrants from Burma living and working in and around Mae Sot, Thailand

Specific Aim 4: Examine a possible mediation model, exploring the relationship between deceit during migration, coercive working conditions and mental health outcomes, depression and anxiety.

Hypothesis 1: There is a direct relationship between deceit experienced during migration and mental health symptoms, which is mediated in part by coercive working conditions.

Specific Aim 5: Identify post-migration experiences that are associated with increased symptoms of depression and anxiety

Hypothesis 2: Aspects of working conditions and interactions with authorities are associated with increased levels of depression and anxiety. This association differs across the three categories of migrants in the sample.

This study seeks to identify particular influences on mental health of migrants living and working in and around Mae Sot, Thailand, in order to identify programmatic and policy interventions that can effectively address their needs and improve their well-being. More broadly, the study seeks to contribute to the research literature on mental health amongst vulnerable populations in low-resource settings.

Specific aspects of this study have implications for research, programs and policy. The qualitative data is analyzed from the perspective of a migration and health framework that emphasizes the phases in the migratory process. This approach and analysis can improve understanding of the ways in which migrant workers from Burma travel to Thailand, their experiences in transit, and ways in which the transit phase of their travel to Thailand is connected with subsequent experiences in workplaces in Thailand. Moreover, both qualitative and quantitative results highlight the types and prevalence of exploitation and abuse in three different industries in Thailand. Therefore, this study provides significant insight into human rights violations and labor conditions experienced by migrant workers in Thailand, leading to recommendations for programs and policies that are further detailed in *Chapter VIII*. Finally, there are few studies focused on the mental health of migrant workers in low-resource settings, and this study is the first in the specific context of migration in the Thailand-Burma border area.

2. Overview of chapters

Chapter I – Research Objectives presents the research objective and specific aims of the present study, an overview of the chapters of the dissertation, and a description of the significance of the research.

Chapter II – Background provides as background to the study a discussion of the global context of migration and recent developments in the field of migration and health, as well as a discussion of the specific context of the present study, migration and displacement from Burma to Thailand. The chapter concludes with a discussion of research and policy in the field of global mental health.

Chapter III – Literature Review summarizes the body of literature relevant to the study objectives and context, exploring literature on migration and health and, specifically, migration and mental health. The review focuses on primarily on migrants with irregular status and migration in low-resource settings.

Chapter IV – Conceptual Framework and Theoretical Approach presents a number of conceptual frameworks and theoretical approaches relevant to the present study. Theories addressing the association between migration and mental health are presented, alongside a conceptual framework of migration and health that guides this study. Moreover, a brief discussion of theories and definitions of stress, and its association with mental health outcomes, is included. Finally a conceptual framework guiding this study is

proposed, combining the migration and health conceptual framework and theoretical approaches to stress and mental health.

Chapter V – Study Design presents all aspects of the qualitative and quantitative methods used for this study, including instrument development and design, sampling, data collection, analysis methods and research ethics, as well as a discussion of this study's approach to mixed methods research and an overview of the parent project in which this study is nested, the Trafficking Assessment Project.

Chapter VI – Qualitative Results presents results from 61 in-depth interviews with migrants from Burma in Mae Sot, Thailand, focusing on migration processes from Burma to Thailand. The findings illustrate themes such as issues of debt and deceit during travel, and modes of entry into work; conditions in workplaces and forms of exploitation, including salary deductions, forced work without pay and abuse and violence; and issues associated with registration, documentation and interactions with authorities. This chapter addresses Specific Aims 1 and 2.

Chapter VII – Quantitative Results presents results from analysis of 589 surveys with migrants from Burma in Mae Sot, Thailand, using a stratified respondent-driven sampling approach to sample migrants working in agriculture, factory and sex industries. The association between specific exposure variables (identified according to the study's conceptual framework and literature on migration and health) and mental health

outcomes, depression and anxiety, are presented. This chapter addresses Specific Aims 3, 4 and 5.

Chapter VIII – Discussion and Conclusions presents discussion of the results from Chapters VI and VII, alongside implications for programs and policy and overall strengths and limitations of the study. This chapter offers conclusions from the study and implications of the findings from the study for researchers, programs and policy.

3. Significance of the research

The significance of this research is in two main domains: the focus on this specific study population and the broader focus on mental health in this context.

The health characteristics of migrants, including those with irregular status, in low-resource settings, and the particular risks they can face at various stages of migration, are topics of concern in international fora (WHO, 2010a). Direct violations of migrants' rights, alongside poor living and working conditions that can undermine and influence health status, are thought to affect large numbers of migrants, whereas the evidence-base concerning specific populations of migrants or particular contexts of large-scale migration is limited (Gushulak & MacPherson, 2000; MacPherson & Gushulak, 2004).

Specific data on the nature of risks experienced in migration processes, the particular elements of exploitation in workplaces, and post-migration living conditions, including interactions with authorities, are limited. Primary data on these issues in low-resource

settings globally are often limited to advocacy reports from non-governmental organizations, which highlight the specific issues of importance for the promotion of human rights, but do not capture the magnitude and prevalence of these issues. Moreover, studies have primarily focused specifically on a single industry – often, as discussed in *Chapter III – Literature Review,* women working in the sex industry. This study contributes to the literature by characterizing three separate industries – agriculture, factory work and the sex industry, and comparing and contrasting experiences and mental health of these three groups of migrants.

Furthermore, in the context of the Thailand-Burma border, there is limited understand of the processes that link travel to and entry into work in Thailand with forms of exploitation subsequently experienced by migrants. Existing studies have not systematically identified, measured and assessed the particular experiences of migrants in ways that can adequately inform policy and program development. Discussions of how to improve the well-being of migrants need to be informed by an evidence-base that describes and documents the particular experiences of migrant workers in a variety of contexts. This particular study adds specific contextual information on a distinct migrant population on the Thailand-Burma border, in order to inform particular debate, policy and programs in a specific context, as well as contributing towards broader discussions of the potential risks and health outcomes of migrants with irregular status in low-resource settings globally.

Discussion of the health needs of migrants, both at the global level and specifically within Thailand, often contain little or no mention of mental health needs (WHO, 2010a). However, migrants may experience significant mental health problems, either as a result of mental disorders that pre-exist migration, or due to mental health needs that emerge in destination countries. Mental health treatment and services that are appropriate for and accessible to migrants are needed. Furthermore, as discussed in *Chapter III – Literature Review*, while there is extensive discussion of prevalence and correlates of mental disorders amongst migrants who migrate to industrialized, Western countries, the themes in this literature are often not directly relevant to migration in low-resources settings. Moreover, in discussions on the emerging field of global mental health, it is evident that the question of vulnerability, and how certain forms of vulnerability may impact mental health outcomes, requires further investigation (WHO, 2010b). Migrant workers in low-resource settings may experience multiple layers of vulnerability, for example, lack of legal status and lack of enforcement of labor standards to prevent poor working conditions and exploitation. As such, investigation of the mental health problems of this vulnerable group, in the context of increased attention to the interaction between vulnerability and mental health, is warranted. The focus of and findings from this study add an important dimension to the discussion of migrant health, which currently lacks adequate engagement with the question of prevention and treatment of mental disorders.

Therefore, this study seeks to make a contribution to knowledge in the following primary ways:

1. To contribute to the knowledge base about the experiences of migrant workers from Burma in Thailand, focusing both on migration and workplace-related experiences, and providing data to inform policy and programs aimed at improving the well-being of migrants in this context;
2. To identify specific mental health needs amongst different groups of migrant workers and contextualize these findings in literature on migration and mental health in low-resource settings; and
3. To add to the emerging literature on mental health of migrants in low-resource settings, using these findings to inform policy and program development focused on services for migrants in these settings.

References:

Feinstein International Center. (2011). *Developing a Profiling Methodology for Displaced People in Urban Areas: case study: Mae Sot, Thailand*. Medford: Tufts University.

Gushulak, B. D., & MacPherson, D. W. (2000). Health issues associated with the smuggling and trafficking of migrants. *J Immigr Health, 2*(2), 67-78.

MacPherson, D. W., & Gushulak, B. D. (2004). *Irregular migration and health*. Geneva: Global Commission on International Migration.

Oram, S., Stockl, H., Busza, J., Howard, L. M., & Zimmerman, C. (2012). Prevalence and risk of violence and the physical, mental, and sexual health problems associated with human trafficking: systematic review. *PLoS Med, 9*(5), e1001224.

Robinson, C., & Branchini, C. (2011). *Estimating Labor Trafficking: A Case Study of Burmese Migrant Workers in Samut Sakhon Province, Thailand*. Bangkok: Labor Protection Network and UNIAP.

Tsutsumi, A., Izutsu, T., Poudyal, A. K., Kato, S., & Marui, E. (2008). Mental health of female survivors of human trafficking in Nepal. *Soc Sci Med, 66*(8), 1841-1847.

WHO. (2010a). *Health of migrants: the way forward - report of a global consultation, Madrid, Spain, 3-5 March 2010*. Geneva: WHO.

WHO. (2010b). *Mental health and development: targeting people with mental health conditions as a vulnerable group*. Geneva: WHO.

II. Study Background

Having presented the specific research objectives of this present study, this chapter proceeds to introduce migration in the global context, as well as recent policy initiatives and approaches to migration and health. Then, the context in which this study is based – the Thailand-Burma border, and its migration dynamics and processes – is presented. Finally, a discussion of research and policy in the field of global mental health provides insight into how this study is situated in terms of broader literature and debate.

1. Migration in the global context

Dynamics and definitions

The Global Commission on International Migration [GCIM] identified a number of disparities and differentials driving global migration patterns (Global Commission on International Migration, 2005). Disparities in development, human security and protection of human rights between and within countries and regions lead millions every year to migrate. Various push and pull factors – factors in countries of origin that 'push' individual to migrate, and factors in destination countries that 'pull' migrants to those countries – underlie global migration dynamics. Complex interactions of these factors contribute to patterns and processes of migration globally. The GCIM focused on the "global jobs crisis" as a central factor driving global migration, whereby a large proportion of people globally are unable to support themselves and their families through local livelihood opportunities or labor markets, and therefore migrate in order to seek improved income and livelihoods opportunities. There is demand for a flexible labor force (often for 3D jobs – dangerous, difficult and demeaning work in destination

countries (Caouette, Sciortino, Guest, & Feinstein, 2006). Demographic trends in destination countries often result in significant gaps in the labor market that can be filled by migrant labor. However, destination countries also often seek to limit the number of migrants entering, for a range of social, political and economic reasons, or because these countries do not have capacity for adequate systems for regular migration, thus creating a category of migrant that is variously labelled irregular, illegal, unauthorized, or undocumented.[1]

Discussions of migration in a global context often focus on the issue of irregular migration. Given the nature of this form of migration, accurate data concerning the scope of irregular migration are lacking (Global Commission on International Migration, 2005). The various challenges migrants with irregular status can face – many of which have direct and indirect implications for health – are elucidated in various policy and research publications, and include unsafe travel and transit (Gushulak & MacPherson, 2000), exploitation in workplaces, and lack of redress or recourse for abuses due to fear of authorities, which often also impacts use of and access to social services (MacPherson & Gushulak, 2004). These themes are further explored in the literature review, *Chapter III*.

The language selected to describe this group of migrants often carries with it a political connotation. For example, the term "irregular" or "illegal" migrant connotes violation of rules and restrictions by the individual migrant, whereas the status of irregularity or

[1] The IOM Glossary on Migration defines irregular migration as "Migration that takes place outside the regulatory norms of the sending, transit and receiving countries." As this varies from country to country, there is no universal definition of irregular migration, and the definition may differ depending if the perspective is from the sending or destination country (IOM, 2004b: 34-35).

illegality is often produced by incongruence between labor market demands and formal migration policies, and whereas destination countries often overlook or tacitly encourage such violations in order to meet labor market demands. For example, as a study on cross-border migration from Cambodia to Thailand notes,

> Channels for migration, in particular labor migration, are defined by the policy of the destination country, usually in response to the demand of domestic labor markets for foreign workers. When the supply through established channels does not match the demand, irregular migration dynamics develop, and migrants enter illegally and undocumented (Khamsiriwatchara, et al., 2011).

Moreover, migrants with irregular status are often framed pejoratively as 'only' economic migrants – in contrast, for example, to forced migrants, who are often fleeing state persecution, or conditions of generalized violence, such that refugee status is granted, and along with it, international protection. Whereas economic migrants are usually perceived as having migrated by choice, this perception of choice as a clear-cut dividing line between economic migrants and forced migrants may not be applicable in some contexts. In a context of extreme vulnerability and deprivation, the concepts of consent, force and voluntariness are limiting. Furthermore, these descriptive terms often lack precision. The term illegal, for example, may refer to mode of entry into a country, length of stay, or type of employment, and individuals may transition from one status to another through change of employment or duration of stay (Battistella, 2008). Descriptive terms such as illegal or irregular may in fact be used to exclude migrants from access to basic services and justify violations of human rights (Willen, 2007b). In recognition of the limitations and connotations of language in this field, the term "migrant" or "migrant with irregular status" will be used throughout this study. This approach is adopted as a way to limit the

ways in which these descriptive terms imply judgement of individuals' behaviors and choices.

Migrants with irregular status can be at risk of various forms of abuse and exploitation, including trafficking. Trafficking is defined in the United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children, known as the Palermo Protocol on Trafficking, by three criteria: (1) Process (recruitment, transportation, transfer, harbouring or receipt of persons); (2) Means (threat or use of force, coercion, abduction, fraud, deception, abuse of power or vulnerability); and (3) Goal (for the purpose of exploitation, which includes exploiting the prostitution of others, sexual exploitation, forced labor, slavery or similar practices, or the removal of organs) (UNODC, 2004). Irregular migration is considered distinct from trafficking; the Palermo Protocol on Trafficking defines victims as having been forced into activities against their will, whereas migrants with irregular status are considered to have moved voluntarily. Although they may subsequently be exploited, their consent to movement is often considered a factor that distinguishes them from victims of trafficking. Migrants with irregular status are often considered to fall under the definition of smuggling, where a migrant is considered to have consented to and paid for illegal movement. Legal analysis of the Palermo Protocol on Trafficking and the Protocol Against the Smuggling of Migrants by Land, Sea and Air (the Smuggling Protocol) has found that the key distinction between the definitions of trafficking and smuggling in these legal instruments is that "the crime of trafficking was defined as forcing clear victims into activities against their will to which they did not consent or understand," while smuggling was defined as a

"mutually beneficial arrangement between two parties" involving illegal entry into a given country (Gjerdingen, 2009).

Trafficking and broader irregular migration processes may expose individuals to similar risks, and result in similar adverse outcomes. In some contexts of large-scale irregular migration, trafficking is embedded in broader migration dynamics. Migrant workers and trafficked persons share similar characteristics and risks, including that they may be "highly mobile, socially marginalized, have unauthorized legal status or be unclear about their rights and therefore have difficulty accessing services" (Zimmerman, Hossain, & Watts, 2011). As such, while the parent project, TAP, sought to define and measure the prevalence of trafficking, as distinct from other forms and patterns of migration, this study seeks to examine migration and work-related experiences of the migrant population more broadly.

Migration and health – policy initiatives and approaches

The subject of migration and health – the impact of the migration process on migrants' health, and the intersection between migration dynamics and population health, both in countries of origin and destination countries – has been the focus of extensive academic research and literature (presented in *Chapter III*). Recently, the intersection between migration and health has been the focus of policy development and debate. Policy engagement with the question of migration and health had primarily focused on the ways in which migration can introduce new diseases or strains of diseases, and result in epidemics in destination countries (Gushulak & MacPherson, 2011; MacPherson &

Gushulak, 2004; WHO, 2005). However, an emerging policy debate is focused on how health of migrants can be protected during migration processes and in destination countries. For example, the 2008 World Health Assembly resolution on the Health of Migrants noted that "some groups of migrants experience increased health risks" and that there is a "need to formulate and implement strategies for improving the health of migrants" (World Health Assembly, 2008). The 2010 Global Consultation on Migrant Health, a follow-up to the World Health Assembly resolution, established priorities for addressing health in the context of migration in four major areas: monitoring migrant health; policy and legal frameworks affecting migrant health; migrant sensitive health systems; and, partnerships, networks and multi country frameworks, seeking to identify priorities that address vulnerabilities and marginalization often experienced by migrants (WHO, 2010a). The Special Rapporteur on the human rights of migrants issued a thematic report in 2010 on the right to health and adequate housing for migrants, emphasizing that irregular status can confer adverse impacts on migrants' health and that destination countries' policies can impede access to health services (Human Rights Council, 2010).

Other initiatives have included efforts to include migrant health issues in the global development agenda. For example, the International Organization for Migration [IOM]'s contribution to consultations on the post-2015 global development agenda emphasized the need to address migrant health, regardless of individuals migrants' status, and stated that "[i]rregular migrants, in particular, often face higher risks of exploitation and marginalization, including lack of access to health services" (IOM, 2012). Other

international fora, such as the High Level Dialogue on International Migration and Development and the Global Forum on Migration and Development, have provided some opportunities to discuss and develop policy around health and migration, however, have often failed to focus on the specific issue of irregular migration and its associated risks (Mosca, Rijks, & Schultz, 2013). Many of these discussions have focused primarily or solely on the economic impacts of migration. For example, in the outcomes and recommendations of the Global Forum on Migration, the only reference to health was a recommendation to determine the most cost effective way to address health care for migrants (Global Forum on Migration and Development, 2010).

At the regional level, in 2007, the Association of South-east Asian Nations [ASEAN] leaders adopted the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers (ASEAN, 2007), which formally recognizes migrant workers as a vulnerable group in need of specific services and access to health care. Regional policy initiatives have specifically focused on HIV prevention and treatment in the context of population movement in the Greater Mekong Sub-region (JUNIMA, 2011).

2. Migration and displacement from Burma to Thailand

Migration dynamics in the Greater Mekong Sub-region [GMS][2] are driven by a range of intersecting factors, primarily economic, demographic and social development disparities between Thailand and neighboring countries. Demographic transition and a decreasing fertility rate in Thailand have made Thailand reliant on foreign labor in many industries.

[2] The GMS is made up of Burma, Cambodia, Laos, Thailand, Viet Nam, and the Yunnan Province of China.

Neighboring countries in the GMS lack livelihood opportunities and are characterized by widespread poverty. Therefore, migration to Thailand to access work and improved wages is an important livelihood strategy for individuals and communities in neighboring countries (Caouette, et al., 2006; Huguet & Punpuing, 2005; IOM, 2006; World Bank, 2006). Disparities in development, including lack of access to basic services and low-income levels in source countries, are considered major determinants of migration patterns in the region, influencing the scale and direction of migration patterns. In 2006, a World Bank report stated that "[u]neven patterns of development and diverging demographic trends" are likely to drive these migration dynamics for the coming decades (World Bank, 2006). Moreover, increased regional economic integration, alongside improved infrastructure and transport throughout the region, has, according to one study, "facilitat[ed] and instigat[ed] unprecedented flows of people across borders" (Caouette, et al., 2006). Migration in the region is dynamic, fluid and complex, with many migrants moving internally for short periods within their home country, prior to crossing the border to Thailand, and moving within Thailand in search of improved opportunities once they arrive (Caouette, et al., 2006).

Given the nature of migration to Thailand from neighboring countries, it is difficult to ascertain exact numbers of migrants residing in Thailand. Recent estimates suggest that as many as 2.4 million migrants from surrounding countries reside in Thailand, the majority of whom have arrived from neighboring Burma (Huguet, Charmatrithriong, & Richter, 2011). Within Thailand, the primary occupational sectors employing migrant labor are domestic work, agriculture, fishing and seafood processing, and service

industries, with each industry characterized by differing working and living conditions (ILO, 2006). In some industries – fishing, fish processing and domestic services – migrants account for up to a quarter of the labor force (ILO, 2006). While migrants make up a relatively small proportion of the overall workforce in the agricultural sector in Thailand, agriculture is the sector that employs the most migrant workers in absolute terms (World Bank, 2006).

There are multiple gaps in data sources concerning the nature of migration to Thailand, including a lack of data on non-registered migrants, rates of return and re-migration, and health status (Caouette, et al., 2006). For example, there is sparse data on the length of stay of most migrants, although a number of studies indicate that length of stay differs by source country, and that migrants from Burma are more likely to stay in Thailand for a long time (Khamsiriwatchara, et al., 2011; Wangroongsarb, et al., 2011). Despite Thai Government policies that are intended to ensure that migration is short-term and temporary, some data shows that the average length of stay of migrants from neighboring countries is six years, and is far higher for migrants from Burma in Chiang Mai and Tak provinces. Mean length of time in one job for migrants from Burma in inland provinces of Thailand was 4.6 years in 2008 (Boonchalaksi, Charmatrithriong, & Huguet, 2012).

The majority of migrants to Thailand are from Burma. The political and human rights situation in Burma has been a primary driver of migration from Burma to Thailand for decades. Burma had been under military rule since 1962, with increasing repression of political freedoms after the 1988 pro-democracy student demonstrations (Brees, 2008).

Ethnic minorities located in Government-designated 'black-zones', suspected of supporting insurgency groups, were often targeted for forced labor, suffering displacement, destruction of villages and other abuses by the Burmese Army (Eubank, 2008). The military Government's Four Cuts policy, aimed at cutting off insurgency groups from access to food, money, information and support from local populations, led to widespread forced labor, relocation and destruction of entire communities (Stover, et al., 2007).

Decades of armed conflict in Burma, pervasive human rights violations and targeting of ethnic minorities led as many as two million to leave Burma and flee to Thailand, beginning in the early 1980s and increasing from the mid 1990s. While the majority of migrants from Burma in Thailand have not been recognized as refugees, many have fled for reasons of political persecution, systematic violence and abuse (Green, Jacobsen, & Pyne, 2008). As such, the distinction between economic migrant and forced migrant in this context is not clear-cut. Individuals often move for multiple reasons, and an individual's status as a refugee or migrant may depend more on when they arrived in Thailand and where they settled, rather than their motivations for leaving Burma (Feinstein International Center, 2011). Separating economic and political motivation for migration in this context is difficult (Gjerdingen, 2009). Economic conditions – including those that result in significantly higher prevalence of communicable diseases, morbidity and mortality on a number of indicators (T. J. Lee, et al., 2006) – are direct results of abuses experienced by military actors, including forced labor and land confiscation (KHRG, 2009).

Burma underwent a transition to a civilian government in 2011, and several significant changes, including release of political prisoners and ceasefires with ethnic armies, have occurred since that time (Physicians for Human Rights, 2012). These changes have prompted significant changes in donor priorities, with a shift from funding refugee camps and organizations working on health and human rights in Thailand, to increased direct support of organizations based in Burma. There are hopes that political changes will result in more equitable funding for health services in Burma (Finch & Win, 2013); however, donors have identified significant barriers in health systems strengthening within Burma, including lack of public sector capacity, poor infrastructure, limited human resources, and lack of access to some areas in Burma (Risso-Gill, McKee, Coker, Piot, & Legido-Quigley, 2013). There are concerns that the shift in donors' priorities at the Thai-Burma border area from humanitarian issues to a focus on migration and development does not adequately recognize the vulnerabilities and needs of migrant workers and border populations, who may not have benefitted directly from the political changes in Burma.[3]

Moreover, despite these changes in the political climate in Burma, a number of economic and political challenges influencing migration patterns remain. For example, large development projects in rural areas throughout Burma – such as dams and plantation agricultural projects – have resulted in land confiscation and flooding of villagers' arable

[3] See for example: Physicians for Human Rights, http://physiciansforhumanrights.org/blog/international-donors-should-not-forget-others-providing-care-burma.html.

farm land. One report found that these consequences led to villagers migrating to Thailand for work due to loss of land and livelihoods (KHRG, 2013). Combined with continued extreme impoverishment in areas throughout Burma, due to years of lack of investment from the central government, and the impact of conflict, it is evident that migration from Burma to Thailand will continue despite the political changes in Burma.

Migrant workers from Burma in Thailand experience various forms of exploitation, including limitations of migrants' mobility through direct employer control (Kusakabe & Pearson, 2010), unsafe and unsanitary working conditions that confer increased risk for disease and injury (Caouette, et al., 2006), lack of legal protections, including minimum wage and guaranteed time off work (Huguet, Charmatrithriong, & Natali, 2012; Mon, 2010), and verbal, physical and sexual abuse by employers and authorities (Amnesty International, 2005; Human Rights Watch, 2010; Kusakabe & Pearson, 2010). Documentation of working conditions in factories in Southern provinces on Thailand noted forced overtime, dangerous working conditions, lack of sick leave and confiscation of work permits and passports (Vartiala, Purje, Hall, Vihersalo, & Aukeala, 2013). Access to social services for migrants is often limited. The World Bank noted that while registered migrants are officially afforded access to health services, "[a] lack of knowledge as to their rights combined with the vulnerability of their status within Thai society creates an environment in which migrants are unlikely to demand services they are entitled to use" (World Bank, 2006). Basic standards for labor protections are not enforced for migrant workers, and there is a lack of redress for migrant workers who have experienced exploitation, violations of labor rights, or abuse (Gjerdingen, 2009; Huguet & Charmatrithriong, 2011). There are explicit restrictions on migrant workers forming

unions, thus limiting avenues for organizing in order to seek enforcement of labor laws and protections (Arnold & Hewison, 2005). Migrant workers who complain about working conditions or seek legal redress for instances of exploitation face physical abuse and deportation, indicating a "dearth of legal protections for Burmese migrants in Thailand" (Gjerdingen, 2009). Archavanitkul and Hall state that human rights violations against migrant workers in Thailand are "systematic and institutionalised," with employers and authorities acting with impunity (Archavanitkul & Hall, 2011).

Migrant workers from Burma living and working in Thailand are vulnerable to a range of abuses and human rights violations. A survey of 800 residents of Mae Sot, Thailand, the location of this present study, compared well-being of registered and unregistered migrants from Burma and local Thai residents (Feinstein International Center, 2011). The study showed that feelings of safety and security amongst migrant workers are very low, and the majority of migrant workers reported being unable to seek redress for abuses or theft, or access health facilities. The findings showed high prevalence of exposure to abuse, theft, eviction and exploitation in work places amongst registered and unregistered migrants. The survey assessed vulnerability across the four domains of employment security, household security/ physical safety, community security/ access to justice, and assets and housing, demonstrating the multiple and overlapping vulnerabilities experienced by migrant workers from Burma living in Mae Sot, particularly those who are unregistered. Other factors, such as longer time spent in Mae Sot, ability to speak Thai, and having previous contacts in Mae Sot, reduced individuals' vulnerability as measured by the four domains. Previous research has also indicated that female migrants are particularly vulnerable to various forms of exploitation, including being paid a lower

wage than male migrant workers, and being unfairly dismissed from their job (Pollack & Aung, 2010).

There is a process of worker registration with the Royal Thai Government; however, the process is complicated, expensive, and restricted to a selected number of industries. The registration system has multiple steps – including fingerprinting, health checks, and visiting multiple local municipal offices, and costs over 3000 baht (around US$100). Moreover, migrant workers must register with a specific employer, and registration requires that the migrant worker remain working for that employer in order for registration to remain valid. Registration periods are open for narrow windows of time, and registration is only valid in the province of registration. Moreover, despite being registered, registered migrants are still considered illegal under Thai law, as they entered the country illegally, and therefore, may still be subject to arrest or deportation, such that this category of workers might be considered "registered irregular workers" (Huguet & Punpuing, 2005; Kusakabe & Pearson, 2010; World Bank, 2006). Huguet and Punpuing note that nearly all migrants from Burma could be considered irregular under Thai provisions, whether registered or not, "because they entered the country clandestinely or with day passes issued at border checkpoints" (Huguet & Punpuing, 2005).[4] Therefore, migrant workers from Burma in Thailand are predominantly migrants with irregular

[4] Huguet et al. describe the multiple ways a migrant entering Thailand can become irregular:

a) "they may enter the country clandestinely or without approval;
b) they may enter the country with a valid document, such as a visa or day-pass, but stay longer than permitted;
c) they may be in the country legally but working without permission;
d) they may have been working with permission but their status has changed, as when the work permit expires or the migrant changes employers" (Huguet, et al., 2011).

status, and given their status, are vulnerable to abuse, exploitation, and threat of deportation, as they are placed "in particularly vulnerable conditions at the bottom of the labor market and society" (Caouette, et al., 2006).

Despite some protections afforded by registration, including access to national health services, Caouette et al. note that lack of knowledge of rights, cultural differences, language barriers, inability to take days off work and high costs deter registered migrants from accessing benefits (Caouette, et al., 2006). According to Hall, "[l]ack of access to rights accorded in practice to these registered workers, lack of enforcement against unregistered workers and employers and harassment by officials continue to make incentives to regularize weak" (Hall, 2011). Registration may in fact confer additional burdens and risks on migrant workers. Previous studies have shown that migrants report that their employers retain the original copy of their registration document and that copies of registration documents do not protect migrants from arrest and deportation (Kusakabe & Pearson, 2010). Moreover, high costs of registration may result in migrants being in large amounts of debt to their employers, which can impact their ability to leave an exploitative workplace (World Bank, 2006) and reduce freedom of movement (Caouette et al., 2006).

Summaries of recent policy developments indicate the shifting nature of migration and labor policy in Thailand, demonstrating that the policy landscape is complex and ever-changing, while also indicating recent positive developments towards a more transparent and predictable registration system (Hall, 2011). Policy developments to regulate cross-

border migration to Thailand have developed along two distinct approaches – the first, to regularize migrants who are already in Thailand (through registration, described above), and the second, to establish mechanisms through which to regulate movement from Lao PDR, Cambodia and Burma, through the establishment of bilateral Memoranda of Understanding [MoU]. The MoUs include requirements such as the establishment of private recruitment companies, to send and manage migrant workers to industries in Thailand, including obtaining a visa, contract and work permit for the migrant worker (Huguet & Punpuing, 2005). In the case of Burma, the MoU has not been fully implemented, and only 1,500 migrants from Burma have been recruited through its processes (Huguet, et al., 2011). Therefore for Burmese seeking to come to Thailand to access livelihood opportunities, the prevailing modes of migration is irregular – primarily, movement across the border without any documentation, or over-staying a day pass obtained at the border.

3. Mental health in low-resource settings

This study is situated within broader efforts to understand, prevent and treat mental disorders and promote mental health in low-resource settings. A brief introduction to recent literature and policy initiatives in the field of global mental health is presented here.

The global prevalence and incidence of mental disorders is high, and recognition of this burden of disease of mental and substance use disorders has only recently led to increased attention in terms of policy development and academic research. The introduction of

measures of disability into estimates of the global burden of disease has brought to the fore the importance of mental disorders and "initiated the recognition of mental health as a public health priority" (Patel, 2007). According to burden of disease measures, which use disability-adjusted life years [DALYs] to estimate impacts of diseases and conditions on mortality and morbidity, mental and substance use disorders account for 7.4% of the total burden of disease in low and middle-income countries. Data from the 2010 Global Burden of Disease Study indicate that the burden of mental and substance use disorders accounts for nearly one quarter of all years lived with disability (Collins, Insel, Chockalingam, Daar, & Maddox, 2013; Whiteford, et al., 2013). Overall, mental and substance use disorders were found to be the fifth leading cause of DALYs, and the leading cause of years lived with disability [YLDs] (Whiteford, et al., 2013). Data from the WHO World Mental Health Survey, of over 60,000 individuals in 14 countries, affirmed that prevalence of mental disorders is high, mental disorders are associated with impaired functioning, and often are untreated (WHO World Mental Health Survey Consortium, 2004). Findings specific to depression and anxiety disorders in the Global Burden of Disease study indicate that depressive disorders account for 42.5% of YLDs and 40.5% of DALYs, while anxiety disorders account for 15.3% of YLDs and 14.6% of DALYs. Consistent patterns in the World Mental Health Surveys indicate, while there is wide variation between countries, anxiety disorders are the most prevalent mental disorders in the general population, followed by depressive disorders. Lifetime prevalence of anxiety disorders is 16% across all surveys, with a 12-month prevalence of 11%, and lifetime prevalence of mood disorders is 12%, with 12-month prevalence estimates of approximately 6% (Kessler, et al., 2009).

MNS [mental, neurological and substance use] disorders in low-income countries "do not attract global health policy attention," despite evidence of the considerable impact of mental and substance use disorders on individuals, families, communities and society (Patel, 2007). For example, mental health is not mentioned within the United Nations Millennium Development Goals, reflecting the ways in which mental health is often marginalized within the global health agenda (Saraceno & Dua, 2009). Alongside the issues of limited funding and policy attention, there is significant unmet need for treatment. The World Mental Health Surveys estimated that between 76.3 and 85.4% of persons with MNS disorders in low and middle-income countries received no treatment in the 12 months before the survey (Patel, 2007). This is described by Patel and Thornicroft as "an astonishingly large treatment gap for people with MNS disorders" (Patel & Thornicroft, 2009).

There has, however, been increased attention to mental health in the context of global public health. The WHO's 2001 World Health Report, *"Mental Health: New Understanding, New Hope,"* represented a turning point for global mental health and was described by Patel as "the most valuable document advocating for global mental health" (Patel, 2007; WHO, 2001). The report took a perspective that went beyond strict biomedical definitions of mental disorders, including the social determinants of mental health in its analysis. The report also focused on the need for community-based services, integration of mental health care into primary care services and education to prevent stigma and discrimination (WHO, 2001). Policy initiatives to strengthen global

commitment to and investment in MNS disorders include the WHO's Mental Health Gap Action Programme [mhGAP]. Launched in 2008, the goal of the initiative is to "to reinforce the commitment of all stakeholders to increase the allocation of financial and human resources for care of MNS disorders, and to achieve higher coverage with key interventions especially in countries with low and lower middle incomes that contribute large proportions of the global burden of these disorders" (Saraceno & Dua, 2009). The focus of mhGAP is scale up of mental health services in low and middle-income settings, through integration of mental health services into primary care settings (Gureje, 2009; Jenkins, et al., 2010). Organization of mental health services is considered a key obstacle to scaling up of treatment, and integration of mental health services into primary health care settings is proposed as a core component of scaling up services (Chisholm, et al., 2007). mhGAP provides template packages of treatment interventions for priority disorders, based on epidemiological evidence of impact on mortality, morbidity and disability. The program focuses on issues including scarcity and inequity of resources for MNS disorders and mobilization of political will, commitment and development of legislation to address MNS disorders in low and middle-income settings, calling for "political will, concerted action by a range of global health stakeholders, and the resources to implement them" (WHO, 2008).

Alongside these recommendations and policy initiatives at the level of international organizations, there has been a strong movement to incorporate mental health into the global public health agenda. The 2007 and 2011 Lancet *Series on Global Mental Health* addressed issues including inadequacy of resources for mental health, cost effectiveness

of various treatment and prevention approaches to mental disorders, and barriers to improving mental health systems in low-resource settings (Chisholm, et al., 2007; Jacob, et al., 2007; Patel, et al., 2007; Prince, et al., 2007; Saxena, Thornicroft, Knapp, & Whiteford, 2007). Prince and Patel et al.'s contribution to the series brought to light a number of key points under the rubric that there is "no health without mental health" (Prince et al., 2007). In this paper, the authors elucidated the associations between mental disorders and various physical health issues, including cardiovascular disease, diabetes, HIV/AIDS and infant growth and survival. They presented evidence that mental disorders interact with and can worsen physical health conditions. Miranda and Patel have argued for mental health concerns to be part of the Millennium Development Goals based on recognition of these associations, as mental disorders are associated with HIV/AIDS transmission, poor maternal health and poor child development (Miranda & Patel, 2005).

Building on these policy and research developments, there have been research and advocacy initiatives designed to determine and address the key challenges in the field of global mental health. In the field of research, the 2011 Lancet *Series on Global Mental Health* focused on a number of key challenges, including mental health in humanitarian emergencies, child and adolescent mental health, human resources for mental health and scale-up of services for mental health (Eaton, et al., 2011; Kakuma, et al., 2011; Kieling, et al., 2011; Tol, et al., 2011). Through consultation with researchers, advocates and clinicians, a series of 25 central research priorities have been identified, which include identifying root causes, risk and protective factors for mental disorders, advancing prevention and implementation of early interventions, improving treatment and

expanding access to care, building human resource capacity and transforming health system and policy responses (Collins, et al., 2011).

On a policy level, significant developments have occurred: following a resolution in 2012 (Hock, et al., 2012; WHO, 2012), the World Health Assembly adopted a 2013-2020 comprehensive Mental Health Action Plan (World Health Assembly, 2013). This global plan provides guidance for states to develop national action plans, focusing on a range of interventions, with a goal to "promote mental well-being, prevent mental disorders, provide care, enhance recovery, promote human rights and reduce the mortality, morbidity and disability for persons with mental disorders" (World Health Assembly, 2013). The Mental Health Action Plan is global, and designed to provide support for country-led action plans. The four goals of the Action Plan are: "strengthen effective leadership and governance for mental health; provide comprehensive, integrated and responsive mental health and social care services in community-based settings; implement strategies for promotion and prevention in mental health, and strengthen information systems, evidence and research for mental health" (WHO, 2013). The rights-based focus and recognition of the social determinants of mental health represent a shift in thinking about mental health (Saxena, Funk, & Chisholm, 2013), establishing measureable targets and indicators by which for countries to measure progress.

Recently, discussion of mental disorders in the context of global public health has focused on the ways in which individuals with mental disorders, and often their families and communities, can be considered a vulnerable group. A 2010 WHO report notes that

those with mental disorders themselves, or who affected by mental disorders of family members, for example, are often amongst the most vulnerable populations in society. The report defines vulnerable groups as those who "experience a range of adverse outcomes, including poverty, poor health and premature death," making the case that people suffering from MNS disorders experience many of the challenges vulnerable groups experience, including stigma and discrimination, being subject to violence and abuse, and exclusion from income generation and employment opportunities (WHO, 2010b). For example, Saraceno argues that risk of mental disorders is "higher among the poor, children and adolescents, abused women, the unemployed, persons with low education, the neglected elderly, victims of violence, migrants and refugees" (Saraceno, 2004). Specific dimensions of poverty have been found to be risk factors for common mental disorders, with epidemiological research on the association between poverty and common mental disorders in low-income settings suggesting the role of insecurity, hopelessness, economic and social change and access to education as mechanisms connecting poverty and common mental disorders (Patel & Kleinman, 2003). Other research suggests that the most significant correlate between poverty and poor mental health involves changes in life circumstances, a finding that is particularly relevant to the case of individuals who migrate, suggesting the need to focus on vulnerability, adverse events and economic uncertainty that households in low-income setting may experience (Das, Do, Friedman, McKenzie, & Scott, 2007). The WHO report also explores the relationship between vulnerability and increased risk for mental disorders, noting that conditions that characterize vulnerability – including stigma and discrimination, isolation, exposure to

violence and abuse, lack of access to basic services, and multiple dimensions of poverty – can cause mental disorders.

The "global mental health" field is relatively new. Critiques have noted that the basis of estimation of prevalence and policy recommendations for treatment are Western diagnostic categories, which may not be relevant or applicable in non-Western settings, thus calling into question the validity of prevalence estimates, as well as proposed treatment interventions, put forward by proponents of the movement for global mental health. Summerfield notes that the WHO's "prevalence figures lack credibility and would seriously mislead health planners and providers" (Summerfield, 2008). This critique has also examined the prevailing emphasis on treatment of mental disorders, rather than exploration of the social and economic determinants of poor mental health in the "global mental health" project (Summerfield, 2013). Proponents of this critique argue that the treatment gap and burden of disease of mental illness discussed in the global mental health field assumes Western psychiatric categories to be universal, ignores the power relations inherent in defining and diagnosing mental illness, and prioritizes Western epistemology above local practices and knowledge (Bemme & D'souza, 2012; Summerfield, 2012). Researchers argue that local perceptions of mental illness and distress must be central to generating knowledge and evidence about global mental health, however, the field is dominated and defined by expertise based in high-income settings (Salie, Shatrugna, Fernando, & Timimi, 2011). While some of these critics reject the global mental health field outright, others identify ways in which the field can be strengthened by integrated local perspectives and focusing on social and economic

determinants of mental health. Proponents of the global mental health field note these critiques, while arguing that mental illness is a global concern affecting the lives of millions, that treatment gaps are a human rights violation, and that the global mental health field seeks to incorporate local knowledge and perspectives into a model to address mental health problems (Lamichhane, 2013). These critiques bring up important points, most notably the need to take local perspective and idioms of distress seriously in constituting the mental health field, as well as the need to increase analysis and attention to the ways in which social and economic factors influence types and prevalence of mental disorders globally.

In summary, there have been a number of policy and research initiatives focusing on global mental health in the past decade, highlighting that mental health should be considered a key global public health issue. Estimates of the contribution of mental disorders to the burden of disease in developing countries have shown the significant impact of MNS disorders on mortality and morbidity in low-resource settings. Mental health is a central component of health and well-being more broadly. As the WHO points out, mental health is integral in the very definition of health in the WHO Constitution ("a state of complete physical, mental, and social well-being") (WHO, 2008). This argument points to the direct impacts of mental disorders on individuals, families and communities, and the importance of addressing mental health in a broader public health framework, and as a central component of the global health agenda. Moreover, physical health and mental health are interdependent. Addressing mental disorders in many contexts can improve physical health, as well as increase treatment-seeking and increase adherence to treatment

for chronic and communicable diseases. Transcultural psychiatric perspectives emphasize the need to integrate local perspectives on and perceptions of mental health and illness into the global mental health field. Taking these points together, it is clear that there is a strong case for mental health to "become part of global development and the public health agenda" (Saraceno, 2007).

References

Akiyama, T., Win, T., Maung, C., Ray, P., Sakisaka, K., Tanabe, A., et al. (2013). Mental health status among Burmese adolescent students living in boarding houses in Thailand: a cross-sectional study. *BMC Public Health, 13*, 337.

Allden, K., Poole, C., Chantavanich, S., Ohmar, K., Aung, N. N., & Mollica, R. F. (1996). Burmese political dissidents in Thailand: trauma and survival among young adults in exile. *Am J Public Health, 86*(11), 1561-1569.

Amnesty International. (2005). *Thailand: the plight of Burmese migrant workers*. London: Amnesty International.

Archavanitkul, K., & Hall, A. (2011). Migrant workers and human rights in a Thai context. In J. W. Huguet & A. Charmatrithriong (Eds.), *Thailand Migration Report 2011: Migration for development in Thailand: Overview and tools for policymakers*. Bangkok: IOM.

Arnold, D., & Hewison, K. (2005). Exploitation in Global Supply Chains: Burmese migrant workers in Mae Sot, Thailand. *Journal of Contemporary Asia, 35*(3), 319-340.

ASEAN. (2007). *ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers*. Cebu: ASEAN.

Battistella, G. (2008). *Irregular Migration*. Geneva: IOM.

Bemme, D., & D'souza, N. (2012). *Global Mental Health and its Discontents*: Somatosphere.

Boonchalaksi, W., Charmatrithriong, A., & Huguet, J. W. (2012). Has Permanent Settlement of Temporary Migrant Workers in Thailand Begun? *Asian and Pacific Migration Journal, 21*(3), 387-404.

Brees, I. (2008). Forced displacement of Burmese people. *Forced Migration Review, 37*, 4-6.

Caouette, T., Sciortino, R., Guest, P., & Feinstein, A. (2006). *Labor Migration in the Greater Mekong Sub-region*. Bangkok: Rockefeller Foundation.

Chisholm, D., Flisher, A. J., Lund, C., Patel, V., Saxena, S., Thornicroft, G., et al. (2007). Scale up services for mental disorders: a call for action. *Lancet, 370*(9594), 1241-1252.

Collins, P. Y., Insel, T. R., Chockalingam, A., Daar, A., & Maddox, Y. T. (2013). Grand challenges in global mental health: integration in research, policy, and practice. *PLoS Med, 10*(4), e1001434.

Collins, P. Y., Patel, V., Joestl, S. S., March, D., Insel, T. R., Daar, A. S., et al. (2011). Grand challenges in global mental health. *Nature, 475*(7354), 27-30.

Das, J., Do, Q. T., Friedman, J., McKenzie, D., & Scott, K. (2007). Mental health and poverty in developing countries: revisiting the relationship. *Soc Sci Med, 65*(3), 467-480.

Eaton, J., McCay, L., Semrau, M., Chatterjee, S., Baingana, F., Araya, R., et al. (2011). Scale up of services for mental health in low-income and middle-income countries. *Lancet, 378*(9802), 1592-1603.

Eubank, D. (2008). Under attack: a way of life. *Forced Migration Review, 37*, 10-11.

Ezard, N. (2013). It's Not Just the Alcohol: Gender, Alcohol Use, and Intimate Partner Violence in Mae La Refugee Camp, Thailand, 2009. *Subst Use Misuse*.

Falb, K. L., McCormick, M. C., Hemenway, D., Anfinson, K., & Silverman, J. G. (2013). Suicide ideation and victimization among refugee women along the Thai-Burma border. *J Trauma Stress, 26*(5), 631-635.

Feinstein International Center. (2011). *Developing a Profiling Methodology for Displaced People in Urban Areas: case study: Mae Sot, Thailand*. Medford: Tufts University.

Finch, S., & Win, S. (2013). Myanmar health services emerging from decades of neglect. *CMAJ, 185*(4), E177-178.

Gjerdingen, E. (2009). Suffocation inside a cold storage truck and other problems with trafficking as "exploitation" and smuggling as "choice" along the Thai-Burmese border *Arizona Journal of International & Comparative Law, 26*(3), 700-737.

Global Commission on International Migration. (2005). *Migration in an interconnected world: new directions for action*. Geneva: GCIM.

Global Forum on Migration and Development. (2010). *Fourth Meeting of the Global Forum on Migration and Development: Report of Proceedings* Puerto Vallarta: GFMD.

Green, M., Jacobsen, K., & Pyne, S. (2008). Invisible in Thailand: documenting the need for protection. *Forced Migration Review, 37*, 31-32.

Gureje, O. (2009). The WPA train-the-trainers workshop on mental health in primary care (Ibadan, Nigeria, January 26-30, 2009). *World Psychiatry, 8*(3), 190.

Gushulak, B. D., & MacPherson, D. W. (2000). Health issues associated with the smuggling and trafficking of migrants. *J Immigr Health, 2*(2), 67-78.

Gushulak, B. D., & MacPherson, D. W. (2011). Health aspects of the pre-departure phase of migration. *PLoS Med, 8*(5), e1001035.

Hock, R. S., Or, F., Kolappa, K., Burkey, M. D., Surkan, P. J., & Eaton, W. W. (2012). A new resolution for global mental health. *Lancet, 379*(9824), 1367-1368.

Huguet, J. W., & Charmatrithriong, A. (2011). *Thailand Migration Report 2011: Migration for development in Thailand: Overview and tools for policymakers*. Bangkok: IOM.

Huguet, J. W., Charmatrithriong, A., & Natali, C. (2012). *Thailand at a crossroads: challenges and opportunities in leveraging migration for development*. Washington, D.C.: Migration Policy Institute and IOM.

Huguet, J. W., Charmatrithriong, A., & Richter, K. (2011). Thailand Migration Profile. In J. W. Huguet & A. Charmatrithriong (Eds.), *Thailand Migration Report 2011: Migration for development in Thailand: Overview and tools for policy makers*. Bangkok: IOM.

Huguet, J. W., & Punpuing, S. (2005). *International Migration in Thailand*. Bangkok: IOM.

Human Rights Council. (2010). *Report of the Special Rapporteur on the human rights of migrants, Jorge Bustamante*. Geneva: Office of the High Commissioner for Human Rights.

Human Rights Watch. (2010). *From the tiger to the crocodile: abuse of migrant workers in Thailand*. Bangkok: Human Rights Watch

ILO. (2006). *The Mekong Challenge: Underpaid, Overworked and Overlooked*. Bangkok: ILO.

IOM. (2006). *Review of Labor Migration Dynamics in Cambodia*. Phnom Penh: IOM.

IOM. (2012). *Health in the post-2015 Development Agenda: The importance of migrants' health for sustainable and equitable development*. Geneva: IOM.

Jacob, K. S., Sharan, P., Mirza, I., Garrido-Cumbrera, M., Seedat, S., Mari, J. J., et al. (2007). Mental health systems in countries: where are we now? *Lancet, 370*(9592), 1061-1077.

Jenkins, R., Kiima, D., Njenga, F., Okonji, M., Kingora, J., Kathuku, D., et al. (2010). Integration of mental health into primary care in Kenya. *World Psychiatry, 9*(2), 118-120.

JUNIMA. (2011). *Multi Stakeholder Dialogue on Migrant Workers' Health and Access to HIV Services in the ASEAN Region*. Bangkok: JUNIMA.

Kakuma, R., Minas, H., van Ginneken, N., Dal Poz, M. R., Desiraju, K., Morris, J. E., et al. (2011). Human resources for mental health care: current situation and strategies for action. *Lancet, 378*(9803), 1654-1663.

Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Chatterji, S., Lee, S., Ormel, J., et al. (2009). The global burden of mental disorders: an update from the WHO World Mental Health (WMH) surveys. *Epidemiol Psichiatr Soc, 18*(1), 23-33.

Khamsiriwatchara, A., Wangroongsarb, P., Thwing, J., Eliades, J., Satimai, W., Delacollette, C., et al. (2011). Respondent-driven sampling on the Thailand-Cambodia border. I. Can malaria cases be contained in mobile migrant workers? *Malar J, 10*, 120.

KHRG. (2009). *Abuse, Poverty and Migration*. Mae Sot: KHRG.

KHRG. (2013). *Losing Ground: Land conflicts and collective action in Eastern Myanmar*. Mae Sot: Karen Human Rights Group

Kieling, C., Baker-Henningham, H., Belfer, M., Conti, G., Ertem, I., Omigbodun, O., et al. (2011). Child and adolescent mental health worldwide: evidence for action. *Lancet, 378*(9801), 1515-1525.

Kusakabe, K., & Pearson, R. (2010). Transborder Migration, Social Reproduction and Economic Development: A Case Study of Burmese Women Workers in Thailand. *International Migration, 48*(6), 13-42.

Lamichhane, J. (2013). Evolving effort - http://www.ekantipur.com/2013/04/19/related-article/evolving-effort/370231.html. Retrieved 3/2/2014, 2014

Lee, T. J., Mullany, L. C., Richards, A. K., Kuiper, H. K., Maung, C., & Beyrer, C. (2006). Mortality rates in conflict zones in Karen, Karenni, and Mon states in eastern Burma. *Trop Med Int Health, 11*(7), 1119-1127.

Lopes Cardozo, B., Talley, L., Burton, A., & Crawford, C. (2004). Karenni refugees living in Thai-Burmese border camps: traumatic experiences, mental health outcomes, and social functioning. *Soc Sci Med, 58*(12), 2637-2644.

MacPherson, D. W., & Gushulak, B. D. (2004). *Irregular migration and health*. Geneva: Global Commission on International Migration.

Miranda, J. J., & Patel, V. (2005). Achieving the Millennium Development Goals: does mental health play a role? *PLoS Med, 2*(10), e291.

Mon, M. (2010). Burmese labour migration into Thailand: governance of migration and labour rights. *Journal of the Asia Pacific Economy 15*(1), 33-44.

Mosca, D., Rijks, B., & Schultz, C. (2013). A role for health in the global migration and development debate? Looking ahead at the UN High Level Dialogue on Migration and Development (HLD) and other forums. *Migration Policy Practice, 3*(2).

Patel, V. (2007). Mental health in low- and middle-income countries. *Br Med Bull, 81-82*, 81-96.

Patel, V., Araya, R., Chatterjee, S., Chisholm, D., Cohen, A., De Silva, M., et al. (2007). Treatment and prevention of mental disorders in low-income and middle-income countries. *Lancet, 370*(9591), 991-1005.

Patel, V., & Kleinman, A. (2003). Poverty and common mental disorders in developing countries. *Bull World Health Organ, 81*(8), 609-615.

Patel, V., & Thornicroft, G. (2009). Packages of care for mental, neurological, and substance use disorders in low- and middle-income countries: PLoS Medicine Series. *PLoS Med, 6*(10), e1000160.

Physicians for Human Rights. (2012). *Bitter Wounds and Lost Dreams: Human Rights under Assault in Karen State, Burma*. Boston, MA: PHR

Pollack, J., & Aung, S. L. (2010). Critical times: gendered implications of the economic crisis for migrant workers from Burma/Myanmar in Thailand. *Gender and Development, 18*(2), 213-227.

Prince, M., Patel, V., Saxena, S., Maj, M., Maselko, J., Phillips, M. R., et al. (2007). No health without mental health. *Lancet, 370*(9590), 859-877.

Risso-Gill, I., McKee, M., Coker, R., Piot, P., & Legido-Quigley, H. (2013). Health system strengthening in Myanmar during political reforms: perspectives from international agencies. *Health Policy Plan*.

Salie, M., Shatrugna, V., Fernando, S., & Timimi, S. (2011). *A Reply to "Grand Challenges in Mental Health"*: Somatosphere.

Saraceno, B. (2004). Mental health: scarce resources need new paradigms. *World Psychiatry, 3*(1), 3-5.

Saraceno, B. (2007). Advancing the global mental health agenda. *Int J Public Health, 52*(3), 140-141.

Saraceno, B., & Dua, T. (2009). Global mental health: the role of psychiatry. *Eur Arch Psychiatry Clin Neurosci, 259 Suppl 2*, S109-117.

Saxena, S., Funk, M., & Chisholm, D. (2013). World Health Assembly adopts Comprehensive Mental Health Action Plan 2013-2020. *Lancet, 381*(9882), 1970-1971.

Saxena, S., Thornicroft, G., Knapp, M., & Whiteford, H. (2007). Resources for mental health: scarcity, inequity, and inefficiency. *Lancet, 370*(9590), 878-889.

Stover, E., Suwanvanichkij, V., Moss, A., Tuller, D., Lee, T. J., Whichard, E., et al. (2007). *The Gathering Storm: Infectious Diseases and Human Rights in Burma*: Human Rights Center, University of California, Berkeley/ Center for Public Health and Human Rights, Johns Hopkins School of Public Health

Summerfield, D. (2008). How scientifically valid is the knowledge base of global mental health? *BMJ, 336*(7651), 992-994.

Summerfield, D. (2012). Afterword: against "global mental health". *Transcult Psychiatry, 49*(3-4), 519-530.

Summerfield, D. (2013). "Global mental health" is an oxymoron and medical imperialism. *BMJ, 346*, f3509.

Thornton, T. (2012). *Transcultural psychiatry: a position paper*. Glasgow: University of Glasgow

Tol, W. A., Barbui, C., Galappatti, A., Silove, D., Betancourt, T. S., Souza, R., et al. (2011). Mental health and psychosocial support in humanitarian settings: linking practice and research. *Lancet, 378*(9802), 1581-1591.

UNODC. (2004). *Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children*: available at http://www.unodc.org/documents/treaties/UNTOC/Publications/TOC%20Convention/TOCebook-e.pdf.

Vartiala, S., Purje, H., Hall, A., Vihersalo, K., & Aukeala, A. (2013). *Cheap has a High Price: Responsibility problems relating to international private label products and food production in Thailand*. Helsinki: Finnwatch.

Wangroongsarb, P., Satimai, W., Khamsiriwatchara, A., Thwing, J., Eliades, J. M., Kaewkungwal, J., et al. (2011). Respondent-driven sampling on the Thailand-Cambodia border. II. Knowledge, perception, practice and treatment-seeking behaviour of migrants in malaria endemic zones. *Malar J, 10*, 117.

Whiteford, H. A., Degenhardt, L., Rehm, J., Baxter, A. J., Ferrari, A. J., Erskine, H. E., et al. (2013). Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet, 382*(9904), 1575-1586.

WHO. (2005). *International Health Regulations*. Geneva: WHO.

WHO. (2010). *Mental health and development: targeting people with mental health conditions as a vulnerable group*. Geneva: WHO.

WHO. (2012). *Global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level. 130th Session of the World Health Organization Executive Board. Agenda item 6.2*. Geneva: WHO.

WHO. (2013). *Mental Health Action Plan 2013-2020*. Geneva: WHO.

WHO World Mental Health Survey Consortium. (2004). Prevalence, Severity, and Unmet Need for Treatment of Mental Disorders in the World Health Organization World Mental Health Surveys. *JAMA, 291*(21), 2581-2590.

Willen, S. S. (2007). Toward a Critical Phenomenology of "Illegality": State Power, Criminalization, and Abjectivity among Undocumented Migrant Workers in Tel Aviv, Israel. *International Migration, 45*(3), 8-38.

World Bank. (2006). *Labor Migration in the Greater Mekong Sub-region*. Bangkok: World Bank

World Health Assembly. (2008). *Health of Migrants: 61st World Health Assembly*. Geneva: WHO.

World Health Assembly. (2013). *Comprehensive mental health action plan 2013–2020*. Geneva: WHO.

Zimmerman, C., Hossain, M., & Watts, C. (2011). Human trafficking and health: a conceptual model to inform policy, intervention and research. *Soc Sci Med, 73*(2), 327-335.

III. Literature review

The following literature review summarizes and analyzes key components of the research literature that are pertinent to the specific aims of this study. The focus is on migration and health of migrant populations, including those with irregular status, primarily in low-resource settings. Moreover, as discussed in *Chapter II*, individuals who have experienced trafficking are in some contexts – including the context in which this study is located – part of broader migration dynamics. Therefore, literature on trafficking and mental health, is also discussed below.

1. Migration and health

In a review of the associations between migration and health, Carballo and Mboup note the many intersections between migration and health outcomes, including communicable and non-communicable diseases, and occupational risks that lead to injury and disability (Carballo & Mboup, 2005). Various approaches have been used to understand the changes to migrants' health, at the individual and population level, that can occur during and after migration. The convergence model proposes that physical, social and cultural influences in destination countries alter migrants' health outcomes, such that their health status converges with that of the population of the destination country. The resettlement stress model proposes that stressors that migrants experience in destination countries – such as social isolation and lack of access to services – have a significant impact on health outcomes, leading to decreased health and well-being. The interaction model frames changes in migrants' health as an interaction between pre-migration and post-migration stressors, as well as individuals' and households' strategies to maintain health

(Llacer, Zunzunegui, del Amo, Mazarrasa, & Bolumar, 2007). Specific groups of migrants may face additional risks; for example, research suggests that this is the case for female migrants (Adanu & Johnson, 2009; Llacer, et al., 2007).

Literature on migration and health is discussed below, with sections focusing on migration and communicable diseases, which has been a central theme in the literature on migration and health, followed by discussion of potential risks during travel and transit, living and working conditions, and the impact of legal status on migrants' health status and access to health care. Finally, a discussion of a specific population, migrant workers in the United States, touches on some similarities to migrant workers in this study's context.

Migration and communicable diseases

From the beginning of research on migration and health, there was a marked focus on the types of new, communicable diseases migrants could introduce to destination countries, and thus, the potential negative impact migration could have on the health of populations in destination countries (J. Evans & Baldwin, 1987). The theme of migration and communicable disease has continued to be central to migration and health literature.

While some research has indicated the importance of migration in development of new strains of malaria and tuberculosis (TB) (Khamsiriwatchara, et al., 2011; Lynch & Roper, 2011; Wangroongsarb, et al., 2011), a significant focus of this literature is on HIV transmission, with a focus on labor migrants and female sex workers who are migrants as

groups who are particularly vulnerable to HIV transmission. A systematic review of HIV risk and labor migration noted the structural and ecological components of HIV risk and labor migration, and that HIV risk was found to be associated with multi-level determinants, including policy, socio-cultural context, and sexual practices (S. M. Weine & Kashuba, 2012). Social determinants of HIV risk include a number of factors ubiquitous amongst labor migrants, such as changes in financial status, difficult working and housing conditions, separation from families, limited access to social support, and lack of access to health services. Research on labor migration in Mozambique found that increased socio-economic status gained through migration may be associated with increased exposure to HIV risks (Agadjanian, Arnaldo, & Cau, 2011).

In a study comparing migrant and non-migrant female sex workers in South Africa, findings showed that migrant sex workers had lower health service utilization and condom use, while having safer work environments than non-migrant sex workers (Richter, et al., 2012). A systematic review focusing on the differences in HIV and health-related risks between migrant and non-migrant female sex workers showed that migrant female sex workers in low-income settings experienced higher HIV risk than non-migrants. However, a lack of consistent difference in HIV risk between migrants and non-migrants indicates the "importance of the local context in mediating risk among migrant female sex workers," whereas in the case of acute sexually transmitted infection, migrant female sex workers were at greater risk in high and low-income settings (Platt, et al., 2013). A more extensive literature on sex work and HIV risk has focused on women who have been trafficked into sex work and the risks associated with trafficking,

including violence, focuses on mode of entry into sex work (force, fraud or coercion) and sexual health outcomes (George & Sabarwal, 2013; Silverman, Decker, Gupta, Maheshwari, Patel, et al., 2007; Silverman, Decker, Gupta, Maheshwari, Willis, et al., 2007). A systematic review of studies on trafficking and health identified 19 studies, all of which focused on women and sexual exploitation. Findings showed high levels of violence and abuse, physical and mental health problems amongst victims of trafficking (Oram, Stockl, et al., 2012).

Migration and risks during travel and transit

Some studies have documented the risks that migrants, especially those with irregular status, face during travel and transit to destination countries. For example, a study of migrant women from Mexico crossing the border to the United States found that women encountered multiple risks – including drowning, suffocation in enclosed spaces, such as truck trailers, and heat exposure – due to unsafe border crossing, resulting in multiple impacts on health, including severe injury (McGuire & Georges, 2003). Travel across borders can result in injury or death. Data collected on the United States-Mexico border has shown that 36% of paediatric deaths of children from Mexico or Central America in one year could be attributed to hazards experienced while crossing the border (Bowen & Marshall, 2008). Deaths in transit from Mexico to the United States in a one-year period in border counties in Arizona and New Mexico were largely due to preventable causes, primarily environmental exposure (Sapkota, et al., 2006). While there is a lack of

published data on other border crossings, reports of morbidity and mortality associated with migrants undertaking hazardous land and sea crossings globally are ubiquitous.[5]

Health and migrants' living and working conditions

Benach et al. provide an overview of the various health issues associated with working conditions, and note the multiple risks associated with working conditions for low-skilled migrants. However, there are limited empirical studies that focus on these issues (Benach, Muntaner, Delclos, Menendez, & Ronquillo, 2011). Studies that address these issues focus particularly on occupational health and safety, based on the finding that low-skilled migrants "bear a disparate burden of occupational fatalities, injuries, and illnesses as compared to the non-migrant or native workforce" (Howard, 2010). The precariousness of the industries in which migrants often work can lead to injury and fatalities. Specific risks may be associated with particular industries and types of work – for example, exposure to pesticides in agricultural work. Even within high-risk industries, migrants are at greater risk of injury than non-migrants (Schenker, 2010b). The body of research on migration and occupational health shows "a consistent pattern of higher occupational morbidity and mortality among immigrant workers" (Schenker, 2010a). Disparities in injuries between migrant and non-migrant groups within industries may be explained by assignment of more hazardous work to migrants and inability of migrants to complain about unsafe conditions and hazardous work. Workplace discrimination and workplace harassment both have direct and indirect pathways to adverse physical and mental health

[5] See for example media coverage of deaths of migrants crossing from North Africa to Europe: http://edition.cnn.com/2013/08/10/world/europe/italy-migrant-drowning; http://www.theguardian.com/world/2013/jul/28/migrants-drown-lampedusa-crossing).

outcomes, including post-traumatic stress disorder [PTSD], depression, headaches, stomachaches, and injury, as well as negative health and coping behaviors, such as smoking and alcohol-use (Okechukwu, Souza, Davis, & de Castro, 2013).

Migrants' legal status and health

Some literature has directly addressed the health impacts of legal status on migrants, focusing on topics including barriers in accessing health services, and impact of irregular status on living and working conditions (Quesada, 2012; Wolffers, Verghis, & Marin, 2003). Acevedo-Garcia notes that migrants' well-being in destination countries can be "constrained by discrimination, public policies that may deny and restrict their access to rights otherwise granted to the native born, and immigrants' limited knowledge of how to navigate the institutions of the host country," which can significantly impact migrant health (Acevedo-Garcia & Almeida, 2012). Castaneda suggests that in the epidemiology of health and migration, "migrant illegality represents a variable with separate but largely unexplored effects," with distinct but intersecting and overlapping issues including fear of authorities, barriers in access to health services, and poor working and living conditions combining to produce significant impacts on health (Castaneda, 2009).

Legal status is often a key factor in determining access to health services, given categorization of migrants is a way in which destination countries seek to determine provision of interventions. For example, a refugee may be eligible for a certain package of health benefits, whereas a migrant with irregular status may be ineligible for health services (Gagnon, 2011). A study at a clinic in Berlin offering health services to migrants

with irregular status found that irregular status resulted delayed presentation of chronic illness, difficulties accessing medication for chronic illness and a lack of mental health care options for a range of mental disorders (Castaneda, 2009). Irregular status can continue to be a significant factor in limiting access to basic services even in a context with formal equality in access to health services for migrants. For example, a qualitative study in Kazakhstan found that TB treatment is limited for Uzbek migrant workers, despite being formally available to them, given constraints in legal, employment and health-care contexts that create practical obstacles to migrants' access to care (Huffman, Veen, Hennink, & McFarland, 2012). For example, migrants with irregular status reported being restricted from leaving the worksite, forced to hide from police to avoid arrest, and abused by and forced to pay bribes to authorities. As such, formal access to health care and treatment is ineffective, given the influence of legal status on social exclusion and marginalization of migrants. Structural conditions of marginalization of and discrimination against migrants can produce risks for a range of adverse health outcomes. For example, a study of Tajik male migrant workers showed that migrants' ability to protect themselves from HIV was impacted by difficult living and working conditions in Russia, including abuse and harassment by police, resulting in lack of protection of law, and therefore, lack of protection from a range of adverse social, economic and health impacts (S. Weine, Bahromov, & Mirzoev, 2008). Fear of arrest can influence behavior and mental health, while arrest and deportation experiences can result in exposure to abuse and violence (MacPherson & Gushulak, 2004).

The impact of irregular status and its intersection with health has been addressed in anthropological literature. Willen notes the "juridical, socio-political and experiential" implications of irregular status for migrants; irregular status can transform into a form of structured social exclusion of migrants from a range of social services (Willen, 2007a). Approaches to understanding health of migrants with irregular status must account for the significant structural influences on health, including formal and informal exclusion from health systems, discrimination and overarching policy approaches to managing migration, including deportation (Viruell-Fuentes, Miranda, & Abdulrahim, 2012). Being undocumented may be experienced as a chronic stressor, influencing daily behaviors, including health care seeking, resulting in adverse health outcomes both due to the impact of the stress of being undocumented, and due to lack of utilization of health services. Quesada identified vulnerabilities migrants with irregular status can face, which are "precarious living conditions, exploitative work conditions, low incomes, lack of health insurance, lack of transportation and restrictions on mobility, lack of proper housing, hunger, homelessness, language barriers, social stigmatization, restrictive and punitive immigration policies"; these vulnerabilities can interact synergistically to produce cumulative adverse health outcomes (Quesada, 2012). Migrants with documentation and legal status in low-resource settings may also experience these vulnerabilities, where labor regulations and human rights standards are poorly enforced. These studies, primarily anthropological in approach, spanning a large number of migration contexts, support Benach et al.'s contention that "migrant status is a key cross-cutting mechanism linking employment and working conditions to health inequalities through diverse exposures and mechanisms" (Benach, et al., 2011).

Health of migrant workers in the United States of America

There is extensive literature on migration and health in the population of migrant workers in the United States, who are primarily low-skilled, working in agriculture and construction industries, and largely have irregular status. While health services and systems in the United States are vastly different than those in the low-resource settings discussed above, there are some important themes to draw from this literature that are relevant for the present study. Many of these studies emphasize the role of the social context in influencing migrants' health and access to services. As Holmes contends, "social context is critical to the development of sickness and suffering among migrant workers. In the case of migrant workers in the United States, this social context includes abusive working conditions, discrimination, fear of being deported, and lack of social support and distance from family and friends in their home countries (Holmes, 2006).

As discussed above, migrants' legal status can be an important influence on health status and access to health care. Some migrants have legal status to work in the United States, which can allow them access to health care. However, forms of discrimination and structural vulnerability can contribute to lack of access to health care and adverse health outcomes amongst both migrants with legal status and those with irregular status (Quesada, 2011). Lack of documentation can impact personal safety and health, heightening health risks due to constant mobility and unstable working and living conditions (Quesada, 2011). Important differences in social context and therefore vulnerability exist between migrant workers in different industries, such as day laborers compared to agricultural workers (Bail, et al., 2012; Quesada, 2011). Migrant day

laborers are exposed to difficult and dangerous working conditions, often due to lack of training, inadequate safety equipment, and economic pressure to take these jobs (Walter, Bourgois, Margarita Loinaz, & Schillinger, 2002), and often do not complain about these conditions to their employers, as they fear losing their precarious jobs (Walter, Bourgois, & Margarita Loinaz, 2004). Migrant workers experience significant barriers to health services, including not qualifying for services, inability to forgo income in order to go to health clinics, discrimination, and culturally and linguistically inaccessible services, for example, lack of translators (Holmes, 2012), resulting in lower utilization of health services despite elevated risks for a range of health needs (Berk, Schur, Chavez, & Frankel, 2000). The intersection of unsafe border crossing, enforced separation from family, uncertainty and unpredictability of daily life, risk of work injury, and barriers to exercising legal rights result in "overlapping and intersecting" causes of adverse health outcomes, including injury and disability (Walter, et al., 2002). Literature on migrant work and health in the United States has engaged with the question of structural vulnerability, the impacts of political discourse and policy on migrant health, and marginalization of migrant workers within a range of social services (Bail, et al., 2012).

Focus and limitations of migration and health literature

This literature on migration and health sheds light on the intersections between vulnerability of migrants and health risks, touching on a range of health outcomes, including HIV, injury and chronic diseases. Analysis of labor migration, migration with irregular status, and working conditions sheds light on the structural conditions of migrant work, with discrimination, barriers to health care, dangerous working conditions,

and fear of arrest and deportation, influencing both access to health care and health outcomes. A number of studies discussed above, primarily anthropological in approach, analyze the role of legal status in influencing migrant health. However, this perspective is more fully integrated into social science research than health research (Acevedo-Garcia & Almeida, 2012). Within this body of literature, there is a lack of comparative studies of working and living conditions and migrant health within different industries in a single context. Few studies focus on structural determinants of workplace risk – for example, the role of policing and workplace raids on occupational health and safety. The issue of irregular status and its impact on health is more integrated within social science research, primarily anthropology, than public health research. However, the studies described above highlight the ways in which migration processes, including forms of travel crossing borders, and in particular, living and working conditions for irregular migrants, poses significant and overlapping risks to health of migrants.

2. Migration and mental health

Carta et al. note that, given the differences between migrants, including motivation for migration, legal status, and distance from home country, "it is impossible to consider "migrants" as a homogenous group concerning the risk for mental illness" (Carta, Bernal, Hardoy, & Haro-Abad, 2005). Despite this, there is consistent evidence in the literature concerning associations between migration and elevated risks for mental disorders, while there is continued debate as to the explanatory mechanisms for this relationship. For example, a systematic review of studies of immigrants from the ex-Soviet Union to Israel found that "[h]igher psychological distress and psychiatric morbidity have been

consistently found among immigrants compared to the Israel-born. These findings support the migration-morbidity hypothesis that predicts a greater risk for mental health problems among immigrants compared to non-immigrants and this prediction is supported by many international studies" (Mirsky, 2009). A meta-analysis provides evidence of increased rates of schizophrenia amongst first- and second-generation migrants (Cantor-Graae & Selten, 2005). As Bhugra and Minas summarize, "[f]ragmentation and erosion of identity, the loss associated with displacement from familiar contexts and support networks, the difficulties of settlement, and the pressures on accustomed family structures and relationships can increase vulnerability to mental illness" (Bhugra & Minas, 2007). The relationship between migration and mental health is explored below, through presentation of literature on mental health of migrants, including rural-urban migrants in China, Central Asian labor migrants in Russia and domestic workers in the Middle East, followed by a discussion of migrants' legal status and mental health.

Findings on mental health of migrants with irregular status and in low-resource settings

A number of studies of rural-to-urban migrants in China have utilized a stressors framework, identifying which migration stressors are relevant in the specific context of internal migration in China and assessing how these stressors are associated with mental health outcomes. Wong and Leung define migration stress as "the stress that results from exposure to difficulties in handling such survival issues as finding employment, financial problems, feelings of loss, cultural differences, and unmet high expectations" (Wong &

Leung, 2008). The legal and policy context of internal migration in China is such that public services such as health and education are provided based on the locality in which a person is registered, and this entails that migrants to other provinces often do not qualify for such services (Hu, Cook, & Salazar, 2008), and as such, irregular status and access to health services are important themes in these studies. Wong and Leung found that two types of stressors were associated with mental health problems amongst internal migrants in Shanghai – financial and employment-related stressors and interpersonal relationship stressors (Wong & Leung, 2008). Another study explored unemployment as a specific stressor amongst migrant workers in China, finding that longer duration of unemployment was associated with increased psychiatric symptoms (Chen, et al., 2012). Wong et al. explored the influence of working conditions, access to social security and medical benefits, access to education for migrant children, housing conditions, and discrimination on mental health outcomes in a survey of 475 migrant workers in Shanghai, finding that work-related stressors were associated with poor mental health (Wong, He, Leung, Lau, & Chang, 2008). Potential moderators of the association between migration-related stressors and mental health, such as gender, expectations of migration outcomes (He & Wong, 2013), social support (Wong & Leung, 2008), and coping approaches (Chen, et al., 2012) have been explored in this literature. The population studied in this body of research – rural-to-urban migrants in China, who often experience socio-economic deprivations and work-related stressors, including low salary, irregular salary payments, and poor occupational health and safety standards (Lau, et al., 2012) – may share some similar experiences and conditions to the population of migrants from Burma to Thailand.

In a study of the mental health of female Mexican migrants in the United States, Vega et al. proposed a conceptual model that includes the following influences on mental health: 1) factors related to leaving a country of origin (for example, disruption of familial and social ties), 2) factors related to the migration process itself (for example, physical jeopardy due to unsafe travel), 3) factors related to adaptation in host societies (for example, access to viable economic opportunities) and 4) factors associated with expectations of social and economic benefits of migration (for example, unfulfilled expectations of migration) (Vega, Kolody, & Valle, 1987). They state, "identifying a model of migration stress that has predictive value for psychopathology has not occurred, hence, there is a lack of common agreement as to what it is about the migration process that is really stressful." In their study, they showed that amongst Mexican migrant women in their sample, the following factors were associated with higher levels of depressive symptoms: low income and education, unfulfilled expectations of migration, and difficulty accessing family and friends in Mexico after migration. This model has also been applied in a study of migrant farm-workers in the United States, where social isolation was found to be associated with anxiety, while stressful working conditions were found to be associated with both anxiety and depression, showing that "some types of stressors may have mental health consequences while others do not, and that discrete types of stressors may act on specific mental health outcomes" (Hiott, Grzywacz, Davis, Quandt, & Arcury, 2008). A study of male Thai migrant agricultural laborers in Israel focused on multiple components of migration stress, including objective measures, such as whether the worker migrated with family and friends, and subjective measures, such as

pre-migration perceptions of the benefits of migration. Results supported the hypothesis that migration stressors would be associated with increased psychological distress, and that socio-cultural and occupational variables were significant intervening variables, for example, higher levels of social support moderated the relationship between prior migration stressors and current psychological distress (Griffin & Soskolne, 2003).

Some research has focused on women who migrate to the Middle East for domestic labor. Studies have assessed the influence of pre-migratory factors on psychiatric morbidity of domestic workers in Kuwait (Zahid, Fido, Alowaish, Abd El-Motaal Mohsen, & Abdul Razik, 2003), the influence of post-migration stressors on prevalence of psychiatric disorders (Zahid, Fido, Alowaish, Mohsen, & Razik, 2002), and patterns of psychiatric diagnoses and hospital admissions amongst domestic workers in Kuwait (Zahid, Fido, Razik, Mohsen, & El-Sayed, 2004). Psychiatric morbidity of domestic workers in Kuwait, who primarily come from Sri Lanka, India and the Philippines, is higher than for Kuwaiti women, with the most common mental disorders being severe stress reactions, manic episodes and depressive episodes (Zahid, et al., 2002). Stress-related disorders amongst domestic workers in Kuwait were associated with harassment in workplaces, having little or no contact with their families at home, and regretting the decision to migrate, while other disorders, including depression, were associated with stressors such as receiving less wages than expected (Zahid, et al., 2002). Post-migratory stressors also included sexual harassment and salary non-payment. However, onset of psychiatric disorders amongst domestic workers is most commonly within a month of arriving in Kuwait, indicating a need to understand the influence of pre-migratory vulnerabilities.

One study showed that having less education, being from Sri Lanka (and therefore having more difficulty learning the language and adapting culturally), being non-Muslim, and having had a previous physical or mental illness were associated with increased risk of diagnosis psychiatric disorder after migration to Kuwait to become a domestic worker (Zahid, et al., 2003). In a study of Ethiopian women who had returned to Ethiopia after having worked as domestic workers in the Middle East, focus group discussions identified severe exploitation, including physical and sexual abuse, dislocation from family and friends in Ethiopia, and disappointment at not having achieved their goals in migrating to the Middle East, as risk factors for the onset of mental health problems (Anbesse, Hanlon, Alem, Packer, & Whitley, 2009). A systematic review of health problems of foreign domestic workers identified themes including adverse work conditions and health problems related to these conditions, mental health, communicable diseases, and knowledge, attitudes and practices related to health (Malhotra, et al., 2013). The systematic review identified stress experienced as a result of care-giving tasks as a factor related to depressive symptoms.

Migrants' legal status and mental health

The literature on the relationship between legal status and mental health outcomes has mainly focused on refugees and asylum seekers in Western countries. For example, one study explored the impact of legal status on treatment outcomes of a therapeutic intervention for Iranian and Afghani male asylum seekers and refugees in the Netherlands, finding that patients whose legal status changed experienced increased symptom reduction compared to patients who already had legal status or who did not

have a change in legal status during the course of treatment (Drozdek, Kamperman, Tol, Knipscheer, & Kleber, 2013). Authors hypothesized that access to legal status restored feelings of security and control, improving the impact of the therapeutic intervention. Another study showed that duration of asylum procedure and length of time with uncertain legal status was significantly associated with increased psychopathology amongst Iraqi asylum seekers in the Netherlands (Laban, Gernaat, Komproe, Schreuders, & De Jong, 2004), suggesting that length of asylum process exacerbates stressors including fear of being deported, lack of work and lack of access to proper housing.

Refugees and mental health

The population in this study, migrants from Burma to Thailand, are not considered refugees or asylum seekers under international law, however, they may experience many of the same challenges as refugees and asylum seekers, associated with displacement, vulnerability and lack of legal status. Refugees and asylum seekers in many contexts experience vulnerability to arrest and deportation, lack of ability to access regular livelihood opportunities, and loss of social networks and social support due to displacement, which are all issues that the population in this study experience. As such, literature on mental health outcomes amongst refugees and asylum seekers can shed light on risk and protective factors for mental health in this population of labor migrants. Steel et al.'s meta analysis of depression and PTSD in refugee populations showed that torture and exposure to potentially traumatic events is associated with mental disorders across all surveys they analyzed, and that taking into account the substantial differences in methodology between the studies, torture was "the strongest substantive factor associated

with PTSD," while cumulative exposure to potentially traumatic events had the strongest association with depression (Steel, et al., 2009). Steel et al. argue that potentially traumatic events involve multiple forms of loss and deprivation that are often associated with adverse mental health outcomes; this finding could be applicable to the population and context in this study. Another influence on mental health outcomes was displacement or living in a refugee camp, which resulted in increased symptoms of mental disorder, compared to resettlement in a third country. This finding may indicate that uncertainty, poor living conditions, and lack of access to livelihoods are associated with adverse mental health outcomes, which is also a finding that is applicable in the context of the present study. In a synthesis of surveys comparing displaced and non-displaced populations, conducted globally and across five decades, Porter and Haslam noted the importance of factors beyond traumatic events in influencing mental health outcomes. These factors, such as socio-economic disadvantage and loss of social suppor, are also relevant in the present study. Porter and Haslam found that post-displacement factors, such as restricted economic opportunity and living in institutional accommodation, were associated with poorer mental health outcomes (Porter & Haslam, 2005).

Of primary relevance to this project, some studies have focused on the mental health outcomes of Burmese in Thailand. A 1992/1993 survey of Burmese political dissidents who had fled to Thailand after the 1988 student uprisings found that respondents had experienced a mean of 30 trauma events, including high rates of interrogation, harassment and imprisonment. 38% of respondents suffered from depression and 23% suffered from PTSD (Allden, et al., 1996). The majority of literature on mental health of

migrants or refugees from Burma focuses on refugees from Burma in camps in Thailand. A 2001 population-based study of mental health problems among Karenni refugees in Ban Mai Nai Soi, Ban Pang Kwai and Ban Mae Surin refugee camps in Thailand explored the associations between trauma experiences and mental health and functioning of adults in the camps (Lopes Cardozo, Talley, Burton, & Crawford, 2004). Findings included a prevalence of depression of 42% and anxiety of 41%, elevated rates compared to the general population and consistent with other findings amongst other conflict-affected, displaced populations, while the finding of 4.6% prevalence of PTSD was lower than other similar contexts. Risk factors for poor mental health included prior mental health issues, harassment (i.e. forced labor or forced relocation), lack of access to basic needs and exposure to violence, including murder of a family member or friend. A study found that women in three refugee camps along the Thai-Burma border who had experienced intimate partner violence were 8 times more likely than those who did not experienced intimate partner violence to report suicide ideation (Falb, McCormick, Hemenway, Anfinson, & Silverman, 2013). Research on alcohol-use in Mae La refugee camp found that alcohol abuse is perceived as related to the stresses of camp-life, including lack of livelihood opportunities, and is leading to increased intimate partner violence (Ezard, 2013). One study focused on the mental health of adolescents from Burma living in boarding houses in Thailand, who are often the children of migrant workers from Burma working in Thailand. Respondents reported a mean total number of 5.7 traumatic events, which was associated with increased symptoms of depression, anxiety and PTSD amongst adolescents (Akiyama, et al., 2013). There is limited

literature that focuses on the mental health of those displaced from Burma, and the literature that is available is primarily focused on camp-based refugee populations.

Focus and limitations of migration and mental health literature

Cumulatively, findings on the associations between low-skilled and irregular migration, including rural to urban migration in low-resource settings, and mental health have indicated that the stressors associated with migration processes, as well as living and working conditions after migration, are associated with a range of adverse mental health outcomes. The World Health Organization has concluded that "migration does not bring improved social well-being; rather, it often results in high rates of unemployment and squalid living conditions, exposing migrants to social stress and increased risk of mental disorders because of the absence of supportive social networks" (WHO, 2001). The evidence-base on migration and mental health in these particular contexts appears to indicate that migration stressors are in fact associated with increased psychological distress and increased prevalence of mental disorders amongst migrants. However, there are few studies of resilience amongst this population, and the majority of studies approach the question of mental health and migration based from the starting point that migration is detrimental to mental health. Therefore, the finding that migration stressors are associated with increased mental disorders and distress may reflect biases in the literature, rather than evidence of the true association.

Limitations of many studies of migration and mental health include difficulties controlling for migrants' mental health status prior to migration and lack of longitudinal

studies, limiting ability to assess whether mental health outcomes are associated with time since migration, and whether pre-migration mental health status influences post-migration mental health outcomes (Mirsky, 2009). Given the majority of respondents in these studies are highly mobile and often have irregular status, tracking respondents for the purpose of longitudinal research is a significant challenge and therefore research has been limited to cross-sectional studies (Chen, et al., 2012). Measurement of migration and post-migration related stressors vary across these studies, as does measurement of psychological distress, with a range of mental disorders selected as outcome measures, and a variety of assessment scales used to measure symptoms and disorders. In the majority of studies, distinctions are made between stressors that occur in different areas of a migrants' life (for example, Wong and Leung 2008 used factor analysis to identify distinct types of stressors in the case of internal migrants in China), and between stressors that occur in different phases of migration processes (for example, Vega et al.'s model or Zahid et al.'s examination of pre and post-migratory factors related to psychiatric disorders). Research in low and middle-income settings has often been done with non-validated mental health measures, reducing rigor of these studies.

3. Trafficking and mental health

The discussion below focuses on the specific phenomenon of trafficking, which can be related to and embedded within broader dynamics of migration. The discussion focuses on literature exploring the relationship between trafficking and mental health, noting gaps and limitations of the literature.

Findings on trafficking and mental health

A number of studies have explored the mental health of women in post-trafficking services in Europe. Ostrovschi et al. used clinician-administered diagnostic assessments of PTSD, anxiety disorders, mood disorders and substance use disorders amongst women (N=120) in post-trafficking services in Moldova, comparing diagnoses made within five days of return to Moldova to diagnoses two to twelve months later (Ostrovschi, et al., 2011). Findings include that 88% of women experienced significant psychological distress after a trafficking experience, with 54% reaching clinical levels of common mental disorders at 2-12 months after return. 85% of women with co-morbid PTSD and another anxiety or mood disorder were diagnosed with a psychiatric disorder at follow-up interviews. Zimmerman et al. assessed physical symptoms, depression, anxiety, hostility and PTSD, amongst women in post-trafficking services in Belgium, Bulgaria, Czech Republic, Italy, Moldova, Ukraine and the United Kingdom, finding that symptoms associated with depression were most commonly reported, with significantly elevated mean levels of anxiety, depression and anxiety. Overall, 57% of women were above the cut-off for probable PTSD, while some of the most commonly reported physical symptoms – including headaches and loss of appetite – may be manifestations of psychological distress (Zimmerman, et al., 2008).

Hossain et al., using data from the same survey, examined the associations between exposure to sexual violence or abuse pre-trafficking, various trafficking experiences, including sexual violence, physical violence and restrictions on freedom of movement, and symptoms of mental disorders (Hossain, Zimmerman, Abas, Light, & Watts, 2010).

Results showed that length of time in a trafficking situation was predictive of higher level of depression and anxiety symptoms, with women who had been in a trafficking situation for at least 6 months two times as likely to have high levels of depression and anxiety symptoms. Sexual violence experienced during trafficked was significantly associated with PTSD, experiencing physical violence during trafficking was associated with anxiety, and experiencing a serious injury during trafficking was associated with PTSD, anxiety and depression (Hossain, et al., 2010). These studies acknowledged the potential for selection bias, in that the women who access post-trafficking services are a small proportion of women who are trafficked and may differ as a population from those women who do not access services (Ostrovschi, et al., 2011), and do not include women who are currently in a trafficking situation (Zimmerman, et al., 2008).

Cwikel et al. identified occupational risk factors experienced by women (N=55) working in brothels in three cities in Israel, finding that levels of occupational risk were associated with starting sex work at an early age, PTSD symptoms, history of suicide attempts, and number of hours worked in a day. The study also assessed trauma exposures prior to starting sex work, finding that history of past trauma was associated with starting sex work at an early age and continued symptoms of PTSD. Higher levels of past and work-related trauma, depression and poor self-rated health were all associated with higher symptoms of PTSD amongst the study population (Cwikel, Ilan, & Chudakov, 2003). One study compared two groups in Nepal – women who had been trafficked into the sex industry, and women who had been trafficked into domestic or circus work (Tsutsumi, et al., 2008). Results showed that the sex-worker group had higher levels of PTSD and

depression compared to the domestic or circus workers, but that duration of trafficking experience and age when trafficked were unrelated to mental health outcomes, indicating that "[t]he fact that they were trafficked and taken to a different country might have been reason enough for mental health problems to develop, regardless of the duration of the trafficking and their age at the time of trafficking." A recent study of the physical and mental health of men and women who had been trafficked into labor exploitation in the United Kingdom found that a fifth of the sample endorsed hyper-arousal or re-experiencing symptoms of PTSD, as well as high levels of depressive and anxiety symptoms (Turner-Moss, Zimmerman, Howard, & Oram, 2013).

Limitations of trafficking and mental health literature

The vast majority of studies of trafficking and mental health identified in this literature review focus on the experiences of women trafficked into the sex industry, apart from one study that compares the mental health of women trafficked into the sex industry with the mental health of women trafficked into domestic and circus work (Tsutsumi, Izutsu, Poudyal, Kato, & Marui, 2008) and the study cited above, of labor exploitation, which includes a majority of men in its sample (Turner-Moss, et al., 2013). This constitutes a significant limitation in the available data on mental health and trafficking, reflecting the overall focus of research on trafficking on the experiences of women trafficked into the sex industry and neglect of the experiences of men trafficked into various industries, or women trafficked into industries apart from the sex industry. As Busza et al. note, there is "an enormous gap in research on the health of trafficked men, trafficked children, and people who have been trafficked for labour exploitation" (Busza, Castle, & Diarra, 2004).

Given limitations in overall data, it is unclear whether this focus reflects the fact that the majority of victims of trafficking are women trafficked into the sex industry, or whether this reflects widespread *perceptions* that women trafficked into the sex industry are the majority of victims of trafficking. Research may also focus on this population based on the perception that this population has the highest mental health burden, but given the lack of comparative data, this perception cannot currently be supported by evidence. Moreover, many of these studies utilize definitions of trafficking that are unclear or rely on problematic definitions – for example, women who are accessing post-trafficking services are defined as having been trafficked, whereas the women may be accessing these services because they were in fact victims of trafficking, or because they are seeking services after having been deported from a country to which they migrated. Overall, as Hossain et al. note, "there is an extremely limited body of research on the mental health consequences of trafficking," and this body of research is further limited by its overwhelming focus on women trafficked into the sex industry (Hossain, et al., 2010).

These studies, apart from the study in Nepal, are limited by the lack of a non-sex worker comparison population, which entails that the mental health symptoms are related to trafficking experiences in general, rather than specifically trafficking into the sex industry. One study that sheds some light on this, while not focused specifically on trafficking, is a study comparing psychological well-being of women who trade sex compared to women who do not trade sex in Harlem, seeking to answer the question of "[t]o what extent is the psychological distress [the women] experience in exchanging sex for money or drugs independent of these other stressful events that they encounter?" The

study found that women who were trading sex had significantly higher levels of psychological distress, controlling for a range of demographic factors and exposure to various traumas (el-Bassel, et al., 1997). Another study explored psychiatric morbidity of drug users in Glasgow, comparing female drug users with any lifetime involvement in sex work to those without, and finding that female drug users with a history of sex work were more likely to have attempted suicide or meet criteria for current depressive ideas (Gilchrist, Gruer, & Atkinson, 2005). As such, some data indicates that experience of sex work in and of itself influences mental health, and indicate that trafficking into the sex industry, compared to trafficking into other industries and forms of work, is likely to result in increased symptoms of mental disorders.

In sum, these studies show high levels of psychological distress across a range of mental disorders amongst women who have been trafficked into the sex industry, indicating a need to develop appropriate diagnostic and treatment services. These results confirm that this population is "of particular concern for mental health specialists," and yet, that access to specialized services and treatment is often limited (Hossain, et al., 2010).

References:

Acevedo-Garcia, D., & Almeida, J. (2012). Special issue introduction: Place, migration and health. *Soc Sci Med, 75*(12), 2055-2059.

Adanu, R. M., & Johnson, T. R. (2009). Migration and women's health. *Int J Gynaecol Obstet, 106*(2), 179-181.

Agadjanian, V., Arnaldo, C., & Cau, B. (2011). Health Costs of Wealth Gains: Labor Migration and Perceptions of HIV/AIDS Risks in Mozambique. *Soc Forces, 89*(4), 1097-1117.

Akiyama, T., Win, T., Maung, C., Ray, P., Sakisaka, K., Tanabe, A., et al. (2013). Mental health status among Burmese adolescent students living in boarding houses in Thailand: a cross-sectional study. *BMC Public Health, 13*, 337.

Allden, K., Poole, C., Chantavanich, S., Ohmar, K., Aung, N. N., & Mollica, R. F. (1996). Burmese political dissidents in Thailand: trauma and survival among young adults in exile. *Am J Public Health, 86*(11), 1561-1569.

Amirkhanian, Y. A., Kuznetsova, A. V., Kelly, J. A., Difranceisco, W. J., Musatov, V. B., Avsukevich, N. A., et al. (2011). Male labor migrants in Russia: HIV risk behavior levels, contextual factors, and prevention needs. *J Immigr Minor Health, 13*(5), 919-928.

Anbesse, B., Hanlon, C., Alem, A., Packer, S., & Whitley, R. (2009). Migration and mental health: a study of low-income Ethiopian women working in Middle Eastern countries. *Int J Soc Psychiatry, 55*(6), 557-568.

Bail, K. M., Foster, J., Dalmida, S. G., Kelly, U., Howett, M., Ferranti, E. P., et al. (2012). The impact of invisibility on the health of migrant farmworkers in the southeastern United States: a case study from georgia. *Nurs Res Pract, 2012*, 760418.

Benach, J., Muntaner, C., Delclos, C., Menendez, M., & Ronquillo, C. (2011). Migration and "low-skilled" workers in destination countries. *PLoS Med, 8*(6), e1001043.

Berk, M. L., Schur, C. L., Chavez, L. R., & Frankel, M. (2000). Health care use among undocumented Latino immigrants. *Health Aff (Millwood), 19*(4), 51-64.

Bhugra, D., & Minas, I. H. (2007). Mental health and global movement of people. *Lancet, 370*(9593), 1109-1111.

Bowen, K. A., & Marshall, W. N., Jr. (2008). Deaths of Mexican and Central American children along the US border: the Pima County Arizona experience. *J Immigr Minor Health, 10*(1), 17-21.

Busza, J., Castle, S., & Diarra, A. (2004). Trafficking and health. *BMJ, 328*(7452), 1369-1371.

Cantor-Graae, E., & Selten, J. P. (2005). Schizophrenia and migration: a meta-analysis and review. *American Journal of Psychiatry, 162*, 12-24.

Carballo, M., & Mboup, M. (2005). *International Migration and Health* Geneva: GCIM.

Carta, M. G., Bernal, M., Hardoy, M. C., & Haro-Abad, J. M. (2005). Migration and mental health in Europe (the state of the mental health in Europe working group: appendix 1). *Clin Pract Epidemiol Ment Health, 1*, 13.

Castaneda, H. (2009). Illegality as risk factor: a survey of unauthorized migrant patients in a Berlin clinic. *Soc Sci Med, 68*(8), 1552-1560.

Chen, L., Li, W., He, J., Wu, L., Yan, Z., & Tang, W. (2012). Mental health, duration of unemployment, and coping strategy: a cross-sectional study of unemployed migrant workers in eastern China during the economic crisis. *BMC Public Health, 12*, 597.

Cwikel, J., Ilan, K., & Chudakov, B. (2003). Women brothel workers and occupational health risks. *J Epidemiol Community Health, 57*(10), 809-815.

Drozdek, B., Kamperman, A. M., Tol, W. A., Knipscheer, J. W., & Kleber, R. J. (2013). Is legal status impacting outcomes of group therapy for posttraumatic stress disorder with male asylum seekers and refugees from Iran and Afghanistan? *BMC Psychiatry, 13*, 148.

el-Bassel, N., Schilling, R. F., Irwin, K. L., Faruque, S., Gilbert, L., Von Bargen, J., et al. (1997). Sex trading and psychological distress among women recruited from the streets of Harlem. *Am J Public Health, 87*(1), 66-70.

Evans, J., & Baldwin, W. (1987). Migration and health. *Int Migr Rev, 21*(3), v-491-486.

Ezard, N. (2013). It's Not Just the Alcohol: Gender, Alcohol Use, and Intimate Partner Violence in Mae La Refugee Camp, Thailand, 2009. *Subst Use Misuse*.

Falb, K. L., McCormick, M. C., Hemenway, D., Anfinson, K., & Silverman, J. G. (2013). Suicide ideation and victimization among refugee women along the Thai-Burma border. *J Trauma Stress, 26*(5), 631-635.

Gagnon, A. J. (2011). Health and Immigration. *Canadian Journal of Nursing Research, 43*(4), 9-20.

George, A., & Sabarwal, S. (2013). Sex trafficking, physical and sexual violence, and HIV risk among young female sex workers in Andhra Pradesh, India. *Int J Gynaecol Obstet, 120*(2), 119-123.

Gilchrist, G., Gruer, L., & Atkinson, J. (2005). Comparison of drug use and psychiatric morbidity between prostitute and non-prostitute female drug users in Glasgow, Scotland. *Addict Behav, 30*(5), 1019-1023.

Griffin, J., & Soskolne, V. (2003). Psychological distress among Thai migrant workers in Israel. *Soc Sci Med, 57*(5), 769-774.

He, X., & Wong, D. F. (2013). A comparison of female migrant workers' mental health in four cities in China. *Int J Soc Psychiatry, 59*(2), 114-122.

Hiott, A. E., Grzywacz, J. G., Davis, S. W., Quandt, S. A., & Arcury, T. A. (2008). Migrant farmworker stress: mental health implications. *J Rural Health, 24*(1), 32-39.

Holmes, S. M. (2006). An ethnographic study of the social context of migrant health in the United States. *PLoS Med, 3*(10), e448.

Hossain, M., Zimmerman, C., Abas, M., Light, M., & Watts, C. (2010). The relationship of trauma to mental disorders among trafficked and sexually exploited girls and women. *Am J Public Health, 100*(12), 2442-2449.

Howard, J. (2010). Foreword for special edition on migration and occupational health. *Am J Ind Med, 53*(4), 325-326.

Hu, X., Cook, S., & Salazar, M. A. (2008). Internal migration and health in China. *Lancet, 372*(9651), 1717-1719.

Huffman, S. A., Veen, J., Hennink, M. M., & McFarland, D. A. (2012). Exploitation, vulnerability to tuberculosis and access to treatment among Uzbek labor migrants in Kazakhstan. *Soc Sci Med, 74*(6), 864-872.

Khamsiriwatchara, A., Wangroongsarb, P., Thwing, J., Eliades, J., Satimai, W., Delacollette, C., et al. (2011). Respondent-driven sampling on the Thailand-Cambodia border. I. Can malaria cases be contained in mobile migrant workers? *Malar J, 10*, 120.

Laban, C. J., Gernaat, H. B., Komproe, I. H., Schreuders, B. A., & De Jong, J. T. (2004). Impact of a long asylum procedure on the prevalence of psychiatric disorders in Iraqi asylum seekers in The Netherlands. *J Nerv Ment Dis, 192*(12), 843-851.

Lau, J. T., Cheng, Y., Gu, J., Zhou, R., Yu, C., Holroyd, E., et al. (2012). Suicides in a mega-size factory in China: poor mental health among young migrant workers in China. *Occup Environ Med, 69*(7), 526.

Llacer, A., Zunzunegui, M. V., del Amo, J., Mazarrasa, L., & Bolumar, F. (2007). The contribution of a gender perspective to the understanding of migrants' health. *J Epidemiol Community Health, 61 Suppl 2*, ii4-10.

Lopes Cardozo, B., Talley, L., Burton, A., & Crawford, C. (2004). Karenni refugees living in Thai-Burmese border camps: traumatic experiences, mental health outcomes, and social functioning. *Soc Sci Med, 58*(12), 2637-2644.

Lynch, C., & Roper, C. (2011). The Transit Phase of Migration: Circulation of Malaria and Its Multidrug-Resistant Forms in Africa. *PLoS Med, 8*(5).

MacPherson, D. W., & Gushulak, B. D. (2004). *Irregular migration and health*. Geneva: Global Commission on International Migration.

Malhotra, R., Arambepola, C., Tarun, S., de Silva, V., Kishore, J., & Ostbye, T. (2013). Health issues of female foreign domestic workers: a systematic review of the scientific and gray literature. *International Journal of Occupational and Environmental Health In press*.

McGuire, S., & Georges, J. (2003). Undocumentedness and liminality as health variables. *ANS Adv Nurs Sci, 26*(3), 185-195.

Mirsky, J. (2009). Mental health implications of migration: a review of mental health community studies on Russian-speaking immigrants in Israel. *Soc Psychiatry Psychiatr Epidemiol, 44*(3), 179-187.

Okechukwu, C. A., Souza, K., Davis, K. D., & de Castro, A. B. (2013). Discrimination, harassment, abuse, and bullying in the workplace: Contribution of workplace injustice to occupational health disparities. *Am J Ind Med*.

Oram, S., Stockl, H., Busza, J., Howard, L. M., & Zimmerman, C. (2012). Prevalence and risk of violence and the physical, mental, and sexual health problems associated with human trafficking: systematic review. *PLoS Med, 9*(5), e1001224.

Ostrovschi, N. V., Prince, M. J., Zimmerman, C., Hotineanu, M. A., Gorceag, L. T., Gorceag, V. I., et al. (2011). Women in post-trafficking services in Moldova: diagnostic interviews over two time periods to assess returning women's mental health. *BMC Public Health, 11*, 232.

Platt, L., Grenfell, P., Fletcher, A., Sorhaindo, A., Jolley, E., Rhodes, T., et al. (2013). Systematic review examining differences in HIV, sexually transmitted infections

and health-related harms between migrant and non-migrant female sex workers. *Sex Transm Infect, 89*(4), 311-319.

Porter, M., & Haslam, N. (2005). Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis. *JAMA, 294*(5), 602-612.

Quesada, J. (2011). No soy welferero: undocumented Latino laborers in the crosshairs of legitimation maneuvers. *Med Anthropol, 30*(4), 386-408.

Quesada, J. (2012). Special issue part II: Illegalization and embodied vulnerability in health. *Soc Sci Med, 74*(6), 894-896.

Richter, M., Chersich, M. F., Vearey, J., Sartorius, B., Temmerman, M., & Luchters, S. (2012). Migration Status, Work Conditions and Health Utilization of Female Sex Workers in Three South African Cities. *J Immigr Minor Health*.

Sapkota, S., Kohl, H. W., 3rd, Gilchrist, J., McAuliffe, J., Parks, B., England, B., et al. (2006). Unauthorized border crossings and migrant deaths: Arizona, New Mexico, and El Paso, Texas, 2002-2003. *Am J Public Health, 96*(7), 1282-1287.

Schenker, M. B. (2010a). A global perspective of migration and occupational health. *Am J Ind Med, 53*(4), 329-337.

Schenker, M. B. (2010b). Migration and occupational health: Shining a light on the problem. *Am J Ind Med, 53*(4), 327-328.

Silverman, J. G., Decker, M. R., Gupta, J., Maheshwari, A., Patel, V., Willis, B. M., et al. (2007). Experiences of sex trafficking victims in Mumbai, India. *Int J Gynaecol Obstet, 97*(3), 221-226.

Silverman, J. G., Decker, M. R., Gupta, J., Maheshwari, A., Willis, B. M., & Raj, A. (2007). HIV prevalence and predictors of infection in sex-trafficked Nepalese girls and women. *JAMA, 298*(5), 536-542.

Steel, Z., Chey, T., Silove, D., Marnane, C., Bryant, R. A., & van Ommeren, M. (2009). Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. *JAMA, 302*(5), 537-549.

Tsutsumi, A., Izutsu, T., Poudyal, A. K., Kato, S., & Marui, E. (2008). Mental health of female survivors of human trafficking in Nepal. *Soc Sci Med, 66*(8), 1841-1847.

Turner-Moss, E., Zimmerman, C., Howard, L. M., & Oram, S. (2013). Labour Exploitation and Health: A Case Series of Men and Women Seeking Post-Trafficking Services. *J Immigr Minor Health*.

Vega, W. A., Kolody, B., & Valle, J. R. (1987). Migration and mental health: an empirical test of depression risk factors among immigrant Mexican women. *Int Migr Rev, 21*(3), 512-530.

Viruell-Fuentes, E. A., Miranda, P. Y., & Abdulrahim, S. (2012). More than culture: structural racism, intersectionality theory, and immigrant health. *Soc Sci Med, 75*(12), 2099-2106.

Walter, N., Bourgois, P., & Margarita Loinaz, H. (2004). Masculinity and undocumented labor migration: injured latino day laborers in San Francisco. *Soc Sci Med, 59*(6), 1159-1168.

Walter, N., Bourgois, P., Margarita Loinaz, H., & Schillinger, D. (2002). Social context of work injury among undocumented day laborers in San Francisco. *J Gen Intern Med, 17*(3), 221-229.

Wangroongsarb, P., Satimai, W., Khamsiriwatchara, A., Thwing, J., Eliades, J. M., Kaewkungwal, J., et al. (2011). Respondent-driven sampling on the Thailand-Cambodia border. II. Knowledge, perception, practice and treatment-seeking behaviour of migrants in malaria endemic zones. *Malar J, 10*, 117.

Weine, S., Bahromov, M., & Mirzoev, A. (2008). Unprotected Tajik male migrant workers in Moscow at risk for HIV/AIDS. *J Immigr Minor Health, 10*(5), 461-468.

Weine, S. M., & Kashuba, A. B. (2012). Labor Migration and HIV Risk: A Systematic Review of the Literature. *AIDS Behav*.

WHO. (2001). *World Health Report: Mental health: New Understanding, New Hope*. Geneva: World Health Organization.

Willen, S. S. (2007). Exploring “Illegal” and “Irregular” Migrants' Lived Experiences of Law and State Power. *International Migration, 45*(3).

Wolffers, I., Verghis, S., & Marin, M. (2003). Migration, human rights, and health. *Lancet, 362*(9400), 2019-2020.

Wong, D. F., He, X., Leung, G., Lau, Y., & Chang, Y. (2008). Mental health of migrant workers in China: prevalence and correlates. *Soc Psychiatry Psychiatr Epidemiol, 43*(6), 483-489.

Wong, D. F., & Leung, G. (2008). The functions of social support in the mental health of male and female migrant workers in China. *Health Soc Work, 33*(4), 275-285.

Zahid, M. A., Fido, A. A., Alowaish, R., Abd El-Motaal Mohsen, M., & Abdul Razik, M. (2003). Psychiatric morbidity among housemaids in Kuwait. III: Vulnerability factors. *Int J Soc Psychiatry, 49*(2), 87-96.

Zahid, M. A., Fido, A. A., Alowaish, R., Mohsen, M. A., & Razik, M. A. (2002). Psychiatric Morbidity among Housemaids in Kuwait: the precipitating factors *Annals of Saudi Medicine, 22*(5-6), 384-387.

Zahid, M. A., Fido, A. A., Razik, M. A., Mohsen, M. A., & El-Sayed, A. A. (2004). Psychiatric morbidity among housemaids in Kuwait. a. Prevalence of psychiatric disorders in the hospitalized group of housemaids. *Med Princ Pract, 13*(5), 249-254.

Zimmerman, C., Hossain, M., Yun, K., Gajdadziev, V., Guzun, N., Tchomarova, M., et al. (2008). The health of trafficked women: a survey of women entering posttrafficking services in Europe. *Am J Public Health, 98*(1), 55-59.

IV. Conceptual frameworks and theoretical approach

This study is grounded in conceptual frameworks and theoretical approaches that guide research and analysis, as well as providing a framework for interpretation of findings. The conceptual frameworks pertain to two separate but overlapping areas: migration and mental health, and stress and mental health.

In the field of migration and mental health, a number of conceptual frameworks have been discussed in the literature. These are presented below, followed up a description of an exploratory conceptual framework for migration and health. In the field of stress and mental health, theoretical issues associated with definition and measurement of stress, and assessment of the relationship between stress and mental health, are discussed below, in order to provide a basis for the conceptual model for stress and mental health adopted in this study. The chapter finished with a discussion of the relationship between stress and depression and anxiety, the mental health outcome measures utilized in this study.

1. Migration and mental health

Migration and mental health – conceptual frameworks

As noted in *Chapter III – Literature Review*, there is consistent evidence concerning the adverse mental health status of migrants. Models that have developed to account for the association between migration and mental health include "selection" theories, which propose that migrants' poor mental health can be explained by the fact that individuals with poorer mental health are more likely to migrate, and theories focused on socio-economic status, whereby migrants with lower socio-economic status are expected to

exhibit poorer mental health outcomes, particularly as integration into a labor market in a new country may impede socio-economic improvement for a time period after migration. In addition, other conceptual frameworks address the question of acculturation and integration, proposing that barriers to integration and experiences of discrimination influences migrants' mental health status (Eaton & Garrison, 1992).

The theoretical approach most relevant to the current study is the theory that stressors associated with the migration process itself, and experiences upon arrival in the host country, are related to poorer mental health outcomes (Eaton & Garrison, 1992). For example, migrants may experience "goal-striving stress," whereby the discrepancy between a migrant's own aspirations and actual level of achievement produces stress (Parker, Kleiner, & Needelman, 1969), a stressor which may be particularly present for individuals who have migrated in order to improved livelihoods or seek educational opportunities but find themselves unable to achieve these goals.

An exploratory conceptual framework for migration and health

Specific influences on the mental health outcomes of migrants may relate to particular phases of the migration process, including pre-migration, migration, and post-migration factors (Bhugra, et al., 2011), with particular phases having related vulnerability factors that can lead to increased risk of mental disorders (Bhugra & Jones, 2001). As such, this study is guided by Zimmerman et al.'s framework for understanding the associations between migration and health (Zimmerman, Kiss, & Hossain, 2011). The Zimmerman model is a broad, exploratory model that focuses on all aspects of health, rather than only

mental health. However, the framework is particularly pertinent to the present study as it is grounded within recognition of the "migratory process," whereby it is possible to identify the "multi-staged and cumulative nature of the health risks and intervention opportunities that can occur throughout the migration process." Within the Zimmerman framework, phases of migration are identified and used to frame specific health risks present in each phase. The Zimmerman framework includes pre-departure, travel, destination, interception, and return phases of migration, however, for the present study, the focus is on the travel and destination phases.

In Zimmerman's discussion of the framework, the travel phase is primarily identified with the spread of infectious diseases, including, for example, issues of the spread of multi-drug resistant malaria (Lynch & Roper, 2011). However, other risks – including stress experienced during to unsafe travel and exposure to violence, which can result in mental disorder – are also relevant in the context of this study. Zimmerman's discussion of the destination phase notes, as discussed in the literature review in *Chapter III,* that the majority of health research focused on this phase describes migration to high-income destination countries and issues migrants face in those settings, and that "greater attention is required for non-communicable diseases, mental health, and socioeconomic influences on health." In further exploration of the destination phase, Benach et. al. note that low-skilled migrants "are more often exposed to potentially health-damaging work environments than native workers", and that key issues in the destination phase that require further explication and attention are occupational health and safety, access to health services, and basic legal protection for migrants, especially those with irregular

status (Benach, Muntaner, Delclos, Menendez, & Ronquillo, 2011). In this study, the key risks associated with the travel and destination phases of migration are explored and identified.

As shown below [Figure 4.1], the framework also recognizes the interconnections between phases of migration. As such, this present study is grounded in this approach in recognition of how migration dynamics are interconnected with destination phase experiences. Moreover, this approach fits within the theoretical approach to stress and mental health discussed further below, which recognizes the cumulative and interconnected nature of stress and how this impacts mental health. Finally, the Zimmerman framework is broad and flexible, and in this study the framework is used in order to characterize the specific contextual factors of the travel and destination phases on the Thailand-Burma border.

This study does not address all components that are present in the Zimmerman framework. Exploration of the pre-departure, interception and return phases included in the framework was not part of the present study. The pre-departure phase – including pre-existing health conditions, health disparities, prior experiences of stress and trauma, and primary factors leading to migration – is likely to have had significant influences on health and well-being of the population in this study; however, in-depth exploration of this phase was not possible in the present study.

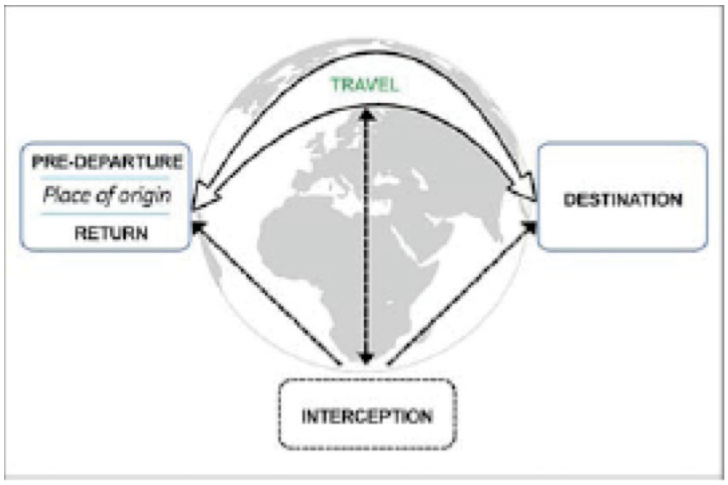


Figure 4.1: Conceptual framework for migration and health

2. Mental health – theoretical approaches

This present study seeks to examine the association between migration and post-migration related stressors, and mental health outcomes. As such, an account of the various ways of conceptualizing and measuring stressors and stressful life events is warranted. There is considerable debate on the definition of stress and stressful life events, the role of stressors in the etiology of depression and anxiety, and the measurement of such stressors. A select number of themes in debate and discussion in the fields of psychiatric and social epidemiology are discussed here, while acknowledging the broader conceptual and analytical debates in the field.

Defining and measuring stress

A central question in assessing the association between stress or stressful life events and mental health outcomes is that of how to define stress. Seeking to integrate various theoretical approaches to stress, Cohen, Kessler and Gordon define stress as a process in

which “environmental demands tax or exceed the adaptive capacity of an organism, resulting in psychological and biological changes that may place persons at risk of disease” (Cohen, Kessler, & Gordon, 1997). Whereas stress is understood to be a process, the term *stressors,* as distinct from stress, is usually used to denote the specific events or components of the stress process (Cohen, et al., 1997; Grant, et al., 2003). General stressors can be understood as distinct from traumatic stressors, which are described in literature as major events that are psychologically overwhelming for individuals (Briere & Scott, 2006), defined in the most recent version of the Diagnostic and Statistical Manual [DSM] as “exposure to actual or threatened death, serious injury or sexual violation,” in which an individual directly experiences, witnesses, learns of the traumatic event occurring to a close family member of friend, or experiences on-going repeated first hand exposure to components of the trauma (American Psychiatric Association, 2013). Examples of traumatic events include exposure to natural disasters, mass conflict or interpersonal violence, intimate partner violence, physical assault and child abuse, whereas general stressors may include loss of employment, divorce, inter-personal conflict with family or friends, financial problems and personal illness or injury. While the distinction between traumatic and general stressors is not clear-cut, the primary focus of this study is on general stressors, and therefore the mental health outcome, post-traumatic stress disorder, which is closely linked to exposure to traumatic stress, is not included in this study.

There are three central approaches to defining stress. The environmental perspective takes the view that stress is an objective event or experience that requires adaptation from

the individual. The psychological view focuses on stress as subjectively experienced by individuals who judge their capacity to cope and respond – that is, stress is contextual, and the same event may be perceived as high-stress by one individual, and as low-stress by another individual. The third perspective is the biological view, which looks at the activation of specific biological processes as reactions to stressful events (Cohen, et al., 1997). The psychological view coheres with the transactional view proposed by Lazarus and Folkman, who define stress as "involv[ing] a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well being" (Lazarus & Folkman, 1984). Grant et al., in contrast, define stress as "environmental events or chronic conditions that objectively threaten the physical and/ or psychological health or well-being of individuals of a particular age in a particular society" (Grant, et al., 2003). The central debate here is whether stress can be objectively measured, as Grant et al. propose, or whether individual response to and perception of stress is central to the impact of stress on health (Hobfoll, 1989).

The association between life stress and mental health outcomes has been investigated using a range of different approaches. Holmes and Rahes' 1967 publication of a measurement approach, the Social Readjustment Rating Scale, contained a list of 43 life events, and assigned values associated with the magnitude of expected change in life circumstances associated with each event, in order to determine an objective measure of life stress (T. H. Holmes & Rahe, 1967). This approach defined an event – positive or negative – as stressful to the extent that it brought about changes in an individual's life

that would require adjustment (B. P. Dohrenwend, 2006). Criticism of this approach includes that assigning a life event a single value across all respondents obscures the relatively wide variation in impacts a specific life event – such as, losing one's job – may have, depending on whether the event was expected or unexpected, and differences in magnitude that may be culturally or contextually influenced (B. S. Dohrenwend & Dohrenwend, 1978; Hammen, 2005). The life events scale approach operationalizes the concept of stress as an objective experience that requires adaptation from the individual that can have a negative impact on health.

In contrast to the life events approach, Dohrenwend has found that the *nature* of stressful life events is a central factor in the relationship between stress and mental disorders. In particular, he notes that the severity of a life event is at least partially determined by its centrality "of the threat to the needs and goals of the individual," meaning that the severity of an event is subjective, varies according to individual reactions to the event, and may depend on individual characteristics, including modes of coping and appraisal, as well as environmental factors, such as social support (B. P. Dohrenwend, 2000). Providing contrasting narratives of individual soldiers' experiences of combat in the Vietnam War, Dohrenwend demonstrates that individuals who check "yes" to the same life events may have experienced events with vastly different significance, and therefore, different impacts on mental health (B. P. Dohrenwend, 2000, 2006). However, as Hobfoll notes, there is a set of events that can be agreed upon as stressful across any context, while individual reactivity to these events may vary (Hobfoll, 1989).

A significant challenge of the transactional/psychological approach is the amount of time and training needed to effectively measure contextual factors (Kessler, 1997). Individual response, perception of each event, and coping mechanisms must be assessed in order to operationalize a transactional/ psychological perspective (Grant, et al., 2003; Suldo, Shaunessy, & Hardesty, 2008). Therefore, despite recognizing the importance of understanding individual responses to and perceptions of stress, in this particular study, life events were measured via a checklist method. This study's approach to measurement and analysis of stress adheres most closely to that of the environmental model, where life events and stress are considered as objective and comparable across individuals.

The body of research focused on definition and measurement of stress indicates a number of relevant issues for this study: i) life events that are often objectively considered as negative and stressful may have different subjective meaning for individuals, depending on a number of factors, ii) the impact of specific life events is complicated by a number of pre-existing individual and environmental factors, including protective and vulnerability factors, and individual reactions to events, and iii) given these points, identifying a causal relationship between stressful life events and mental disorders in any given context is fraught with a number of methodological and analytical challenges.

Other approaches seek to shift the focus of mental health research from stressful life *events* to stressful life *conditions*, or chronic stress, defined as stress experienced for more than 12 months. This approach emphasizes the need to identify the conditions that can generate these stressful life events, as well as account for the more fundamental

causes of adverse health outcomes, rather than focusing only on the most proximate causes (Kessler, 1997; Link & Phelan, 1995). For example, research on the impact of poverty on mental disorders seeks to account for how poverty as a stressful life condition can influence mental health outcomes. Indicators such as low income, adverse neighborhood characteristics and inequality have been found to be associated with mental disorders (Lund, et al., 2010). Data suggest that in low and middle-income countries, socio-economic status, lower levels of education, food insecurity and housing are associated with common mental disorders (Lund, et al., 2010; Patel & Kleinman, 2003). Moreover, research on depression has shown that chronic stress is more predictive of depression than specific life events (Hammen, 2005).

The concept of distal and proximal stressors is important when approaching the question of stress and its impact on mental health. Distal (more distant) and proximal (more recent) stressors may act independently to influence mental health outcomes, or distal stressors may impact recent exposure to stress, and current levels of social support (Ensel & Lin, 1996). Distal causes can be considered to generate vulnerability to mental disorder in later life (Kiesler, 1999). Consideration of both distal and proximal stressors may be necessary in order to increase the amount of variance of symptoms of mental disorders explained by models that only account for more proximal stressors (Ensel & Lin, 1996).

Alongside the shift to focusing on stressful life conditions, studies have focused on *cumulative risk* and mental health outcomes. This is an approach that calculates cumulative risk scores through summing exposure to a number of stressful life events or

conditions, rather than looking at each exposure separately and independently (Rutter, 1993). Some of these studies have demonstrated that it is "number of risk factors and not the kind of risk factor" that determines influence on mental health outcomes (Sameroff, Seifer, Baldwin, & Baldwin, 1993). Studies have explored how cumulative risk exposure at one time point in childhood is related to adverse mental and physical health outcomes in adolescence or adulthood (Wells, Evans, Beavis, & Ong, 2010), or how cumulative risk and protective factors operate at multiple ecological levels (Stoddard, et al., 2013). Studies of adverse childhood events [ACEs] have shown that there is a dose-response relationship between number of ACEs and lifetime and recent depressive disorder (Chapman, et al., 2004). The cumulative risk approach captures both distal and proximal influences on mental health outcomes, providing "a simple summation of multiple risk categories" (G. W. Evans, 2003). Evans notes that while this approach has been criticized for obscuring the independent impacts of specific risk factors, and assuming that individual risk factors are interchangeable, research has shown that "although individual risk factors do in fact vary in their respective impacts, each of these unique effects pales in comparison to the explanatory power of the cumulative risk metric" (G. W. Evans, 2003). The cumulative risk approach conceptualizes stress as a number of different types of stressors that cumulatively impact mental health outcomes.

Assessing the impact of stress on mental health

Beyond seeking to identify the nature of stressful life events, researchers have sought to develop ways of understanding how stress operates to produce adverse physical and mental health outcomes. There are a number of explanatory models accounting the

association between these events and general mental health outcomes. One model, the diathesis-stress model, proposes that diathesis (vulnerability), when combined with stress, produces mental disorders. This is primarily modelled by testing interaction effects, identifying how pre-existing vulnerabilities *combined with* other stressors, relate to mental health outcomes, and has increasingly been used to explore the role of pre-existing genetic variations in influencing mental health outcomes (Hartley, et al., 2012; Reinelt, et al., 2013). Another model is that of allostatic load – an approach that seeks to capture the relationship between exposure to stress and adverse physical and mental health outcomes (McEwen, 1998). Allostatic load is the "long-term effect of the physiologic response to stress" (McEwen, 1998); in each instance of exposure to stress, perception of threat initiates the body's nervous and immune systems to react to protect the body, and allostatic load reflects the chronic impacts of mobilization of the allostatic system to meet the demands of these stressors (Evans, 2003). Gersten defines allostatic load as ''the cumulative, multisystem physiological dysregulation that results from exposure to challenges over the life course and that places individuals at greater risk for poor health" (Gersten, 2008). This model focuses on how physiological response to stress over time can cause cumulative changes that have a range of negative health outcomes, and while it refers to both physical and mental health outcomes, is one model that accounts for how response to stress leads to adverse health outcomes in the long-term.

Stress, depression and anxiety

There is substantial evidence supporting the association between exposure to stressful life events and onset and recurrence of depression (Hammen, 2005). It is unclear whether events occurring a short period prior to onset of depression in adulthood exert a more significant influence on depression than long-term effects of stressors experienced in childhood (Kessler, 1997). Childhood adversities are associated with a range of mental disorders in adulthood; data from World Mental Health surveys in 21 countries indicate that parental mental illness, child abuse, and neglect, are highly associated with first onset of mental disorder (Kessler, et al., 2010). Early childhood abuse and exposure to other forms of traumatic stress in childhood is associated with depression in adulthood (Kessler, 1997; Maniglio, 2010; Saveanu & Nemeroff, 2012), and some studies have shown that early experiences of extreme stress, including emotional abuse as a child, increase vulnerability to depression due to stressful life events in adulthood (Shapero, et al., 2013). There is empirical support for the etiological model of stress sensitization, which is that exposure to stress in early life changes stress response, leading to greater reactivity to stressful situations in later life, and increased risk for developing depression following exposure to stress in adulthood (McLaughlin, Conron, Koenen, & Gilman, 2010; Patten, 2013). This model, wherein increased responsiveness to stress due to early life trauma and adversity leads to vulnerability to depression, as well as anxiety, is also premised on the important role of exposure to ongoing stressors in adulthood in the onset and chronicity of depression and anxiety disorders (Heim & Nemeroff, 2001).

The mechanism through which chronic stress influences depression is currently unclear. It has been hypothesized that chronic stress can exacerbate the impact of current acute stressors on depression (Hammen, 2005; Shapero, et al., 2013). The particular type of stress may influence the strength of association with mental disorders – for example, loss and relationship stress specifically have been found to have a strong association with depression (Hammen, 2005). While some studies have investigated the role of specific stressors on depression, the majority of studies examining stress and depression have analyzed stressful life events from a cumulative perspective (Risch, et al., 2009), exploring a large number of potentially stressful life events and comparing number of events experienced, rather than type of event (Anda, et al., 2006). Other studies have considered a large number of risk factors, individually and cumulatively – for example, Sjoholm et al.'s study of 16 risk factors and their association with depression (Sjoholm, Lavebratt, & Forsell, 2009).

Other risk factors for depression and anxiety must be considered, given that most people exposed to stressful life events do not go on to develop depression or anxiety (Kessler, 1997). The relationship between stress and depression may be modified by factors that can be considered risk factors – being female (Mezulis, Funasaki, Charbonneau, & Hyde, 2011), prior history of mental disorder, socio-economic status (Lorant, et al., 2003), parental depression (Morris, McGrath, Goldman, & Rottenberg, 2013), low self-esteem (Orth, Robins, Widaman, & Conger, 2013), cognitive and personality styles (Hammen, 2005; Rawal, Collishaw, Thapar, & Rice, 2013; Rohde, Stice, & Gau, 2012), and factors that can be considered protective factors – such as access to social support (Kawachi &

Berkman, 2001), interpersonal skills (Kessler, 1997) and active coping strategies (Southwick, Vythilingam, & Charney, 2005). Recent research has also focused on genetic vulnerability to depression, with a study providing evidence for a gene-environment interaction partially explaining the association between stress and depression (Caspi, et al., 2003). Genetic factors may partially explain the way in which individuals respond differently to the same stressful event (Saveanu & Nemeroff, 2012), and there is an interaction between genetic factors and stressful life events in the etiology of depression (Goldberg, 2006). Application of the diathesis-stress model to depression indicates that the etiology of depression is multi-causal, with a combination of factors combining to constitute causal factors for depression (Sjoholm, et al., 2009); for example, childhood adversity acts together with stressors experienced as an adult to increase risk for depression (Patten, 2013).

Some of these same models and factors have been shown to hold for the relationship between stress and anxiety, however, the literature on the impact of stress on mental disorders has focused more on depression than anxiety. While there is considerable literature on PTSD, PTSD is no longer defined as an anxiety disorder in the DSM-5 (American Psychiatric Association, 2013). Childhood adversity, discussed above, is also considered a risk factor for anxiety disorders (Anda, et al., 2006; Heim & Nemeroff, 2001; McLaughlin, et al., 2010). Child sexual abuse has been found to be both a distal and proximal cause of anxiety disorders in adulthood, including generalized anxiety disorder (Maniglio, 2013). A range of early adverse experiences have been found to be associated with a number of anxiety disorders, with anxious reactions to stress in

childhood posited as forming the basis for anxious response to stress throughout life (Heim & Nemeroff, 2001). Depression and anxiety are often co-occurring; a study has shown that anxiety is both a cause of, and mediator of, depression – for example, that stress increases anxiety, which in turn increases depression (Nima, Rosenberg, Archer, & Garcia, 2013).

Whereas the literature on stress, depression and anxiety often focuses on early experiences of stress, as discussed above, this study focuses on stressful life events specifically relevant to the population of migrant workers from Burma, living and working in Thailand. These stressful life events include violations of labor rights experienced in the workplace, deceit experienced during migration from Burma to Thailand, and threats to safety and security experienced while living in Thailand. This study used qualitative methods to ascertain the relevant stressful life events, and then assessed the prevalence of these events, and associations with, mental health outcomes in this population. This theoretical background provides grounding to understanding the associations between stressful life events and mental health outcomes examined in this study.

A conceptual model for migration, stress and mental health

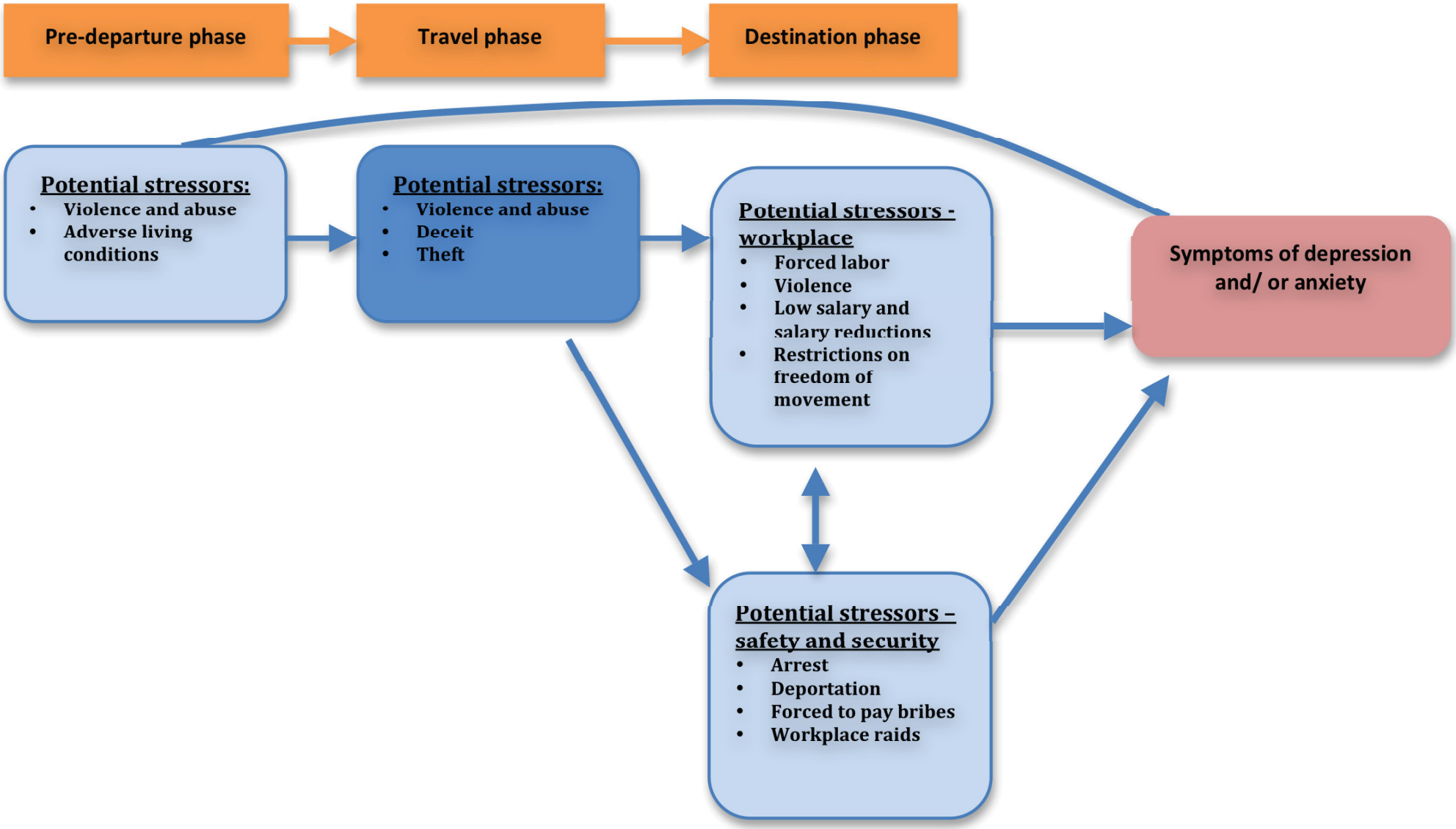
The proposed conceptual model for this present study combines the areas of migration and health, and stress and mental health [Figure 4.2]. The conceptual framework provides a map for understanding measurement and analysis decisions made in the course of this specific study.

The basis of the framework is the migration and health conceptual framework, whereby pre-departure, travel, destination, and interception and return phases of the migratory process are represented, along with potential stressors associated with each phase. The travel and destination phases are highlighted, given they are the focus of the present study, and the particular categories of stressors selected for analysis in the quantitative phase of research are identified in these two phases. For each phase, a number of potential stressors that could lead to depression and/ or anxiety are listed. The qualitative and quantitative phases of research of this study explore the specific stressors present and relevant in the context of the Thailand-Burma border.

The model draws on a number of theories discussed above. The approach to understanding stress and its relationship with mental health in this study is informed by both the life conditions approach and the cumulative risk approach discussed earlier in this chapter. Adopting the *life conditions approach* results in analysis of items from the survey, primarily those relating to safety and security, that are considered as structural or macro factors influencing migrant workers' mental health. Utilizing *cumulative risk* as a theoretical basis, the study seeks to understand travel-related, workplace-related and safety and security-related stressors, and their influence on migrant workers' mental health, separately and cumulatively. The cumulative nature of stress is represented by the arrows connecting the phases, with a separate and independent arrow also connecting the migration phase to mental health outcomes, representing the direct effect stress experienced in this phase could have on mental health. Moreover, inclusion of both travel

and destination-phase stressors is in recognition of the need to include both proximal and distal stressors to account for mental health outcomes. This framework does not include demographic variables, such as age, marital status and education level, are also expected to influence mental health outcomes.

Figure 4.2: Conceptual framework for migration, stress and mental health



References:

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th Edition ed.). Arlington, VA: American Psychiatric Association Publishing.

Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., et al. (2006). The enduring effects of abuse and related adverse experiences in childhood. A convergence of evidence from neurobiology and epidemiology. *Eur Arch Psychiatry Clin Neurosci, 256*(3), 174-186.

Briere, J., & Scott, C. (2006). *Principles of Trauma Therapy: A Guide to Symptoms, Evaluation, and Treatment*. Thousand Oaks, California: Sage Publications.

Caspi, A., Sugden, K., Moffitt, T. E., Taylor, A., Craig, I. W., Harrington, H., et al. (2003). Influence of life stress on depression: moderation by a polymorphism in the 5-HTT gene. *Science, 301*(5631), 386-389.

Chapman, D. P., Whitfield, C. L., Felitti, V. J., Dube, S. R., Edwards, V. J., & Anda, R. F. (2004). Adverse childhood experiences and the risk of depressive disorders in adulthood. *J Affect Disord, 82*(2), 217-225.

Eaton, W., & Garrison, R. (1992). Mental Health in Mariel Cubans and Haitian Boat People. *International Migration Review, 26*(4), 1395-1415.

Ensel, W. M., & Lin, N. (1996). Distal Stressors and the Life Stress Process. *Journal of Community Psychology, 24*, 66-82.

Evans, G. W. (2003). A multimethodological analysis of cumulative risk and allostatic load among rural children. *Dev Psychol, 39*(5), 924-933.

Goldberg, D. (2006). The aetiology of depression. *Psychol Med, 36*(10), 1341-1347.

Grant, K. E., Compas, B. E., Stuhlmacher, A. F., Thurm, A. E., McMahon, S. D., & Halpert, J. A. (2003). Stressors and child and adolescent psychopathology: moving from markers to mechanisms of risk. *Psychol Bull, 129*(3), 447-466.

Hammen, C. (2005). Stress and depression. *Annu Rev Clin Psychol, 1*, 293-319.

Heim, C., & Nemeroff, C. B. (2001). The role of childhood trauma in the neurobiology of mood and anxiety disorders: preclinical and clinical studies. *Biol Psychiatry, 49*(12), 1023-1039.

Hobfoll, S. E. (1989). Conservation of resources. A new attempt at conceptualizing stress. *Am Psychol, 44*(3), 513-524.

Kawachi, I., & Berkman, L. F. (2001). Social ties and mental health. *J Urban Health, 78*(3), 458-467.

Kessler, R. C. (1997). The effects of stressful life events on depression. *Annu Rev Psychol, 48*, 191-214.

Kessler, R. C., McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., et al. (2010). Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *Br J Psychiatry, 197*(5), 378-385.

Kiesler, D. J. (1999). *Beyond the disease model of mental disorders* Westport: Praeger Publishers

Link, B., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior, Special Issue*, 80-92.

Lorant, V., Deliege, D., Eaton, W., Robert, A., Philippot, P., & Ansseau, M. (2003). Socioeconomic inequalities in depression: a meta-analysis. *Am J Epidemiol, 157*(2), 98-112.

Maniglio, R. (2010). Child sexual abuse in the etiology of depression: A systematic review of reviews. *Depress Anxiety, 27*(7), 631-642.

Maniglio, R. (2013). Child sexual abuse in the etiology of anxiety disorders: a systematic review of reviews. *Trauma Violence Abuse, 14*(2), 96-112.

McLaughlin, K. A., Conron, K. J., Koenen, K. C., & Gilman, S. E. (2010). Childhood adversity, adult stressful life events, and risk of past-year psychiatric disorder: a test of the stress sensitization hypothesis in a population-based sample of adults. *Psychol Med, 40*(10), 1647-1658.

Mezulis, A., Funasaki, K., Charbonneau, A. M., & Hyde, J. S. (2011). Gender differences in the cognitive vulnerability-stress model of depression in the transition to adolescence. . *Cognitive Therapy and Research, 34*, 501-513.

Morris, B. H., McGrath, A. C., Goldman, M. S., & Rottenberg, J. (2013). Parental Depression Confers Greater Prospective Depression Risk to Females than Males in Emerging Adulthood. *Child Psychiatry Hum Dev*.

Nima, A. A., Rosenberg, P., Archer, T., & Garcia, D. (2013). Anxiety, affect, self-esteem, and stress: mediation and moderation effects on depression. *PLoS One, 8*(9), e73265.

Orth, U., Robins, R. W., Widaman, K. F., & Conger, R. D. (2013). Is Low Self-Esteem a Risk Factor for Depression? Findings From a Longitudinal Study of Mexican-Origin Youth. *Dev Psychol*.

Patten, S. B. (2013). Major depression epidemiology from a diathesis-stress conceptualization. *BMC Psychiatry, 13*, 19.

Rawal, A., Collishaw, S., Thapar, A., & Rice, F. (2013). A direct method of assessing underlying cognitive risk for adolescent depression. *J Abnorm Child Psychol, 41*(8), 1279-1288.

Risch, N., Herrell, R., Lehner, T., Liang, K. Y., Eaves, L., Hoh, J., et al. (2009). Interaction between the serotonin transporter gene (5-HTTLPR), stressful life events, and risk of depression: a meta-analysis. *JAMA, 301*(23), 2462-2471.

Rohde, P., Stice, E., & Gau, J. M. (2012). Effects of Three Depression Prevention Interventions on Risk for Depressive Disorder Onset in the Context of Depression Risk Factors. *Prevention Science, 13*, 584-593.

Saveanu, R. V., & Nemeroff, C. B. (2012). Etiology of depression: genetic and environmental factors. *Psychiatr Clin North Am, 35*(1), 51-71.

Shapero, B. G., Black, S. K., Liu, R. T., Klugman, J., Bender, R. E., Abramson, L. Y., et al. (2013). Stressful Life Events and Depression Symptoms: The Effect of Childhood Emotional Abuse on Stress Reactivity. *J Clin Psychol*.

Sjoholm, L., Lavebratt, C., & Forsell, Y. (2009). A multifactorial developmental model for the etiology of major depression in a population-based sample. *J Affect Disord, 113*(1-2), 66-76.

Southwick, S. M., Vythilingam, M., & Charney, D. S. (2005). The psychobiology of depression and resilience to stress: implications for prevention and treatment. *Annu Rev Clin Psychol, 1*, 255-291.

Suldo, S., Shaunessy, E., & Hardesty, R. (2008). Relationships among stress, coping, and mental health in high-achieving high school students. *Psychology in the schools, 45*(4), 273-290.

V. Study design

1. Overview of the Trafficking Assessment Project

The data used for this study are from the Trafficking Assessment Project [TAP]. TAP was a partnership between researchers at JHSPH and Social Action for Women [SAW], a Burmese community-based organization based in Mae Sot. The focus of the present study is the findings from the research components of TAP. The over-arching goal of the research component of TAP was to estimate the prevalence of trafficking amongst migrant workers from Burma living and working in and around Mae Sot, Thailand. The research components of TAP were as follows:

Formative research: The formative research phase included forty key informant interviews with community leaders, services providers and staff of community-based organizations and non-governmental organizations working on issues relating to trafficking and migration in and around Mae Sot. Another component was mapping of key migration transit routes from Burma to Thailand and locations of migrant labor in and around Mae Sot. Analysis of these key informant interviews informed sampling strategy and selection of domains for the interview guide for the qualitative phase of research. Moreover, aspects of formative research were used to inform design and implementation of RDS in the quantitative research phase.

Qualitative research: In-depth interviews were conducted with 61 migrant workers, working in agriculture, factories, construction and the sex industry. This phase of research is described further below in *Qualitative Methods.*

Quantitative survey: A prevalence survey of 589 migrant workers, using an instrument developed based on analysis of in-depth interviews, included measures of trafficking and workplace exploitation, and mental health measures (depression and anxiety). This study utilized respondent driven sampling [RDS] as its sampling method. This phase of research is described further below in *Quantitative Methods*.

2. Mixed methods research

TAP was a mixed-methods research project, and the data collection and analysis methods employed for this present study are both qualitative and quantitative. There are a number of conceptual and epistemological issues associated with mixed methods studies. This following discussion identifies some of these issues, and explains the reasons for employing mixed methods in this study, and the approach used to integrate qualitative and quantitative findings.

Mixed methods research can raise questions and challenges associated with paradigms, which Morgan defines as "shared belief systems that influence the kinds of knowledge researchers seek and how they interpret the evidence they collect" (Morgan, 2007). Most fundamentally, quantitative research is usually approached through a positivist or realist epistemological stance, while qualitative research paradigms vary, but may include

constructivist approaches that contradict or undermine the principles of positivist research. This has led some theorists to describe qualitative and quantitative research as incommensurate, meaning that the "radically different assumptions about the nature of reality and truth in paradigms like realism and constructivism make it impossible to translate or reinterpret research between these paradigms" (see Morgan 2007 for further discussion). At an epistemological level, different assumptions about the nature of reality and truth may pose a theoretical challenge to the simple combination of qualitative and quantitative methods. However, at a pragmatic level, as Morgan points out, there is lack of clarity "about the linkage between philosophical commitments at the so-called paradigm level and practical procedures at the level of data collection and analysis" (Morgan, 2007). Qualitative and quantitative approaches may stem from different epistemological stances. However, these epistemologies may not strongly influence actual data collection and analysis methods, and therefore, combination of qualitative and quantitative methods may not be challenged by the different epistemological assumptions underlying each approach. This study adopted a pragmatic approach to combining qualitative and quantitative methods (Feilzer, 2010; Morgan, 2007). The pragmatic approach suggests that mixed methods research can combine the inductive, theory-driven approach typically associated with qualitative methods, and the deductive, data-driven approach typically associated with quantitative methods, through a mode of reasoning that goes between theory and data and allows each to inform the other.

Adopting a pragmatic approach, Johnson and Onwuegbuzie proposed that "[t]he goal of mixed methods research is not to replace either of these approaches [qualitative and

quantitative methods] but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies" (Johnson & Onwuegbuzie, 2004). Creswell et al. propose criteria for selecting mixed methods approaches, one of which is that a mixed methods approach be employed where either method on its own would be limited and incomplete (Creswell, Klasson, Plano Clark, & Clegg Smith, 2011). Studying the phenomenon of trafficking in the context of the Thailand-Burma border is one such context where the strengths of both qualitative and quantitative methods were valuable. Utilizing both approaches addressed some of the weaknesses of a purely qualitative or quantitative approach to the research questions, and utilized the strengths of a qualitative or quantitative approach to best address the research questions. Some of the strengths and limitations of a quantitative approach in the context of this study included the significant complexities associated with defining and measuring trafficking, particularly in a context of large-scale migration. As such, TAP employed qualitative methods within a mixed methods approach in order to investigate the complex processes and dynamics of both migration and trafficking in this context. Qualitative methods were used in an exploratory fashion to develop meaningful and relevant measures and indicators of trafficking, based on experiences of migrant workers from Burma. This phase of research drew on some of the strengths of qualitative research – that data are based on people's personal experiences and own categories of meaning, and that the data identify local dynamics and complex phenomena associated with the research question. For example, the issue of debt emerged in in-depth interviews, whereby migrant workers described how travel to and within Thailand, or obtaining a work permit, led to significant debt, which could lead to limitations in freedom of movement and other rights. As such, qualitative methods

enabled researchers to identify concepts and questions that are highly relevant that may not have been uncovered without qualitative inquiry.

However, a majority of trafficking research has been primarily, or solely, qualitative, and some of the methodological limitations of these studies – for example, sampling approaches – have limited the ability of these studies to shed light on important questions in this field (Brunovskis & Surtees, 2010). For example, this has hindered attempts to more accurately estimate numbers of trafficking victims or identify needs for services. TAP sought to address these limitations by operationalizing the qualitative data into indicators of trafficking for the prevalence survey, and subsequently utilizing established quantitative methods that enable estimation of prevalence of trafficking and migration-related risks.

There are multiple models of mixed methods research, each of which may place a different emphasis on qualitative or quantitative approach and findings, and use methods in different sequences. The present study adopts what Johnson and Onwuegbuzie characterize as a QUAL–>QUAN study, whereby the qualitative phase is sequentially followed by a quantitative phase (Creswell, et al., 2011; Johnson & Onwuegbuzie, 2004; D. L. Morgan, 1998), but where the results and approaches are given equal weight. In many mixed methods studies where qualitative methods are used prior to quantitative methods, qualitative methods are primarily used instrumentally – for example, to identify themes and domains, and to develop items to include in a scale. However, in this study, both qualitative and quantitative findings are used to shed light on the phenomena under

investigation. As such, the combination of methods allows for triangulation, complementarity (including seeking illustration and clarification of results from both phases) and expansion (seeking to expand the breadth of the findings by using different methods) (Greene et al. 1989, cited in Johnson and Onwuegbuzie, 2004). As such, the results from the qualitative research phase in this present study are understood to have multiple purposes, beyond informing the quantitative research instrument, including informing selection of specific indicators and categorization of variables for quantitative analysis, explaining quantitative findings, and as stand-alone exploratory research that could be used to inform future research on related topics.

In this study, the "point of interface" – the point where the data are mixed or connected – between the qualitative and quantitative data is during the data interpretation stage [presented in *Chapter VIII – Discussion and Conclusions*], as well as in the data collection phase, discussed in the description of survey design below in *Quantitative Methods* (Guest, 2013). The purposes of integration of the different data sets are multiple: the qualitative data inform the survey design [data collection phase], the qualitative and quantitative data are integrated to enhance or explain the results of each data set [data analysis phase], and the data sets are compared in order to identify convergence and contradiction [data analysis phase] (Guest, 2013). Moreover, integration seeks to address the concern that, in some mixed methods research, the benefits of combining methods are limited by separate reporting of results and data (Bryman, 2007). Therefore, while presentation of qualitative data [*Chapter VI*] and quantitative data [*Chapter VII*] are

separate, integrative discussion of both forms of data is included in *Chapter VIII* (Castro, Kellison, Boyd, & Kopak, 2010).

3. Study setting

Mae Sot is a town and district in Tak Province, Thailand, located four kilometers from the Thai-Myanmar Friendship Bridge that crosses the Thailand-Burma border. Mae Sot is located near "one of the most porous parts of the Thai-Burma border," with numerous individuals crossing the Moei River from Burma into Thailand daily, for day-labor and longer term stays for work in Thailand (Feinstein International Center, 2011). The area is a major point of transit for migrant workers from Burma seeking to travel to other parts of Thailand, including Bangkok and fishing areas around Bangkok, as well as a final destination for migrant workers, many of whom hear of increased livelihood opportunities from friends and family members who are already working in the area and who travel back to visit or return to Burma. Agricultural work is a major sector of employment for migrant workers from Burma, and as such, the district of Phop Phra, an agricultural area close to Mae Sot, was an additional site of interviews.

Mae Sot is emerging as a regional hub and a center of industry. In Mae Sot, there are growing numbers of textile factories, whose employees are at least 95% migrant workers from Burma (Arnold, 2005; Kusakabe & Pearson, 2010). In 2004, the Thai Cabinet endorsed the Mae Sot Border Economic Zone Project (Huguet & Punpuing, 2005), and factories and industry established in Mae Sot offers multiple tax incentives and exemptions on import duties (Arnold & Hewison, 2005). Future plans for establishing

Mae Sot as a special economic zone, in order to increase trade with Burma, will include increased transport infrastructure, warehouses, and shipment and distribution centres; these plans are expected to increase the need for migrant labor in the district.[6]

4. A note on sampling

The present study is embedded within TAP. However, while the over-arching research goal of TAP is to measure the prevalence of trafficking amongst a population of migrant workers, the present study explores a broader range of migration and post-migration experiences. The decision to select a sample of migrant workers for TAP, rather than more specifically individuals who had been identified as victims of trafficking, was driven by two factors: recognition of the dynamics of migration and trafficking in this context, and recognition of some of the limitations of research focused on trafficking.

Previous research on trafficking into forced labor in Samut Sakhon, Thailand, indicated that trafficking is embedded in broader migration dynamics, suggesting a need to study a broader sample of migrants in order to identify and assess trafficking dynamics (Robinson & Branchini, 2011). International Labor Organisation [ILO] research has indicated that a clear distinction between trafficked and non-trafficked victims of labor and sex exploitation is hard to maintain with regard to experiences of hardship and health consequences. Research has indicated that both trafficked and non-trafficked victims of exploitation experience severe coercion at various phases of migration and work, and suggests a "forced labor continuum," where trafficking victims are in the most

[6] See media coverage of proposed economic changes, for example: (http://www.bangkokpost.com/business/news/370350/special-economic-zones-planned-at-myanmar-border; http://karennews.org/2013/03/border-boomtown-a-tale-of-winners-and-losers.html).

exploitative and restrictive situations, followed by non-trafficked victims of forced labor (Andrees & van der Linden, 2005). In order to determine whether this perspective holds in this context, and to develop in-depth understanding of what components constitute trafficking in this context, this research focused on the broader population of migrant workers, amongst whom it was assumed there would be a sub-set of migrants who had experienced trafficking. The sample therefore includes migrant workers who had previously had trafficking experiences, as well as other migrant workers who experienced various forms of abuse and exploitation in migration processes and workplaces.

Moreover, much trafficking research focuses specifically on victims of trafficking and individuals in post-trafficking services (Oram, Ostrovschi, et al., 2012; Ostrovschi, et al., 2011; Turner-Moss, et al., 2013). Many studies use samples of victims of trafficking who are receiving post-trafficking assistance, leading to samples that are biased towards individuals who are more likely to receive services. Research focused on this population may either over- or under-estimate risks associated with trafficking, as individuals who receive services are likely systematically different from those who do not (Brunovskis & Surtees, 2010). Numbers and characteristics of individuals in post-trafficking services may reflect particular components of the services themselves, rather than reflect the prevalence or profile of trafficking victims (Tyldum & Brunovskis, 2005). The extent to which specific cases of victims of trafficking, purposively selected for research, reflect the broader experiences of individuals who have been trafficked is difficult to ascertain (Brunovskis & Surtees, 2010). A systematic review of studies of trafficking and health outcomes found that methods of defining individuals as trafficked in a number of studies

may have introduced significant selection bias into these studies (Oram, Stockl, et al., 2012). Some studies that have sought to identify trafficking prevalence in a broader sample of sex workers, for example, have used a definition of trafficking that focuses on means of entry into the workplace, rather than encompassing means, process and goal (Decker, McCauley, Phuengsamran, Janyam, & Silverman, 2011; Silverman, et al., 2011; Silverman, et al., 2013), while limited data shows mechanisms of trafficking in the sex industry (Falb, et al., 2011; McCauley, Decker, & Silverman, 2010), but not amongst the broader population of migrants in other industries. As such, for the parent project, TAP, a sample of migrant workers was interviewed for both qualitative and quantitative research phases. This approach sought to address the limitations in studying mechanisms and outcomes of trafficking amongst individual in post-trafficking services, while also enabling insight into a broad range of experiences, beyond those categorized as trafficking-related.

5. Qualitative methods

For the qualitative research phase, in-depth interviews were conducted with 61 migrants from Burma living and working in and around Mae Sot, Thailand.

Sampling

The sampling strategy was purposive sampling, an approach whereby "[t]he researcher actively selects the most productive sample to answer the research question" (Marshall, 1996). In the absence of background information about what a typical case of migrant labor looks like in this context, or what types of variation of risks, processes or

demographic factors would be important to include, which would allow for typical case or maximum variation sampling, this was identified as the most suitable sampling approach (Teddlie & Yu, 2007).

Inclusion criteria for the research were that the respondent was 18 or over, from Burma, and currently living or working in and around Mae Sot, Thailand. The sampling strategy for the research was based on findings from the formative phase of research conducted as part of TAP, logistics of accessing migrant workers in safe and private environments, and research objectives for this phase of research.

Findings from key informant interviews in the formative phase of research suggested that important variations in migrant workers' experiences, in terms of travel and transport to Thailand, registration, and experiences in the workplace, could be found between men and women in different industries in Thailand. The types and locations of work that were identified in these interviews were small and large factories in Mae Sot, agricultural work in surrounding areas of Mae Sot, and sex work, and therefore respondents were selected from each of these industries. Sampling was an iterative process. For example, in an early interview, a respondent currently working in a factory detailed a number of exploitative experienced during prior work in the construction industry, and thus researchers decided to add a number of interviews with construction workers to further explore these issues.

Sampling procedures were also informed by ethical considerations. Many aspects of the interview touched on sensitive topics. All respondents were expected to be migrant

workers with irregular status, who are therefore subject to arrest and deportation, and vulnerable to abuse by employers, police and immigration officials. Therefore, the sampling procedures utilized were also designed to ensure that participants were individuals who SAW members knew directly, or knew of through their programs, and therefore would feel comfortable to contact SAW after the interview with any questions or problems. Members of SAW have built strong relationships with peer educators and health outreach workers in a number of sectors of employment in and around Mae Sot through their programs, and participants were recruited through these individuals. As such, participants were aware of the work SAW does, and were aware of services they could access after the interview if they needed. Logistical challenges in conducting conducting interviews with migrant workers also influenced the sampling approach. In this context, many migrant workers do not have days off and working hours are long. Interviewers endeavored to conduct interviews outside of working hours or on days off, which limited access to migrant workers in some industries, such as agriculture.

The final sample, including sex, type of work, age and length of time in Thailand of respondents, is displayed below in Table 5.1.

Table 5.1: Demographics characteristics of sample of respondents for in-depth interviews

	Male (N)	Female (N)
Type of work		
Large factory – Mae Sot town	6	6
Small factory – Mae Sot town	4	10
Agriculture – Phop Phra	10	8
Sex industry	N/A	10
Other (returned from Bangkok, construction)	7	0
Age		
18-24	5	9
25-34	12	15
35-44	8	8
45-54	2	2
Length of time in Thailand		
Under one year	2	1
1-2 years	4	2
2-5 years	8	18
5-10 years	7	8
10-15 years	4	4
15-20 years	2	1

Sample size

The final sample size was a total of 61 migrant workers. Given the diversity of experiences in different sectors of work described in the formative stage of research, a large sample size was selected. Moreover, sample size selection was informed by the principle of saturation – the point at which new data does not provide new information about the topic being studied. Through reading and discussing interview transcripts with interviewers as they were completed, the TAP research team was able to assess saturation of categories and guide selection of additional respondents to address gaps in data. The principle of saturation is rarely scientifically assessed, and the qualitative methods literature provides "no description of how saturation might be determined and no

practical guidelines for estimating sample sizes for purposively sampled interviews" (Guest, Bunce, & Johnson, 2006). As is the case in many qualitative studies, the principle of saturation was used as a guideline at the conceptual level. When various themes were repeated and few significant new themes were heard in additional interviews, the TAP research team was able to identify which categories of workers were adequately covered and when to stop conducting interviews.

Procedure

Researchers developed an in-depth interview guide based on the goals of TAP, as well as themes that emerged in the formative research phase of TAP. The interview guide was piloted and revised as needed. The guide focused on the following domains:

1. Travel and transit to Thailand – including modes of travel, use of agents, forms of payment involved and exposure to violence or abuse;
2. Experiences living and working in Thailand – including working hours and conditions, restrictions on freedom of movement or changing jobs, access to registration or work permits, and experiences and interactions with police or authorities;
3. Health status and well-being – including physical and mental health issues, experiences of abuse or violence, and access to health services; and
4. Social networks – size of social networks and sources of support.

The final domain of the interview was included as formative research for implementing RDS for the quantitative survey.

SAW staff members, who had all previously worked on SAW programs with migrant workers, conducted the interviews. Prior to starting data collection, interviewers received one week of training in qualitative research methods, including research ethics. The interviewers were all Burmese individuals who had migrated from Burma to Thailand for a range of reasons. The life experiences and current status of some of the interviewers was similar to that of respondents, for example, not having legal status in Thailand or having migrated to Thailand using similar means. This similarity may have helped interviewers build rapport with respondents, and increase sensitivity to the difficult topics being discussed in the interviews.

All interviews were conducted in Burmese. Interviewers scheduled appointments and discussed possible interview locations with respondents, to ensure that interviews took place in safe and private locations. A number of interviews were conducted in nearby schools or at SAW offices, so as to provide a convenient location for the interviews, away from worksites. Respondents were offered a SAW migrant workers' hotline card at the end of the interview, describing ways for the respondent to seek help from SAW, along with a small gift of household goods (a towel and soap).

Interviewers worked in pairs, with one taking the lead asking questions and the other taking detailed notes. After each interview, each pair of interviewers reviewed the notes and typed up a complete transcript in Burmese. Subsequently, after each interview, interviewers participated in a supervision session, with the researcher for this study and a translator, fluent in Burmese and English. This stage of the process was a component of

data quality improvement, as interviewers read through the transcript to clarify meaning of aspects of the transcript to improve subsequent translation. These sessions also served to improve the skills of interviewers, through identifying possible probes and follow-up questions and addressing any difficulties that arose in the interview, and encouraging interviewers to feel comfortable asking difficult questions about violence and abuse. After this session, translators translated the Burmese transcript into English. This was then double-checked by another translator, who compared the Burmese transcript and English transcript and noted any discrepancies, which were resolved through discussion between translators and supervisors. The interviews were collected over a five-week period in March-April 2012.

Analysis

In order to analyze the interviews, the researcher developed a codebook as a way of categorizing data into meaningful areas of inquiry (Creswell, 2007) [see Appendix 1] Codebook development was an iterative process. The researcher of this present study developed an initial codebook by hand-coding ten interviews purposively selected to represent a range of experiences captured in the sample. The codebook was supplemented and some codes merged or clarified based on initial coding of interviews in Atlas.ti, using the constant comparative method to synthesize data (Boychuk Duchscher & Morgan, 2004). The first fifteen interviews were coded in Atlas.ti by the researcher of this present study and coding was subsequently checked by a Principal Investigator of TAP, after which coding was completed by the researcher of the present study. Subsequent to coding, discussions amongst the research team identified themes and codes most relevant

to the central research questions, moving from a descriptive coding procedure to a more explicitly interpretive and analytical process (Miles & Huberman, 1994).

The researcher adopted a constructivist approach, which recognizes the role of the researcher's own perspectives and experiences in shaping interpretation and meaning (Creswell, 2007). In this study, this entails recognition that the data that emerged from each in-depth interview reflects an interaction between the interviewer and the respondent, and that interpretation of this data is influenced by a variety of aspects of the researcher's own identity and beliefs. This requires consideration of issues of reflexivity, which is defined as the process of "reflecting critically on the self, and of analyzing and noting personal values that could affect data collection and interpretation" (Walker, Read, & Priest, 2013). Reflexivity of the researcher was considered at the data analysis stage, and included documenting and taking notes on decisions made around codebook development and coding – for example, considering how or if knowledge gained from living in Mae Sot for the duration of the study influenced choices of analytical categories. Jootun et al. note that the "reflexive researcher acknowledges that any findings are the product of the researcher's interpretation," and that subjectivity can in fact improve the quality of analysis and interpretation (Jootun, McGhee, & Marland, 2009).

Validity was approached in the qualitative phase of this study through the lens of "trustworthiness" suggested by Lincoln and Guba (1985, cited in Creswell 2007). The most relevant components of trustworthiness for this study were credibility – the fit between the data and the researcher's representation of the findings, and dependability –

ensuring that the process of data collection is "logical, traceable and clearly documented" (Tobin & Begley, 2004). This researcher adopted the position that in qualitative research, the approach to validity should be one of making decisions about data collection and analysis explicit, rather than following a set of structured rules or practices (Sandelowski, 1993).

6. Quantitative methods

For the quantitative research phase, a survey was conducted with 589 migrant workers from Burma living and working in and around Mae Sot, Thailand.

Sampling

This survey employed RDS. RDS is a sampling method developed to utilize with 'hidden populations' – populations for whom a sampling frame does not exist, precluding use of traditional probability sampling methods, and for whom stigma may create barriers to participation in a study. In contrast to sampling methods that require a sampling frame prior to starting a study, in RDS, the "sampling frame is constructed during the sampling process, during which subgroup members recruit their peers and recruitment patterns are documented" (Magnani, Sabin, Saidel, & Heckathorn, 2005). Moreover, respondents are recruited to the study by peers, which can potentially overcome some of the barriers created by stigma, where respondents may not want to be identified for participation in a survey by a researcher or others outside of their community. RDS combines a chain-referral sampling approach – that is, asking eligible respondents to recruit other eligible peers to the study – with "a mathematical system for weighting the sample to compensate

for its not having been drawn as a simple random sample" (Abdul-Quader, Heckathorn, Sabin, & Saidel, 2006). Analysis methods for post-hoc weighting are discussed further in *Analysis*. White et al. have expressed concerns that reporting of methodological decisions and procedures in RDS studies is not adequate (White, et al., 2012). As such, this section and subsequent reporting of findings from the survey obtained through RDS include the components suggested in White et al.'s RDS reporting guidelines, which are included in Appendix 2.

RDS is implemented through purposive selection of a set of "seeds," who are asked to recruit their peers to the study. Recruitment continues as seeds recruit a next set of respondents – the "first wave" – and continues to second-wave and so on, until the desired sample size is reached. Seeds and recruits are given a set number of coupons to distribute, reducing overrepresentation of some groups and underrepresentation of others based on some respondents being able to recruit large numbers (Abdul-Quader, et al., 2006; Heckathorn, 2002; Ramirez-Valles, Heckathorn, Vazquez, Diaz, & Campbell, 2005). This also encourages longer recruitment chains – for example, six or seven waves – which can increase reach into the population and identify sub-groups of respondents within the sample. This helps to reach "equilibrium" – the point at which the composition of the sample, in terms of key characteristics, is independent of the composition of the non-randomly selected seeds.

In a RDS study, each seed and recruit's coupon number is tracked so that who recruited who to the study is documented. As such, homophily bias – where individuals are more

likely to recruit other individuals who are similar to themselves – can be adjusted for in post-hoc analysis (Heckathorn, 1997, 2002). Moreover, respondents are asked to report their personal network size, on the assumption that recruits are selected with a probability proportional to the network size of their recruiter. This allows for weighted analysis, allowing for controlling bias introduced by over-sampling those with larger peer networks (Abdul-Quader, et al., 2006). In summary, like traditional approaches to probability sampling, RDS "provides a means of selecting a sample and evaluating the reliability of the data obtained, and allows inferences about the characteristics of the population from which the sample is drawn" (Semaan, Lauby, & Liebman, 2002). This approach combines the feasibility and effectiveness of chain-referral methods in hidden and vulnerable populations with statistical techniques to allow for population-based estimates.

RDS has been found to be feasible and effective in recruiting vulnerable and hidden populations in various contexts: Latino gay and transgender men in Chicago and San Francisco (Ramirez-Valles, et al., 2005), female sex workers in Vietnam (Johnston, Sabin, Mai, & Pham, 2006), and men who have sex with men in Zanzibar (Johnston, Holman, et al., 2010) and Argentina (Carballo-Dieguez, et al., 2011). RDS has primarily been used for HIV prevalence and risk-behavior surveys of men who have sex with men, female sex workers, and injection drug users. However, the approach may be applicable to migrant worker populations, who are also often hidden due to irregular status, and may be highly mobile, spread out and hard to reach. A recent study of rural to urban migrant workers in China used RDS, stating that given migrant workers' "marginal status and often transient residential circumstances, researchers have frequently encountered

numerous obstacles when seeking to recruit a representative sample of migrant workers" (Qiu, et al., 2012). A study of migrant workers from Burma and Cambodia on the Thailand-Cambodia border found that RDS was an effective sampling methodology, providing valid estimates of knowledge and treatment-seeking for malaria amongst the migrant worker population (Khamsiriwatchara, et al., 2011).

RDS was selected for this study given that in this particular context, the total population of migrant workers is unknown, mobile, and a complete sampling frame does not exist. Moreover, migrant workers with irregular status might be unwilling to enrol in a survey when approached by interviewers. Finally, individuals who are trafficked may constitute a "hidden population" within the broader population of migrant workers. Therefore, to address TAP's study aims, and to produce a valid sample of migrant workers for the purposes of the study, RDS was selected as the most appropriate sampling method.

Formative research is an important component of planning and implementing a RDS study (Johnston, Whitehead, Simic-Lawson, & Kendall, 2010). In this study, community mapping conducted as part of formative research for TAP and in-depth interviews with migrant workers in the qualitative phase of research included specific components that were designed to inform RDS design and implementation. Formative research addressed the following aspects suggested in Johnston et al. – "social network properties, acceptability of RDS to the target population, seed selection and survey logistics." Extensive discussion with SAW staff yielded information regarding how and when to access migrant workers for surveys, suitable amount for incentive payments, and

appropriate locations for interviews. Formative research also informed decisions about the structure of the study. It became evident in the formative research phase that migrant workers in different industries in and around Mae Sot form different networks – that is, a factory worker in Mae Sot would be unlikely to know or recruit an agricultural worker in Phop Phra. In RDS, an underlying assumption is that the study population forms one single network. As such, researchers decided to stratify the sample, and conduct respondent-driven sampling with this population in three separate samples: factory workers in Mae Sot, agricultural workers in Phop Phra, and women in the sex industry in Mae Sot.

Eligibility criteria for all participants in the study were:

- Over 18 years of age
- Migrant worker from Burma

For each separate group – migrant workers in factories, agriculture and the sex industry – eligibility criteria were that they had worked in the given industry in the past year, and for migrants in the sex industry, that they were female. Wording of eligibility for the sex workers group was such that inclusion was based on behavior (having sold sex for money or goods in the past year), rather than self-identification as a sex worker.

Seed selection is an important component of RDS, and researchers consulted with SAW staff to identify important demographic differences in the three separate study populations, and to select appropriate seeds who represented a diversity of variables

within the study populations. For each of the three groups, seeds were selected based on the following considerations:

- Agriculture: sex, location
- Factory: sex, type of factory
- Sex work: location, type of sex work (i.e. brothel-based, contacting clients by phone)

For factory and agriculture groups, six seeds were selected. In the agriculture group, three male and three seeds were selected, representing five different living locations and three different working locations. For the factory group, three male and three female seeds were selected, representing garment, pipe/electricity and knitting/sewing factories of various sizes (approximately 1000 to 3000 employees). In the sex work group, five seeds were selected, two of whom worked in brothels, two of whom worked in restaurants that also operated as brothels, and one of whom arranged clients on her own by phone.

In the agriculture group, all six seeds were launched on the first day of the survey, whereas in both factory and sex work groups, seed launch was staggered throughout the study, so as to better handle study flow. Seeds and recruits were given three coupons to hand to peers for the majority of the study; in all three groups, recruits were given two, and then one or zero, coupons when desired sample size was close so as to ensure that individuals with coupons were not turned away from the study.

Researchers used a number of methods throughout the study to reduce repeat enrolment or possibility of duplication of coupons by potential respondents. All coupon information

was entered into a Coupon Log daily. Interviewers retained redeemed coupons, in order to eliminate the possibility of coupons being returned more than once by different respondents. Coupons for each group were printed on different colored paper, to reduce the possibility of respondents copying coupons and distributing additional coupons. The possibility of commercial exchange of coupons in the community is minimal such that it can be concluded with confidence that returned coupons were distributed and redeemed only once. Finally, in order to track recruitment speed and how many recruits each seed brought to the study, recruitment was mapped using NetDraw each day [see Appendix 3] This also assisted in identifying any problems with mislabelled coupons or data entry in the coupon logs. Table 5.2 displays the number of initial recruits per seed, the longest wave of respondents linked to the seed, and the total number of recruits linked to each seed.

Table 5.2: Recruitment by seed

Seed ID	*Number of Recruits by Seed*	*Longest Wave Linked to Seed*	*Total Number of Recruits Linked to Seed*
1001 (agriculture)	3	2	9
1002 (agriculture)	3	4	43
1003 (agriculture)	3	1	3
1004 (agriculture)	3	6	19
1005 (agriculture)	3	4	29
1006 (agriculture)	3	6	92
5001 (factory)	3	5	42
5002 (factory)	3	5	39
5004 (factory)	3	4	37
5006 (factory)	3	7	62
5007 (factory)	3	5	37
5008 (factory)	2	5	36
8001 (sex work)	3	4	20
8002 (sex work)	3	4	21
8003 (sex work)	3	6	50
8004 (sex work)	3	3	16
8005 (sex work)	3	4	15

Reasons for non-participation or coupon rejection were not recorded in this study. Table 5.3 displays the number of distributed and returned coupons per sub-group, and the final sample size per sub-group

Table 5.3: Coupons distributed and returned, final sample size:

Sub-group	Number of coupons distributed	Number of coupons returned	Final sample size
Agriculture industry	292	197	203
Factory industry	708	252	258
Sex industry	334	123	128

Survey instrument

Respondents were interviewed using a survey instrument developed for TAP, which included modules to measure demographic variables, migration history and experiences, work experiences, interactions with authorities, mental health, registration status, debt, health, and an extra module to measure risks specific to sex work. The survey was designed in English, and translated by an experienced Burmese translator. The translation was discussed by Burmese interviewers and clarified based on feedback from pilot interviews and based on review by a translator who was not affiliated with SAW or TAP. The mental health measures were developed for the Mental Health Assessment Project [MHAP], a randomized controlled trial of a mental health intervention for survivors of violence and torture in Mae Sot. An experienced Burmese translator translated the mental health measures, using vocabulary from qualitative research conducted for MHAP where appropriate. The translation was then reviewed by bilingual English-Burmese staff affiliated with MHAP. The whole survey was only translated to Burmese, based on SAW staff members' advice that the majority of migrant workers spoke Burmese. One interviewer was fluent in Karen and was available to conduct an interview in Karen (with simultaneous translation from Burmese to Karen) if needed. This option was not used at

any point during the study as respondents reported being comfortable answering the questions in Burmese.

The instrument was piloted with 12 migrant workers who would have been eligible for the study. Based on feedback from these interviews, changes to specific questions were made to improve clarity, and some items were for dropped to reduce length.

The sections drawn upon for analysis are described below here; sections on debt, self-reported health status and sex workers' experiences are not included here. The full survey instrument is included in Appendix 4.

a) RDS information

This module was utilized to collect the coupon number of the respondent and the coupon number of the respondent's recruiter. Moreover, the module sought to identify the number of other migrant workers from the specific sub-group in the respondent's network, using the following four questions:

I. How many migrant sex workers who are over 18 and are currently or recently working in your job from Burma do you know?
II. Of these people from above, how many know you?
III. Of these people who know you, how many did you see in the past week?
IV. Of those people you saw, how many did you speak to in the past week?

This set of questions is standard practice to ensure accurate reporting of network size for the purposes of weighting in RDS data analysis.

b) Demographics and socio-economic status

In addition to standard demographic questions (sex, age, education level, marital status), respondents were asked demographic questions relevant to this specific context and population: whether they were born in Burma or Thailand or another country; reasons for coming to Thailand, with possible response categories including lack of livelihood opportunities, conflict, and drought; whether they had ever lived or been registered in a refugee camp, and whether they send money to Burma. Given different earning capacity in the different industries, and varying costs of living for migrant workers, a household food security question was asked, as a proxy indicator for socio-economic status.

c) Migration history and experiences

In order to assess prevalence of trafficking for the purposes of the key research question for TAP, this module included an item about the use of a *carry* or broker while travelling to Thailand, as well as a question assessing the role that the *carry* or broker played in travel and transit to Thailand from Burma. This module also included items assessing experiences of deceit and fraud while travelling to Thailand, based on findings of the prevalence of these experiences from the in-depth interviews with migrant workers in the qualitative research phase. This module included ten closed-ended questions.

d) Work experiences

This module addressed experiences of forced labor and exploitation in the workplace, including items specifically drawn from the ILO definition of forced labor (for example,

"Have you ever been unable to leave a job due to a fear of punishment?" and "Has an employer, manager or *wunna*[7] ever threatened to turn you into authorities?") and items developed to reflect findings from in-depth interviews (for example, "Have you ever had to pay additional fees for police protection to your employer out of your salary?" and "Have you ever had payment deducted for food and living expenses?"). Items also assessed workplace safety and training, occupational health and safety (assessing presence and severity of disease or injury due to work), and sexual harassment and abuse in the workplace. This module included 46 items, all of which were closed-ended apart from questions asking the respondent to describe a work-related injury or illness they had experienced.

e) Interactions with authorities

This module assessed whether respondents had experienced a range of interactions with local authorities – police or immigration officials – such as arrest, physical abuse or deportation to Burma. This module included 7 closed-ended questions.

The migration, work and authorities modules all drew on data from the in-depth interviews with migrants workers conducted in the qualitative research phase. Table 5.4 lists some items from these modules and excerpts from in-depth interviews indicating the relevance of this item.

[7] Wunna is a Burmese word (borrowed from the Thai word, *hua na*, or "boss") used to describe the manager/ go-between of the employer, who is directly responsible for giving workers orders and is usually a Burmese individual who speaks Thai and has been in Thailand for a long time.

Table 5.4: Links between qualitative data and items in survey instrument

Section of survey	Quote	Item in survey
Migration history and experiences	Q: "Could you explain in detail about why you had to pay money at the checkpoints although you had ID?" A: "That was just the bribery of the authorities. They issued National ID for us and they also asked the money. When we made the National ID, we had to spend about over 10,000 Kyats. With it, we could go anywhere in Burma. Although it could do, whenever we travel, they asked money from us. Since these checkpoints were military checkpoints, we were afraid so we didn't dare to complain. We had heard from the people on the car that if we complained, we would be forced to get off the car." – male, age 25, working in a large factory	3.3 Were you ever forced to pay a bribe to any authorities during transport while traveling to Thailand or moving within Thailand?
Migration history and experiences	"He [the *carry*] told us that he could take us to Bangkok overnight at 600 baht a person. We paid him right away and crossed the stream by rubber tube. Instead of his promise to take us by car, we had to walk in the woods. We had two *carries* at that time, and one of them told us not to wear the white shirts but the dark ones instead. It was the raining season at that time. We had to cross the chest high water in the streams. We had to cross at least three mountains. We were not allowed to sleep. We had no food to eat. Two days later, we arrived to a village called Maelamon. We were placed in a tent in a farm. The carry told us that we had to wait for the boss coming to pick us up for two days….Later, they told us to wait for one more day, and they would take us for the next day. After they all left, the man who worked in the field told us that the boss will not come and take you now…He assured us that they would	3.8 Have you ever been deceived, defrauded or cheated while traveling to Thailand or moving within Thailand?

	never take us to Bangkok. We came to realize at that point that we were deceived by the *carries*." – female, age 24, working in a small factory	
Work experiences	Q: "When you wanted to change the job or you saw the better job and tried to change from the job, do you feel any restriction?" A: "My boss does not restrict it. But in some places it is difficult to quit the job. Because they took the debts from the shops nearby and they took advance money from the boss, it is very hard for them to quit. If they still owe money to pay, they cannot quit. If they quit secretly and are arrested, it would not be easy. They could die. In these areas, killing people is so easy." – male, age 45, working in agriculture	4.12 Have you ever been unable to leave a job due to debt to an employer?
Work experiences	"When we were a bit late to the work, the wunna yelled at us. If the workers were sick and could not work, he came in front of the huts and shouted. He forced them to work. They couldn't avoid to work. Only when they could not stand from the bed, they were allowed not to work." – male, age 31, working in agriculture	4.14 Have you ever been forced to work when you are sick?
Work experiences	"The salary was too low in this home factory. Salary was not paid regularly. The costs to pay to the police for security and for work permit were cut but they didn't make any work permit for us." – female, age 23, working in a factory	4.19 Have you ever had to pay additional fees for police protection to your employer out of your salary?

f) Mental health

The instrument included a version of the Hopkins Symptoms Checklist-25 [HSCL-25] that had previously been adapted for this context. The HSCL-25 version used in this survey was adapted through a process that included qualitative research, translation and back-translation of the instrument, piloting, and reliability and validity testing, for use in

a mental health intervention, the Mental Health Assessment Project [MHAP], for survivors of systematic violence in Mae Sot (Haroz, et al., under review). For MHAP, qualitative research was conducted in order to identify the most important psychosocial problems present in the population (C. I. Lee, Robinson, & Bolton, 2011). Selection and adaption of mental health measures for MHAP was based on these findings. Adaptation included "translation based on local idioms and phrases from the qualitative study, and addition of items specifically relevant to the local context, also from the qualitative study" (Haroz, et al., under review). Based on qualitative findings, two items were added to the depression scale and two to the anxiety scale, and one item was removed from the anxiety scale, resulting in 17 items in the depression scale and 11 in the anxiety scale. The items added to the depression scale based on the qualitative data from MHAP were "Don't talk to anyone" and "Disappointed." The items added to the anxiety scale were "Distrust, feel suspicious" and "Feel stress."

In a reliability and validity study conducted for MHAP (N=164), the depression and anxiety scales were found to have good internal consistency (Alpha coefficient) and test-retest/ inter-rater reliability. Reliability was assessed through a combination of test-retest and inter-rated reliability, whereby a re-interview was done with n = 31 respondents within four days of the first interview, using a different interviewer. Test-retest/ inter-rater reliability was assessed using a Pearson correlation coefficient (Haroz, et al., under review). Internal consistency for depression and anxiety scales was .85 for men for both depression and anxiety scales, and .93 and .90 for women for depression and anxiety scales respectively. Test-retest/ inter-rater reliability, based on re-administering the scales

to 31 respondents three days after the first interview, was .84 for depression and .71 for anxiety. Given the strengths of the research process behind the adaptation of the HSCL-25 and the findings of the reliability of the depression and anxiety in this specific context with a similar population, researchers decided that these would be appropriate measures of mental health outcomes to include for this study.

g) Registration

This module assessed whether respondents were currently or had ever been registered, reasons for lack of registration, and presence of any other type of documentation apart from registration for work purposes with the Thai Government.

Procedure:

All interviews were administered by trained data collectors who were SAW staff, had experience participating in research (including the qualitative component of TAP), and experience working with the migrant community. Data collectors received extensive training on administering the survey instrument, human subjects research ethics, and training on interviewing respondents on sensitive topics, which built upon training the data collectors had received in other phases of TAP and MHAP, the mental health intervention project through which SAW staff had also been trained. Training included practice scenarios of extreme distress and ways to respond to problems that could emerge in the course of research.

Coupons listed a phone number of a SAW staff member for potential respondents to call and arrange an interview time. Interviewers travelled to locations accessible to respondents and conducted interviews in locations that were safe and private in order to protect confidentiality. Before starting the survey, interviewers checked eligibility of all respondents, including that they had a valid coupon from a respondent in the same occupational group. Interviewers recorded the respondent's coupon number and recruiter's coupon number in a coupon log prior to each interview, and recorded the coupon numbers on the coupons given to the respondent to hand out to peers in the coupon log after the interview was completed.

Interviewers obtained verbal informed consent from respondents and asked four questions (from the *RDS Information Module*, listed above) to obtain accurate reporting of network size for the purposes of statistical weighting in the analysis phase. After completing the survey, respondents were given three coupons to distribute to peers, and an incentive for completing the survey (100 baht for agriculture and factory workers, 250 baht for migrant workers in the sex industry, to reflect differences in earning capacity in the different sectors). Interviewers explained how and why to give out coupons, and provided a brief training to respondents in how to encourage peers to participate in the survey. Secondary incentives, whereby respondents are given additional incentives based on how many peers they recruit to the study, were not provided in this study.

Agriculture, factory and sex industry surveys were conducted successively, given limitations of availability of study staff and resources to conduct all three samples concurrently.

Measurement and construction of key variables

i. Mental health outcome measures – depression and anxiety

The HSCL-25 was utilized as the mental health measure in this study, with additional items added from qualitative research from MHAP, as described above. The HSCL-25 measures two distinct mental health outcomes – depression and anxiety. Across all the 28 items in the two measures, in the whole sample of 589, there were a total of 21 missing responses. The largest number of missing responses per item was 5 missing responses, for the item "Loss of sexual interest or pleasure," in the depression scale. This has been noted, in prior research projects and by SAW interviewers, as a particularly sensitive question that some individuals were evidently unwilling to answer. Considering the low level of missing data, all missing data for the depression and anxiety measures was imputed through single mean imputation.

The depression scale was measured on a 1-4 Likert scale (Never, Sometimes, Often, All the time), and the anxiety scale was measured on a 1-5 Likert scale (Never, Sometimes, Half of the Time, Often, All the time). During analysis, the responses "Sometimes" and "Half of the Time" in the anxiety scale were combined to change it to a 1-4 Likert scale, to improve comparability to other studies utilizing the HSCL.

Depression and anxiety are often operationalized in research studies as dichotomous variables, with a cut-off selected and all individuals scoring above this cut-off considered as depressed or anxious. However, this approach was not selected for this study for a number of reasons. Firstly, a validated cut-off distinguishing between depressed and non-depressed, and anxious and non-anxious, individuals has not been developed for this population. Prior work on validation using the HSCL-25 in this context developed an algorithm through which to score individuals as depressed or anxious, however, this was developed for the purpose of screening individuals into a counselling service. Symptom levels were evaluated on the basis of suitability for clinical services, which was not the case for this study (Bolton, et al., under review). There are significant limitations associated with selecting a cut-off developed for other populations or in other contexts, including possible over or under-estimation of prevalence. Secondly, Grant et al. note that categorical diagnoses are most appropriate in the case where the question of interest is onset, duration and remission of specific mental disorders. In this case, documentation of the timing of specific stressful events or other determinants is key (Grant, et al., 2003). The measurement of the stressors in this study entails that utilizing the depression and anxiety outcome measures as categorical measures of mental disorder was not considered by the researcher to be the strongest approach. Finally, there is debate as to whether depression, specifically, should be considered as a category or a continuum. The Diagnostic and Statistical Manual [DSM]-III shifted the conceptualization of psychopathology towards classification of disease based on a categorical basis – i.e. that someone either does or does not have a mental disorder (Hankin, Fraley, Lahey, & Waldman, 2005). Some empirical data show that depression is dimensional, and

constitutes a "quantitative deviation from "normal" affective experience," rather than a distinct and separate syndrome for which a quantitative cut-off can be selected (Hankin, et al., 2005; van den Oord, Pickles, & Waldman, 2003). There is debate as to whether interpreting data based on measurement instruments such as the HSCL-25 in order to generate a categorical diagnosis is a valid approach. Hartman et al. note the distinction between the clinical approach, which employs a categorical diagnosis based on clinical interview, and the psychometric approach, which employs a dimensional approach based on a questionnaire (Hartman, et al., 2001).

Therefore, these outcome measures are considered throughout analysis as continuous variables, with a total score per individual representing the number of symptoms endorsed and degree of endorsement (i.e. "sometimes," which was scored as a 2, vs. "often," which was scored as a 3). As such, the results do not provide an estimate of the prevalence of depression and anxiety in this population, but rather estimates associations between various exposures measured in the survey, and level of symptoms of depression and anxiety.

ii. Exposure variables

Exposure variables from the survey included items assessing experiences during migration, in workplaces, and experiences of safety and security post-migration. There was minimal (< .003%) missing data on any of these items. Given the binary nature of these variables, missing data was addressed through the conservative approach of imputing "no" for any missing responses.

Three types of exposure variables were selected for analysis in this study:

Migration deceit:

Qualitative data indicated the central role of experiences of deceit and fraud during migration and its influence on subsequent working conditions. As such, the item – "Have you ever been deceived, defrauded or cheated while traveling to Thailand or moving within Thailand?" – was included as the exposure variable in the category of migration stressors. This is the measure of deceit that is referred to in mediation analyses in *Chapter VII – Quantitative Analysis.*

Workplace experiences:

Four separate workplace experience exposure variables were constructed for the purposes of analysis. The TAP survey assessed a large number of items relating to working conditions. Principal components analysis and factor analysis was conducted for the purposes of data reduction and construction of theoretically and empirically grounded exposure variables from this group of items. Factor analysis relies on the assumption of a linear relationship between continuous variables. Given the binary nature of these variables, a polychoric correlation structure was specified.

Principal components analysis suggested that either a four or five factor structure would fit, based on the number of Eigenvalues more than 1, the scree plot and parallel analysis. The researcher looked at four and five factor models, using promax rotation (given the

assumption that the factors are correlated) to compare factor loadings and interpret the meaning of factors. A general cut-off of a factor loading of .4 is a rule of thumb commonly applied to decide if an item is part of a factor, however, number of factors and inclusion of items in factors should also be guided by previous research and should be theory driven (Netemeyer, Bearden, & Sharma, 2003). After consideration of the four and five factor structures, and the grouping of items under each of these structures, the four-factor structure was selected as fitting best with the qualitative findings from this study.

The labels of the factors are based on understanding of the nature of the items derived from qualitative findings. For example, descriptions of being forced to work overtime in in-depth interviews with migrant workers indicated that forced overtime work was common and often expected by migrant workers, and therefore the label of the factor this item is associated with is "Hassles and daily stressors."

The factors and associated items displayed below in Table 5.5:

Table 5.5: Working conditions variables – factors and items

Factor	Items
Sexual and physical abuse and harassment	• Have you ever experienced unwanted sexual comments in the workplace? • Have you ever experienced unwanted sexual touching in the workplace? • Have you ever experienced unwanted sex in the workplace? • Have you ever been kicked, hit or slapped by an employer, manager or wunna?
Coercive working conditions	• Have you ever been threatened, pressured or compelled to take a job? • Have you ever felt that a person with power or authority took advantage of you to make you take a job?

	• Has physical force ever been used by anyone to make you take a job? • Have you ever been forced to work without payment? • Have you ever had your salary withheld or reduced as a form of punishment or threat?
Hassles and daily stressors	• Have you ever been forced to work when you are sick? • Have you ever been restricted from leaving your workplace on your free time? • Have you ever been forced to work overtime? • Have you ever had to pay additional fees for police protection to your employer out of your salary? • Have you ever been yelled at by an employer, manager or *wunna*?
Barriers to exit	• Have you ever been unable to leave a job due to a fear of punishment? • Have you ever been unable to leave a job due to debt to an employer? • Has an employer, manager or *wunna* ever threatened to turn you into authorities? • Have you ever had documents retained by an employer to force you to work?

The factor structure and item loadings varied by sub-sample. After conducting separate factor analysis for each sub-sample, and comparing the number of factors, and patterns of factor loadings, the researcher decided to use the number of factors and the factor loadings generated by the results from factor analysis for the whole sample. This allows for final models that allow for comparison between the three groups, rather than models that would not be comparable given their basis on different types and numbers of exposure variables.

Safety and security:

Three specific items from the survey were selected to represent migrants' experiences of safety and security: "Have you ever experienced a workplace raid by authorities while in

Thailand?," "Have you ever been arrested while in Thailand?," and "Have you ever been sent back to Burma involuntarily by authorities while in Thailand?" These experiences are considered to be reflective of migrant workers' vulnerability and lack of safety and security, which may influence mental health and well-being. These items were not included in the factor analysis, as they were conceptually different than the workplace-related stressors measured above. The safety and security items identify safety and security stressors that occur at and outside of workplaces, and in non-work related environments. While they may be correlated with poor working conditions, they are conceptualized separately for the purposes of this analysis, and therefore included as a separate exposure variable.

For all of these items, the survey question addressed lifetime experiences – whether an event had *ever* happened to a respondent, and did not include measures to assess how often, or when, the event occurred. The ways in which assessment of the exposures using lifetime prevalence questions may have influenced results is discussed further in *Chapter VIII – Discussion.*

Analysis:

Coupon logs were checked and reconciled with paper survey copies daily, and recruitment chains graphed using NetDraw, to track recruitment and ensure that there was no repeat enrolment. All survey data were entered into EpiInfo and then transferred to Stata 12.0 for all subsequent analysis. Exploratory data analysis was conducted to determine categorization of demographic variables and bivariate analyses of demographic

variables and mental health outcomes were conducted to identify demographic variables to control for in bivariate and multivariate models of migration, workplace, and safety and security-related exposures.

RDS methodology, described above, introduces dependence between observations, such that statistical methods for sample design must be used to generate correct standard errors and confidence intervals (Szwarcwald, de Souza Junior, Damacena, Junior, & Kendall, 2011). All respondents connected to a particular seed can be considered clustered, and therefore throughout analysis, statistical methods for sample design of a survey with clusters were employed. Moreover, use of a stratified sampling approach in this study, with three sub-groups sampled, led to analysis by sub-group for each model, as well as stratified analysis using the whole sample.

Power analysis of sample size needed to determine a .05 effect size, and power of .9, showed that a sample size of 300 was needed for the multivariate analyses. This indicates that study is not powered to detect true differences in the sub-samples, but is powered to determine true differences using the full sample.

Regression diagnostics were performed on regression models. Inter-quartile range plots were used to identify severe outliers. Testing of regression assumptions also included plotting kernel density plot, p-norm plot and q-norm plot, in order to identify deviation from normality of residuals. In order to assess independence of predictors, mean VIF was assessed for each regression model.

The first steps of analysis included determining the mean level of each symptom in the depression and anxiety scales, as well as calculating the mean level of symptoms of depression and anxiety by sub-group, and for the full sample, in order to address Specific Aim 3: "To determine the prevalence of symptoms of depression and anxiety amongst the sample population."

Mediation model:

The next analysis method addressed Specific Aim 4: "To examine a possible mediation model, exploring the relationship between deceit during migration, coercive working conditions and mental health outcomes, depression and anxiety." This model hypothesized that the relationship between deceit experienced during migration and symptoms of depression or anxiety is mediated in part by experiences of coercive working conditions. Mediation (or partial mediation) exists if the following hold true: i) there is a significant relationship between deceit during migration and coercive working conditions, ii) there is a significant relationship between deceit during migration and mental health symptoms, in the absence of coercive working conditions, iii) there is significant relationship between coercive working conditions and mental health symptoms, and iv) the effect of deceit on mental health symptoms shrinks with the presence of coercive working conditions in the model (Baron & Kenny, 1986). In order to assess mediation using this data, the association between deceit experience during migration and subsequent coercive working conditions was first assessed, using logistic regression for individual items part of the coercive working conditions summary measure, and linear regression for the summary measure. Then, the relationship between

the independent variable – deceit, and the dependent variables, depression and anxiety, was assessed. Then, the relationship between deceit during migration and mental health symptoms was assessed. These three regression analyses were used to ascertain if the requirements to establish mediation held. The Sobel-Goodman test was used to test whether the mediator, coercive working conditions, carries some of the effect of deceit during migration to depressive or anxiety symptoms, and what percentage of the total effect of deceit on mental health symptoms is mediated by coercive working conditions.

Multivariate model:

In the next stage of analysis, the wider range of post-migration experiences – aspects of working conditions and interactions with authorities – were explored in order to address Specific Aim 5: "Identify post-migration experiences that are associated with increased symptoms of depression and anxiety." Subsequent regression models, adjusting for demographic variables, explored the association between the summary measures of the various working conditions factors – coercive working conditions, physical and sexual abuse and harassment, hassles and daily stressors, and barriers to exit, and depression and anxiety outcomes. Regression models exploring the association between safety and security risks and depression and anxiety outcomes are also presented. Finally, multivariate models – with all the exposure variables, and demographic variables included as control variables – were conducted separately for depression and anxiety outcomes.

RDS methodology has generated some approaches to improve external validity of results – specifically, weighting of prevalence estimates based on social networks size and recruitment patterns. This study uses weights generated in RDSAT, the statistical software for RDS data analysis (Heckathorn, 2002; Sagalnik & Heckathorn, 2004; Wangroongsarb, et al., 2011). It should be noted that there is debate as to whether use of individualized weights creates accurate standard errors in the case of multivariate regression models. Few studies employing RDS methods have conducted regression analyses and "there is no consensus among statisticians as to whether RDS data can be appropriately weighted for multivariate analysis" (Johnston, Malekinejad, Kendall, Iuppa, & Rutherford, 2008). RDSAT does not create weights for continuous variables, so the depression and anxiety measures were dichotomized at the mean in order to generate weights.

7. Research ethics

Ethical approvals:

The Johns Hopkins School of Public Health Institutional Review Board approved the study. The researchers also convened a local review board for TAP, in collaboration with SAW, which was comprised of four local leaders working on labor and migration issues, who also approved all research components of TAP.

Procedures

A number of the procedures implemented throughout this study are in line with ethical guidelines for research on violence and trafficking (Ellsberg & Heise, 2005; Zimmerman

& Watts, 2003). For example, safety and security of the location and conduct of interviews was assessed and re-assessed throughout the study period, in response to changing security concerns. Data collectors had extensive knowledge about the potential risks for respondents in each occupational sector, and procedures for recruitment and conduct of interviews was adjusted based on this knowledge. Data collectors also had up-to-date information about accessible services for migrant workers, sharing a SAW contact card at the end of interviews in order to facilitate access to those services. Data collectors conducted interviews without anyone else present, with procedures in place to protect confidentiality and anonymity.

Informed consent:

Interviewers were trained in human subjects research, including the concepts of informed consent and minimization of risk. Prior to all interviews conducted for the qualitative and quantitative phases of the study, interviewers explained the nature of the study and the length of the interview, and obtained informed consent from respondents. Given low levels of literacy amongst the study population, an informed consent script was read by the interviewer to the respondent, and the respondent provided verbal consent, after which the interviewer signed the informed consent script for the respondent. The informed consent script contained a description of the study, the amount of time the interview would take, the topics of the interview, assurance of anonymity of data and description of potential risks and benefits of participation in the study.

Recruitment:

Researchers consulted with SAW staff to identify appropriate remuneration levels for respondents in both qualitative and quantitative phases of research, such that incentives would not be high enough so as to constitute coercion in the context of a vulnerable population (DeJong, Mahfoud, Khoury, Barbir, & Afifi, 2009). The higher level of incentive for the sub-group of migrants working in the sex industry was selected as the daily wage in that sub-group is much higher than the other two sub-groups.

Recruitment to the qualitative phase of research was conducted through SAW staff, who selected individuals in the community whom they knew through their various outreach programs and activities. This introduced the risk that the respondents would feel induced to participate in the study in order to continue receiving SAW services. However, other modes of recruitment were not considered to be ethical or logistically possible, and therefore, interviewers were trained to emphasize to potential respondents that participation was strictly voluntary, would not result in an increase or decrease of access to services, and continued access to SAW services not dependent on participation.

In terms of recruitment to the prevalence survey, RDS allows a high level of confidentiality and choice for respondents, as respondents who are asked to participate by a recruiter (who is their peer) can choose to refuse a coupon, or take a coupon and then later decide not to participate in the study (Semaan, Santibanez, Garfein, Heckathorn, & Des Jarlais, 2009). Peer pressure to take a coupon is unlikely to have operated in this study, as recruiters did not receive additional incentives if those they recruited redeemed

their coupon. All respondents were provided with training on peer recruitment, an aspect of prevention of coercion in RDS studies (Semaan, et al., 2009). Remuneration for respondents' participation in interviews was offered out of respect for the respondents' time and effort in participating in the study, especially given in some cases it was expected that migrants would have to take time off work in order to participate.

Risks and steps taken to minimize risk:

Researchers for the parent project, TAP, discussed with SAW staff potential risks that participation in the study could confer on respondents. One risk that was identified was that questions, both in the in-depth interview and in the survey, required respondents to recall past distressing and traumatic events or discuss current difficulties that may cause stress or impact well-being, and as such, participation in the study might make a respondent upset or emotional. Moreover, in the survey, questions that were asked as part of the mental health scales – including thoughts of suicide – can be particularly sensitive and difficult for respondents to answer.

In order to address this risk, interviewers were trained to observe respondents for signs of discomfort or distress, and informed respondents that they were free to refuse to answer any questions or stop the interview at any time. In addition, prior to asking respondents any questions from the mental health measures, a suicidality screener was administered to respondents, whereby they were asked if they had considered suicide or had plans to commit suicide. If respondents endorsed these items, there was a safety plan in place whereby a local mental health professional would be contacted and immediate mental

health counselling services would be provided to the respondent. Interviewers were trained to respond to general distress that did not manifest through endorsement of the suicidality questions – for example, crying during the interview. All respondents were provided with information about SAW services, and data collectors were trained to encourage respondents to seek help and support through these services to address problems causing this distress. Data collectors followed a standardized distress screener at the end of the interview, stating "Thank you very much for participating in our survey. We really appreciate you time. I know this discussion might have been difficult for you. How are you feeling right now? Would you like to discuss any of these issues further with someone else?"

Another risk associated with participation in this study was that police or immigration authorities could target respondents during travel to interview sites. Given that the majority of respondents were expected to have irregular status, this was a significant risk that needed to be addressed in order to protect the safety of respondents. As such, interviewers travelled to places near respondents' homes and workplaces after an interview was scheduled, and the site of interviews was selected in consultation with respondents.

These risks were not limited solely to potential respondents. A number of SAW interviewers also had irregular status in Thailand. SAW staff regularly employ protection methods to avoid police or immigration authorities in the day-to-day operation of their services, and therefore the study continued to support these approaches – for example,

only scheduling interviews at times of day where interviewers with irregular status felt safe to travel in Mae Sot.

However, in the course of the quantitative survey, there was a two-week period following the end of a registration period (for registration of workers with the Thai Government) where travel in and around Mae Sot was particularly dangerous, as immigration authorities came to Mae Sot from Bangkok in order to deport unregistered migrants. A number of additional checkpoints were present during the course of the two-week period, limiting daily travel of migrants with irregular status throughout Mae Sot. As such, the study was put on hold during that period, as the safety and security of both interviewers and potential respondents could not be assured.

Data protection:

During the course of the qualitative research phase, no identifiers were collected and all interviews were transcribed and stored with a code number. During the quantitative survey, the names of seeds were recorded in an Excel spreadsheet so that researchers could contact the seeds during the initial phases of research to encourage distribution of coupons and coupon return. This spreadsheet was kept separately from all data, and only accessible to lead researchers on the project. Therefore, throughout the course of the study, no data could be linked with individual respondents' names.

References:

Abdul-Quader, A. S., Heckathorn, D. D., Sabin, K., & Saidel, T. (2006). Implementation and analysis of respondent driven sampling: lessons learned from the field. *J Urban Health, 83*(6 Suppl), i1-5.

Andrees, B., & van der Linden, M. N. J. (2005). Designing Trafficking Research from a Labour Market Perspective: The ILO Experience. *International Migration, 45*(1/2), 55-73.

Arnold, D. (2005). The situation of Burmese migrant workers in Mae Sot, Thailand. In Asia Monitor Resource Center (Ed.), *Asian Transnational Corporation Outlook 2004: Asian TNCs, workers, and the movement of capital*. Bangkok: Asia Monitor Resource Center, .

Arnold, D., & Hewison, K. (2005). Exploitation in Global Supply Chains: Burmese migrant workers in Mae Sot, Thailand. *Journal of Contemporary Asia, 35*(3), 319-340.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *J Pers Soc Psychol, 51*(6), 1173-1182.

Bolton, P., Lee, C. I., Haroz, E. E., Murray, L. a. K., Dorsey, S., Robinson, W. C., et al. (under review). A Randomized Controlled Trial of a Community-Based Mental Health Treatment for Comorbid Disorders among Burmese Refugees in Thailand.

Boychuk Duchscher, J. E., & Morgan, D. (2004). Grounded theory: reflections on the emergence vs. forcing debate. *J Adv Nurs, 48*(6), 605-612.

Brunovskis, A., & Surtees, R. (2010). Untold Stories: Biases and Selection Effects in Research with Victims of Trafficking for Sexual Exploitation. *International Migration, 48*(4), 1-37.

Bryman, A. (2007). Barriers to Integrating Quantitative and Qualitative Research. *Journal of Mixed Methods Research, 1*(1), 8-22.

Carballo-Dieguez, A., Balan, I., Marone, R., Pando, M. A., Dolezal, C., Barreda, V., et al. (2011). Use of respondent driven sampling (RDS) generates a very diverse sample of men who have sex with men (MSM) in Buenos Aires, Argentina. *PLoS One, 6*(11), e27447.

Castro, F. G., Kellison, J. G., Boyd, S. J., & Kopak, A. (2010). A Methodology for Conducting Integrative Mixed Methods Research and Data Analyses. *Journal of Mixed Methods Research, 4*(4), 342-360.

Creswell, J. W. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. London: Sage Publications.

Creswell, J. W., Klasson, A. C., Plano Clark, V. L., & Clegg Smith, K. (2011). *Best Practices for Mixed Methods Research in the Health Sciences*. Washington D.C.: Office of Behavioral and Social Sciences Research.

Decker, M. R., McCauley, H. L., Phuengsamran, D., Janyam, S., & Silverman, J. G. (2011). Sex trafficking, sexual risk, sexually transmitted infection and reproductive health among female sex workers in Thailand. *J Epidemiol Community Health, 65*(4), 334-339.

DeJong, J., Mahfoud, Z., Khoury, D., Barbir, F., & Afifi, R. A. (2009). Ethical considerations in HIV/AIDS biobehavioral surveys that use respondent-driven sampling: illustrations from Lebanon. *Am J Public Health, 99*(9), 1562-1567.

Ellsberg, M., & Heise, L. (2005). *Researching Violence Against Women: A Practical Guide for Researchers and Activists.* Washington D.C.: World Health Organization, PATH.

Falb, K. L., McCauley, H. L., Decker, M. R., Sabarwal, S., Gupta, J., & Silverman, J. G. (2011). Trafficking mechanisms and HIV status among sex-trafficking survivors in Calcutta, India. *Int J Gynaecol Obstet, 113*(1), 86-87.

Feilzer, M. Y. (2010). Doing Mixed Methods Research Pragmatically: Implications for the Rediscovery of Pragmatism as a Research Paradigm. *Journal of Mixed Methods Research, 4*(1), 6-16.

Feinstein International Center. (2011). *Developing a Profiling Methodology for Displaced People in Urban Areas: case study: Mae Sot, Thailand*. Medford: Tufts University.

Grant, K. E., Compas, B. E., Stuhlmacher, A. F., Thurm, A. E., McMahon, S. D., & Halpert, J. A. (2003). Stressors and child and adolescent psychopathology: moving from markers to mechanisms of risk. *Psychol Bull, 129*(3), 447-466.

Guest, G. (2013). Describing Mixed Methods Research : An Alternative to Typologies. *Journal of Mixed Methods Research, 7*(2), 141-151.

Guest, G., Bunce, A., & Johnson, L. (2006). How Many Interviews Are Enough?An Experiment with Data Saturation and Variability. *Field Methods, 18*(1), 59-82.

Hankin, B. L., Fraley, R. C., Lahey, B. B., & Waldman, I. D. (2005). Is depression best viewed as a continuum or discrete category? A taxometric analysis of childhood and adolescent depression in a population-based sample. *J Abnorm Psychol, 114*(1), 96-110.

Haroz, E. E., Bass, J. K., Lee, C. I., Murray, L. K., Robinson, W. C., & Bolton, P. (under review). Adaptation and Testing of Psychosocial Assessment Instruments for Cross-Cultural Use: An Example from the Thailand Burma Border. .

Hartman, C. A., Hox, J., Mellenbergh, G. J., Boyle, M. H., Offord, D. R., Racine, Y., et al. (2001). DSM-IV internal construct validity: when a taxonomy meets data. *J Child Psychol Psychiatry, 42*(6), 817-836.

Heckathorn, D. (1997). Respondent-driven Sampling: A New Approach to the Study of Hidden Populations. *Social Problems, 44*(2), 174-199.

Heckathorn, D. (2002). Respondent Driven Sampling II: Deriving Valid Population Estimates from Chain-referral Samples of Hidden Populations. *Social Problems, 49*(1), 11-34.

Huguet, J. W., & Punpuing, S. (2005). *International Migration in Thailand*. Bangkok: IOM.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher, 33*(7), 14-26.

Johnston, L. G., Holman, A., Dahoma, M., Miller, L. A., Kim, E., Mussa, M., et al. (2010). HIV risk and the overlap of injecting drug use and high-risk sexual behaviours among men who have sex with men in Zanzibar (Unguja), Tanzania. *Int J Drug Policy, 21*(6), 485-492.

Johnston, L. G., Malekinejad, M., Kendall, C., Iuppa, I. M., & Rutherford, G. W. (2008). Implementation challenges to using respondent-driven sampling methodology for HIV biological and behavioral surveillance: field experiences in international settings. *AIDS Behav, 12*(4 Suppl), S131-141.

Johnston, L. G., Sabin, K., Mai, T. H., & Pham, T. H. (2006). Assessment of respondent driven sampling for recruiting female sex workers in two Vietnamese cities: reaching the unseen sex worker. *J Urban Health, 83*(6 Suppl), i16-28.

Johnston, L. G., Whitehead, S., Simic-Lawson, M., & Kendall, C. (2010). Formative research to optimize respondent-driven sampling surveys among hard-to-reach populations in HIV behavioral and biological surveillance: lessons learned from four case studies. *AIDS Care, 22*(6), 784-792.

Jootun, D., McGhee, G., & Marland, G. R. (2009). Reflexivity: promoting rigour in qualitative research. *Nurs Stand, 23*(23), 42-46.

Khamsiriwatchara, A., Wangroongsarb, P., Thwing, J., Eliades, J., Satimai, W., Delacollette, C., et al. (2011). Respondent-driven sampling on the Thailand-

Cambodia border. I. Can malaria cases be contained in mobile migrant workers? *Malar J, 10*, 120.

Kusakabe, K., & Pearson, R. (2010). Transborder Migration, Social Reproduction and Economic Development: A Case Study of Burmese Women Workers in Thailand. *International Migration, 48*(6), 13-42.

Lee, C. I., Robinson, W. C., & Bolton, P. (2011). *Qualitative assessment of displaced persons in Mae Sot, Thailand affected by torture and related violence in Burma.* . Washington, D.C.: USAID.

Magnani, R., Sabin, K., Saidel, T., & Heckathorn, D. (2005). Review of sampling hard-to-reach and hidden populations for HIV surveillance. *AIDS, 19 Suppl 2*, S67-72.

Marshall, M. (1996). Sampling for qualitative research. *Family Practice 13*, 522-525.

McCauley, H. L., Decker, M. R., & Silverman, J. G. (2010). Trafficking experiences and violence victimization of sex-trafficked young women in Cambodia. *Int J Gynaecol Obstet, 110*(3), 266-267.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: a sourcebook of new methods*. Thousand Oaks, CA: Sage.

Morgan, D. L. (1998). Practical strategies for combining qualitative and quantitative methods: applications to health research. *Qual Health Res, 8*(3), 362-376.

Morgan, D. L. (2007). Paradigms Lost and Pragmatism Regained : Methodological Implications of Combining Qualitative and Quantitative Methods. *Journal of Mixed Methods Research, 1*(1), 48-76.

Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling Procedures: Issues and Applications*. London: SAGE Publications Ltd. .

Oram, S., Ostrovschi, N. V., Gorceag, V. I., Hotineanu, M. A., Gorceag, L., Trigub, C., et al. (2012). Physical health symptoms reported by trafficked women receiving post-trafficking support in Moldova: prevalence, severity and associated factors. *BMC Womens Health, 12*, 20.

Oram, S., Stockl, H., Busza, J., Howard, L. M., & Zimmerman, C. (2012). Prevalence and risk of violence and the physical, mental, and sexual health problems associated with human trafficking: systematic review. *PLoS Med, 9*(5), e1001224.

Ostrovschi, N. V., Prince, M. J., Zimmerman, C., Hotineanu, M. A., Gorceag, L. T., Gorceag, V. I., et al. (2011). Women in post-trafficking services in Moldova: diagnostic interviews over two time periods to assess returning women's mental health. *BMC Public Health, 11*, 232.

Qiu, P., Yang, Y., Ma, X., Wu, F., Yuan, P., Liu, Q., et al. (2012). Respondent-driven sampling to recruit in-country migrant workers in China: a methodological assessment. *Scand J Public Health, 40*(1), 92-101.

Ramirez-Valles, J., Heckathorn, D. D., Vazquez, R., Diaz, R. M., & Campbell, R. T. (2005). From networks to populations: the development and application of respondent-driven sampling among IDUs and Latino gay men. *AIDS Behav, 9*(4), 387-402.

Robinson, C., & Branchini, C. (2011). *Estimating Labor Trafficking: A Case Study of Burmese Migrant Workers in Samut Sakhon Province, Thailand*. Bangkok: Labor Protection Network and UNIAP.

Sagalnik, M., & Heckathorn, D. (2004). Sampling and estimation in hidden populations using respondent-driven sampling. *Sociol Methodol, 34*, 193–239.

Sandelowski, M. (1993). Rigor or rigor mortis: the problem of rigor in qualitative research revisited. *Advanced Nursing Science, 16*(2), 1-8.

Semaan, S., Lauby, J., & Liebman, J. (2002). Street and network sampling in evaluation studies of HIV risk-reduction interventions. *AIDS Rev, 4*(4), 213-223.

Semaan, S., Santibanez, S., Garfein, R. S., Heckathorn, D. D., & Des Jarlais, D. C. (2009). Ethical and regulatory considerations in HIV prevention studies employing respondent-driven sampling. *Int J Drug Policy, 20*(1), 14-27.

Silverman, J. G., Raj, A., Cheng, D. M., Decker, M. R., Coleman, S., Bridden, C., et al. (2011). Sex trafficking and initiation-related violence, alcohol use, and HIV risk among HIV-infected female sex workers in Mumbai, India. *J Infect Dis, 204 Suppl 5*, S1229-1234.

Silverman, J. G., Saggurti, N., Cheng, D. M., Decker, M. R., Coleman, S. M., Bridden, C., et al. (2013). Associations of Sex Trafficking History with Recent Sexual Risk among HIV-Infected FSWs in India. *AIDS Behav*.

Szwarcwald, C. L., de Souza Junior, P. R., Damacena, G. N., Junior, A. B., & Kendall, C. (2011). Analysis of data collected by RDS among sex workers in 10 Brazilian cities, 2009: estimation of the prevalence of HIV, variance, and design effect. *J Acquir Immune Defic Syndr, 57 Suppl 3*, S129-135.

Teddlie, C., & Yu, F. (2007). Mixed Methods Sampling: A Typology With Examples. *Journal of Mixed Methods Research, 1*(1), 77-100.

Tobin, G. A., & Begley, C. M. (2004). Methodological rigour within a qualitative framework. *Journal of Advanced Nursing, 48*(4), 388-396.

Turner-Moss, E., Zimmerman, C., Howard, L. M., & Oram, S. (2013). Labour Exploitation and Health: A Case Series of Men and Women Seeking Post-Trafficking Services. *J Immigr Minor Health*.

Tyldum, G., & Brunovskis, A. (2005). Describing the Unobserved: Methodological Challenges in Empirical Studies on Human Trafficking. *International Migration, 43*(1/2), 17-34.

van den Oord, E. J., Pickles, A., & Waldman, I. D. (2003). Normal variation and abnormality: an empirical study of the liability distributions underlying depression and delinquency. *J Child Psychol Psychiatry, 44*(2), 180-192.

Walker, S., Read, S., & Priest, H. (2013). Use of reflexivity in a mixed-methods study. *Nurse Res, 20*(3), 38-43.

Wangroongsarb, P., Satimai, W., Khamsiriwatchara, A., Thwing, J., Eliades, J. M., Kaewkungwal, J., et al. (2011). Respondent-driven sampling on the Thailand-Cambodia border. II. Knowledge, perception, practice and treatment-seeking behaviour of migrants in malaria endemic zones. *Malar J, 10*, 117.

White, R. G., Lansky, A., Goel, S., Wilson, D., Hladik, W., Hakim, A., et al. (2012). Respondent driven sampling--where we are and where should we be going? *Sex Transm Infect, 88*(6), 397-399.

Zimmerman, C., & Watts, C. (2003). *WHO Ethical and Safety Recommendations for Interviewing Trafficked Women* Geneva: World Health Organization

VI. Qualitative results

The qualitative research phase of TAP involved in-depth interviews with 61 migrant workers. The aims addressed in this chapter are Aim 1, to describe experiences of migrant workers in Mae Sot, Thailand, during their migration processes from Burma to Thailand, and Aim 2, to describe working conditions for the same population in Mae Sot, Thailand, including modes of entry into work and specific forms of exploitation experienced in workplaces.

The methodology is described in-depth in *Chapter V – Study Design, Qualitative Methods.* Results here are presented according to Zimmerman et al.'s conceptual framework for migration and health, which account for different stages of the migratory process. In the case of this study, migration-related experiences are captured in the "travel phase," which includes travel to Thailand from Burma, as well as travel within Thailand. Relevant themes that emerged in the travel phase are: the use of *carries* and brokers, debt, and deceit. Relevant themes that emerged in the destination phase can be divided into those associated with the workplace and those associated with safety and security. Workplace-related themes discussed below are: salary deductions and forced overtime, forced work without pay, and abuse and violence. Themes associated with safety and security for migrant workers are: fear and insecurity; workplace raids, arrest and deportation, and registration. Whereas the results are presented separately in travel phase and destination phase, the interconnections between phases of the migratory process are also explored throughout.

1. Travel phase

Use of carries and brokers

Carries and brokers – individuals who assist migrants to travel to Thailand and potentially subsequently provide arrangements to enter into particular work environments – are central actors is the travel phase of the migratory process in this context. In-depth interviews indicated that mode of travel, specifically, whether or how a migrant used a *carry* or broker to travel to and within Thailand, and in some case, to obtain work, was an important determinant of subsequent experiences in workplaces in Thailand, as well as potentially leading to exposure to abuse and deceit during travel.

Many respondents described using *carries* or brokers at some point of their travel to or within Thailand, using *carries* or brokers to travel to from Burma to Mae Sot, directly from Burma to Bangkok, or from Mae Sot to Bangkok. Migrant workers who were unsure of how to travel to Thailand or did not have existing contacts, such as friends or family members already working in Thailand, used *carries* or brokers to navigate the process of travel to or within Thailand.

Respondents provided some descriptions of *carries* that illustrate the role *carries* take in this process, and the ways in which potential migrants in Burma often enter into arrangements with *carries*. *Carries* were described by respondents as individuals from Burma, many of whom had lived and worked in Thailand for a long time, who earned

money transporting individuals from Burma to Thailand, and sometimes also played a role facilitating the migrant obtaining a job in Thailand.

> "The *carry* was from our village…He had good relationships with the police and village-heads as he would pay money to them. He was one of the influential people in our village." – male, age 29, working in a large factory

As illustrated in this quote, *carries* are perceived as individuals with the knowledge and connections to be able to facilitate travel to Thailand, and some *carries* were described as individuals who were prominent or respected in the community. Some *carries* were described as traders who knew the routes to Thailand and therefore were able to facilitate travel.

> "This woman lived in our quarter [in Burma]…She was like a broker or trader. She went to Thailand, bought commodities and sold them back in Burma. There were so many people she knew in Thailand. So when somebody wanted to work in Thailand, they just had to give 10,000 Kyat to her and she would look for a good job for them." – female, age 25, working in a small factory

Other respondents described a *carry* as follows:

> "She [the *carry*] sold Thai commodities to the shops in Burma and sold Burmese commodities in Thailand, she was a trader. She was known at all the checkpoints." – female, age 23, sex industry

These descriptions indicate that *carries* are usually involved in other components of cross-border trade, including facilitating delivery of remittances from migrant workers already in Thailand to their families in Burma. *Carries* usually have knowledge of trade routes and experience facilitating other components of migrants' lives in Thailand, enabling them to present themselves as a necessary and useful way in which potential migrants can travel to Thailand.

Some respondents who had not used *carries* to travel to Thailand recognized that travel with the protection of a *carry* could confer benefits on potential migrants, protecting them from forced bribes and abuse, and other risks described as part and parcel of travel within Burma and across the border. For example,

> "At the checkpoints, my sister and I had to pay 500 kyat each for not having Burmese IDs (documentation). Some checkpoints demanded up to 1,000 kyat. If the people refused to pay, they would be dragged out of the bus until they paid. However, the people who came via the *carry* won't have to worry about it. The *carry* took care of it. They didn't even have to get off the bus." – female, age 24, working in a small factory

Therefore, for migrant workers who may not have direct familial or personal contacts with other migrant workers from Burma in Thailand and who may be unaware of the routes or conditions of travel to Thailand, use of a *carry* or broker is often seen as a useful or necessary component of travelling to Thailand from Burma.

Other individuals involved in the travel phase are brokers – individuals who specifically facilitate migrants obtaining work in Thailand. For example, a respondent described meeting a woman near the border after she arrived in Thailand;

> "She told me that if you didn't know how to go, you would be cheated by others; there were a lot of liars; you shouldn't trust the people. And she said that if we didn't have any jobs and wanted a job, she could arrange for us. She had been in Thailand for a long time; she knew what happened where; if we wanted a job, she would help contact. She asked what kind of job we wanted, in factories or selling things." – female, age 27, sex industry

Use of *carries* or brokers is an essential component of migration processes for many migrant workers who seek protection and facilitation of travel and transit to Thailand, and who may also seek connections to workplaces in Thailand.

Respondents also described the ways in which *carries* and brokers actively seek to convince potential migrants of the benefits of their services, and the positive aspects of working in Thailand. For example, *carries* and brokers offer promises of good jobs in Thailand, often in order to convince individuals to come with them to Thailand. For example,

> "A woman, who used to come to our village to sell the Thai products monthly, told me that there are good paying jobs available in Thailand…She promised me to get a job as she had many friends, who could find the jobs such as factories, domestic maid, sale assistant or working in the restaurant in Thailand." – female, age 29, working in agriculture

All respondents described the central role of lack of livelihoods and economic difficulties providing for themselves and their families in driving their decision to migrate. Therefore, *carries'* and brokers' descriptions of high-paying jobs available in Thailand were often extremely attractive to potential migrants, who were often convinced by depictions of a context in which high-paying work is readily available:

> "She [the *carry*] suggested to me that I should go and work in Mae Sot. I could save at least 70,000 kyat a month working there, according to her. She would take me for 50,000 kyat. She told me that I could pay her back the money within a month in doing so. So, I decided to go with her." – female, age 31, working in a large factory

Carries were regularly described as promising that migrants can "earn a lot every month" in Mae Sot (*female, age 23, sex industry*), that "the jobs in Mae Sot are good, the income can be fine, and the factories in Mae Sot need a lot of workers" (*male, age 36, working in large factory*). As discussed below, these descriptions offered by *carries* and brokers may at times constitute deception. For example, according to one respondent, explained,

> "The *carry* usually goes and sends the money to the families of the workers in Mae Sot on behalf of them. By doing so the *carry* would convince them about working in the factories in Thailand. The *carry*

> would tell them that young women could get a job easily and send at least 70,000 to 80,000 kyat a month back home. The *carry* would promise them to get a job in the factories easily. In reality, these people won't get a job, but they would be abandoned at stranger's house in Mae Sot by the carry who took the fee and left. Thus, these people might as well have to find a job on their own in the end." – female, 24, working in small factory

As such, the role of *carries* and brokers is both central and complex. It appears that they partially or possibly accurately describe jobs accessible to migrant workers in Thailand and largely unavailable in Burma, and fill a role in facilitating travel to and sometimes entry into these jobs. However, as described further below, their descriptions focus primarily, or solely, on the positive elements of working in Thailand. Respondents described multiple instances where *carries* or brokers, through deceit and sometimes coercion, played a role in facilitating exploitation of migrant workers.

A few respondents described having personally experienced or heard of sexual abuse and violence experienced at the hands of *carries.* A 26 year-old female migrant working in the sex industry described having agreed to go to Bangkok with a *carry* while looking for opportunities in Myawaddy. The *carry* told her,

> "if I wanted to go to Bangkok, he could find a job in a factory processing fish cans. When I said I have no money to go to Bangkok, he told me to give 100,000 kyat to him first and I could gradually give him back the remaining 200,000 kyat later…As I wanted a job, I took my things from the house that I stayed at and followed him right away. He brought me to a place in Myawaddy. I did not know that place. When we arrived there, I paid him 100,000 kyat. There was nobody in this house. When I asked him, he said other people were in other places. He said he would meet me at the Myawaddy Bridge when we went the next day. I already had accompanied him, I couldn't do anything. At night, he raped me. I couldn't stop him since we were just two alone."

In another example, a 32 year-old female migrant working in the sex industry explained that,

> "There were some girls who allowed the *carries* to sleep with them (used their bodies as the fees) to be able to travel. In the sleeping time, they disappeared and they had to go and sleep with the *carries*."

These instances illustrate the extreme abuses and violations that migrant workers can face in travel and transit to and within Thailand. While respondents often described deciding to go to Thailand with a *carry,* or arrange work through a broker, in order to facilitate protection and ease in travel and transit, it is evident that this arrangement can also confer risks of deceit and abuse on migrants.

Debt and travel to and within Thailand

One of the central themes that emerged in discussions of the travel phase of the migratory process was debt, incurred for travel to and within Thailand. All respondents – those who used a *carry* and those who travelled on their own or with family members – described multiple costs for travel, including fares for buses and multiple bribes at checkpoints throughout Burma. However, respondents who travelled with a *carry* discussed the additional cost, often burdensome, of the payment of the *carry* or broker. Respondents stated that *carries* and brokers often told them that they could pay back travel costs after arriving in Thailand, convincing migrant workers that they should incur debt in order to access higher-paying jobs in Thailand. For example, one respondent described meeting a man in her village in Burma who,

> "told me that if I wanted to go to Bangkok, he can bring me there. He was also the one who brought other people to Bangkok and he had worked there for a long time. People trusted him. If they didn't have money, they could give him later. He looked for a job for them. He took the money from employers in advance and we had to agree to pay it back." – female, age 32, sex industry

For one respondent, a *carry* she met in Burma told her,

> "if I wanted to go to Bangkok, he could find a job in a factory processing fish cans. When I said I have no money to go to Bangkok, he told me to give 100,000 Kyat to him first and I could gradually give him back the remaining 200,000 Kyat later." – female, age 26, sex industry

Another respondent explained,

> "We went there and told him [the *carry*] that we wanted to go to Thailand to look for a job. He asked us if we really wanted to go. We said yes. He asked us how much money did we have. We told him that we had no money. He said that it would cost 7,000 baht, equivalent to about 0.35 ounce of gold at that time. He agreed to pay for us in advance. We had to pay it back after we got a job. We had to work for free until the money we owed him was settled." - male, age 31, working in a large factory

For migrants who often described having no money to pay for travel costs up-front, the *carries*' and brokers' offers to pay for travel in advance was viewed as an ideal opportunity to go to Thailand and access higher incomes. These descriptions identify how the role of *carries* and brokers spans both travel and destination phases of the migratory process. Debt incurred during the travel phase connects to experiences in the destination phase, as debt was described as a factor leading to entry into exploitative work. As discussed below, migrants are often unaware of, or purposefully deceived, as to the amount of debt that they are incurring in order to travel to Thailand, and the ways in which this will impact their salary and work conditions, often in pervasive and on-going ways.

Deceit

For some migrants who used a *carry* to travel from Mae Sot to Bangkok, this form of migration directly resulted in their being forced to work without pay, often in working conditions to which they had not agreed. Deceit in the travel phase operates in a number of different ways. Firstly, migrants experience deceit whereby services for which they

have paid are not delivered by the *carry*. Moreover, respondents described experiencing deceit regarding the amount of debt incurred in order to travel to Thailand, and how this debt would be paid off. A third aspect of deceit was about the nature of working conditions promised to migrants. Deceit may occur at different phases of migration and entry into forced labor, however, respondents primarily described instances in which they only found out about the amount of debt owed after starting to work or after working for some time.

Some respondents described being deceived by *carries*, who left with money they had been given by the migrant worker without delivering a service, or who abandoned them en route to Bangkok, leaving migrant workers vulnerable to arrest and deportation by authorities in Thailand. For example, a 24 year-old female working in a small factory described the process of being convinced to travel to Bangkok from Mae Sot after being disappointed by the low wages she was earning in Mae Sot. She explained that a *carry,*

> "came to our factory and told us that he could send us to Bangkok as cheap as 1,000 baht a person, who had work permit, and 3,000 baht a person, who didn't have the work permit. I paid 3000 baht to him. On the same day, he took us back to Myawaddy[8] from Mae Sot in the evening…He rented a house for us at 50,000 kyat on his own expense. We had to pay for the other costs. He told us to wait for 2 weeks. We were stuck there for three months…After that, he disappeared and was nowhere to be found."

She subsequently tried again, paying another *carry* 600 baht to take her to Bangkok, and was then left by the *carry* in a field en route to Bangkok with other migrant workers, after three days of travel by foot. A 41 year-old male working in a large factory also described

[8] Myawaddy is the town in Burma nearest to Mae Sot

having paid 14,000 kyat to a broker who then disappeared with the money before arriving in Thailand; subsequently, when he paid another broker, he explained, *"We didn't even asked what kind of job we had to work because we just wanted to get out of the country. I was so upset for being deceived. I didn't want to go back home."* Another respondent similarly described being cheated by a *carry*:

> "I thought that if I went to Bangkok and worked there, I might be able to save more money. So I asked for the travel cost from my mom and went to Bangkok with the *carry* whom my mom contacted for me. I gave him 6,500 Baht and I told him that I would pay the rest when I arrived there. He said if something was wrong on the way, he would take responsibility. But when immigration officials came and arrested us in the dark on the way, the carry ran away. So the carry was free and we, 15 people including 5 girls, were running and 6 of us were arrested" – male, 20, working in construction

As described above, deceit by *carries* can have a range of serious implications, including exposure to violence, arrest, detention, and deportation, and increased indebtedness. Respondents who described experiences of having been cheated and losing money in travel and transit to Thailand often found themselves in a situation whereby they were compelled to take a job they would not have chosen otherwise, to be able to pay off their debt quickly.

In some cases, *carries* and brokers deceived migrant workers about the amount of debt they had incurred in order to travel to Thailand. For example, one respondent reported about his experience travelling with *carry* from Burma. After they arrived at their destination, he experienced limitations on freedom of movement given the debt he had to pay back:

> "We were not allowed to go out. He [the *carry]* told us that we could be arrested by police if we went out. Later, he took the girls to some place. I didn't know where. I was afraid to ask. On the next day, he told us that he would go out and look for the jobs for us….[he] arranged us to work on the boats. He told us how much we would make and how many months we had to work for free for the money that we owed him for the trip. He reminded us that it would be very dangerous for us if we tried to run away." – male, age 31, working in a large factory

He was forced to work without pay on a fishing boat for three months in order to pay off his debt. Debt can also lead to limitations in ability to change jobs; as a 23 year-old male agricultural worker explained that after he had arrived at his job in Thailand, after travelling with a *carry* from Burma, *"the boss didn't allow us to move to the other job for five months. He claimed that we owed him for our travel costs that he spent."* This quote demonstrates the connections between *carries* and employers, whereby employers pay *carries* in advance to bring migrant workers to their workplace, and then deduct from the migrant's salary or withhold salary completely in order to make back the money. Therefore, migrants' arrangement with *carries* can draw them into a complex arrangement, about which they are appear to be usually unaware, that significantly impacts their well-being in workplaces in Thailand.

Another form of deceit and coercion in the travel phase consists of deception about working conditions and the nature of work to which migrant workers are agreeing. Women involved in the sex industry most commonly described this form of deceit, whereby they were told prior to beginning work that they would be working in a restaurant, but then ended up in a venue selling sex. The following narrative reflects themes in many of the descriptions provided by migrant women working in the sex industry. In Burma, a 26 year-old female met her friend, who *"said I could get the job at*

a restaurant in Mae Sot; this job was waitress job and it was a bit exhausting; I could earn about 7,000 Baht per month; she would ask for the job for me." After agreeing to go with her friend, she found that in her new workplace,

> "First I had to work as a waitress. I had to make myself to be beautiful. My friend lent me her nice clothes and I had to wear them. At night, other girls including my friend had to sit beside those who came to the restaurant and do everything that these men wanted. The boss also asked me to do like this. Those who came were all the men; I didn't see any women. At night, I had seen that others including my friend went up to the other floor with the men. After about two days, I realized that this restaurant was just the cover business and they run prostitution work. So I told my friend that I do not want to work there anymore and I wanted to go and work at another place. My friend said I couldn't and anyone had to work at least 3 months here after they got in this job. She also said that if I went away, the boss would ask the police to arrest me…Later I found out that my friend got 5,000 baht for bringing me as a recruitment fee."

During the travel phase, some women were vulnerable to deceptive offers of employment that resulted in being trafficked into the sex industry. As such, in both the case of deceit about amount of debt, and deceit about working conditions, the resulting work environment is characterized by exploitative experiences such as work without pay, described further below.

2. Destination phase

Workplace conditions: Salary deductions and forced overtime

Respondents discussed a broad range of experiences of exploitation in workplaces, including salary deductions and forced overtime. In many cases, these experiences are linked with the process through which the migrant worker came to Thailand and their mode of entry into work. However, most respondents also described experiencing some

form of salary deductions and, often, forced and unpaid overtime, that was not connected with their mode of travel to Thailand, reflecting the pervasive exploitative conditions in workplaces predominantly using migrant labor in Thailand. Economic exploitation in workplaces are not only linked to arrangements with *carries* or brokers, and forced or coercive entry into work environments, but are characteristic of forms of migrant labor in Thailand.

Respondents commonly described work environments where salary deductions were irregular, unexpected, and forced. After receiving 2,000 baht out of a promised 12,000 baht of his salary, a respondent explained,

> "He [my employer] would give me only 2,000. If I did not agree, he said that he does not care and that I can inform anybody. And he told me to leave...I didn't dare to inform the police because this boss got along with the police and the immigration and he bribed them." – male, age 25, working in construction

Existing relationships between police and employers act to stop migrant workers from addressing issues associated with salary payments. Many migrant workers are afraid to approach Thai police to complain about violations they encounter in their workplace, due to their irregular status. Salary deductions are linked to migrants' irregular status, and vulnerability to arrest and deportation. For example, migrant workers are forced to pay "police fees" to obtain protection from arrest, described further below. Migrant workers feel unable to seek redress for salary deductions and non-payment, as they fear arrest and deportation, and are often threatened, directly or implicitly, with this in order to ensure their compliance with employers' and managers' directives.

Salary deductions can leave migrant workers vulnerable in a number of ways. Firstly, with already low wages, migrants who experience regular salary deductions often have to go into debt to friends, family or employers for basic living expenses. Secondly, salary deductions can also influence migrant workers' ability to change their job. For example:

> "When we were working in the factory, the factory owner made it impossible for us to leave the factory for another job by not paying our salary… If we had to get 2,000 (baht), they only gave 700 and they said they would give us next month. They always threatened us that we had been sold." – female, age 22, working in small factory

Migrant workers described being told by employers that they would be paid their full salary in subsequent weeks or months, convincing them to stay in workplaces where they are owed money and yet have to endure difficult working conditions.

Forced, and often unpaid, overtime was another commonly discussed form of exploitation experienced by migrant workers in workplaces in Thailand. For example, one respondent stated,

> "The factory stole our overtime pay too. We always got paid less. For instance, if we were supposed to get 9 baht for every 100 pieces of clothes, the money we got was less than we were supposed to get. We dared not speak out. Some workers asked why. Then, the boss would give the reasons such as the fees for water, electricity and food. He would also fire the workers who complained about it later. We were afraid of being fired." – female, age 41, working in a small factory

Another respondent explained,

> "Whenever there is overtime work, we have to work. We also have to work all the night. We cannot refuse to work. If we don't work, 50 Baht per day is cut from our salaries. We are allowed only a few hours for sleeping. If overtime work start from 6pm and end at 5am in the next day, we have to start again at noon." – female, age 23, working in a large factory

Working overtime is often tied to receiving regular salary payments for non-overtime work,

> "At every payday, we had to work all night long. They threatened us that we were not getting our salaries if we didn't get the job done at that night. No one dared to refuse it. We had to do whatever they said in order to get our salaries on time. The factory had too many orders…If we couldn't get the job done before the end of the month, the boss would find a way to push us to finish the job anyway. We had no choice but to do what he said. Otherwise, we might not get our salaries on time." – female, age 19, working in a small factory

An 18 year-old female working in a large factory explained that she was told by a manager, *"if you don't want to work overtime, just pack your things and go."* Conditions in workplaces are such that migrant workers experience significant pressure to work overtime, often when they would not otherwise agree to it, and are not properly compensated for it. When one respondent stated, *"No one dared to refuse it,"* this reflects the pervasive feeling of fear and insecurity that surrounds the daily lives of migrant workers from Burma working in and around Mae Sot. Specific violations of migrant workers' rights – forced salary deductions and forced overtime, as described above – are embedded in a context in which migrant workers are systematically disempowered and unable exert significant control over the circumstances of their livelihoods.

Workplace conditions: Forced work without pay

One component of exploitation described by respondents was forced work without pay. As described above, one mechanism by which migrant workers found themselves in a work environment where they were forced to work without pay was through deceit about the amount of debt, and how the debt would be paid off. A 37-year old respondent described meeting a Thai woman in Myawaddy;

> "She said we had to pay when we got a job. After we arrived in Bangkok, she handed us over to another Thai woman, who is about 45 years old and left. She said that women will get a job for us, so we followed her."

After getting a job as a babysitter with a Thai couple in Bangkok, she found,

> "The promised salary was 2,000 baht a month. At the end of the month, they told me that they had already paid for my one year's salary to the Thai woman. Therefore, I would get paid after one year. I was frustrated, and didn't know what to do. I was not allowed to go out. I could only go out if they took me. I didn't know how to contact my friends. I always thought about running away."

She experienced being forced to work long hours and being beaten by her employer, thus also showing the link between economic exploitation and exposure to abuse in the workplace. Another respondent who had used a *carry* for travel explained,

> "The boss didn't give me salary. I had to put all the tip money into a box on the counter. The boss gave all these money to the other employees by quota except me and my fellow worker. When we asked why we didn't get paid, he said he bought us at 20,000 baht. We would get our salaries and the money in the box after two years. I couldn't do anything but cry at that point." – female, age 27, sex industry

One respondent paid 3,000 baht to a *carry* who arranged travel to Bangkok, and after travelling by foot for 20 days with the *carry* and seven other migrant workers, he was taken to a place near Bangkok;

> "When we arrived, they left us at an ice factory. They didn't care when we refused to work there. They forcefully left us there regardless. When I asked a worker there, he told me that I could make about 5,000 baht a month. They all made about 5,000 / 6,000 baht a month there. After a month, I went to the boss and ask for my salary. He told me that he paid our two months salaries at 10,000 baht to the carry. He said I would get paid after three months." – male, age 23, working in a small factory

These means of deceit and abuse of power are linked to forms of exploitation experienced in work environments, as migrant workers are forced to work off their debt in unsafe and coercive working conditions.

Migrant workers in this context face risks of being forced to work without pay in conditions and forms of work to which they did not consent, with entry into forced labor primarily described as respondents as interconnected with the travel phase of migration processes. For example, one 32 year-old female migrant working in the sex industry paid a *carry* to travel from Burma to Bangkok, and once in Bangkok, was forced to work as a sex worker without pay for five months in order to pay off her debt to the *carry*. She explained,

> "when we were in the first restaurant in Bangkok, we couldn't go since the debt was not over yet. They told us that wherever we ran, we could not escape. If we were arrested by the police, we would not only be arrested but we would also be charged with prostitution."

Debt to employers is often linked to debt to *carries* or brokers, and as such, experiences of forced labor and abusive working conditions in Thailand are connected to migration processes from Burma and within Thailand.

Workplace conditions: Abuse and violence

Another important aspect of work environments in this context is violence. Within work environments, respondents described numerous examples of abuse and violence, either personally experienced or witnessed. Employers and managers were routinely described as yelling at and threatening, and sometimes physically abusing, workers.

> "The boss came to work and monitored us from time to time. He would say who worked slowly and who worked fast and to work faster in broken Burmese. If we made a mistake, he would yell as us in a strange language" – female, age 30, working in agriculture

Another respondent explained,

> "If I did something wrong at work, the manager would yell at me with vulgar language. He would yell or threaten me if I took a day off during the working days" – male, age 36, working in construction

Respondents described verbal abuse by employers and managers as prevalent in workplaces.

Violence was witnessed and experienced in the course of everyday life in workplaces. For example, a 46 year-old female working in agriculture reported seeing other workers "thrown to the ground strongly and kicked" by the manager. A 31 year-old male working in agriculture described being threatened with a gun by his employer when he tried to change jobs without paying off a debt. Some migrant workers explained that they chose to stay in work environments that were unsafe, coercive and constituted forced labor, having witnessed violence and realizing the potential for them to personally fall victim to violence if they attempted to leave a particular employer. As such, presence of violence can act to induce migrant workers to stay in abusive and exploitative work environments, serving as an indirect influence on migrant workers' lack of freedom of movement and ability to change jobs.

Some respondents described work environments characterized by extreme violence and coercion. One respondent described the restrictive and violent work environment he had previously experienced on a fishing boat:

> "The manager was always monitoring us. If we worked slowly, we would be kicked and punched. He would do the same to the people who were physically unable to work fast. That's the reason why people committed suicide, by jumping into the water and drowning themselves." – male, age 31, working in a large factory

Respondents in the sex industry routinely described physical force that was utilized as a form of compulsion, with a 32 year-old woman explaining about beginning to work:

"Some girls refused to do it and were beaten. Later, they couldn't refuse anymore and they had to do it. Later, we had to do this job." Based on the interviews conducted for this study, the fishing industry and sex industry are two industries in Thailand where regular and extreme violence is present. In the fishing industry, physical force is used while on fishing boats in order to extract hard work from migrant workers. A 35 year-old male, working on a fishing boat after being cheated by a *carry*, described the work environment:

> "The manager was always cursing us. They all had guns. We had to work 24 hours a day. We were not allowed to stop until the work was done. Two Thai men threatened us with their guns. If we talked to each other while working, they would shoot in the air like a warning shot. We were afraid of them. We couldn't talk back to them. If we said anything against them, we were beaten." – male, age 35, working in construction

In the sex industry, employers used physical violence as a means to compel migrants to begin sex work and prevent them from choosing to leave once they find out the nature of the work that is expected from them.

In the case of the migrants working in the sex industry, an additional layer of abuse that can exist is interactions with customers. A 23 year-old female described abuse by customers:

> "In front of the boss, they [the customers] said they would use condoms and later when I asked them to use condoms, they kicked and beat me. When I told the boss about it, the boss didn't do anything."

In another example, a 27 year-old woman explained,

> "At work, some guests asked us to do what they want. If I refused to do so, they called the boss and complained. The boss had to refund all the advance money given by the guest. On these days, we had to sleep with the guest without getting pay and were yelled at by the boss. Some guests

> asked us to have oral sex. When I said that I could not do it, they slapped on my cheeks."

One respondent described being raped by customers and most described having been personally or having witnessed other sex workers beaten by customers. Another told the following story,

> "Some customers, who were on heavy drugs, forced me to have violent sex. When I refused to do it, a customer stuck my neck with a knife and forced me to perform as he wished to" – female, 27 years, sex industry

Descriptions of personal experience with, or witnessing, such abuse was common amongst the ten women working in the sex industry who were part of the sample. Some described eventually being able to select customers they trusted after working for a while, while others explained that even though they were able to do that, that would mean they would earn less money.

Safety and security: Environment of fear and insecurity

The forms of exploitation described above – salary deductions, forced overtime, forced work without pay, and violence and abuse – occur in a context characterized by fear and insecurity for migrant workers. This insecurity is inextricably associated with irregular status and lack of valid documentation to work and live in Thailand. This impacts migrant workers' ability to leave work environments that are difficult, coercive and violent, or to negotiate improved conditions. Respondents explained the multiple ways in which lack of registration impacts their lives. A 25 year-old male construction worker answered the question of what the difference between being registered and being unregistered is as follows:

> "It is different. If we do not have the work permit, we do not dare to talk back to the boss and the *wunna* boldly. If we complain to them and they

> do not like it and they ask the police, we would be arrested. They didn't dare to talk much to those who had work permits. Those who had work permits could work at other places if they do not want to work here. When we were cheated, because those who had work permits said that they would inform, the *wunna* paid us back a bit. If we went and informed, we would be even arrested for working without work permit cards."

In this description, the impact of documentation is felt at the level of being ability to address the pervasive violations of labour rights experienced by migrant workers in this context. As a 31 year-old male working in agriculture explained, no-one dares to negotiate working conditions, such as regular salary payments, with the *wunna,* as if they did, *"we would be fired right away…If we could not get another job and there was no job for us, the living for us could not be ok. Previously when the workers complained to him [the wunna], he didn't let them work on the next day and drove them out from the farm of the boss. So no workers dared to talk back to him."* Complaining to employers or *wunnas* is seen as risky for migrant workers without work permits, who fear that they will be turned into police if they complain. A 25 year-old male working in construction stated,

> "If we do not have the work permit, we do not dare to talk back to the boss and the *wunna* boldly. If we complain to them and they do not like it and they call the police, we would be arrested."

Threats to turn migrant workers into police or immigration authorities were frequently mentioned by respondents. For women in the sex industry, who can be arrested for irregular migrant status as well as engaging in prostitution, this threat may compel them into working conditions to which they would not have otherwise consented. For example, employers told one woman in the sex industry, *"[t]hey would inform to the police, and they would send me to the police station (if I leave). So I told them not to send to police station and that I would do anything they asked"* (female, age 27, sex industry). The

power relations between employers and employees are saturated by employers' power to inflict arrest or deportation on employees.

Safety and security: workplace raids, arrest and deportation

Migrant workers regularly described ways in which lack of documentation is associated with increased vulnerability to arrest and deportation. The pervasive nature of these risks induce a sense of fear and insecurity to the environment of migrant workers in and around Mae Sot, and the concrete result appears to be that basic enforcement of labor rights in work environments is lacking, given migrant workers are often reliant on employers to protect them from police.

This fear is caused in part by frequent police raids of workplaces. For example, a 33 year-old female agricultural worker described the fear experienced by migrant workers in this context, explaining

> "Here, immigration comes about five times a year. They come here whenever they want to. Then we have to run away. They usually come and arrest at night and early morning. So we are afraid even while sleeping. We were hiding in the jungle so we were not arrested."

Some respondents described multiple instances of running to avoid police and the risk of arrest due to lack of documentation:

> "Before, when we had no documents, if police were going to come to the factory, the boss informed us in advance. So we went hiding in the farms and jungle… Sometimes we had to sleep in the wood for about 3 days and two nights. Sometimes, we had to go and hide in the morning and came back in the evening. I was so afraid at this time. Since we had no document in another country, we had to run often. It was so dangerous for the girls. Some were raped by the Thai police. For the Burmese, if we just

> heard the voice of the "police", we had to run." – male, age 36, working in a large factory

Migrant workers regularly described understanding that they would be forced to flee at a moment's notice in order to avoid arrest, and many discussed the fear and anxiety associated with hiding behind factories or in agricultural fields.

One mode of protection of migrant workers from arrest or deportation comes from employers, who deduct money from migrants' pay for "police fees" – forced salary deductions by employers in order to pay bribes to police to ensure undocumented migrant workers are not arrested. In many cases, however, these payments did not protect migrant workers from arrest.

> "As we didn't have any documents, the boss also deducted 200 baht per month for police pay. He told us to work well and not to worry about police arrest and that he would take responsibility since we were in his farm. After about three months, the immigration came to the farm and arrested people… Although the boss deducted for the police, he didn't help to take them back [out of jail]." – male, age 31, working in agriculture

An 18 year-old female working in a large factory explained, *"In the factory, although 150 Baht per month is cut from our salaries, if police come we just have to run. If we are arrested, we just have to solve ourselves. They [the employers] don't solve for us."* A 31 year-old female working in a large factory explained about the "police fee":

> "In our factory, 100 workers out of 200 had no work permits…the boss deducts 300 baht a month from the workers who don't have the work permit as the police fee. And, he told us that we won't have to worry about police because of it. In reality, the police raided our factory and people were arrested anyway."

While employers often promise protection, the informal system of protection from police through "police fees" is coercive (migrants are not free to choose not to pay the fee), and

often ineffective. This also demonstrates forms of collusion between employers and authorities. Some employers are able to protect migrant workers from arrest through bribing authorities, a means through which they can ensure a regular labor force while not paying for their employees' registration.

Underlying the issue of how registration impacts migrant workers' lives is the role of police and immigration authorities within the system of migration law enforcement. The role of police and immigration authorities in the lives of migrant workers is one of constant threat and potential for abuse. A 27 year-old female in the sex industry explained,

> "All of us here have to play the cat and mouse game with the police. It's like an endless circle to go to jail when we get arrested and then we come back and work for survival after being released. We don't have much choice, since we don't have enough money to get a work permit."

This has a clear and on-going impact on migrant workers' well-being. A 41 year-old female agricultural worker described the impact of her arrest:

> "When I was arrested for the first time, I sat down and cried in fear. I couldn't sleep, thinking about it after that. It's not exactly fear anymore. But, I am still worried that the immigration police might come and raid us. It won't ever go away."

These interviews shed light on a number of interrelated issues regarding to the impact of registration on the lives of migrant workers: migrant workers without registration are at increased risk of arrest or deportation. Safety and security in the workplace is also dictated by behavior of employers, who may exact payments for "police fees" from workers in return for protection from arrest. These issues cumulatively create a situation of restricted freedoms and significant impacts on daily behaviors.

Safety and security: registration and exploitation

Paradoxically, registration can entrench migrant workers' exploitation, leading to further restrictions on their freedom of movement and ability to change jobs.

> "When the bosses made the work permit, they pay the half of 4,000 Baht and the rest had to be paid by the workers. As the bosses paid half of the cost, they wanted the workers to work at their farms. When the workers changed to other jobs, the name of the boss who guaranteed for their work permit needed to be changed. If the name could not be changed, they needed to make another new work permit under the name of other boss. It would cost a lot and that's the difficulty. So if they want to change to another job, they think first." – male, age 31, agriculture

The parameters of the registration system may compel workers to stay with a particular employer. Beyond this, registration may tie workers to employers through debt and obligation. A 27 year-old female working in a small factory explained,

> "I have not had any experience [of restrictions moving jobs] yet. But I heard that my friend had it. The boss of the factory where they were working made the documents for them. After making these, he didn't pay the salary regularly. So when the workers told him that they would move the jobs, the boss said that they still owed the money for the document paid by the boss. So they could not change the job and if they did, he would ask the police to arrest them. So my friend had to work there for about one year. That was kind of restriction to change jobs although they want to move. My friend could quit from this factory, only when the validity of the work permit was over. If she wanted to extend it, it wouldn't be easy to change the job."

A 33 year-old male working in a small factory said:

> I think that they [employers] have a way to control us. If you look at my case, the employer keeps my original document and issued me the copy of it. It could be a problem if I move out. The other factories will definitely hire me if I can prove my original work permit. So, this is the system to control my right to move.

As such, while registration can allow greater freedom and protection to migrant workers, in that they are able to travel around Mae Sot without fear of arrest or deportation, the

process of obtaining registration can in fact reinforce exploitation and tie migrants to exploitative workplaces through debt and obligation.

VII. Quantitative results

The quantitative research phase of TAP involved a prevalence survey of 589 migrant workers, stratified into three occupational groups – migrants working in agriculture, factories and the sex industry. Results from exploratory data analysis, descriptive statistics of the depression and anxiety scales, mediation analysis and multivariate analyses for relationships between a range of exposures and mental health outcomes are presented below, in order to address the following research aims:

Specific Aim 3: Determine the prevalence of symptoms of depression and anxiety amongst the sample population of migrants from Burma living and working in and around Mae Sot, Thailand

Specific Aim 4: Examine a possible mediation model, exploring the relationship between deceit during migration, coercive working conditions and mental health outcomes, depression and anxiety.

Hypothesis 1: There is a direct relationship between deceit experienced during migration and mental health symptoms, which is mediated in part by coercive working conditions.

Specific Aim 5: Identify post-migration experiences that are associated with increased symptoms of depression and anxiety

Hypothesis 2: Aspects of working conditions and interactions with authorities are associated with increased levels of depression and anxiety. This association differs across the three categories of migrants in the sample.

1. Demographics

Table 7.1: Demographics

Variable	Agriculture* N=203 % (n)	Factory* N=258 % (n)	Sex industry* N=128 % (n)	All** N=589 % (n)	P-value (comparison between three groups)
Sex					
Male	44.3 (90)	41.5 (107)	N/A	33.4 (197)	.54 (comparison between factory and agriculture)
Female	55.7 (113)	58.5 (151)	100 (128)	66.5 (392)	
Age					
18-24	27.6 (56)	45.3 (117)	64.8 (83)	42.5 (256)	
25-34	31.5 (64)	48.8 (126)	35.2 (45)	40.0 (235)	
35-44	19.2(39)	5.4 (14)	0	9 (53)	**.000**
45-54	19.7 (40)	.4 (1)	0	7.0 (41)	
Above 55	2.0 (4)	0	0	.7 (4)	
Ethnicity					
Karen	5.4 (11)	15.1 (39)	32.0 (41)	15.4 (91)	
Burman	81.8 (166)	65.1 (168)	48.4 (62)	67.2 (396)	**.005**
Other (Mon, Shan, Kachin, Chin, other)	12.8 (26)	19.8 (51)	19.5 (25)	17.3 (102)	
Level of education					
None	6.4 (13)	5.0 (13)	17.2 (22)	8.1 (48)	
Any Primary	53.2 (108)	26.4 (68)	54.7 (70)	41.8 (246	**.000**
Any middle or high school	33.5 (68)	63.6 (164)	28.1 (36)	45.5 (268)	
More than high school	6.9 (14)	5.0 (13)	0	4.6 (27)	
Marital status					
Married or in a relationship	76.8 (156)	37.6 (97)	44.5 (57)	52.6 (310)	
Single, widowed, divorced	23.1 (47)	62.4 (161)	55.5 (71)	47.4 (279)	**.000**

Ever lived in refugee camp in Thailand?					
Yes	2.0 (4)	3.9 (10)	11.0 (14)	4.7 (28)	**.001**
No	98.0 (199)	96.1 (248)	89.1 (114)	95.2 (561)	
Live on worksite					
Yes	51.2 (104)	91.5 (236)	73.4 (94)	73.7 (434)	**.000**
No	48.8 (99)	8.5 (22)	26.6 (34)	26.3 (155)	
Number of children					
None	34.0 (69)	69.4 (179)	67.2 (86)	56.7 (334)	
1-2	41.4 (84)	28.7 (74)	31.2 (40)	33.6 (198)	**.000**
3-4	21.2 (43)	2.0 (5)	1.6 (2)	8.5 (50)	
More than 4	3.4 (7)	0	0	1.2 (7)	
Registration status					
Currently registered	7.9 (16)	46.9 (121)	.8 (1)	23.4 (138)	**.000**
Currently not registered	92.1 (187)	53.1 (137)	99.2 (127)	76.6 (451)	
Send money back to Burma					
Yes	57.1 (116)	86.4 (223)	74.2 (95)	73.7 (434)	**.000**
No	42.9 (87)	13.6 (35)	25.8 (33)	26.3 (155)	
Household food security					
We always have enough to eat and the kinds of food that we want to eat	22.2 (45)	50.4 (130)	68.7 (88)	44.6 (263)	
We have enough to eat but not the kinds of food we want to eat	27.1 (55)	29.8 (77)	31.3 (40)	29.2 (172)	**.000**
Sometimes we don't have enough to eat	44.3 (90)	19.8 (51)	0	23.9 (141)	
Often we don't have enough to eat	6.4 (13)	0	0	2.2 (13)	

***adjusted for clustering ** adjusted for stratification**

Table 7.1 displays the demographics of the sample. This data indicates similarities and differences between the three sub-samples of migrant workers.

66.5% of the whole sample was female; this reflects the fact that 100% of the sample selected from the sex industry was female, as this was part of the selection criteria for inclusion in this sub-sample. 55.7% of agricultural workers were female, compared to 58.5% of factory workers. In terms of age, the mean age across the sample was 26.9. The average age of the agriculture group was higher than the overall average, at 32.5, and higher than both group of migrants working in factories (24.3) and the group of migrants working in the sex industry (23.1). The majority of the sample (67.2%) was of Burman ethnicity, and 15.4% were of Karen ethnicity. 17.3% of the sample were from other ethnic groups. The "other" category included the following ethnicities: Kayah, Kachin, Mon, Chin, Rakhine and Shan. The 26 agricultural workers who were from "other" ethnic groups were primarily Rakhine (19 respondents). The 51 respondents who worked in factories who were from "other" ethnic groups included Rakhine (20 respondents) and Mon (25 respondents). The 25 respondents who were working in the sex industry who were from "other" ethnic groups were primarily Mon (17 respondents). This ethnic breakdown is not representative of the ethnic breakdown of the population within Burma. While accurate data concerning the ethnicity breakdown of the population in Burma is difficult to obtain, it is clear that the Karen ethnic group is over-represented, which can be explained by the fact that Karen state is the most proximate state to Mae Sot.

Overall, 8.15% of the full sample reported having no education, while 41.8% reported having some level of primary education, 45.5% reported any middle or high school education, and less than 5% of the sample reported any level of education higher than high school. Education levels differed between the three groups – for example, 62.6% of workers in factories reported any middle or high school, while only 28.1% of women in the sex industry and 33.5% of migrants working in agriculture reported any middle or high school, indicating higher levels of education amongst workers in factories, compared to workers in agriculture or the sex industry. In addition, 17.2% of women in the sex industry reported having no education, compared to 6.4% in agriculture and 5.0% in the factory group. 52.6% of the full sample reported being currently married or in a relationship. This varied across the three groups, and this variation may be explained by the different dynamics of these industries that were observed in the course of this study. In the agricultural industry, where 76.8% of workers reported being married or in a relationship, many workers live with their partners and families near the worksite and are able to obtain daily work as a member of a family that works for a particular employer. In factory work, working and living conditions make it difficult to live with a partner or as a part of a family, and only 27.6% of factory workers reported being married or in a relationship. In the sex industry, it is similarly difficult for migrant workers to live with a partner, however, 44.5% of respondents in the sex industry reported being married or in a relationship. Migrants in the sex industry interviewed for the qualitative phase of research often reported leaving a partner behind in Burma, which may account for this larger proportion. The number of reported children under the age of 18 also varied across the three groups. For example, 34.0% of workers in agriculture reported having no children,

compared to 69.3% amongst migrants in factory work and 67.2% amongst workers in the sex industry.

The data also provides insight into some context-specific aspects of the sample. Only 4.7% of the whole sample reported ever having lived in a refugee camp, while this was a higher proportion for migrants in the sex industry (11.0%) compared to the other industries (2.0% in agriculture, 3.9% in factory work). This question was asked in the survey as it is thought that many migrant workers come to Thailand and start off living in a nearby refugee camp, and then leave in order to earn money, as refugees in the camps are not allowed to work and have limited access to livelihood opportunities. This data suggests that in these three occupational groups, the vast majority of migrant workers have not followed this route to migrant work. It is possible that this dynamic is less prevalent than has been previously thought in agricultural and factory work, although the higher prevalence of respondents reporting having lived in a refugee camp amongst the sex industry sub-sample is worthy of further investigation.

73.7% of respondents in the whole sample reported sending money back to Burma. 86.4% of respondents in the factory sub-sample reported sending money back, while 74.2% of respondents in the sex industry and 57.1% of respondents in agriculture reported this. This may reflect that the daily wages of workers in agriculture are lower than those of workers in factories and the sex industry, and thus, they are less able to save enough money to send back to Burma. These data are important given the ways in which sending remittances can impact the daily living of migrant workers in and around Mae

Sot. Migrants may be less able to move jobs, or forego salary in order to seek healthcare, if they are expected by family members in Burma to send money to support them. A large proportion – 73.7% – of the whole sample reported living on their worksite, with proportions ranging from 51.2% amongst respondents in the agriculture sub-sample, 91.5% amongst respondents in the factory sub-sample, and 73.4% in the sex industry sub-sample.

Given the different wages for the three different industries included in the study, daily income was not considered a useful indicator for socio-economic well-being, and food security was instead selected as a proxy for socio-economic well-being. 68.7% of respondents reported that they "always have enough to eat and the kinds of food that we want to eat." This contrasts to other data that indicates the low socio-economic status of migrant workers living in and around Mae Sot (Feinstein International Center, 2011), and indicates that food security may not be an effective proxy measure for socio-economic well-being. More nuanced measures, including measures of housing quality and living conditions, may more accurately indicate the socio-economic status of migrant workers in this context. Nonetheless, this measure indicated differences between the three groups, whereby 44.3% of respondents working in agriculture reported sometimes not having enough to eat, compared to 19.8% in factory work and none in the sex industry.

Only 23.4% if the whole sample reported being currently registered. The variation of registration between industries also reflects different aspects of these three industries. Only 1 respondent working in the sex industry reported being currently registered.

Registration is only available to migrant workers in legal industries, and given the sex industry is not legal, migrants working in the sex industry cannot obtain registration through their employers. However, 46.9% of workers in factories reported being currently registered, a proportion that reflects data from the in-depth interviews and formative research for TAP that indicated that employers in factories often obtain registration for workers. Only 7.9% of workers in agriculture reported being currently registered. This may be because agricultural workers are more likely to work on a number of farms and work for many employers, making it more difficult to obtain a work permit that is tied to a single employer.

Table 1a: Motivation for coming to Thailand

Motivation	Agriculture % (n)	Factory % (n)	Sex industry % (n)	All % (n)
Conflict or violence	1.5 (3)	3.1 (8)	7.8 (10)	3.6 (21)
Physical or sexual abuse	.5 (1)	1.5 (4)	10.2 (13)	3.1 (18)
Improve income/ livelihoods problems in Burma	88.2 (179)	96.1 (248)	71.9 (92)	88.1 (519)
Family problems in Burma	37.9 (77)	34.1 (88)	62.5 (80)	41.6 (245)
Join family or friends in Thailand	26.6 (54)	32.9 (85)	34.4 (44)	31.1 (183)
Land disputes	2.5 (5)	6.6 (17)	5.5 (7)	4.9 (29)
Forced labor or recruitment to armed forces in Burma	1.0 (2)	1.9 (5)	.8 (1)	1.4 (8)
Environmental problems (flood, drought)	11.3 (23)	24.8 (64)	24.2 (31)	20.0 (118)

Responses to the question "What was your motivation for coming to Thailand?" provide further insight into the characteristics of respondents. Respondents were able to select more than one response to the question, in recognition of the fact that migrants move from Burma to Thailand for a number of reasons. The three most commonly reported reasons for coming to Thailand, across the whole sample, were to improve income or due to livelihoods problems in Burma (88.1%), because of family problems in Burma (41.6%) and to join family and friends in Thailand (31.1%). A larger proportion of respondents from the sex industry sub-sample reported coming to Thailand due to family problems in Burma (62.5% compared to 37.9% in the agricultural industry and 34.1% of workers in factories). Moreover, a greater proportion of respondents in the sex industry sub-sample reported one of their motivations for coming as conflict or violence (7.8%, compared to 1.48% in agriculture sub-sample and 3.1% in factory sub-sample) or due to physical or sexual abuse (10.2%, compared to .5% in agriculture sub-sample and 1.5% in

factory sub-sample). While the survey did not seek to assess the associations between motivations coming to Thailand and subsequent working experiences, it seems possible that prior experiences – such as physical or sexual abuse, in the case of respondents in the sex industry sub-sample – may influence subsequent entry into certain occupations or industries.

2. **Descriptive statistics of the depression and anxiety scales:**

Table 7.2: Summary statistics of individual depression scale items
1 = Never
2 = Sometimes
3 = Often
4 = All the time

Variable	Agriculture Mean (SE) 95% CI*	Factory Mean (SE) 95% CI*	Sex industry Mean (SE) 95% CI*	All Mean (SE) 95% CI**
1. Feeling hopeless about the future; don't care what will happen	1.6 (.1) [1.4, 1.8]	1.8 (.06) [1.7, 1.9]	2.6 (.07) [2.4, 2.7]	1.9 (.06) [1.8, 2.0]
2. Crying easily, cry	1.7 (.09) [1.5, 1.9]	2.1 (.2) [1.7, 2.6]	2.3 (.1) [2.0, 2.5]	2.0 (.1) [1.8, 2.3]
3. Feeling sad, unhappy	2.1 (.08) [2.0, 2.3]	2.4 (.07) [2.3, 2.5]	2.6 (.09) [2,4. 2,8]	2.3 (.05) [2.2, 2.5]
4. Feeling lonely	1.6 (.08) [1.5, 1.8]	1.5 (.1) [1.3, 1.7]	1.9 (.07) [1.8, 2.1]	1.6 (.06) [1.5, 1.8]
5. Loss of sexual interest or pleasure	1.4 (.1) [1.2, 1.7]	1.3 (.06) [1.1, 1.4]	1.7 (.2) [1.3, 2.1]	1.4 (.05) [1.3, 1.5]
6. Feeling no interest in things/ less interest in daily activities, no more interest in work	1.8 (.02) [1.7, 1.8]	2.4 (.07) [2.2, 2.5]	2.4 (.02) [2.3, 2.4]	2.2 (.05) [2.1, 2.3]
7. Feeling low in energy, slowed down	1.8 (.09) [1.6, 2.0]	1.9 (.1) [1.6, 2.2]	2.6 (.07) [2.5, 2.7]	2.0 (.07) [1.9, 2.2]
8. Poor appetite, no appetite for food	1.8 (.06) [1.7, 1.9]	1.7 (.06) [1.6, 1.9]	2.0 (.08) [1.8, 2.1]	1.8 (.04) [1.7, 1.9]
9. Difficulty falling asleep, staying asleep, can't sleep well	2.1 (.1) [1.8, 2.3]	2.1 (.1) [1.9, 2.3]	1.8 (.04) [1.7, 1.9]	2.1 (.07) [1.9, 2.2]
10. Thoughts of ending your life, commit suicide	1.0 (.005) [1.0, 1.03]	1.0 (.002) [.99, 1.007]	1.1 (.02) [1.0, 1.1]	1.0 (.005) [1.009, 1.03]
11. Feeling of being trapped or	1.7 (.1)	2.6 (.04)	2.5 (.1)	2.3 (.06)

caught, feels very uncomfortable and smothered	[1.5, 2.0]	[2.5, 2.7]	[2.2, 2.7]	[2.1, 2.4]
12. Worrying too much about things; worried	2.1 (.1) [1.9, 2.4]	2.9 (.05) [2.8, 3.0]	2.7 (.1) [2.4, 2.9]	2.6 (.07) [2.4, 2.7]
13. Blaming self for things	1.8 (.08) [1.6, 1.9]	1.9 (.1) [1.6, 2.2]	2.7 (.1) [2.4, 2.9]	2.0 (.08) [1.9, 2.2]
14. Feeling everything is effort	1.6 (.09) [1.4, 1.8]	2.0 (.09) [1.8, 2.2]	2.3 (.07) [2.2, 2.5]	1.9 (.06) [1.8, 2.0]
15. Feelings of worthlessness, no value	1.5 (.06) [1.3, 1.6]	1.4 (.05) [1.3, 1.5]	2.7 (.1) [2.4, 2.9]	1.7 (.06) [1.5, 1.8]
16. Don't talk to anyone* **	1.6 (.1) [1.4, 1.9]	1.7 (.06) [1.6, 1.8]	1.9 (.08) [1.7, 2.0]	1.7 (.05) [1.6, 1.8]
17. Disappointed* **	2.3 (.09) [2.1, 2.5]	2.8 (.04) [2.8, 2.9]	2.6 (.03) [2.5, 2.6]	2.6 (.03) [2.5, 2.7]

* Adjusted for clusters and weighting

** Adjusted for clusters, weighting and strata

*** Item added from qualitative findings from prior adaptation of instrument to this context

Table 7.3 – Summary statistics of individual anxiety scale items

1 = Never
2 = Sometimes/ half of the time
3 = Often
4 = All the time

Variable	Agriculture Mean (SE) 95% CI*	Factory Mean (SE) 95% CI*	Sex industry Mean (SE) 95% CI*	All Mean (SE) 95% CI**
18. Suddenly scared for no reason	1.4 (.02) [1.36, 1.43]	1.6 (.04) [1.5, 1.7]	1.7 (.06) [1.5, 1.8]	1.5 (.03) [1.5, 1.6]
19. Feeling fearful, afraid, afraid all the time	1.4 (.02) [1.3, 1.4]	1.6 (.06) [1.5, 1.7]	1.7 (.04) [1.6, 1.8]	1.6 (.03) [1.5, 1.6]
20. Faintness, dizziness	1.6 (.06) [1.5, 1.7]	1.7 (.07) [1.5, 1.8]	2.0 (.07) [1.9, 2.1]	1.7 (.05) [1.6, 1.8]
21. Nervousness or shakiness inside	1.6 (.01) [1.5, 1.6]	1.7 (.07) [1.5, 1.9]	1.8 (.05) [1.7, 2.0]	1.7 (.04) [1.6, 1.8]
22. Heart beats quickly	1.5 (.01) [1.5, 1.6]	1.5 (.06) [1.4, 1.6]	2.0 (.05) [1.9, 2.1]	1.6 (.04) [1.5, 1.7]
23. Trembling, feel very shaky	1.5 (.06) [1.3, 1.6]	1.5 (.04) [1.4, 1.5]	1.8 (.07) [1.6, 1.9]	1.5 (.04) [1.4, 1.6]
24. Feeling tense or keyed up	1.5 (.05) [1.4, 1.6]	2.1 (.04) [2.0, 2.2]	2.0 (.06) [1.9, 2.1]	1.9 (.05) [1.8, 2.0]
25. Spells of terror or panic	1.5 (.03) [1.4, 1.5]	1.7 (.07) [1.6, 1.9]	1.9 (.05) [1.8, 2.0]	1.7 (.04) [1.6, 1.8]
26. Feeling restless, fidget all the time	1.6 (.04) [1.6, 1.7]	1.8 (.03) [1.7, 1.9]	1.9 (.06) [1.7, 2.0]	1.8 (.03) [1.7, 1.8]
27. Distrust, feel suspicious* **	1.5 (.02) [1.5, 1.6]	1.8 (.05) [1.7, 1.9]	2.2 (.1) [1.9, 2.5]	1.8 (.06) [1.7, 1.9]
28. Feel stress* **	1.7 (.07) [1.5, 1.8]	2.4 (.04) [2.3, 2.5]	2.3 (.07) [2.2, 2.5]	2.1 (.06) [2.0, 2.3]

* Adjusted for clusters and weighting ** Adjusted for clusters, weighting and strata *** Item added from qualitative findings from prior adaptation of instrument to this context

Tables 7.2 and 7.3 display the mean score for each individual item in the depression scale (Table 7.2) and the anxiety scale (Table 7.3), for the whole sample and per sub-sample. The highest-scored items in the whole sample for the depression scale were "disappointed," "worrying too much about things, worried," "feeling of being trapped or caught, feels very uncomfortable and smothered," and "feeling sad, unhappy." These scores ranged from 2.3 to 2.6, in between "sometimes" and "often." The three lowest-scoring items in the depression scale were "thoughts of ending your life, commit suicide," "loss of sexual interest or pleasure," and "feelings of worthlessness, no value." These scores were between 1.0 and 1.7, lying between the "never" and "sometimes" response categories. Low scores on two of these items – thoughts of ending your life and loss of sexual interest or pleasure – may reflect unwillingness to disclose these symptoms, rather than lower prevalence of the symptoms.

The highest-scoring items from the anxiety scale were "feel stress," "distrust, feel suspicious," "feeling restless," and "feeling tense or keyed up"; these scores fall primarily fall between the "never" and "sometimes/ half of the time" response categories. Lower-scoring items included "suddenly scared for no reason" and "trembling, feeling shaky."

It is notable that the one of the highest scoring items – "disappointed" – in the depression scale, and the two highest scoring items from the anxiety scale – "feel stress" and "distrust, feel suspicious" – are both items that were added to the scale due to qualitative work for the MHAP project, indicating the importance of adding items with strong cultural meaning and relevance when adapting mental health measures.

Table 7.4 – Mean and standard error of mental health scores, by industry

	Depression Mean (SE) [95% CI] [range 0 – 68]	Depression Cronbach's alpha	Anxiety (mean, SE) [95% CI] [range 0 – 44]	Anxiety Cronbach's alpha
Agriculture	29.8 (1.3) [27, 32.6]	.87	16.8 (.3) [16.2, 17.4]	.8
Factory	33.7 (.7) [32.1, 35.2]	.73	19.5 (.3) [18.8, 20.1]	.73
Sex industry	38.3 (.6) [37.0, 29.5]	.71	21.4 (.4) [20.6, 22.2]	.66
All	33.3 (.6) [32.0, 34.7]	.82	19.0 (.34) [18.2, 19.7]	.77

The overall mean for depression (range 0 – 68) was 33.3, while the mean for the three sub-samples was 29.8 for the agriculture group, 33.7 in the factory group and 38.3 in the sex industry group. The overall mean for anxiety was 19.0 (range 0 – 44), while the mean for the three sub-samples was 16.8 for respondents in the agriculture group, 19.5 in the factory group and 21.4 in the sex industry group. Anova tests of the mean depression level in the three groups and the mean anxiety level in the three groups showed significant difference.

Table 7.4 also displays the Cronbach's alpha coefficient for each scale, per sub-sample and for the whole sample. Cronbach's alpha is a measure of internal consistency; increased intercorrelations between items in a scale will lead to a higher Cronbach's alpha. As such, a higher Cronbach's alpha indicates that the items in the scale are measuring a single construct. The Cronbach's alpha coefficients for the depression subscale for all sub-samples and the whole sample were in the range of .7-.9, which is considered good. The Cronbach's alpha coefficients for the whole sample, and the factory and agriculture sub-samples, for the anxiety scale were also in the .7-.9 range, while the

Cronbach's alpha for the sex industry sub-sample for the anxiety scale is in the acceptable range (.6-.7).

3. Deceit in migration, working conditions and mental health – a mediation model

This section of analysis seeks to identify the association between deceit experienced during migration and subsequent working conditions, as well as working conditions and levels of depressive and anxiety symptoms. A possible mediation model based on these data is that deceit during migration leads to increased risk for coercive working conditions, which in turn leads to increased symptoms of mental health [see Figure 7.1, below]. This model is based on both qualitative data from this study (*Chapter VI)*, and literature on the relationship between stressors and mental health outcomes *(Chapter IV)* discussed earlier in this dissertation. The mediation model hypothesizes that there is a direct relationship between deceit experienced during migration and mental health symptoms, which may be mediated in part, or fully, by coercive working conditions. Part 3 of this chapter explores the possible mediation relationship for all three sub-samples and the whole sample.

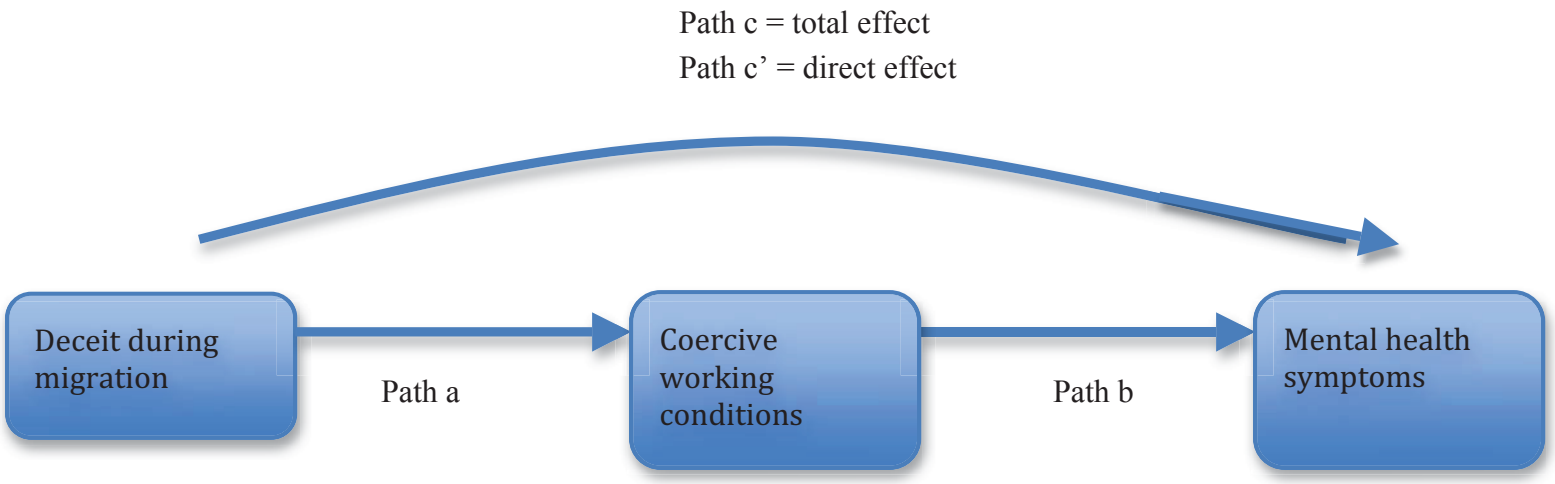


Figure 7.1 – mediation model: deceit experienced during migration, coercive working conditions and mental health outcomes

In Figure 7.1, **Path a** is the relationship between deceit during migration and coercive working conditions. Findings on this relationship are presented in Table 7.6. Table 7.5 presents prevalence of exposure to deceit amongst those who experienced specific coercive working conditions, to lay the foundation for the odds ratios in Table 7.6, of experiencing specific working conditions, having experienced deceit during migration. Table 7.6 also presents a summary measure of coercive working conditions, and uses linear regression to identify if there is a statistically significant association between deceit experienced during migration, and increased number of coercive working conditions experienced. Table 7.6 seeks to establish if there is a significant relationship between deceit during migration and coercive working conditions. **Path b** is the relationship between coercive working conditions and depression and

anxiety, displayed in Table 7.7 (associations between coercive working conditions and depression), and Table 7.8 (associations between coercive working conditions and anxiety). **Path c** is the relationship between deceit during migration and mental health symptoms, without taking into account coercive working conditions (known as the *total effect)*. Table 7.9 presents this relationship. **Path c'** is the direct effect between deceit and mental health symptoms. If this pathway is significantly different than the total effect, this indicates that the relationship is mediated. Figures 7.4 and 7.5 show the results of mediation analysis using the Sobel-Goodman test.

The coercive working conditions are the following items from the survey:

- Have you ever been threatened, pressured or compelled to take a job?
- Have you ever felt that a person with power or authority took advantage of you to make you take a job?
- Has physical force ever been used by anyone to make you take a job?
- Have you ever been forced to work without payment?
- Have you ever had your salary withheld or reduced as a form of punishment or threat?

Table 7.5: Exposure to coercive working conditions

Variable	Agriculture			Factory			Sex industry			Whole sample		
	Total exposed %	Exposed to deceit %	Unexposed to deceit %	Total exposed %	Exposed to deceit %	Unexposed to deceit %	Total exposed %	Exposed to deceit %	Unexposed to deceit %	Total exposed %	Exposed to deceit %	Unexposed to deceit %
Threatened	19.2	38.5	12.6	34.9	46.5	20.2	40.6	41.5	20.0	30.7	43.3	15.9
Physical force used to take a job	11.8	23.1	7.9	8.1	9.7	6.1	32.8	33.3	20.0	14.8	21.0	7.4
Taken advantage of	15.8	23.1	13.2	48.8	41.7	57.9	53.9	54.5	40.0	38.5	43.6	32.6
Forced to work without payment	17.7	28.8	13.9	32.9	42.4	21.1	38.3	38.2	40.0	28.9	38.6	17.4
Salary withheld	19.7	34.6	14.6	57.7	77.1	33.3	54.6	56.9	0	44.0	62.4	22.2

Table 7.5 displays prevalence of exposure to a number of types of coercive working conditions, by sub-sample and for the whole sample. In the agriculture sub-sample, the most prevalent forms of coercive working conditions were having salary withheld or reduced as a form of punishment or threat (19.7%), being threatened to take a job (19.2%) and being forced to work without payment (17.7%). 57.7% of factory workers reported having had their salary withheld or reduced as a form of punishment, and 48.8% reported having been taken advantage by someone with authority or power to take a job. These two conditions were also the two most commonly reported in the sex industry sub-sample – 54.6% reported having had salary withheld, and 53.9% reported having been

taken advantage of to take a job. The columns displaying % exposed to deceit and % unexposed to deceit lay the foundation for the odds ratios below, in Table 7.6.

Table 7.6: Odds ratios of experiencing coercive working conditions, having experienced deceit during migration

Variable	Agriculture Adjusted odds ratio 95% CI P-value	Factory Adjusted odds ratio 95% CI P-value	Sex industry Adjusted odds ratio 95% CI P-value	Whole sample Adjusted odds ratio 95% CI P-value
Threatened to take a job	**4.2** **[1.7, 10.3]** **p=.004**	**3.4** **[2.4, 4.7]** **p=.000**	2.7 [.8, 8.8] p=.096	**4.3** **[3.1, 6.0]** **p=.000**
Physical force used to take a job	**3.8** **[1.0, 14.0]** **p=.048**	**1.9** **[1.4, 2.6]** **p=.001**	2.5 [.8, 7.8] p=.105	**3.6** **[2.0, 6.5]** **p=.000**
Taken advantage of to take a job	**1.9** **[1.1, 3.1]** **p=.018**	**.5** **[.3, 1.0]** **p=.041**	2.0 [.4, 9.1] p=.351	1.5 [1.0, 2.3] p=.069
Forced to work without payment	**2.8** **[1.3, 5.9]** **p=.010**	**2.7** **[1.9, 3.6]** **p=.000**	1.1 [.1, 13.3] p=.940	**3.0** **[2.1, 4.1]** **p=.000**
Salary withheld as a form of punishment	**3.3** **[1.2, 9.4]** **p=.027**	**6.5** **[3.7, 11.5]** **p=.000**	N/A Predicts perfectly	**6.0** **[3.8, 9.6]** **p=.000**
Summary measure, coercive workplace conditions	**.9 (coefficient)** **[.5, 1.2]** **p=.000** **R^2 = .13**	**.8 (coefficient)** **[.5, 1.0]** **p=.000** **R^2 = .13**	**1.1 (coefficient)** **[.6, 1.6]** **p=.000** **R^2 = .03**	**1.1** **[1.0, 1.3]** **p=.000** **R^2 = .17**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

For both the agriculture and factory sub-samples, deceit significantly predicts each individual item in the coercive working conditions factor, and the overall summary measure (agriculture: .9, p=.000, factory: .8, p=.000). Some of the individual odds ratios indicate deceit is strongly associated with particular working conditions. For factory workers, those who experienced deceit are 6.5 times more likely to have had their salary withheld or reduced as punishment or threat than those who have not experienced deceit. For agricultural workers, those who experienced deceit are 4.2 times more likely to have been threatened to take a job, and 3.8 times more likely to have experienced physical force to take a job. However, for factory workers, deceit is actually significantly associated with a *lower* odds of having been taken advantage of to take a job – as shown in Table 7.5, 41.7% of those exposed to deceit were taken advantage of to take a job, while 57.9% who did not experience deceit were taken advantage of. It is not clear what is driving this relationship, which is opposite to the hypothesized relationship between deceit and coercive working conditions. It may indicate different mechanisms for entry into factory work. For the sex industry sub-sample, deceit is not significantly associated with any of the individual predictors. However, as seen in Table 7.5, 100% of respondents in the sex industry who had had their salary withheld or reduced had experienced deceit. Therefore, this predictor is driving the significant result for the summary measure (1.1, p=.000). It appears from these results, therefore, that deceit predicts having had salary withheld or reduced, but not coercive working conditions overall in the sex industry sub-sample. For the whole sample, all individual components of coercive working conditions, apart from having been taken advantage of to take a job, are significantly predicted by deceit, with deceit significantly associated with the coercive

working conditions (1.1, p=.000). From these results, it is evident that for the agriculture, factory and whole sample, the first condition of mediation – a significant relationship between the independent variable (deceit) and the mediator (coercive working conditions) is met. For the sex industry sub-sample, there is a significant relationship between deceit and the summary measure; however, this is driven solely by the 'salary withheld or reduced' variable.

Table 7.7: Associations between coercive working conditions, summary measure of coercive working conditions and depression outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Threatened to take a job	**4.8 p=.002**	**2.1 p=.047**	.7 p=.654	**3.7 p=.001**
Physical force used to take a job	5.3 p=.083	**3.7 p=.026**	3.3 p=.069	**5.4 p=.001**
Taken advantage of to take a job	1.5 p=.198	-1.3 p=.357	1.5 p=.370	**2 p=.020**
Forced to work without payment	**6.7 p=.000**	.1 p=.913	**2.1 p=.021**	**3.8 p=.000**
Salary withheld as a form of punishment	**5.6 p=.000**	**3.8 p=.000**	.3 p=.788	**4.8 p=.000**
Summary measure, coercive workplace conditions	**2.3 p=.000**	1.1 p=.109	1.0 p=.051	**2.1 p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.7 presents regression analyses, with depression symptoms as the outcome variable, including gender, marital status and registration status as covariates. A separate regression analysis for each individual predictor, and the summary measure, was conducted. For the agriculture sub-sample, a number of individual predictors were found to be significant. For example, having been forced to work without payment is

significantly associated with depression symptoms, with the coefficient representing a 6.7 increase in level of symptoms for those having been forced to work without payment. The summary measure of coercive workplace conditions is significantly associated with an increase of 2.3 in level of depressive symptoms, per one item increase of exposure to a coercive workplace condition. Some individual items are significant in the factory and sex industry sub-samples – for example, in the factory sub-sample, having been exposed to physical force to take a job is associated with a 3.7 increase in level of depressive symptoms (p=.03) and in the sex industry, being forced to work without payment is associated with a 2.1 increase in level of depressive symptoms (.02). However, the overall summary measure of coercive workplace conditions is not significantly associated with an increase in level of depressive symptoms, for either the factory or sex industry sub-sample. In the whole sample, all individual items are significantly associated with increased levels of symptoms of depression, and the coercive working conditions summary measure indicates that for each single item increase in exposure to a coercive working condition, there is a 2.1 increase in level of depression symptoms (p=.000). Table 7.7 indicates that for the agriculture sub-sample and whole sample, the third condition of mediation – that there is a significant relationship between the mediator (coercive working conditions) and the outcome (depression) – is met; however, for the factory and sex industry sub-samples, this is not the case.

Table 7.8: Associations between coercive working conditions, summary measure of coercive working conditions and anxiety outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Threatened to take a job	**1.3** **p=.004**	.3 p=.441	-.1 p=.908	**1.1** **p=.005**
Physical force used to take a job	**4.6** **p=.002**	1.2 p=.419	-.2 p=.881	**2.1** **p=.017**
Taken advantage of to take a job	1.1 p=.112	-.8 p=.248	-.5 p=.491	.61 p=.117
Forced to work without payment	**2.8** **p=.001**	**-1.7** **p=.001**	-.7 p=.093	.4 p=.128
Salary withheld as a form of punishment	**1.9** **p=.000**	1.0 p=.100	-.02 p=.959	**1.9** **p=.000**
Summary measure, coercive workplace conditions	**1.0** **p=.001**	-.02 p=.956	-.2 p=.530	**.6** **p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.8 shows a similar pattern to Table 7.7, in terms of exposure to coercive working conditions in the agriculture sub-sample and the whole sample being significantly associated with increased level of symptoms of anxiety (for all individual predictors, apart from being taken advantage of to take a job), however, not for the factory and sex-industry sub-samples. The direction of the significant result for the factory sub-sample – forced to work without payment – is the opposite to what would be hypothesized, indicating the possibility of confounders in the relationship between being forced to work without payment and anxiety symptoms for factory workers. One hypothesis for this (and the coefficients in the sex industry sub-sample, which, while non-significant, also operate in the opposite direction to what would be hypothesized) is that restrictions on freedom of movement often come alongside being forced to work without pay, thus reducing

exposure to other external stressors, such as arrest or deportation, which may have a stronger effect on levels of anxiety symptoms.

Table 7.9: Deceit and mental health outcomes

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Depression	2.2 p=.293	**2.4** **p=.009**	-2.3 p=.277	**4.6** **p=.002**
Anxiety	.9 p=.151	**.7** **p=.032**	-.7 p=.135	**1.9** **p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.9 explores the relationship between deceit experienced during migration and mental health symptoms. For mediation to exist, a significant relationship between deceit and mental health symptoms must exist. Table 7.9 indicates that this is the case for the depression and anxiety outcome for the factory sub-sample, and for both depression and anxiety for the whole sample. However, for both depression and anxiety for agriculture and sex industry sub-samples, there is no significant direct relationship between deceit experienced during migration and mental health outcomes. This relationship is present for the model for the whole sample, with being exposed to deceit during migration resulting in a 4.6 increase in level of depressive symptoms (p=.002) and in a 1.9 increase in symptoms of anxiety (p=.000).

The full mediation model, for depression and anxiety outcomes, is presented below in Figures 7.4 and 7.5. While there is a significant relationship between deceit experienced during migration and coercive working conditions for all three sub-samples, there is no association between deceit and anxiety or deceit and depression for the agriculture and

sex-industry sub-samples. The mediation model does not hold for the factory sub-sample for depression or anxiety, as there is no significant relationship between coercive working conditions and depression (Table 7.7) or for coercive working conditions and anxiety (Table 7.8). For all three sub-samples, Tables 7.7, 7.8 and 7.9 indicate that the preconditions for mediation are not met, and therefore the full mediation analysis is only conducted on the whole sample.

Regression diagnostics were performed on the depression mediation model for the full sample. An inter-quartile range plot of the residuals did not indicate any severe outliers. The kernel density plot (Figure 7.2a), p-norm plot (Figure 7.2b), and q-norm plot (Figure 7.2c), all demonstrate that despite some deviation from normality of residuals, regression assumptions are adequately met. The mean VIF was 1.26, indicating independence of predictors.

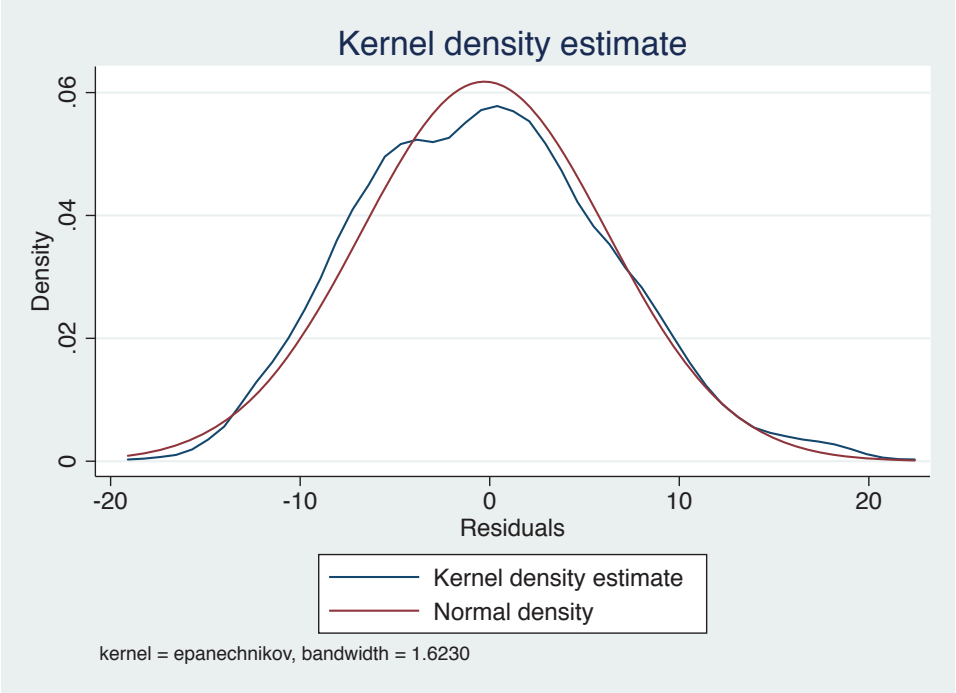


Figure 7.2a: Kernel density plot, depression mediation model

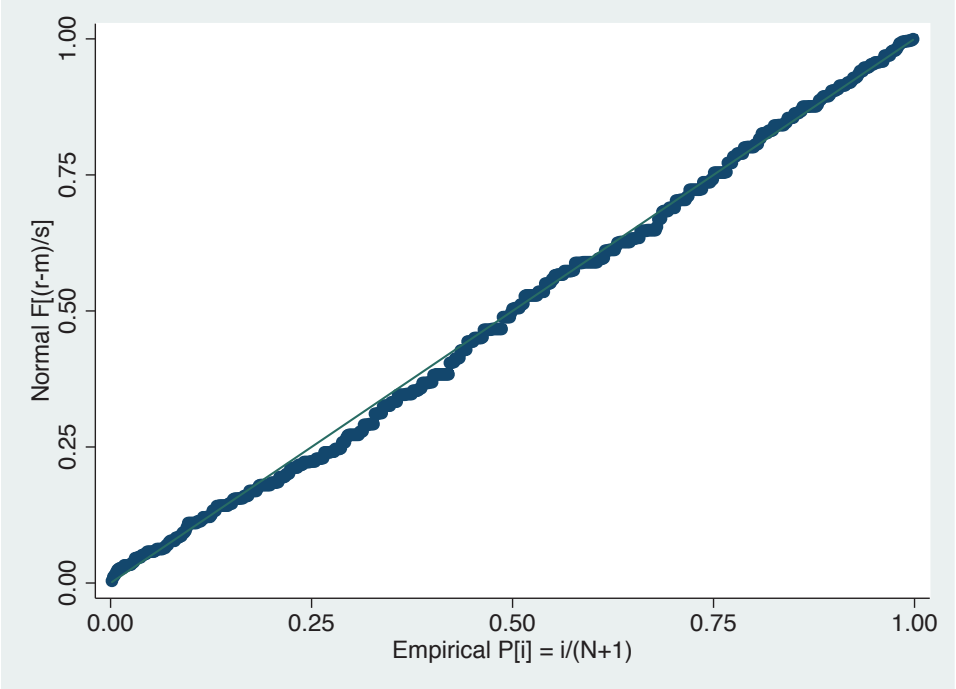


Figure 7.2b: Pnorm plot, depression mediation model

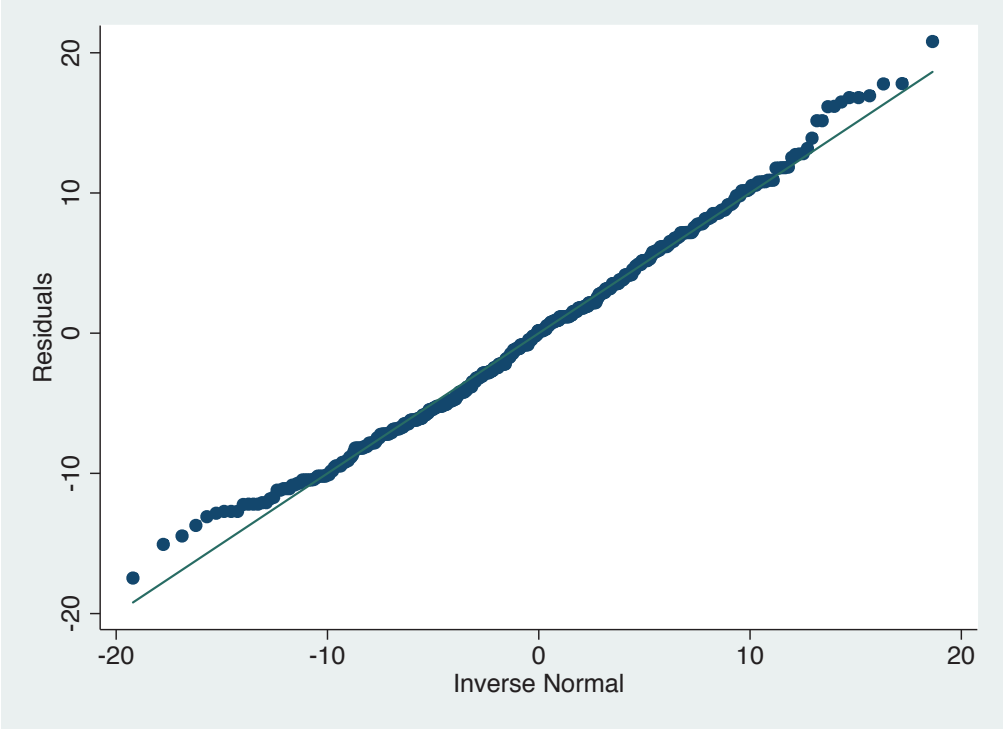


Figure 7.2c: Qnorm plot, depression mediation model

Regression diagnostics for the anxiety mediation model indicated that there were no extreme outliers. The mean VIF was 1.26, indicating independence of predictors. The kernel-density plot (Figure 7.3a), p-norm plot (Figure 7.3b), and q-norm plot (Figure 7.3c) indicate some deviation from the assumption of normal distribution of residuals. In order to check if this significantly influenced coefficients, the anxiety outcome was log transformed and the regression model re-run with the log anxiety outcome. However, the residuals from the log-transformed regression model were also not normally distributed, indicating that transformation did not improve fit with regression assumptions. Small sample size and non-normality of residuals indicates possible unreliability of regression results in the case of the anxiety mediation model.

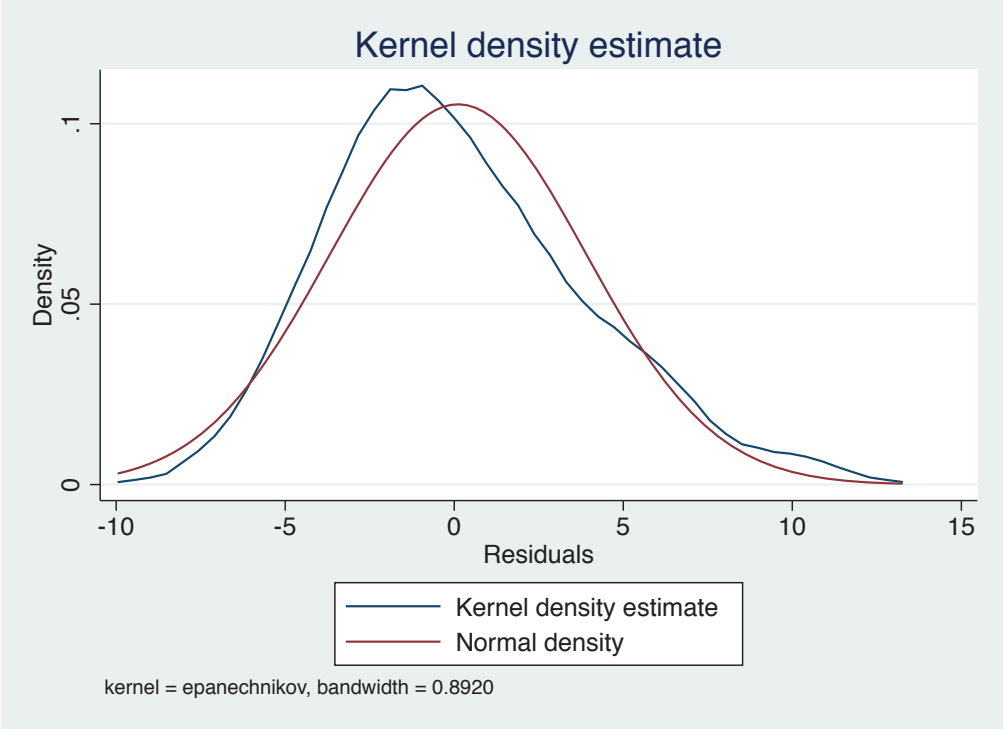


Figure 7.3a: Kernel density plot, anxiety mediation model

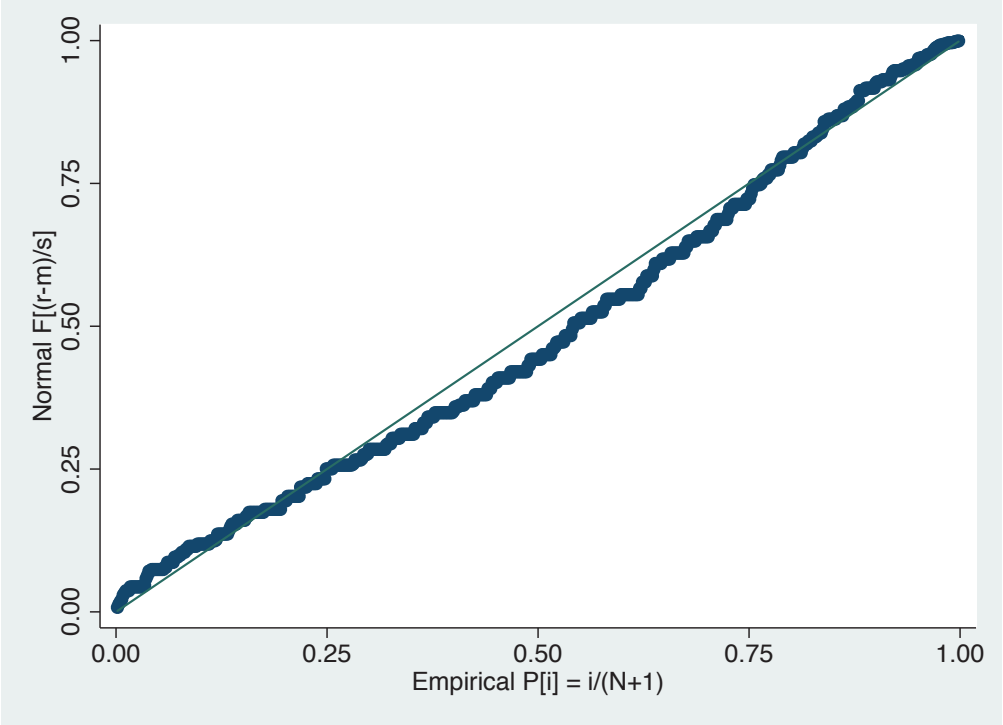


Figure 7.3b: Pnorm plot, anxiety mediation model

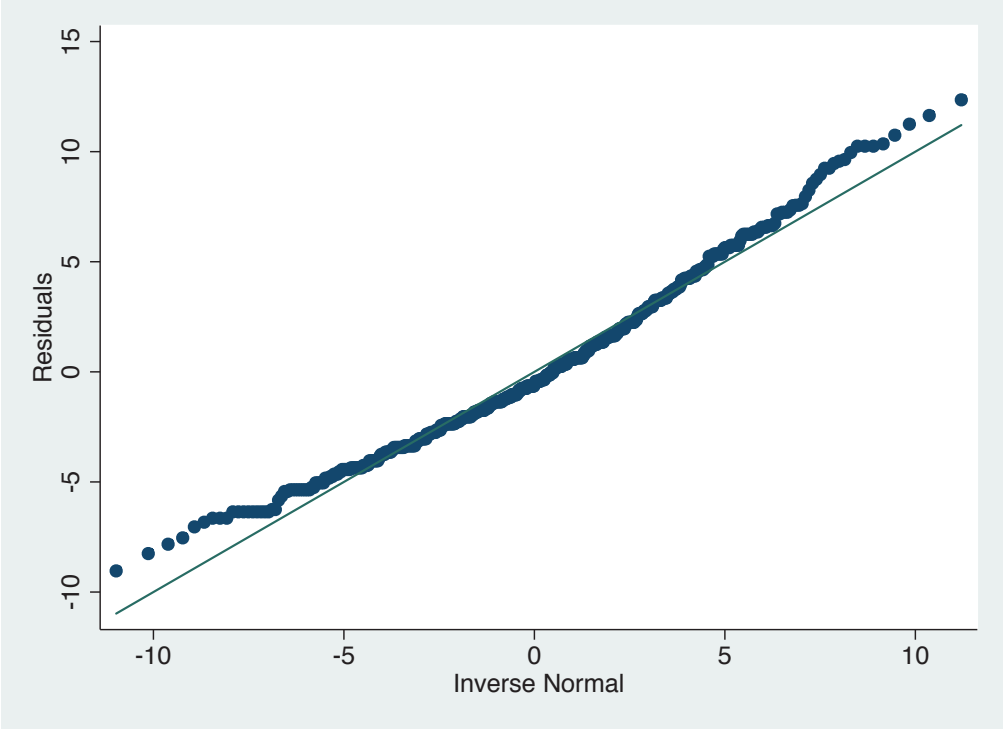


Figure 7.3c: Qnorm plot, anxiety mediation model

Mediation analysis used the Sobel-Goodman test, to assess direct and indirect effects and mediation. Results for the full mediation model did not control for demographic variables. Figure 7.4 shows the total, direct and indirect effects of deceit on depression symptoms. The Sobel-Goodman test indicated that the mediation effect of coercive working conditions on depressive symptoms was significant, with 40% of the total effect of deceit on depressive symptoms mediated by coercive working conditions. The relationship between deceit during migration and depressive symptoms reduces from a coefficient of 5.1 to 3.0, with the presence of the mediator, coercive working conditions.

Figure 7.5 shows the total, direct and indirect effects of deceit on anxiety symptoms. The relationship between deceit during migration and anxiety symptoms reduces from a coefficient of 2.4 to 1.9, with the Sobel-Goodman test indicating 21% of the total effect

of deceit on anxiety symptoms mediated by coercive working conditions. Both these mediation models indicate a possible causal pathway between deceit during migration, coercive working conditions and mental health symptoms. However, mediation is partial, indicating that the direct effect of deceit during migration on both depressive and anxiety symptoms is significant.

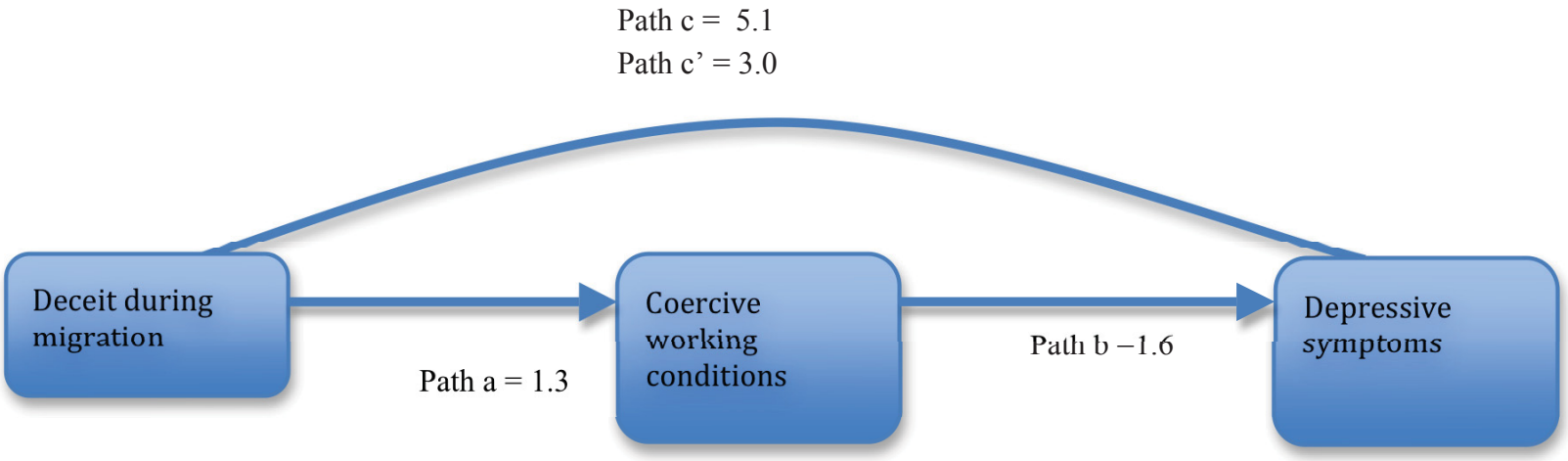


Figure 7.4: Depression mediation model

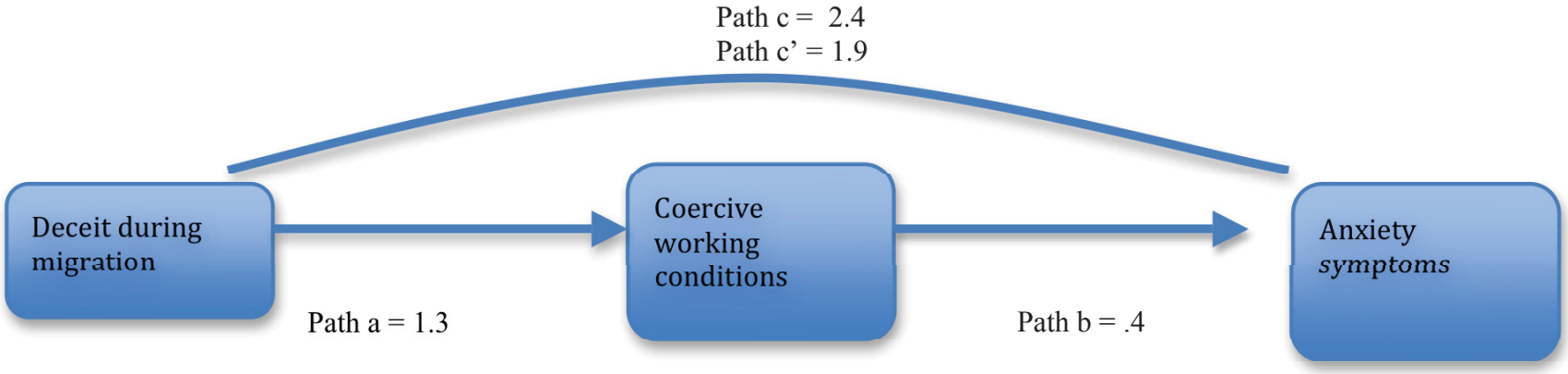


Figure 7.5: Anxiety mediation model

In the next section, additional exposure variables are explored and added to a multivariate model, seeking to explain depression and anxiety outcomes through a broader range of exposures in the workplace and relating to safety and security.

4. Working conditions, safety and security and mental health

In the following sub-sections, factors generated using factor analytic methods and informed by literature review and qualitative data from this study are explored individually, for each sub-sample and the whole sample, and then a final model including all these factors is presented. The aim here is to explore the different types of exposures related to workplace experiences and safety and security, and identify if these exposures have differential impacts on anxiety and depression, or differential impacts per sub-sample. For each factor, the prevalence of each of the items in the sub-sample and the whole sample is presented. After this, tables displaying the associations between each individual predictor, and a summary measure of the factor, and the outcome measures – depression and anxiety – are shown, including gender, martial status and registration status as covariates. In these models, the coefficient for the summary measure represents the increase of depression or anxiety symptoms per single item increase of exposure to any of the items in the factor. All models use svy commands to adjust for clustering and weighting for sub-samples, and clustering, weighting and strata for the whole sample. Finally, a full model encompassing all workplace exposure summary measures and the safety and security summary measure is presented.

i. Sexual and physical abuse and harassment:

This exposure category includes the following items from the survey:

- Have you ever experienced unwanted sexual comments in the workplace?
- Have you ever experienced unwanted sexual touching in the workplace?
- Have you ever experienced unwanted sex in the workplace?
- Have you ever been kicked, hit or slapped by an employer, manager or *wunna*?

Table 7.10: Exposure to individual predictors – sexual and physical abuse and harassment

Variable	Agriculture %	Factory %	Sex industry %	Whole sample %
Unwanted sexual comments	26.1	49.6	95.3	51.4
Unwanted sexual touching	19.7	30.6	100	41.9
Unwanted sex in the workplace	3.4	1.5	96.9	22.9
Physical abuse	9.8	17.4	50	21.9

Prevalence of exposure to sexual harassment and abuse is highest in the sex-industry sub-sample, with 95.3% of respondents reporting unwanted sexual comments, 100% reporting unwanted sexual touching and 96.9% reporting unwanted sex. Amongst agricultural workers, reported experience of unwanted sexual comments (26.1%) and unwanted sexual touching (19.7%) was lower than that of factory workers (49.6% and 30.6%). Prevalence of reported unwanted sex in the workplace amongst agricultural workers (3.4%) and factory workers (1.5%) was low. Reported physical abuse was also highest amongst respondents in the sex industry (50%), compared to 17.4% amongst factory workers and 9.8% amongst agricultural workers.

Table 7.11: Associations between sexual and physical abuse items, summary measure of sexual and physical abuse and depression outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Unwanted sexual comments	1.4 p=.245	**4.3 p=.001**	**5.6 p=.018**	**5.1 p=.000**
Unwanted sexual touching	**1.9 p=.025**	**3.0 p=.002**	N/A (100% exposed)	**5.0 p=.000**
Unwanted sex in the workplace	**9.1 p=.009**	-.008 p=.994	1.8 p=.118	**5.5 p=.000**
Physical abuse	1.0 p=.772	3.3 p=.095	**4.3 p=.001**	**5.0 p=.003**
Sexual and physical abuse and harassment summary measure	**1.1 p=.029**	**2.0 p=.001**	**3.5 p=.000**	**2.3 p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.12: Associations between sexual and physical abuse, summary measure of sexual and physical abuse and anxiety outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Unwanted sexual comments	**1.4 p=.041**	**3.2 p=.024**	.8 p=.482	**3.0 p=.001**
Unwanted sexual touching	1.0 p=.176	1.5 p=.201	N/A (100% exposed)	**2.2 p=.002**
Unwanted sex in the workplace	**6.1 p=.020**	**-2.2 p=.020**	**2.1 p=.000**	**2.4 p=.000**
Physical abuse	1.0 p=.422	.3 p=.851	.2 p=.827	1.2 p=.092
Sexual and physical abuse and harassment summary measure	**.9 p=.046**	1.0 p=.129	.5 p=.441	**1.0 p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.11 shows that for all sub-samples and the whole sample, the sexual and physical abuse summary measure is significantly associated with increased symptoms of depression. Of note is the finding that unwanted sex in the workplace is significantly associated with an increase of 9.1 in the level of symptoms of depression (p=.009) for agricultural workers, while the overall increase for agricultural workers per single item increase of exposure to any of these items is 1.1 (p=.03). For factory workers, exposure to unwanted sexual comments in the workplace (4.3, p=.001) and unwanted sexual touching the workplace (3.0, p=.002) was significantly associated with depression, with a single item increase in the sexual and physical abuse summary measure resulting in 2.0 increase in level of depressive symptoms (p=.001). For respondents in the sex industry, unwanted sexual comments (5.6, p=.018) and exposure to physical abuse (4.3, p=.001) resulted in higher level of depressive symptoms, with an increase of 3.5 of level of depressive symptoms per single item increase of exposure to one of these items (p=.000).

In contrast, the sexual and physical abuse summary measure was not significantly associated with anxiety for the factory and sex-industry sub-samples. For the agriculture sub-sample, unwanted sex in the workplace was significantly associated with an 6.1 increase in level of anxiety symptoms (p=.020) and unwanted sexual comments was significantly associated with a 1.4 increase in level of anxiety symptoms; the overall summary measure was significantly associated with higher level of anxiety (.09, p=.046). For the factory sub-sample, one of the results – that unwanted sex in the workplace is significantly associated with *decreased* symptoms of anxiety – warrants further investigation, given it is the opposite direction to what would be hypothesized. While

unwanted sex in the workplace was associated with increased levels of anxiety symptoms (2.1, p=.02) for the sex industry sub-sample, the overall summary measure was not significantly associated with increased levels of anxiety symptoms. However, for the overall sample, unwanted sexual comments (3.0, p=.001), unwanted sexual touching (2.2, p=.002) and unwanted sex in the workplace (2.4, p=.000) are also significantly associated with levels of anxiety symptoms, as is the overall summary measure (1.0, p=.000).

ii. Hassles and daily stressors

The following items from the survey are included in the "hassles and daily stressors" exposure category:

- Have you ever been forced to work when you are sick?
- Have you ever been restricted from leaving your workplace on your free time?
- Have you ever been forced to work overtime?
- Have you ever had to pay additional fees for police protection to your employer out of your salary?
- Have you ever been yelled at by an employer, manager or *wunna*?

These are items that were often described in qualitative interviews as occurring relatively frequently in the various workplaces, and, while being perceived as stressful events, not having the same impact on well-being as personal experience of sexual or physical abuse, for example.

Table 7.13: Exposure to individual predictors – hassles and daily stressors

Variable	Agriculture %	Factory %	Sex industry %	Whole sample %
Forced to work when sick	23.1	37.2	45.3	34.1
Restricted from leaving workplace on free time	25.6	69.4	69.5	54.3
Forced to work overtime	57.6	95.7	71.1	77.2
Paid police fees	38.4	82.2	90.6	68.9
Verbal abuse	68.0	95.0	98.4	86.4

While patterns of exposure to sexual and physical abuse showed distinct patterns between the occupational sectors, the prevalence of some of the items in the "hassles and daily stressors" category reveals similarities between the factory and sex industry sub-samples. 69.4% of factory workers and 69.3% of respondents in the sex industry reported having been restricted from leaving their workplace during their free time, and 94.96% of factory workers and 98.4% of respondents in the sex industry reported exposure to verbal abuse. Reported forced overtime was high in all three sub-samples – agriculture (57.6%), factory workers (95.7%) and respondents in the sex industry (71.1%).

Table 7.14: Associations between hassles and daily stressors, summary measure of hassles and daily stressors, and depression outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Forced to work when sick	**6.0 p=.011**	1.3 p=.184	**2.4 p=.030**	**3.8 p=.001**
Restricted from leaving workplace on free time	**4.6 p=.000**	.7 p=.464	**3.1 p=.031**	**4.0 p=.000**
Forced to work overtime	**3.0 p=.000**	4.5 p=.051	**4.2 p=.010**	**4.1 p=.002**
Paid police fees	.8 p=.503	-.3 p=.831	**-3.4 p=.001**	1.8 p=.156
Verbal abuse	**6.4 p=.000**	**5.8 p=.035**	-.7 p=.800	**7.9 p=.000**
Hassles and daily stressors summary measure	**2.2 p=.000**	1.0 p=.068	**1.5 p=.028**	**2.2 p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.15: Associations between hassles and daily stressors, summary measure of hassles and daily stressors, and anxiety outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Forced to work when sick	**2.1 p=.002**	-.5 p=.354	**1.2 p=.032**	**1.1 p=.016**
Restricted from leaving workplace on free time	**1.5 p=.010**	.9 p=.267	**1.7 p=.007**	**2.0 p=.000**
Forced to work overtime	**1.2 p=.000**	**2.0 p=.027**	.8 p=.058	**1.6 p=.006**
Paid police fees	1.0 p=.115	1.1 p=.333	1.3 p=.087	**2.0 p=.009**
Verbal abuse	**2.3 p=.000**	**3.1 p=.025**	-.2 p=.921	**3.4 p=.000**
Hassles and daily stressors summary measure	**.9 p=.000**	.6 p=.088	**.9 p=.018**	**1.0 p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.14 shows that for the agriculture and sex industry sub-samples and the whole sample, exposure to hassles and daily stressors is significantly associated with increased levels of depressive symptoms. For agricultural workers, being forced to work when sick is associated with a 6.0 increase in levels of anxiety symptoms (p=.011), while being restricted from leaving a workplace during free time is associated with a 4.6 increase (p=.000). Being forced to work overtime (3.0, p.=000) and verbal abuse (6.4, p=.000) are also associated with increased levels of depressive symptoms for agricultural workers, with the overall summary measure of hassles and daily stressors is associated with a 2.2 increase in levels of depressive symptoms (p=.000). For the factory sub-sample, only verbal abuse is significantly associated with increased levels of anxiety symptoms at the p=.05 level (5.8, p=.035), however, being forced to work overtime nears significance (4.49, p=.051). In the sex industry sub-sample, all the items are significantly associated with increased depressive symptoms apart from verbal abuse. Being forced to work when sick is associated with a 2.4 increase in levels of depressive symptoms (p=.030) and being forced to work overtime is associated with a 4.2 increase (p=.010). However, paying police fees results in a 3.4 *decrease* in levels of anxiety (p=.001). This may indicate that for respondents in the sex industry, payment of police fees results in a reduction of arrest and potential abuse by police, and therefore payment of police fees is protective against depression in the sex industry in particular. For the sex industry sub-sample, the hassles and daily stressors summary measure is significantly associated increased depressive symptoms (1.5, p=.028)

Table 7.15 shows that the summary measure of hassles and daily stressors is significantly associated with increased anxiety symptom levels for the agriculture sub-samples and the whole sample. For the agriculture sub-sample, being forced to work when sick is associated with a 2.1 increase in level of anxiety symptoms (p=.000), being restricted from leaving a workplace during free time is significantly associated with a 1.5 increase (p=.010), being forced to work overtime is associated with a 1.2 increase (p=.000) and being exposed to verbal abuse is associated with a 2.3 increase of anxiety symptom levels (p=.000). The summary measure of hassles and daily stressors is significantly associated with increased level of anxiety, with a single item increase of exposure associated with a .9 increase of anxiety symptom level (p=.000). In the factory sub-sample, being forced to work overtime (2.0, p=.000) and verbal abuse (3.1, p=.025) are the only individual predictors significantly associated with increased anxiety symptoms levels, whereas none of the other predictors or the summary measure have significant association with increased levels of anxiety symptoms. In the sex industry sub-sample, being forced to work when sick is associated with a 1.2 increase in levels of anxiety symptoms (p=.032), being restricted from leaving a workplace on free time is associated with a 1.7 increase (p=.007). For the sex industry sub-sample, the overall summary measure is significantly associated with increased anxiety symptom level (.9, p=.018). For the whole sample, the overall summary measure of hassles and daily stressors is associated with a 1.0 increase in levels of anxiety symptoms (p=.000).

iii. Barriers to exiting a job/ quitting a job

The "barriers to exit" category includes items from the survey that constitute barriers to leaving a workplace or form of employment. The following items are included in this factor:

- Have you ever been unable to leave a job due to a fear of punishment?
- Have you ever been unable to leave a job due to debt to an employer?
- Has an employer, manager or *wunna* ever threatened to turn you into authorities?
- Have you ever had documents retained by an employer to force you to work?

Table 7.16: Exposure to individual predictors – barriers to exit

Variable	Agriculture %	Factory %	Sex industry %	Whole sample %
Unable to leave a job due to a fear of punishment	28.6	41.1	64.1	41.8
Unable to leave a job due to debt to an employer	14.8	31.2	46.1	29.2
Employer, manager or *wunna* ever threatened to turn into authorities	28.1	46.5	85.2	48.6
Documents retained by an employer to force to work	14.8	51.9	21.9	32.6

Table 7.16 displays the prevalence of exposure to each of the individual items in this factor, which constitute barriers to exit from a workplace. In the agriculture sub-sample, the most commonly reported restrictions were being unable to leave a job due to fear of punishment (28.6%) and having had an employer, manager or *wunna* threaten to turn them into the authorities (28.1%). These were also the most commonly reported by respondents in the sex industry sub-sample, but with a higher prevalence – for being unable to leave a job due to fear of punishment, 64.1%, and for being threatened to be

turned into the authorities, 85.2%. The highest prevalence of not being able to leave a job due to debt to an employer was also in the sex industry, at 46.1%. In the factory sub-sample, the most commonly reported restrictions were being threatened to be turned into the authorities (46.5%) and having documents retained (51.9%). The highest prevalence of having documents retained was reported in the factory sub-sample, which can be explained by the higher level of registration in the factory sub-sample. The prevalence of this exposure in the sex industry – 21.9% – is surprising in that only one respondent in the sex industry reported being currently registered, and given that migrants in the sex industry cannot obtain registration. Given these are lifetime prevalence questions, this prevalence may represent experiences that these respondents had in previous workplaces or different industries in Thailand, or the respondents in the sex industry may be discussing documents apart from registration or work permits – i.e. a passport.

Table 7.17: Associations between barriers to exit, summary measure of barriers to exit, and depression outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Unable to leave a job due to a fear of punishment	**4.0** **p=.000**	**3.7** **p=.030**	2.4 p=.137	**5.0** **p=.000**
Unable to leave a job due to debt	**5.0** **p=.000**	2.0 p=.156	**3.3** **p=.002**	**4.7** **p=.000**
Threatened to be turned into authorities	**5.9** **p=.000**	2.7 p=.062	2.1 p=.322	**5.2** **p=.000**
Documents retained by an employer to force to work	3.4 p=.066	.1 p=.941	**4.1** **p=.000**	**3.1** **p=.008**
Barriers to exit summary measure	**3.1** **p=.000**	1.1 p=.104	**2.0** **p=.006**	**2.4** **p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.18: Associations between barriers to exit, summary measure of barriers to exit, and anxiety outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Unable to leave a job due to a fear of punishment	**2.2** **p=.000**	1.5 p=.180	-.02 p=.964	**2.0** **p=.001**
Unable to leave a job due to debt to an employer	**2.4** **p=.006**	-1.3 p=.053	**1.3** **p=.006**	**1.2** **p=.000**
Employer, manager or *wunna* ever threatened to turn into authorities	**2.0** **p=.000**	.6 p=.471	-.4 p=.587	**1.8** **p=.001**
Documents retained by an employer to force to work	1.4 p=.164	-1.3 p=.214	**1.3** **p=.002**	.7 p=.100
Barriers to exit summary measure	**1.3** **p=.000**	-.05 p=.897	.4 p=.077	**.8** **p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.17 shows that for the agriculture and sex industry sub-samples, and for the whole sample, the "barriers to exit" summary measure is significantly associated with increased levels of depressive symptoms. For the agriculture sub-sample, a single item increase in exposure to one of these barriers is associated with an increase of 3.1 of levels of depressive symptoms (p=.000); for the sex industry, the summary measure is associated with an increase of depressive symptoms of 2.0 (p=.006). In the factory sub-sample, being unable to leave a job due to fear of punishment is associated with a 3.7 increase in levels of depressive symptoms (p=.030); however, none of the other single predictors or the summary measure of barriers to exit are significantly associated with increased levels of depressive symptoms. In the whole sample, each single predictor is significantly associated with increased levels of depressive symptoms – for example, being unable to leave a job due to debt to an employer is significantly associated with a 4.7 increase in

levels of depressive symptoms (p=.000). The summary measure of barriers to exit is significantly associated, with a single item increase of one of the predictors associated with 2.4 increase in levels of depressive symptoms across the whole sample (p=.000).

Table 7.18 displays the associations between barriers to exit and levels of anxiety symptoms. In the agriculture sub-sample the following barriers to exit are significantly associated with increased levels of anxiety symptoms: being unable to leave a job due to fear of punishment (2.2, p=.000), being unable to leave a job due to debt (2.4, p=.004) and having been threatened to be turned into the authorities (2.0, p=.000). The barriers to exit summary measure is associated with a 1.3 increase in levels of anxiety symptoms (p=.000). In contrast, in the factory sub-samples, none of the single predictors or the summary measure for barriers to exit are significantly associated with levels of anxiety symptoms. In the sex industry sub-sample, being unable to leave a job due to debt (1.3, p=.006) and having been threatened to be turned into the authorities (1.3, p=.002) were both significantly associated with increased anxiety symptoms. In the analysis of the whole sample, three of the four individual predictors are significantly associated with increased levels of anxiety symptoms, and the barriers to exit summary measure is associated with an increase of levels of anxiety symptoms of .8 (p=.000).

All of these workplace conditions exposure variables are lifetime experience questions, and therefore the data does not indicate whether the exposures happened while respondents were working in the agriculture, factory or sex industries. Therefore, differences in the results in the sub-sample analyses may indicate differences in migration

trajectories and patterns of work experiences between the groups, rather than current occupational status. For example, in this sample, 31.8% of the factory sub-sample had previously worked in construction, compared with 15.2% of agricultural workers and 6.2% of respondents in the sex-industry. 40.5% of respondents in the sex industry had previously worked in domestic work, compared with 7.9% of respondents in the agriculture sub-sample and 10.5% of respondents in the factory sub-sample (data not shown). This is discussed further in *Chapter VIII – Discussion and Conclusions.*

iv. Safety and security and mental health outcomes:

This factor assesses interactions with authorities that may constitute threats to safety or security, including the following items from the survey:

- Have you ever experienced a workplace raid by authorities while in Thailand?
- Have you ever been arrested while in Thailand?
- Have you ever been sent back to Burma involuntarily by authorities while in Thailand?

Table 7.19: Exposure to individual predictors – safety and security

Variable	Agriculture %	Factory %	Sex industry %	Whole sample %
Ever experienced a workplace raid?	40.4	62.8	64.8	55.5
Ever been arrested?	63.0	55.0	79.7	63.2
Ever been deported?	40.9	37.2	55.5	42.4

Table 7.19 shows that across all three sub-samples, there is high exposure to threats to safety and security, with the highest overall exposure reported by respondents in the sex industry. 79.7% of respondents in the sex industry reported having been arrested while in Thailand, compared to 63.0% in the agriculture sub-sample and 55.0% in the factory sub-

sample. More than half of respondents in the sex industry sub-sample had been deported to Burma from Thailand, while 40.9% of respondents from the agriculture sub-sample and 37.2% of respondents from the factory sub-sample reported this experience. Reported experience of a workplace raid was also high across all three groups, with 40.4% of agriculture workers reporting having experienced a workplace raid, compared to 62.8% in the factory sub-sample and 64.8% in the sex industry sub-sample.

Table 7.20: Associations between safety and security items, summary measure of safety and security, and depression outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Ever experienced a workplace raid?	**5.8** **p=.000**	**3.3** **p=.034**	**6.5** **p=.003**	**4.5** **p=.000**
Ever been arrested?	**4.9** **p=.000**	1.0 p=.542	**8.0** **p=.000**	**3.7** **p=.000**
Ever been deported?	**5.4** **p=.000**	-.1 p=.905	**4.8** **p=.000**	**3.8** **p=.000**
Summary measure, safety and security	**2.7** **p=.000**	.7 p=.224	**2.7** **p=.000**	**2.0** **p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.21: Associations between safety and security items, summary measure of safety and security, and anxiety outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Ever experienced a workplace raid?	**2.6** **p.=000**	.7 p=.385	**1.9** **p=.000**	**2.0** **p=.000**
Ever been arrested?	**1.7** **p=.000**	-.7 p=.395	**2.3** **p=.007**	**1.0** **p=.017**
Ever been deported?	**1.9** **p=.006**	**-1.1** **p=.012**	.2 p=.506	.7 p=.084
Summary measure, safety and security	**1.0** **p=.000**	-.2 p=.522	**.6** **p=.003**	**.6** **p=.000**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Table 7.20 shows that for the agriculture and sex industry sub-samples, and the whole sample, the safety and security summary measure is associated with increased levels of depressive symptoms. In the agriculture sub-sample, all three individual predictors are associated with increased levels of depressive symptoms – experiencing a workplace raid (5.8, p=.000), having been arrested (4.9, p=.000) and having been deported (5.4, p=.000). In the agriculture sub-sample, the summary measure of safety and security indicates that for exposure to each single item of safety and security risks, levels of anxiety symptoms increase by 2.7 (p=.000). Similarly, in the sex industry sub-sample, each of the three individual predictors and the summary measure are associated with increased levels of depressive symptoms. In this sub-sample, the experience of having been arrested is associated with a large increase in symptoms of depression (8.0, p=.000). In the factory sub-sample, the only item that is significantly associated with increased levels of depressive symptoms is having experienced a workplace raid (3.3, p=.034).

Table 7.21 displays the associations between safety and security risks and levels of anxiety symptoms. All three safety and security risks are significantly associated with increased levels of anxiety symptoms in the agriculture sub-sample, with the summary measure of safety and security indicating for each single item of exposure to one of the three safety and security risks, levels of anxiety symptoms increase by 1.0 (p=.000). In the factory sub-sample, the only individual predictor that is significantly associated with the anxiety outcomes is having been deported, which actually results in decreased symptoms, the opposite of what may be hypothesized (-1.1, p=.012). In the sex industry sub-sample, both being exposed to a workplace raid (1.9, p=.000) and having been

arrested (2.3, p=.007) are associated with increased levels of anxiety symptoms, as is the summary measure of safety and security (.6, p=.003).

v. Models of workplace exposures, safety and security and mental health outcomes

In Tables 7.22 and 7.23, multivariate models including all the workplace exposure and safety and security summary measures are presented. These models were controlled, as well as controlling for gender, marital status and registration status. All regression diagnostics for the models are presented and discussed in Appendix 5. These results show that the assumption of normal distribution of residuals is adequately met. While for some models there is deviation around the tails in the qnorm plot, the qnorm is more sensitive to deviances from normality and these deviances were not assessed to significantly impact the results of the regression models. All models had no mild or severe outliers in inter-quartile range tests of residuals unless otherwise discussed. Mean VIF levels for all models indicated low multicollinarity.

Table 7.22: Full model of workplace exposures and safety and security, and depression outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Coercive working conditions	**.9 p=.009**	.4 p=.508	-.03 p=.938	**.6 p=.033**
Sexual and physical abuse and harassment	-1.1 p=.058	**1.4 p=.049**	**1.6 p=.019**	.7 p=.098
Hassles and daily stressors	**1.0 p=.007**	.4 p=.172	1.2 p=.067	**1.2 p=.001**
Barriers to exit	**1.5 p=.013**	.6 p=.336	.4 p=.421	**.8 p=.027**
Safety and security	**1.6 p=.000**	-.34 p=.346	**2.3 p=.001**	**.9 p=.008**
R^2	31.3	25.12	35.77	37.55
F test statistic	**.0248**	.2565	.0079	.0002

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Agriculture depression model: Based on the multivariate model in Table 7.22, controlling for gender, marital status and registration status, coercive working conditions (.9, p=.009), hassles and daily stressors (1.0, p=.007), barriers to exit (1.5, p=.013), and safety and security (1.6, p=.000) significantly predicted depression symptoms. Sexual and physical abuse and harassment had been significant in specific separate analysis including the covariates and sexual and physical abuse factor but is not significantly associated with increased depressive symptoms in the full model. This full model explains 31.3% of the variance, and the F test is significant (p=.0248).

Factory depression model: In the multivariate model in Table 7.22, sexual and physical abuse and harassment is still the only significant factor (1.4, p=.049). However, the F test

for the model is not significant. Forward and backward stepwise selection methods do not operate for regressions using svy commands. Therefore, a model was run using only the sexual and physical abuse factor, and the demographic variables that retained significance (gender and registration status). In this model, sexual and physical abuse and harassment was significantly associated with increased levels of depressive symptoms (1.9, p=.000), the R^2 was 20.12 and the F test was significant (p=.0005). As indicated in the appendix on regression diagnostics, the residuals analysis indicates some non-normality of distribution of residuals. However, transformation of the depression measure to the log scale did not improve model fit. Moreover, use of svy commands provides robust standard errors, which can protect against violations of regression assumptions.

Sex industry depression model: In the multivariate model in Table 7.22, only sexual and physical abuse and harassment (1.6, p=.019) and safety and security (2.3, p=.001) retained significance, and hassles and daily stressors and barriers to exit, which were significant in the bivariate analyses, were no longer significant. The R^2 for this model and the F test is significant (p=.0079).

Whole sample depression model: In the multivariate model in Table 7.22, the following factors were significantly associated with increased levels of depressive symptoms: coercive working conditions (.6, p=.033), hassles and daily stressors (1.2, p=.001), barriers to exit (.8, p=.027), and safety and security (.9, p=.008). Sexual and physical abuse and harassment no longer retains significance in the full model. The R^2 for this

model is 37.55 and the F test is significant (p=.0002). An interquartile-range test of residuals showed 7 mild outliers and no severe outliers.

Table 7.23: Full model of workplace exposures and safety and security, and anxiety outcome measure

Variable	Agriculture Coefficient P-value	Factory Coefficient P-value	Sex industry Coefficient P-value	Whole sample Coefficient P-value
Coercive working conditions	**.4 p=.015**	-.3 p=.091	-.4 p=.165	-.05 p=0.705
Sexual and physical abuse and harassment	-.005 p=.998	**1.4 p=.040**	-.3 p=.476	**.9 p=0.001**
Hassles and daily stressors	.3 p=.109	.5 p=.184	**.9 p=.014**	**.8 p=0.002**
Barriers to exit	.6 p=.074	-.3 p=.334	.3 p=.250	.03 p=.841
Safety and security	.5 p=.116	**-.5 p=.005**	**.7 p=.003**	.01 p=0.940
R^2	31.46	17.28	18.45	26.06
F	**.0132**	.0952	**.0149**	**.0003**

All models for agriculture and factory control for gender, marital status, registration status. Models for sex industry control for marital status. All models adjusted for clustering; full sample models adjust for strata

Agriculture anxiety model: In the multivariate model in Table 7.23, the coercive working conditions retained significance (.4, p=.015), whereas in bivariate analyses, hassles and daily stressors, barriers to exit and safety and security had also been significantly associated with increased anxiety symptoms. The R^2 for the model is 31.46 and the F test was significant (p=.0132).

Factory anxiety model: In the multivariate model in Table 7.23, the safety and security indicated a *decrease* in levels of anxiety symptoms (-.5, p=.005), while sexual and physical abuse was associated with increased anxiety symptoms (1.4, p=.040). The R^2 for the model is 17.28 and the F test is not significant (p=.0952).

Sex industry anxiety model: In the multivariate model in Table 7.23, hassles and daily stressors (.9, p=.014) and safety and security (.7, p=.003) are both still significantly associated with increased levels of anxiety symptoms. The R^2 for the model is 18.45 and the F test is significant (p=.0149).

Whole sample anxiety model: In the multivariate model, sexual and physical abuse and harassment (.9, p=.001) and hassles and daily stressors (.8, p=.002) are significantly associated with increased levels of anxiety symptoms. Coercive working conditions, barriers to exit and safety and security had all been significantly associated with increased anxiety in the bivariate analyses, but did not retain significant in the multivariate model. The R^2 for the model is 26.06 and the F test is significant (.0003).

VIII. Discussion and conclusions

1. Discussion

Qualitative findings:

Qualitative interviews with migrant workers on the Thailand-Burma border revealed that use of *carries* and brokers is a systemic component of migration, and is interrelated with debt, deceit, and entry into exploitative workplaces in Thailand. In the absence of safe and legal means through which to travel to Thailand, migrants are exposed to a range of risks during their travel, some of which can make them vulnerable to further exploitation in workplaces in Thailand. A central theme that emerged in the in-depth interviews is that of deceit. Deceit during the travel phase occurs in a number of different ways, all of which can expose migrants to abuse, exploitation and impoverishment. One experience of deceit is when *carries* or brokers do not deliver the service they had promised, which can result in dangerous travel or loss of large amounts of money paid to *carries* or brokers up front. Another component of deceit is debt incurred for travel – migrants reported being deceived as to the amount of debt they had incurred, or the method through which they would pay it off. Finally, respondents also described deceit about the nature of the work to which they had agreed. This appears to be a key entry mechanism into the sex industry, as the majority of respondents working in the sex industry described having experienced this form of deceit.

Qualitative data described workplace experiences in the destination phase, indicating pervasive salary deductions and forced overtime in workplaces. For migrants who have

come to Thailand in order to improve their salaries, and who often have families back in Burma who are reliant on remittances, the continual reduction of already low salaries constitutes a serious and ongoing stressor. Respondents also described experiencing forced work without pay. Workplaces described by respondents who had experienced forced work without pay were extremely violent and coercive, with limitations on freedom of movement, contacting individuals outside of the workplace, and changing jobs. These conditions represent violations of basic labor protections under Thailand's Labor Protection Act 1998, as well as international standards (Human Rights Watch, 2010). In a context of rapid expansion and growth, industries located on the Thailand-Burma border rely on a labor force that is exploited, underpaid and over-worked, increasing profits for industry while not providing adequate protections for workers.

Existing literature on migrant work in the Thailand-Burma border context emphasizes aspects of workplaces and working conditions, identifying common experiences in work environments in Thailand (Arnold, 2005; Arnold & Hewison, 2005; Huguet & Charmatrithriong, 2011). This study goes beyond these findings to indicate how experiences of exploitation in workplaces are interconnected with migration dynamics from Burma to Thailand, and within Thailand. The overlap between experiences of deceit and experiences of exploitation indicate that deceit is a mechanism through which migrant workers can enter into forced labor and other exploitative working conditions. Respondents' descriptions in in-depth interviews of work environments in Thailand demonstrate that there is evidence of extensive exploitation amongst migrant workers,

which, while varying in severity, indicates presence of forced labor in a number of occupational sectors.

Quantitative findings

Quantitative results show that the mean symptoms score for depression (range 0 – 68) was 33.3, while the mean for the three sub-samples was 29.8 for the agriculture group, 33.7 in the factory group and 38.3 in the sex industry group. The overall mean for anxiety was 19.0 (range 0 – 44), while the mean for the three sub-samples was 16.8 for respondents in the agriculture group, 19.5 in the factory group and 21.4 in the sex industry group.

Comparisons with other studies that have used the HSCL can shed light on how the overall mental health symptom levels of this population compares to others in vulnerable or marginalized groups. One study of HIV-infected women in rural Uganda shows that a mean level of depression of 1.34, compared to 1.94 as measured in the total sample in this study (where the total symptom level is divided by the number of symptoms measured) (Hatcher, et al., 2012). All the mean depression levels amongst the three groups were higher than in the Uganda study (1.76 in agriculture, 1.95 in factory, and 2.22 in the sex industry). A cut-off of above 1.75 for both depression and anxiety scales is used in many studies to define depression or anxiety disorder. According to that cut-off, the prevalence of depression in the whole sample in this study is 68.4% and of anxiety is 42.6%. In the same study in Uganda, 23.7% of participants had HSCL scores that were consistent with probable depression (HSCL > 1.75) (Hatcher, et al., 2012).

Using that cut-off for the population in the present study indicates this may indicate a higher burden of depression in this population, or that that the 1.75 cut-off (which has not been validated in this setting) is too low for this population. The majority of studies using the HSCL in cross-cultural settings have focused on refugees and other displaced populations. For example, a study of psychological distress amongst war-affected persons in Nepal found, using the 1.75 cut-off for both depression and anxiety, that 80.3% met criteria for depression and 80.7% met criteria for anxiety, indicating higher depression and anxiety levels than found in this study (Thapa & Hauff, 2005). A study of exposure to traumatic events and mental health in the Central African Republic found a prevalence of 55.3% for depression and 52.5% for anxiety, using the 1.75 cut-off for the HSCL (Vinck & Pham, 2010). Results of a survey of mental health of tsunami-affected populations in Aceh found 77.1% met criteria for depression using the 1.75 cut-off (Souza, Bernatsky, Reyes, & de Jong, 2007). Comparison to these findings indicates that the depression and anxiety levels of this population may be similar or higher to that of war-affected and vulnerable populations in other regions. It should be noted, however, that a number of studies use a more conservative algorithm to determine depression status (Mollica, et al., 1999; Mollica, et al., 2001), or higher cut-off scores (Pham, Vinck, Kinkodi, & Weinstein, 2010; Vinck, Pham, Stover, & Weinstein, 2007). Use of this algorithm or a higher cut-off would result in lower prevalence of depression and anxiety in this study. Some research indicates that a 1.75 cut-off has low specificity for depression in some populations, therefore leading to higher prevalence estimates (Ichikawa, Nakahara, & Wakai, 2006).

A study using the HSCL to assess both depression and anxiety amongst women who had been trafficked into the sex industry in Nepal can be compared to the results in the sex industry sub-sample in this study. The Nepal study showed that 100% and 99.7% of sex workers met the cut-off for depression and anxiety respectively (Tsutsumi, Izutsu, Poudyal, Kato, & Marui, 2008). In the present study, prevalence of depression (87.5%) and anxiety (71.8%) amongst respondents in the sex industry was lower.

Quantitative analysis explored the question of whether deceit experienced during migration was associated with coercive working conditions. Deceit during migration was commonly reported in all sub-samples; in the agriculture sub-sample, 26.0% of respondents reported having experienced deceit during migration, in the factory sub-sample, 55.8% and in the sex industry sub-sample, 96.1%. Deceit during migration was associated with the summary measure of coercive working conditions in all three sub-samples.

The quantitative analysis explored the possibility of a mediation model, whereby the relationship between deceit during migration and the mental health outcomes of depression and anxiety is mediated by coercive working conditions. This model was found to hold for the whole sample, but not for any of the three sub-samples. One notable finding in this analysis was that while it was hypothesized that the summary measure of coercive working conditions would be associated with increased symptoms of depression and anxiety for all three sub-samples, this was only the case for the agriculture sub-sample and the whole sample. For the factory and sex industry sub-samples, other aspects

of working and living conditions in Thailand appear to be more influential on depressive and anxiety symptoms than coercive working conditions. Moreover, the relationship between deceit experienced during migration and mental health outcomes (both depression and anxiety) was only significant for the whole sample and factory sub-sample. For many respondents, deceit during migration may have been experienced many years ago, and may no longer have a significant effect on current depressive or anxiety symptoms, whereas aspects of current living or working conditions exert a stronger impact. Given the study did not assess how long ago deceit during migration was experienced, it is unclear whether this explains this lack of relationship between deceit and mental health outcomes for the agriculture and sex industry sub-samples, or why this relationship is significant for the factory sub-sample. It should also be noted that, as seen in the qualitative data, deceit in migration can take many forms, ranging from a severe traumatic event to a minor inconvenience during travel. It is possible that, for factory workers, the deceit experienced was more severe, and this explains the continued impact on current depressive symptoms.

In the whole sample analysis, the mediation model was found to be significant, with coercive working conditions significantly mediating the relationship between deceit during migration and coercive working conditions. The whole sample analysis corrected for the bias introduced by stratification. However, the whole sample analysis did not capture the distinctions between the three industries, including the different prevalence of exposure to various aspects of coercive working conditions across the three sub-samples. Therefore, while the mediation model held statistically for the whole sample, it is unclear

whether it is possible to say that the mediation model adequately describes the relationship between deceit, working conditions and mental health outcomes for migrants in and around Mae Sot in general, given that the analysis may obscure the differences between the three sub-samples.

The ***agriculture sub-sample*** had the lowest mean scores of depressive and anxiety symptoms across the three sub-samples (29.8 and 16.8, respectively). Compared to the factory and sex industry sub-sample, respondents in the agriculture sub-sample reported lower prevalence of exposure to various aspects of working conditions and safety and security. However, the prevalence of reports of coercive working conditions and hassles is still relatively high. This indicates that for migrant workers in all three industries explored in this study, while patterns of exploitation and poor working conditions vary, they are still unacceptably high and prevalent in all three industries. 26.1% of agriculture workers reported having experienced unwanted sexual comments in the workplace, and 19.7% reported having had their salary withheld as a threat or punishment. Agriculture workers most commonly reported items in the hassles and daily stressors factor – including being forced to work when sick (23.1%), being forced to work overtime (57.6%), paying police fees (38.4%) and experiencing verbal abuse (68.0%). In the multivariate model for depressive symptoms, coercive working conditions, hassles and daily stressors, barriers to exit and safety and security were all associated with small but significant increases in levels of depressive symptoms. The largest increase was safety and security (1.6, p=.000). In the multivariate model for anxiety symptoms, only coercive working conditions had a significant influence on levels of anxiety symptoms.

Quantitative results show that for agriculture workers, there are a number of aspects of living and working conditions that influence mental health outcomes.

In the ***factory sub-sample***, 57.7% of factory workers reported having had their salary withheld for threat or punishment, 49.6% reported unwanted sexual comments, 30.6% reported unwanted sexual touching, and 32.9% reported forced work without payment. Prevalence of hassles and daily stressors was very high – 95.7% of respondents in this sub-sample reported having been forced to work overtime, 82.2% reported having paid police fees, and 95.0% reported verbal abuse. While nearly half the factory workers sample reported being registered, the prevalence of reporting of various aspects of exploitation and abuse suggests that registration may not be protective against these experiences. In fact, the high prevalence of having documents retained by an employer – 51.9% reported having experienced this – confirms data from the qualitative study, and highlights the potential for coercion and exploitation in this industry *due to* registration. High prevalence of a number of barriers to exit – for example, 31.2% reported having been unable to leave a job due to debt, and 41.1% reported having been unable to leave a workplace due to fear or threat of punishment – is indicative of the lack of freedoms experienced by many factory workers. As noted in *Chapter VII,* analysis of the types of industries respondents in the factory sub-sample had previously worked in indicates that the factory sub-sample is heterogeneous, and various demographic variables – including age, length of time in Thailand, and gender, alongside previous work experiences – should be further explored.

For the factory sub-sample, the multivariate depression model indicated that a full model with all factors was not significant, and in a smaller model, only sexual and physical abuse was significantly associated with depressive symptoms. In the anxiety multivariate model, safety and security was significant, but indicated a small *decrease* in levels of anxiety symptoms, which warrants further investigation. Sexual and physical abuse was significantly associated with increased symptoms of anxiety (1.4, p=.040). In both these models, the registration variable, included as a control, retained significance, with lack of registration resulting in higher levels of depression or anxiety. As noted above, registration did not appear to be protective against experiences of abuse and exploitation, however, may act as a moderator of the relationship between these experiences and mental health outcomes. Overall, it appears that the inconsistent results for the factory sub-sample may indicate that the factory sub-sample is in fact a heterogeneous grouping, with work histories, current working conditions and migration trajectories that differ within the sub-sample, to a greater extent than for the agriculture and sex industry sub-samples. A large proportion (31.8%) of respondents in the factory sub-sample had previously worked in the construction industry. Whereas the vast majority of respondents in both the agriculture sub-sample (92.1%) and sex industry sub-sample (99.2%) reported being unregistered, the factory sub-sample is in fact constituted by nearly half registered (46.9%) and unregistered (53.1) migrants. Analyses based on the factory worker respondents grouped together as a sub-sample may have obscured relationships between variables. These results indicate the need to further investigate the role of registration in the factory sub-sample, as well as explore further the possible distinctions between respondents currently working in factories.

In the ***sex industry sub-sample***, the mean depression and anxiety levels were highest across the three sub-samples (38.3 and 21.4). Other aspects of the data from the sex industry sub-sample provided some insight into the nature of the risks experienced by women in this sub-sample prior to migration to Thailand. For example, the sex industry sub-sample had higher reporting of motivation for coming to Thailand due to conflict and violence or due to physical or sexual abuse than the other two sub-samples. There was high prevalence of coercive working conditions, hassles and daily stressors in this sub-sample. For example, 40.6% reported having been threatened to take a job, 38.4% reported having been forced to work without payment, 54.7% reported having had their salary withheld as threat or punishment, 71.1% reported having been forced to work overtime and 98.44% reported having experienced verbal abuse. The extremely high prevalence of sexual and physical abuse and harassment – 95.3% experienced unwanted sexual comments, 100% reported unwanted sexual touching, 96.9% reported unwanted sex, and 50% reported physical abuse – indicates that the coercion and abuse is pervasive in the sex industry.

In the multivariate depression model, both sexual and physical abuse and harassment and safety and security factors were significantly associated with increased levels of depressive symptoms, while in the multivariate anxiety model, hassles and daily stressors and safety and security were significantly associated. The finding that safety and security was associated with both depression and anxiety appears to confirm respondents'

descriptions in the in-depth interviews of the stress, anxiety and fear associated with arrest, or other interactions with authorities. Some relationships identified in analysis of the sex industry sub-sample warrant further exploration. For example, in the sex industry there was 100% correlation between deceit during migration and having salary withheld as a form of punishment or threat, while deceit during migration was *not* associated with any other individual coercive working conditions in the sex industry sub-sample. Therefore, it is evident that other aspects of working conditions specific to the sex industry may require further exploration, for example, ability to negotiate condom-use with clients, ability to refuse clients, and physical abuse by clients. The high prevalence of deceit during migration experienced by respondents in the sex industry indicates that it may be a mechanism through which women enter the sex industry rather than another form of work in Thailand, but not a factor that influences the type of working conditions within the industry.

The quantitative results indicate some differences in the impact of particular factors on depression and anxiety. In the agriculture sub-sample, coercive working conditions, hassles and daily stressors, barriers to exit, and safety and security were significantly associated with depression, however, only coercive working conditions was associated with anxiety. In the sex industry sub-sample, while the barriers to exit summary measure was significantly associated with depressive symptoms, this was not the case for anxiety symptoms. In analysis of the whole sample, the multivariate model for depression showed that the coercive working conditions, hassles and daily stressors, barriers to exit and safety and security factors were all associated with increased levels of depressive

symptoms, whereas for the multivariate model of anxiety, only hassles and daily stressors was significantly associated with increased levels of anxiety symptoms. This finding provides support for the argument presented in *Chapter III – Literature Review,* that "some types of stressors may have mental health consequences while others do not, and that discrete types of stressors may act on specific mental health outcomes" (Hiott, Grzywacz, Davis, Quandt, & Arcury, 2008). This study provides some insight into how particular stressors act to produce particular mental health consequences, and the distinctions between depression and anxiety outcomes in this data could be further explored.

Comparing qualitative and quantitative findings

As discussed in *Chapter V – Study Design,* in the data analysis phase of mixed methods studies, points of convergence and contradiction between the qualitative and quantitative data can be highlighted, in order to expand on the findings present in each separate dataset, and enhance or explain specific results. One point of convergence and contradiction in this data is that of the association between deceit and coercive working conditions. Qualitative data suggested that for migrant workers, experiences of deceit were interrelated with subsequent coercive working conditions. Some of the quantitative findings support this: for example, for both the agriculture and factory sub-samples, deceit significantly predicts each individual item in the coercive working conditions summary measure, and the overall summary measure (agriculture: .9, p=.000, factory: .8, p=.000). The qualitative data suggested that deceit during migration was specifically linked with forced work without pay, and this finding is confirmed in the quantitative

data for the factory and agriculture sub-samples. As noted in *Chapter VI – Qualitative Results,* migrant workers primarily described entry into forced labor as related to deceit experienced during migration. The qualitative data showed that migrant workers who were deceived about the amount of debt they had incurred found themselves forced to work without payment to pay off the debt to a *carry,* broker or employer. In the bivariate analyses of deceit and forced work without payment, odds ratios indicated that agriculture workers who had experienced deceit were 2.8 times more likely to experience forced work without payment (p=.010, while factory workers were 2.7 times more likely (p=.000). This finding indicates the need, discussed subsequently in *Implications,* to focus on improving the safety and security of migrant workers in the travel phase, given the implications of experiences of deceit during migration for subsequent exploitative and abusive conditions in workplaces in Thailand.

Qualitative data also indicated that deceit about the nature of work was a key element of entry into the sex industry. The quantitative finding of the high prevalence of deceit experienced during migration, during which time *carries* or brokers may have deceived women in this sub-sample about the type of work and nature of working conditions to women, confirms this result in the qualitative data. However, for the sex industry sub-sample, bringing both the qualitative and quantitative data together to bear on the relationship between deceit and subsequent specific coercive working conditions also highlights some contradictions between the qualitative and quantitative results. Deceit during migration was not significantly associated with any of the individual measures of coercive working conditions, apart from having salary withheld. Other measures – being

threatened to take a job, having experienced physical force to take a job, having been taken advantage of to take a job, and having experienced forced work without payment – were not associated with deceit experienced during migration for the sex industry sub-sample. This apparent contradiction between qualitative and quantitative findings may indicate that these items are not relevant or sensitive to the particular ways in which working conditions can be coercive in the sex industry. In this case, comparison of the qualitative and quantitative data brings to light the need to assess working conditions in the sex industry using different measures than those used in the case of the agriculture and factory sub-samples.

In the case of the findings on safety and security risks, examining both the qualitative and quantitative data together can strengthen findings and expand interpretation. The qualitative data indicated that the environment of safety and security for migrant workers in and around Mae Sot is of central relevance to migrants' experiences of abuse and exploitation. When migrants experience abuse, they are often unwilling or unable to report the abuse to authorities, given their irregular status and the lack of avenues for redress of labor violations. Findings from the qualitative data indicated pervasive threat of arrest and deportation, which can lead to vulnerability to physical and sexual abuse, especially for female migrant workers. Moreover, there is vulnerability to economic exploitation through payment of bribes, both directly to authorities and through employers, as "police fees." These vulnerabilities were described in the in-depth interviews as creating a state of constant fear and anxiety amongst migrant workers, further restricting movement and freedom as migrant workers accommodate to hiding in

plain sight in industries in and around Mae Sot. Analysis of the quantitative data confirmed the centrality of these issues, showing high prevalence of exposures to workplace raids, arrest and deportation, across all three sub-samples – for example, 63.0% of agriculture workers reported having been arrested, 62.8% of factory workers reported having experienced a workplace raid and 55.5% of respondents in the sex industry reported having been deported. Across the whole sample, 63.2% reported having been arrested. The results from multivariate regression models for both depression and anxiety confirm the qualitative findings that these risks constitute considerable stressors for migrant workers. In the multivariate depression models, for the agriculture and sex industry sub-samples, and the whole sample, safety and security risks were significantly associated with higher levels of depressive symptoms, while for the multivariate anxiety models, safety and security was significantly associated with increased levels of anxiety symptoms for the sex industry sub-sample. In the case of the theme of safety and security, the qualitative phase of research revealed ways in which migrant workers understood interactions with authorities as constituting risks to their well-being, creating stress and fear for migrant workers, while the quantitative data confirmed the high prevalence of these exposures across the sample, and identified associations with depression and anxiety symptoms.

2. Strengths and limitations of this study

Strengths:

This study utilized a mixed methods approach. Whereas the majority of studies on migration and mental health utilize a qualitative or quantitative approach, this study

combined the strengths of both methodological approaches. The in-depth interviews with migrant workers were used to uncover locally relevant, context-specific findings on the types of abuses and violations experienced during travel to Thailand from Burma, and in workplaces in Thailand. This data was used to inform the development of a quantitative instrument that was designed to assess both contextually specific components of migration and workplace-experiences, as well as including items that are considered to be global indicators of violations of labor protections and human rights. The quantitative instrument included stressors that are considered to be indicators of trafficking or exploitation, based on international legal definitions of these phenomena – for example, retention of passport or identity documents, which is considered by the ILO as a component of forced labor (ILO, 2005). Moreover, items were included that were developed primarily based on descriptions of specific stressors by migrants in the in-depth interviews. Therefore, this study can contribute to global analysis and research that seeks to identify the prevalence of particular components of forced labor, as well as reflect the complexities and specificities of this particular context.

An additional strength of the study is the focus on migrant workers in three distinct groups – the agricultural industry, factory industry and sex industry. The majority of research on migration and trafficking in the Greater Mekong Subregion has focused on the sex industry (Piper, 2005). While this present study included a sub-set of women in the sex industry, the study also sought to identify processes of migration and workplace-experiences that affect male migrant workers, and female migrant workers in agriculture and factory work. Formative work conducted for the parent project, TAP, identified

industry-specific experiences and patterns of risk, and therefore, the sampling approach in both qualitative and quantitative research phases sought to capture the diversity of experiences in different occupational groups. The work in this present study lays the foundation for improved understanding of the risk patterns present in these three industries.

This study focused on a population – migrants from Burma living in a border region of Thailand – about whose mental health status and needs little is known. While there is some literature on the mental health of Burmese refugees and survivors of torture in the Thailand-Burma border context (Allden, et al., 1996; Lopes Cardozo, Talley, Burton, & Crawford, 2004), this is the first study that the researcher is aware of that has focused on mental health in the migrant worker population on the Thailand-Burma border. There is widespread recognition that this is a population that experiences multiple vulnerabilities (Feinstein International Center, 2011), and yet the impacts of these vulnerabilities and experiences on mental health are poorly understood. This study adds to the literature by examining the risks associated with increased levels of depression and anxiety, which can both bring attention to the mental health needs of this population, and strengthen awareness of the ways in which the vulnerabilities already identified in the literature are associated with adverse mental health outcomes.

Another strength of the study is the focus on the mental health needs of migrants in a low-resource setting. As noted in the literature review, research has shown that "some types of stressors may have mental health consequences while others do not, and that

discrete types of stressors may act on specific mental health outcomes" (Hiott, Grzywacz, Davis, Quandt, & Arcury, 2008). By categorizing workplace stressors into types of stressors that may influence mental health outcome differently, or have different influences depending on gender or occupation, this study adds to a nascent literature that is starting to tease apart the relationships between stress and mental health in the specific case of migration in low-resource settings. The primary focus of the literature on migration and mental health has been on migration to industrialized countries. Data of the vulnerabilities and mental health needs of migrant workers in low-resource settings is needed, and this study adds evidence to the emerging literature focusing on migrants and migrant mental health in low-resource settings. This data is needed to influence the policy field on migration and health. Whereas the health of migrant workers with irregular status has increasingly become a policy concern, as described in *Chapter II* (WHO, 2010), mental health is often not directly considered within this policy framework – despite its large contribution to the global burden of disease (Whiteford, et al., 2013). Moreover, policy and research attention to the mental health and psychosocial needs of refugees and other displaced persons focuses primarily on humanitarian settings, such as armed conflicts and disasters (IASC, 2007). Some of the policy recommendations in that area may not be directly applicable in this specific context, and may need to be adapted to the specifics of migrant worker populations. Identification of mental health needs and provision of mental health services for migrant workers in low-resource settings may require specific methodologies and approaches. At the moment, the lack of focus in policy or research on the specific issue of *mental* health of migrants in low-resource settings limits progress in this area. It is hoped that the findings from this study can

inform and influence policy and programs, such that the mental health of migrants in low-resource settings garners much-needed attention.

An additional strength of the research is that the sampling approach used in the quantitative study, respondent-driven sampling, overcomes many of the biases inherent in other sampling approaches used in the area of migration and trafficking, for example, selection bias involved with interviewing individuals in post-trafficking services (Brunovskis & Surtees, 2010). Use of statistical methods for sample design, incorporating in clustering by seed, also improved internal validity of the estimates. Moreover, this study provides evidence as to the applicability of RDS methodology to populations of migrant workers. In comparison to studies of sex workers, men who have sex with men and injection drug users, RDS studies of migrant workers have been used relatively rarely (Khamsiriwatchara, et al., 2011; Qiu, et al., 2012; Wangroongsarb, et al., 2011). Studies of migrant workers with irregular status have relied on convenience samples (Chen, et al., 2012; Griffin & Soskolne, 2003), probability sampling using lists of registered migrants (thus missing out the population of migrants who have not registered) (Wong, He, Leung, Lau, & Chang, 2008; Wong & Leung, 2008), or have focused on the population of migrants who utilize health services (Zahid, Fido, Alowaish, Mohsen, & Razik, 2002; Zahid, Fido, Razik, Mohsen, & El-Sayed, 2004). This study represents a more rigorous attempt at sampling migrant workers, and furthermore, demonstrates the feasibility of implementing a RDS study in the context of large-scale irregular migration.

Limitations

The findings in this study should be interpreted in light of a number of limitations. One such limitation pertains to sampling, and is applicable to both the qualitative and quantitative phases of research. Access to respondents for both phases of research depended on respondents currently having some freedom of movement. There are likely migrant workers who are currently in more extreme exploitative situations who could not be reached for either in-depth interviews or for the survey. Migrant workers who are currently experiencing extreme exploitation, in which they might fear reprisals from employers for participation in an interview, would be unlikely to participate in this study. This sampling bias is a common problem in research on trafficking and migrants with irregular status (Brunovskis & Surtees, 2010). The potential for this sampling bias to have operated in the context of this study indicates that exploitation and coercion experienced by migrant workers in and around Mae Sot may be more prevalent than found in the present data. It should be noted, however, that the sample from in-depth interviews included a number of individuals who had escaped from extremely exploitative situations and who reported on those experiences. As such, the data likely captures previous experiences of extreme exploitation – for example, accounts of forced labor on fishing boats described in the course of in-depth interviews, which provide a point for further research and follow-up.

Another limitation is the focus of the study on stressors and adverse mental health outcomes, and the lack of attention to social support, coping mechanisms or aspects of resilience. Resilience research emerged in contrast to the paradigm represented in this study, which focuses on deficits and adverse outcomes. Restricting analysis to stressors

and adverse outcomes may obscure important coping mechanisms and strengths amongst migrant workers, and inclusion of resilience and coping factors may enhance the models presented in this study. Increasingly, researchers in the field of global mental health are recognizing the value of resilience as a conceptual framework and exploring ways to research resilience in individuals and communities exposed to adversity, including conflict, natural disasters and extreme poverty (Betancourt & Khan, 2008). Several researchers have called for more research on resilience in communities affected by extreme adversity, pointing out the important policy and programmatic applications of a more rigorous and grounded understanding of resilience in such contexts (Eggerman & Panter-Brick, 2010; Panter-Brick, 2010). As noted below, this is a potential avenue for future research in this context.

A limitation of the qualitative analysis methods employed for this study is that the approach coded and presented data for the whole sample, and did not compare and contrast between the separate industries sampled for the qualitative phase of research. Findings from the quantitative analyses suggest that there are different patterns of experiences in the travel and destination phases according to the different occupations in the sample. It was beyond the scope of this present study to present stratified analyses by group of migrant workers based on the qualitative data. However, this may be a future fruitful avenue for inquiry, adding a more nuanced understanding of the risks experienced by migrants who enter into different occupations in Thailand.

A further limitation of the qualitative research phase was that sampling was conducted through a community-based organization, SAW, who selected respondents for

participation with whom they already had relationships. Respondents were migrants who had come into contact with SAW through programs and activities designed to improve their knowledge of migrants' rights, or to address and improve health status amongst migrants. These migrants could be different from migrants with whom SAW does not have relationships. However, this sampling strategy was in selected in recognition of the ethical and logistical challenges of conducting sensitive research in the context of migrants with irregular status. Moreover, the pre-existing relationship with SAW may have been beneficial, in that respondents may have felt more comfortable sharing difficult experiences with SAW interviewers.

A number of limitations were present in the quantitative data collection and analysis. Firstly, the survey instrument did not include questions about the timing of events – for example, deceit experienced during migration, or exposures to abuses in the workplace. The models presented in *Chapter VII – Quantitative Results,* are based on a hypothesized causal pathway between deceit experienced during migration and subsequent coercive working conditions. While migration clearly occurs prior to working in Thailand, it is possible that respondents had moved back and forward between Burma and Thailand many times, and the deceit that they reported occurred after having experienced coercive working conditions in Thailand.

Secondly, the survey assessed lifetime prevalence of experiences in travel and destination phases, which does not allow for assessment of the impact of timing or severity of the event on subsequent mental health symptoms. It is possible that physical abuse

experienced in the past week has a more significant impact on current mental health symptoms than physical abuse experienced many years in the past. Endorsement of having experienced physical abuse in the workplace may indicate a single experience, or on-going physical abuse over many years, which would have significantly different impacts on mental health symptoms. The survey did not include measures of the timing or severity of stressors, given the issues of recall bias associated with these measures. However, lack of measurement of timing or severity of stressors limits the strength of the exposure variables used in this study. A study of mental health and trafficking in seven countries in Europe found that depression and anxiety symptoms were lower amongst respondents who had been out of a trafficking situation for months compared to those who had more recently exited (Hossain, Zimmerman, Abas, Light, & Watts, 2010). This finding indicates that current mental health symptoms may be reflective of length of time since the abuse experienced, which this study did not capture. For example, findings in the quantitative analysis that coercive working conditions was associated with increased symptoms of depression and anxiety for the agriculture, but not the factory and sex industry sub-samples, may reflect the timing of the events experienced, rather than that coercive working conditions do not influence mental health outcomes for the factory and sex industry sub-samples.

Thirdly, the survey included a limited number of mental health outcome measures, excluding assessment of PTSD, substance use and psychosomatic symptoms, which may have provided further insight into the mental health needs of this population. The study also assessed a limited number of predictors, focusing on workplace-related stressors, and

excluding a number of potentially influential predictors, including poverty, intimate partner violence, and traumatic events experienced outside the workplace. Another set of potentially influential predictor variables that were not measured was pre-departure variables. The existing peer-reviewed literature on depression and anxiety suggests that childhood adversities have a strong relationship with subsequent experiences of mental disorders or high levels of symptomatology in adulthood (Maniglio, 2010, 2013). The study mentioned above, of trafficking in seven countries in Europe, was able to identify the independent impact of migration and workplace-related abuses by controlling for pre-migration abuses reported (Hossain, et al., 2010). In the case of this study, however, childhood adversities and pre-departure risks to mental health status were not assessed. The exclusion of some mental health outcomes and predictor variables limits the explanatory scope of this study.

Given this is a cross-sectional study that did not ask about timing of reported events, it is difficult to establish temporal relationships between the variables – for example, between deceit and working conditions. It is possible that reported deceit during migration occurred after reported experiences of working conditions. The in-depth interviews in the qualitative phase of research indicated high prevalence of return and re-migration, which this cross-sectional approach and measurement using lifetime prevalence questions, does not capture. The reported findings, therefore, cannot be understood as causal relationships.

Finally, measurement of stressors via a checklist approach, as was the case in this study, can introduce recall bias (Dohrenwend, 2000). In the case of the migration and workplace-related stressors, it is possible that some of these events occurred many years prior to the interview with the respondent, in which case respondents who had been in Thailand for a shorter period of time may have been more likely to have endorsed these experiences compared to respondents who had been in Thailand for a longer period. The length of recall period could also influence the *type* of event reported – respondents may be more likely to remember major, traumatic events, such as physical or sexual abuse in the workplace, than routine, non-traumatic events, such as failure to receive salary on time (Dohrenwend, 2006). Systematic recall bias may operate, whereby respondents with higher levels of symptoms of depression and/ or anxiety are more likely to recall specific events than those with lower symptoms (Kessler, 1997). These problems are common to cross-sectional, self-report studies on stressors and mental health (Dohrenwend, 2006). The extent to which these challenges affected the quality of data in this study is unclear. The alternative to a checklist approach is a narrative approach that elicits details about the nature and timing of each life event. However, while this can reduce these challenges to measurement of stressors, this approach is time and labor-intensive, and was not feasible in the context of this study.

3. Implications

Implications of this study are considered below in three areas: implications of the findings for migration policy in the Thailand-Burma border context; implications for service-providers; and implications for researchers.

Implications for policy:

The findings in this study can be situated in the following two aspects in Thailand's migration policies: firstly, that there are significant gaps in the labor market in Thailand, leading to demand for migrant workers, and secondly, that there are significant numbers of individuals in neighboring countries who want to come to Thailand to access livelihood opportunities, regardless of the conditions of these opportunities (Huguet, Charmatrithriong, & Richter, 2011). However, policies in the areas of migration and labor policy in Thailand limit the legal entry of migrants from Burma, which can result in lack of protection from exploitation and reinforce vulnerabilities of migrant workers. Policy implications of the findings in this study for the following areas are discussed here: protection from abuse and exploitation during travel to and within Thailand, workplace conditions and labor rights, anti-trafficking policy, safety and security, registration, and policy within Burma. In all of these areas, policies should seek to protect and promote the human rights of migrants, regardless of migration status (United Nations, 2012, 2013a). The United Nations General Assembly recommends that all migration policies "take into account the essential contributions that migrants make to societies and economies and uphold the legal obligations…to protect, promote, respect and fulfill the human rights of all migrants" (United Nations, 2013b).

Travel to and within Thailand: The findings from this study demonstrate that travel to and within Thailand can expose migrants to violence and abuse. Current migration policies in Thailand do not adequately address the vulnerabilities associated with the

travel phase, given the very fact of travel to Thailand from Burma can result in irregular status and, depending on the circumstances, considered an illegal act. Approaches to immigration law enforcement in Thailand often frame migrants with irregular status as law-breakers. In some cases, victims of exploitation have been charged with illegal entry, rather than provided services or protection (Gjerdingen, 2009). The US State Department's Trafficking in Persons Report 2012 Thailand country profile stated that "the country's migrant labor policies continue to create vulnerabilities to trafficking and disincentives to victims to communicate with authorities, particularly if the workers are undocumented" (US Department of State, 2012). Migration policies that are predicated on restricting entry via border controls are not considered to result in reduced numbers of migrants, but in increased vulnerability to human rights violations and abuses (United Nations Human Rights Council, 2013). The data in this study indicate the need to focus on enabling safe and protected means of travel for the many migrants from Burma who will continue to seek livelihood opportunities in Thailand. In order to develop migration policy that protects the human rights of migrants, rights-based policies that focus on the modes of travel and entry to Thailand, as well as onward travel within Thailand, are needed.

Workplace conditions and labor rights:

The Thai Labour Protection Act 1998 includes legal protections that are intended to extend to all workers, whether migrant or not, and includes protections such as minimum wages, maximum work hours and occupational health and safety standards (Archavanitkul & Hall, 2011). However, the provisions of the Act do not extend to

agriculture and the sex industry (discussed further below). As a first step, expanding the scope of the Labour Protection Act to all industries throughout Thailand would improve the potential for labor rights protections in the workplace. The ILO notes that the Labour Protection Act "has established certain protection for workers to prevent exploitation and abusive conditions that may be considered as indicators of forced labour" (ILO, 2013). However, as the data from this study and other research studies in Thailand show, exploitation in workplaces in various industries throughout Thailand is pervasive. Improved oversight and enforcement of legal standards and labor protections is needed in order to reduce exploitation of Burmese migrant workers in Thailand (ILO, 2011). Many of the workplace experiences prevalent amongst migrant workers – including forced work without pay, forced overtime, and salary reductions as punishment – are violations of both national and international labor standards. Expansion of the provisions of the Labour Protection Act to all industries, as well as improved enforcement of these provisions is essential in order to reduce violations of labor and human rights against migrants in workplaces in Thailand.

In the case of the sex industry, enforcement and promotion of labor protections does not appear to be an approach that can currently result in improvements of the working environment for migrant sex workers. Any form of sex work is currently illegal under Thai law (UNDP, 2012). The criminalization of the sex industry in Thailand contributes to adverse working conditions for migrant and non-migrant sex workers, including abuse and intimidation by police. Migrant sex workers, who are not eligible for work registration in Thailand, are highly vulnerable to abuse and arrest given they are

simultaneously working in an illegal industry and are often without legal status to remain in Thailand (Physicians for Human Rights, 2004). Research has found that criminalization of sex work and punitive approaches to reduction of sex work have adverse outcomes in terms of access to health services and HIV risk reduction (UNDP, 2012). The data in this present study do not clearly indicate an effective policy approach to sex work and the sex industry in this context. However, the findings from this study, showing the high prevalence of exposure to violence and abuse in the sex industry, can be used to advocate for and influence policy discussions that focus on extending labor rights protections to the sex industry, for migrants and non-migrants alike. Policy reforms concerning labor protections in the sex industry are needed in order to ensure that migrants and non-migrants in the sex industry in Thailand are afforded human rights protections and safe workplaces.

Anti-trafficking policy:

Policy implications are also related to anti-trafficking policy and programming in Thailand. Globally, lack of access to safe and legal ways for low-skilled workers to migrate have resulted in individuals entering into arrangements that result in trafficking (Gallagher, 2001), a dynamic that is present in this context (Huguet, Charmatrithriong, & Natali, 2012). The operationalization of the legal definition of trafficking has been problematic in many contexts globally. In Thailand, the understanding of what may constitute the exploitation component of trafficking is too limited, resulting in some victims of trafficking being excluded from services and reintegration programs. The U.S. State Department Trafficking in Persons report profile on Thailand cites examples of

where local law enforcement officials failed to identify debt bondage or threat of deportation as forms of coercion, instead believing that physical detention or confinement are necessary elements of trafficking (US Department of State, 2012). Moreover, the focus on the question of consent in trafficking policy reinforces a discourse and policy approach whereby irregular migrants, who may experience extreme abuses and exploitation, are not considered victims. This indicates a need to address trafficking within the framework of understanding dynamics and processes of irregular migration. Research on child migration to Mali and Vietnamese women in the sex industry in Cambodia found that addressing and understanding trafficking disconnected from broader migration dynamics led to anti-trafficking policies that did not address the realities experienced by migrants, leading to policies that can result in more covert and dangerous forms of migration (Busza, Castle, & Diarra, 2004). Globally, some anti-trafficking policies have had adverse impacts on the safety and human rights of individuals who voluntarily migrate through irregular means. Further research is needed to assess the extent to which this is the case in the Thailand-Burma border context, and analysis and reform of migration and labor laws and policies that may inadvertently contribute towards trafficking is needed.

Safety and security:

Both qualitative and quantitative findings indicate that police and authorities can contribute towards abuse and coercion of migrant workers. Human rights investigations have also noted the potential for abuse of migrants perpetrated by police and authorities (Human Rights Watch, 2010). These abuses impact health and protection of migrants,

who avoid making complaints to authorities about abuses in the workplace given the potential for arbitrary arrest and deportation, as well as forced bribes or physical and sexual abuse. A number of migrant-receiving countries globally have recognized the important role of immigration officials and police in interacting with migrants, and provide training on legal standards, human rights and labor protections to authorities (United Nations Human Rights Council, 2013). In addition to such activities, the Thai Government should establish a mechanism through which migrants can make complaints against police and other authorities.

Registration:

Some migrant workers interviewed in this study reported obtaining registration in order to gain improved protection from exploitation and abuse. However, registration may also serve to reinforce restrictions on freedom of movement if employers retain registration documents, or if large debts are incurred that result in being migrants being tied to employers until the debt is paid. Measures to address vulnerability primarily through regularization and expansion of documentation to more migrant workers is likely to address only some of the structural issues influencing the well-being of Burmese migrant workers in Thailand. As noted, vulnerability during travel and enforcement of labor protections in workplaces – which registration does not explicitly address – need to simultaneously be addressed. Moreover, the current registration processes and procedures, including short time-periods when registration is available, multiple steps

needed to obtain registration, and high registration costs, make the system difficult for migrant workers to navigate. Finally, stipulations that registered migrants cannot leave the employer from which they are registered have the potential to increase vulnerability to exploitation. For the registration process to be effective in reaching migrant workers from Burma in Thailand, and in improving their well-being, it must be both straightforward to access, and bring about tangible benefits in terms of labor protections, access to complaint mechanisms and justice, and access to basic services.

Migration policy in Burma:

Implications for migration policy in Burma are also evident from the findings in this study. Efforts of the Thai Government to address irregular migration from Burma to Thailand may lead to the establishment and enforcement of certain pre-conditions for migration from Burma, as has been the case in Memoranda of Understanding on labor migration signed between Thailand and Cambodia and Laos. The Government of Burma can seek to use these pre-conditions – for example, attendance at training workshops prior to migration – to empower potential migrants with knowledge and understanding of labor rights and protections to which they are entitled in workplaces in Thailand. As found in this study, deceit and entry into potentially dangerous and exploitative relationships with *carries* and brokers often happens during travel within Burma. Establishment and provision of services, such as an information hotline, where migrants can discuss potential offers of employment or conditions of travel that they have been offered, may have the potential to reduce the prevalence of these occurrences in Burma.

Implications for service-providers

The data from this study can be applied to the Institute of Medicine's model for prevention and treatment of mental disorders (Munoz, Mrazek, & Haggerty, 1996). This is an approach that focuses on a spectrum of interventions for mental disorders – prevention, treatment and maintenance. Within the category of prevention, interventions may be universal – targeted at the whole population, regardless of risk profile; selective – targeted at a sub-group of the population identified as having higher risk for mental disorders; or indicated – targeted at a smaller, higher-risk proportion of the population for whom presence of risk factors, including exposure to significant stressors or prior mental illness, is high.

In the area of universal interventions, descriptions of the types and severity of abuses and exploitation in the qualitative study, and findings on the prevalence of exposure to such experiences in the quantitative study, indicate the need for service-providers and program planners to strengthen efforts to educate and empower all migrant workers in order to prevent and address these abuses. While there are significant limitations to the ability of migrant workers to complain and seek redress for violations experienced in workplaces in Thailand, community-based organizations could increase outreach and engagement with migrant communities in and around Mae Sot, alongside developing and providing legal services to enable migrants to address violations. Organizations such as SAW already have mobile health outreach teams in migrant communities, and information provision campaigns and empowerment activities could be integrated with these services. There are also implications for service-providers in Burma, where education activities are needed,

in order to inform migrants prior to migration of what they can expect and what types of arrangements and conditions they should seek to avoid. Community-based educational initiatives in high-migration sending areas in Burma could be established to facilitate migrants' knowledge and understanding of the migration process and potential workplace conditions in Thailand prior to their deciding to go to Thailand to work. These efforts constitute universal prevention interventions, addressing some of the social determinants of mental distress in this context.

The findings from this study indicate that as well as addressing the mental health needs of migrant workers, programs and activities that address the influences on these needs are needed. Specific services in the health sector alone clearly cannot address the multiple, overlapping vulnerabilities present in this population. As research cited in *Chapter III – Literature Review* noted, structural conditions of marginalization and irregular status constitute significant health risks, and health outcomes of migrants, especially those with irregular status, cannot be addressed outside of a more comprehensive approach. Services and policies to improve the lives of migrant workers in this context require a multi-sectoral approach, engaging with areas including labor protections, migration policies, and service provision. A recent World Health Organization conference on improving healthy borders in the Greater Mekong Region, for which the researcher acted as a consultant and conference rapporteur, highlighted the need for multi-sectoral and cross-sectoral approaches to improving the health of individuals and communities in border regions.[1] As this study has also shown, the question of how to improve the well-being

[1] http://www.searo.who.int/thailand/news/healthbordermeeting/en/index.html

and health of migrant populations in Thailand, cannot be disconnected from the issue of human rights and labor protections for migrant workers. Improvement in service provision in the absence of efforts to address and improve the limitations of migration policy in this context, as detailed above, may have limited impact on migrant workers' well-being and health. This is an approach that fits within the "social determinants" approach to health outcomes, and is one that policy makers and service providers in the area of migrant mental health could adopt, in order to address migrants' needs in an integrated manner (Marmot, 2005).

In terms of selective and indicated prevention interventions, data from this study, and collaboration with local community-based organizations who work with this population, can be used to identify specific groups that are at higher-risk and develop prevention interventions for those groups. Selective interventions could include active engagement with a narrower group of migrant workers thought to be at higher risk of occupational injury, experiencing social isolation or living in extreme poverty, and methods to build social networks and alternative livelihood opportunities for those individuals and communities. In terms of indicated interventions, data from this study indicates the high prevalence of sexual abuse and violence in the sex industry, as well as higher level of symptoms in this occupational group. Specific informal counselling sessions, violence prevention activities and peer outreach work in the sex industry could be used to address risks of mental distress in this specific sub-group.

In addition to interventions spanning the three categories of prevention, data from this study indicates the need for treatment interventions. The findings from the quantitative research phase indicate stressors associated with the travel and destination phase of the migratory process that are associated with increased symptoms of depression and anxiety. While the measurement tools utilized in this study do not constitute diagnostic instruments, it is evident that some proportion of migrant workers would benefit from treatment interventions, including clinical services. Some previous projects in Mae Sot, including a previous JHSPH study, have indicated promising effective clinical interventions and methods to address human resources shortages (Bolton, et al., under review). Efforts to expand these programs and ensure they are accessible and culturally appropriate for migrant workers who could benefit from clinical treatment are an important aspect of a public health approach to migrant mental health in this context.

The data in this study also indicate the need to question the feasibility of dominant models of policy and programs in the field of global mental health. The fields of global mental health and mental health and psychosocial support [MHPSS] in humanitarian settings are often distinct. The primary focus in global mental health has been on scaling-up treatments within primary care settings (Chisholm, et al., 2007), whereas the primary focus within MHPSS is on provision of services in a context where health systems are disrupted (IASC, 2007). However, in the context of large-scale migrant labor in a low-resource setting, these distinct models of practice may not be applicable. The model in the global mental health field, of scaling up of mental health services and strengthening of national mental health systems, may be ineffective in a context where access to

services is severely limited due to marginalization from basic services due to legal status. Issues of disruption of access to health systems, lack of social support and prevalence of stressors that can result in distress, which are common in humanitarian settings, are all central in the specific context of this study. However, the MHPSS approach, primarily situated in emergency contexts, does not adequately address continuity of services, human resources, and capacity-building. As such, the data in this study indicate the need to explore the interconnections and gaps between the modalities and approaches proposed in the global mental health field and the MHPSS field, to ensure that the mental health needs of this vulnerable population are addressed. Marginalization of migrant workers in Thailand from mainstream health and development programming has been noted as a concern in the context of the Millennium Development Goals (Ditton & Lehane, 2009). These data indicate the need, from a research and service-provision perspective, to identify promising practices, frameworks and approaches from both the global mental health and MHPSS fields to increase access to prevention and treatment programs for migrant workers, to ensure that the population of labor migrants – in this specific context, and globally – is not neglected from the policy development and service provision within the movement for global mental health.

Implications for research:

The present study indicates a number of directions for further research. Firstly, given this research is limited to the travel and destination phases of the migratory process, further research is warranted on both pre-departure and return phases of migration in this context. In terms of the pre-departure phase, an important area for investigation is identifying demographic and socio-economic variables that influence decisions to

migrate to Thailand for work. For example, prior research has indicated that women and girls in Burma are often "pushed" to migrate for reasons relating to exposure to sexual and gender-based violence in Burma, or enter into the sex industry in Thailand after experiencing sexual violence (Physicians for Human Rights, 2004). Data not presented in this present study from the in-depth interviews with women in the sex industry suggest this is the case. Research on pre-departure vulnerabilities and risk factors for unsafe travel, and subsequent exploitative or dangerous work, could generate data to inform effective interventions in communities in Burma from which individuals migrant to Thailand. Moreover, there is sparse research on the return phase of migrants. Migrant workers from Burma often stay in Thailand for long periods of time. However, reasons for and patterns of return to Burma require further investigation, especially in the case of Government-sponsored repatriation of trafficking victims (UNIAP, 2013), and forced deportation of migrants with irregular status. Understanding of living conditions, livelihoods and migration choices of individuals post-return to Burma can inform a number of the policy and programmatic issues discussed above. This research would also be timely, given political changes in Burma. Large amounts of donor funding are shifting from the Thailand-Burma border area towards programs located in Burma. Research on pre-departure and return phases could be instrumental in influencing the types of livelihoods, labor rights and economic development programs funded by donors, which are currently increasing at a rapid pace in Burma.

For researchers seeking to build on the findings in this study, exploration of social support, coping mechanisms and other resources through which individuals may retain

good mental health in this population is warranted. Social support can be a key factor in reducing the impact of stressors on mental health (Thoits, 2010), yet migration in and of itself may disrupt social support networks for migrants. Research on the scope and nature of social support in this migrant population is needed. Differences in the protective effects of social support may partially explain the findings in this present study (Ahern, et al., 2004; Kawachi & Berkman, 2001). Moreover, migrant workers may employ adaptive coping mechanisms – such as participating in religious community and ritual – in order to cope with the stressors described in this study, or employ maladaptive coping mechanisms – such as excessive alcohol-use. Data show that effective coping strategies are more likely amongst individuals with high perceived control over life circumstances (Thoits, 1995). Coercion and restrictions on freedoms experienced in Thailand may erode coping mechanisms over time, leading to increased psychopathology. Data on social support and coping mechanisms also have programmatic relevance. Local community-based organizations can seek to build on already-existing social networks and coping mechanisms in migrant communities to further empower and strengthen migrant communities' responses to exploitation and abuse.

From a methodological perspective, further analysis using the data from this study could utilize structural equation modelling [SEM], in order to further investigate and identify the causal pathways, including moderators and mediators, in the relationships between migration stressors, workplace exploitation, and depression and anxiety. It is evident from literature that depression and anxiety can be co-morbid, and some correlation of depression and anxiety symptoms could be expected (Nima, Rosenberg, Archer, &

Garcia, 2013). SEM approaches allow for both depression and anxiety outcomes to be modelled simultaneously, thus allowing insight into different factor structures that may exist in the pattern of symptoms, and the correlation between the outcome measures. SEM allows for both theory development and theory testing; SEM could be used to confirm models based on the qualitative results from this study.

The issue of migration and mental health is an area that can benefit from multi-disciplinary work – for example, anthropological work to examine the identity and cultural issues influencing well-being, sociological work to explore the role of registration and documentation, and legal research to identify possible remedies or redress for the violations explored in this study. As well as additional research utilizing public health methodologies, public health researchers in this area should seek to collaborate with researchers from other disciplines and approaches, in order to improve both the depth and breadth of understanding of the intersection between migration and mental health in low-resource settings.

This study focused on migrant workers in three specific occupational settings in the context of the Thailand-Burma border. Data on migrants who may experience similar stressors – that is, migrants with irregular status, located in low-resource settings – are sparse. Comparative research on similar border contexts in the region and globally is warranted. Some research indicates that similar patterns of exploitation in workplaces, and its association with depression and anxiety symptoms, may exist. For example, the researcher for this study conducted research on the Thailand-Cambodia border, exploring

the intersection of labor migration and mental health, finding that Cambodian migrant workers experience a number of similar stressors in workplaces in Thailand, and that returned migrants described anxiety and depression-like symptoms that resulted from these experiences (Meyer, Robinson, Chhim, & Bass, In Press). To return to a perspective noted in *Chapter III – Literature Review,* the field of research on mental health and migration lacks a unified conceptual framework, such that "there is a lack of common agreement as to what it is about the migration process that is really stressful" (Vega, Kolody, & Valle, 1987). Multiple studies, using qualitative and quantitative methodologies, and identifying migration and workplace-stressors in a range of different geographical, cultural and political contexts, are needed in order to generate data to inform and develop understanding of the association between migration and mental health.

Conclusion:

This study investigated the migratory process of migrants from Burma to Thailand, focusing on the travel and destination phases. In qualitative interviews, findings showed that aspects of the travel phase, including deceit and debt incurred due to travel, are related to subsequent working conditions in Thailand, which can be characterized by violations of labor and human rights. In quantitative analysis, patterns of associations of these exposures and depression and anxiety were explored, revealing various influences on mental health in this population.

This study focused on migrant workers from Burma in and around Mae Sot, Thailand, bringing to light abuses and exploitation experienced in workplaces in Thailand and safety and security risks that can create vulnerability to depression and anxiety. The data indicate need for policy reforms in the areas of migration and labor policies, as well as tailored programs and interventions to address the diverse protection and associated mental health needs in groups of migrant workers in this context. Literature on migration and mental health has largely neglected migration and migratory stressors in low-resource settings. However, data from this context indicates high prevalence of stressors, extensive mental health needs, and areas in which to improve and increase service provision and delivery to address the specific vulnerabilities of migrant workers on the Thailand-Burma border.

References:

Ahern, J., Galea, S., Fernandez, W. G., Koci, B., Waldman, R., & Vlahov, D. (2004). Gender, social support, and posttraumatic stress in postwar Kosovo. *J Nerv Ment Dis, 192*(11), 762-770.

Allden, K., Poole, C., Chantavanich, S., Ohmar, K., Aung, N. N., & Mollica, R. F. (1996). Burmese political dissidents in Thailand: trauma and survival among young adults in exile. *Am J Public Health, 86*(11), 1561-1569.

Archavanitkul, K., & Hall, A. (2011). Migrant workers and human rights in a Thai context. In J. W. Huguet & A. Charmatrithriong (Eds.), *Thailand Migration Report 2011: Migration for development in Thailand: Overview and tools for policymakers*. Bangkok: IOM.

Arnold, D. (2005). The situation of Burmese migrant workers in Mae Sot, Thailand. In Asia Monitor Resource Center (Ed.), *Asian Transnational Corporation Outlook 2004: Asian TNCs, workers, and the movement of capital*. Bangkok: Asia Monitor Resource Center, .

Arnold, D., & Hewison, K. (2005). Exploitation in Global Supply Chains: Burmese migrant workers in Mae Sot, Thailand. *Journal of Contemporary Asia, 35*(3), 319-340.

Betancourt, T. S., & Khan, K. T. (2008). The mental health of children affected by armed conflict: protective processes and pathways to resilience. *Int Rev Psychiatry, 20*(3), 317-328.

Bolton, P., Lee, C. I., Haroz, E. E., Murray, L. a. K., Dorsey, S., Robinson, W. C., et al. (under review). A Randomized Controlled Trial of a Community-Based Mental Health Treatment for Comorbid Disorders among Burmese Refugees in Thailand. .

Brunovskis, A., & Surtees, R. (2010). Untold Stories: Biases and Selection Effects in Research with Victims of Trafficking for Sexual Exploitation. *International Migration, 48*(4), 1-37.

Busza, J., Castle, S., & Diarra, A. (2004). Trafficking and health. *BMJ, 328*(7452), 1369-1371.

Chen, L., Li, W., He, J., Wu, L., Yan, Z., & Tang, W. (2012). Mental health, duration of unemployment, and coping strategy: a cross-sectional study of unemployed migrant workers in eastern China during the economic crisis. *BMC Public Health, 12*, 597.

Chisholm, D., Flisher, A. J., Lund, C., Patel, V., Saxena, S., Thornicroft, G., et al. (2007). Scale up services for mental disorders: a call for action. *Lancet, 370*(9594), 1241-1252.

Ditton, M. J., & Lehane, L. (2009). Towards realizing the health-related millennium development goals for migrants from Burma in Thailand. *J Empir Res Hum Res Ethics, 4*(3), 37-48.

Dohrenwend, B. P. (2000). The role of adversity and stress in psychopathology: some evidence and its implications for theory and research. *J Health Soc Behav, 41*(1), 1-19.

Dohrenwend, B. P. (2006). Inventorying stressful life events as risk factors for psychopathology: Toward resolution of the problem of intracategory variability. *Psychol Bull, 132*(3), 477-495.

Eggerman, M., & Panter-Brick, C. (2010). Suffering, hope, and entrapment: resilience and cultural values in Afghanistan. *Soc Sci Med, 71*(1), 71-83.

Feinstein International Center. (2011). *Developing a Profiling Methodology for Displaced People in Urban Areas: case study: Mae Sot, Thailand*. Medford: Tufts University.

Gallagher, A. (2001). Human Rights and the New UN Protocols on Trafficking and Migrant Smuggling: A Preliminary Analysis. *Human Rights Quarterly, 23*(4), 975-1004.

Gjerdingen, E. (2009). Suffocation inside a cold storage truck and other problems with trafficking as "exploitation" and smuggling as "choice" along the Thai-Burmese border *Arizona Journal of International & Comparative Law, 26*(3), 700-737.

Griffin, J., & Soskolne, V. (2003). Psychological distress among Thai migrant workers in Israel. *Soc Sci Med, 57*(5), 769-774.

Hatcher, A. M., Tsai, A. C., Kumbakumba, E., Dworkin, S. L., Hunt, P. W., Martin, J. N., et al. (2012). Sexual relationship power and depression among HIV-infected women in Rural Uganda. *PLoS One, 7*(12), e49821.

Hiott, A. E., Grzywacz, J. G., Davis, S. W., Quandt, S. A., & Arcury, T. A. (2008). Migrant farmworker stress: mental health implications. *J Rural Health, 24*(1), 32-39.

Hossain, M., Zimmerman, C., Abas, M., Light, M., & Watts, C. (2010). The relationship of trauma to mental disorders among trafficked and sexually exploited girls and women. *Am J Public Health, 100*(12), 2442-2449.

Huguet, J. W., & Charmatrithriong, A. (2011). *Thailand Migration Report 2011: Migration for development in Thailand: Overview and tools for policymakers*. Bangkok: IOM.

Huguet, J. W., Charmatrithriong, A., & Natali, C. (2012). *Thailand at a crossroads: challenges and opportunities in leveraging migration for development*. Washington, D.C.: Migration Policy Institute and IOM.

Huguet, J. W., Charmatrithriong, A., & Richter, K. (2011). Thailand Migration Profile. In J. W. Huguet & A. Charmatrithriong (Eds.), *Thailand Migration Report 2011: Migration for development in Thailand: Overview and tools for policy makers*. Bangkok: IOM.

Human Rights Watch. (2010). *From the tiger to the crocodile: abuse of migrant workers in Thailand*. Bangkok: Human Rights Watch

IASC. (2007). *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*. Geneva: IASC.

Ichikawa, M., Nakahara, S., & Wakai, S. (2006). Cross-cultural use of the predetermined scale cutoff points in refugee mental health research. *Soc Psychiatry Psychiatr Epidemiol, 41*(3), 248-250.

ILO. (2005). *A Global Alliance Against Forced Labor: Report of the Director-General*. Geneva: International Labour Organization.

ILO. (2011). *Research on occupational safety and health for migrant workers in five Asia and the Pacific countries: Australia, Republic of Korea, Malaysia, Singapore and Thailand*. Bangkok: International Labor Organization

ILO. (2013). *Thematic Brochure Series: Forced Labour*. Bangkok: ILO

Kawachi, I., & Berkman, L. F. (2001). Social ties and mental health. *J Urban Health, 78*(3), 458-467.

Kessler, R. C. (1997). The effects of stressful life events on depression. *Annu Rev Psychol, 48*, 191-214.

Khamsiriwatchara, A., Wangroongsarb, P., Thwing, J., Eliades, J., Satimai, W., Delacollette, C., et al. (2011). Respondent-driven sampling on the Thailand-Cambodia border. I. Can malaria cases be contained in mobile migrant workers? *Malar J, 10*, 120.

Lopes Cardozo, B., Talley, L., Burton, A., & Crawford, C. (2004). Karenni refugees living in Thai-Burmese border camps: traumatic experiences, mental health outcomes, and social functioning. *Soc Sci Med, 58*(12), 2637-2644.

Maniglio, R. (2010). Child sexual abuse in the etiology of depression: A systematic review of reviews. *Depress Anxiety, 27*(7), 631-642.

Maniglio, R. (2013). Child sexual abuse in the etiology of anxiety disorders: a systematic review of reviews. *Trauma Violence Abuse, 14*(2), 96-112.

Marmot, M. (2005). Social determinants of health inequalities. *Lancet, 365*, 1099–1104.

Meyer, S., Robinson, W. C., Chhim, S., & Bass, J. K. (In Press). Labor migration and mental health in Cambodia: a qualitative study. *Journal of Nervous and Mental Disease, Forthcoming*

Mollica, R. F., McInnes, K., Sarajlic, N., Lavelle, J., Sarajlic, I., & Massagli, M. P. (1999). Disability associated with psychiatric comorbidity and health status in Bosnian refugees living in Croatia. *JAMA, 282*(5), 433-439.

Mollica, R. F., Sarajlic, N., Chernoff, M., Lavelle, J., Vukovic, I. S., & Massagli, M. P. (2001). Longitudinal study of psychiatric symptoms, disability, mortality, and emigration among Bosnian refugees. *JAMA, 286*(5), 546-554.

Munoz, R. E., Mrazek, P. J., & Haggerty, R. J. (1996). Institute of Medicine Report on Prevention of Mental Disorders: Summary and Commentary. *American Psychologist, 51*(11), 1116-1122.

Nima, A. A., Rosenberg, P., Archer, T., & Garcia, D. (2013). Anxiety, affect, self-esteem, and stress: mediation and moderation effects on depression. *PLoS One, 8*(9), e73265.

Panter-Brick, C. (2010). Conflict, violence, and health: setting a new interdisciplinary agenda. *Soc Sci Med, 70*(1), 1-6.

Pham, P. N., Vinck, P., Kinkodi, D. K., & Weinstein, H. M. (2010). Sense of coherence and its association with exposure to traumatic events, posttraumatic stress disorder, and depression in eastern Democratic Republic of Congo. *J Trauma Stress, 23*(3), 313-321.

Physicians for Human Rights. (2004). *No status: Migration, trafficking and exploitation of women in Thailand*. Boston: Physicians for Human Rights.

Piper, N. (2005). A Problem by a Different Name? A Review of Research on Trafficking in South-East Asia and Oceania. *International Migration, 43*(1/2), 203-233.

Qiu, P., Yang, Y., Ma, X., Wu, F., Yuan, P., Liu, Q., et al. (2012). Respondent-driven sampling to recruit in-country migrant workers in China: a methodological assessment. *Scand J Public Health, 40*(1), 92-101.

Souza, R., Bernatsky, S., Reyes, R., & de Jong, K. (2007). Mental health status of vulnerable tsunami-affected communities: a survey in Aceh Province, Indonesia. *J Trauma Stress, 20*(3), 263-269.

Thapa, S. B., & Hauff, E. (2005). Psychological distress among displaced persons during an armed conflict in Nepal. *Soc Psychiatry Psychiatr Epidemiol, 40*(8), 672-679.

Thoits, P. A. (1995). Stress, coping, and social support processes: where are we? What next? *J Health Soc Behav, Spec No*, 53-79.

Thoits, P. A. (2010). Stress and health: major findings and policy implications. *J Health Soc Behav, 51 Suppl*, S41-53.

Tsutsumi, A., Izutsu, T., Poudyal, A. K., Kato, S., & Marui, E. (2008). Mental health of female survivors of human trafficking in Nepal. *Soc Sci Med, 66*(8), 1841-1847.

UNDP. (2012). *Sex work and the law in Asia and the Pacific*. Bangkok UNDP and UNFPA.

UNIAP. (2013). *After trafficking: Experiences and Challenges in the (Re)integration of Trafficked Persons in the Greater Mekong Sub-region*. Bangkok: UNIAP.

United Nations. (2012). *Resolution adopted by the General Assembly on 20 December 2012: 67/172. Protection of migrants* New York: United Nations

United Nations. (2013a). *International migration and development: Report of the Secretary-General*. New York: United Nations.

United Nations. (2013b). *Promotion and protection of human rights, including ways and means to promote the human rights of migrants: Report of the Secretary-General*. New York: United Nations

United Nations Human Rights Council. (2013). *Report of the Special Rapporteur on the human rights of migrants: Regional study: management of the external borders of the European Union and its impact on the human rights of migrants*. Geneva United Nations Human Rights Council

US Department of State. (2012). *Trafficking in Persons Report*. Washington D.C.: US Department of State.

Vega, W. A., Kolody, B., & Valle, J. R. (1987). Migration and mental health: an empirical test of depression risk factors among immigrant Mexican women. *Int Migr Rev, 21*(3), 512-530.

Vinck, P., & Pham, P. N. (2010). Association of exposure to violence and potential traumatic events with self-reported physical and mental health status in the Central African Republic. *JAMA, 304*(5), 544-552.

Vinck, P., Pham, P. N., Stover, E., & Weinstein, H. M. (2007). Exposure to war crimes and implications for peace building in northern Uganda. *JAMA, 298*(5), 543-554.

Wangroongsarb, P., Satimai, W., Khamsiriwatchara, A., Thwing, J., Eliades, J. M., Kaewkungwal, J., et al. (2011). Respondent-driven sampling on the Thailand-Cambodia border. II. Knowledge, perception, practice and treatment-seeking behaviour of migrants in malaria endemic zones. *Malar J, 10*, 117.

Whiteford, H. A., Degenhardt, L., Rehm, J., Baxter, A. J., Ferrari, A. J., Erskine, H. E., et al. (2013). Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet, 382*(9904), 1575-1586.

WHO. (2010). *Health of migrants: the way forward - report of a global consultation, Madrid, Spain, 3-5 March 2010*. Geneva: WHO.

Wong, D. F., He, X., Leung, G., Lau, Y., & Chang, Y. (2008). Mental health of migrant workers in China: prevalence and correlates. *Soc Psychiatry Psychiatr Epidemiol, 43*(6), 483-489.

Wong, D. F., & Leung, G. (2008). The functions of social support in the mental health of male and female migrant workers in China. *Health Soc Work, 33*(4), 275-285.

Zahid, M. A., Fido, A. A., Alowaish, R., Mohsen, M. A., & Razik, M. A. (2002). Psychiatric Morbidity among Housemaids in Kuwait: the precipitating factors *Annals of Saudi Medicine, 22*(5-6), 384-387.

Zahid, M. A., Fido, A. A., Razik, M. A., Mohsen, M. A., & El-Sayed, A. A. (2004). Psychiatric morbidity among housemaids in Kuwait. a. Prevalence of psychiatric disorders in the hospitalized group of housemaids. *Med Princ Pract, 13*(5), 249-254.

Appendix 1 – Codebook for qualitative analysis

Note: the following codes were removed because had 0 responses after coding was complete:

- **Work – physical force -** Descriptions of taking as job because of physical force
- **Work – threat -** Threats experienced by migrant workers in the work place
- **Documents – descriptions -** Descriptions of types of documentation
- **Work – able to leave** - one response, merged with changing jobs

Mnemonic or numeric "brief" code	**Full description of code**	**When to use and when not use the code. Examples of use of the code**
1. MTT – Migration to Thailand	**All MTT codes refer to experiences and processes occurring on the way to Thailand, within Burma**	
MTT – REASONS	Reasons for migration to Thailand	Use this code when respondents describe reasons for migration to Thailand, including social, economic and political reasons
MTT – PRIOR ABUSE	Prior physical or sexual abuse	Use this code for respondents' descriptions of physical and/ or sexual abuse that occurred prior to, or as influence on, decision to migrate to Thailand
MTT – PRIOR KNOWLEDGE PERSON	Prior knowledge of person in Thailand	Use this code for respondents' descriptions of knowing individuals living and working in Thailand prior to decided to go to Thailand or migrating to Thailand
MTT – PRIOR KNOWLEDGE SITUATION	Prior knowledge of situation in Thailand	Use this code for respondents' descriptions of knowing about the situation living and working in Thailand prior to decided to go to Thailand or migrating to Thailand

MTT – MEANS OF TRANSPORT	Means of transport	Use this code for respondents' descriptions of means of transport en route to Thailand within Burma
MTT – DECEIT	Deceit	Use this code for respondents' descriptions of experiences of deceit within migration to Thailand
MTT – FEAR	Fear	Use this code for respondents' experiences of fear during migration to Thailand
MTT – DANGERS HAZARDS	Dangers and hazards	Use this code for respondents' experiences of dangers and hazards during migration to Thailand
MTT – PRIOR TRAVEL IN BURMA	Prior travel in Burma	Use this code for descriptions of prior migration in Burma, not as a part of the journey to Thailand, for example, moving to another town for work prior to deciding to migrate to Thailand
MTT – CHECKPOINTS	Checkpoints	Use this code for respondents' descriptions of and experiences at checkpoints in Burma on the way to Thailand, including what a checkpoint is, what happened to them or others at the checkpoints, and having to pay a bribe at the checkpoint
MTT – COSTS	Costs	Use this code for descriptions of costs incurred directly due to migration to Thailand, for example, paying for bus tickets
MTT – DEBT	Debt	Use this code for descriptions of debt – either personal or familial – incurred directly due to migration to Thailand
MTT – CARRIER/ BROKER	Use of carrier or broker	Use this code for respondents' descriptions of role of carrier or broker, personal experience of using carrier or broker, and descriptions of benefits or limitations of using a carrier or broker.

MTT – PHYSICAL ABUSE	Physical abuse	Use this code for descriptions of personal experiences of physical abuse in migration to Thailand, or descriptions of others' experiences of physical abuse in migration to Thailand
MTT – SEXUAL ABUSE	Sexual abuse	Use this code for descriptions of personal experiences of sexual abuse in migration to Thailand, or descriptions of others' experiences of sexual abuse in migration to Thailand
MTT – VERBAL ABUSE	Verbal abuse	Use this code for descriptions of personal experiences of verbal abuse in migration to Thailand, or descriptions of others' experiences of verbal abuse in migration to Thailand
MTT – CROSS BORDER	Crossing the border	Use this code for respondents' descriptions of the process of crossing the border to Thailand, including payment of individuals or obtaining immigration documents, or mode of transport across the border, i.e. small boat for the river
MTT – DIRECT BANGKOK	Going directly to Bangkok	Use this code for descritions of respondents who travelled directly from Burma to Bangkok, i.e. not stopping in Mae Sot
2. WORK	**All WORK codes refer to experiences in the work place <u>in Thailand</u>, including obtaining a job, living conditions associated with work, relationships with employers and salaries**	
WORK – HOW FOUND	How found job	Use this code for description of how the individual found the work they are doing, either when first came to Thailand or subsequently. Includes instances of using a carrier or broker to find work

WORK – DESCRIPTION	Description of the type of work	Use for respondents' descriptions of the type of work they do, i.e. carry heavy things, sewing, as well as descriptions of the nature of the work, i.e. it is difficult, it is easy.
WORK – SALARY PROBLEMS DEDUCTIONS	Type of problem with salary payment – deductions	Use for any salary problems that are deductions of salary, for any of the following purposes: fees for protection from police, food and living expenses, unfair deductions due to time off, deductions for payment for work permit, etc
WORK – SALARY PROBLEMS AMOUNT	Type of problem with salary payment – amount	Use for any salary problems that are associated with low amount of salary, including being less than promised or less than expected. Do not use for salary being lower than expected due to deduction listed in WORK – SALARY PROBLEMS DEDUCTIONS
WORK – SALARY PROBLEMS NONPAYMENT	Type of problem with salary payment – non-payment	Use for any problems associated with salary being withheld for specific reasons, including not being paid for overtime
WORK – LACK OF SALARY PROBLEMS	Lack of problems with salary payment	Use to code descriptions of salary payment that are described positively, i.e. paid on time, paid the amount promised, paid overtime, etc.
WORK – COULDN'T REFUSE	Couldn't refuse to work	Use to code for respondents' descriptions of being forced to work, either without pay or when unwilling to work, or in situations where they are compelled through threat of violence, turning into authorities, etc
WORK – KNOWEEDGE OF CONDITIONS	Prior knowledge of conditions	Use to code respondents' descriptions of their knowledge of the nature of their working conditions prior to starting a job, including the type of work and expected working hours

WORK – DECEIT	Deceit in the workplace	Use to code for descriptions of experiences of deceit in the work place
WORK – FORCED WHEN SICK	Forced to work when sick	Use to code for respondents' descriptions of being forced to work when sick
WORK – FORCED OVERTIME	Forced to work overtime	Use to code for respondents' descriptions of being forced to work overtime
WORK – TAKEN ADVANTAGE	Taken advantage of	Use to code for experiences of taking a specific job, or enduring specific working conditions, because a person with power took advantage of the migrant worker to make them take the job or agree to the working conditions
WORK – LIVING CONDITIONS	Living conditions at worksite	Use to code for respondents' descriptions of living conditions at workplaces
WORK – WORKING HOURS	Working hours	Use to code for discussion of working hours, including discussion of problems associated with unexpected overtime hours (even if paid)
WORK – BOSS	Boss	Use to code for descriptions of and relationship with boss in workplace, including attitude of boss towards workers, communication with boss, role of boss in the workplace. Do not use for actions of employer (physical, verbal and sexual abuse, withholding salary, etc).
WORK – WUNNA	Wunna (manager)	Use to code for descriptions of and relationship with wunna in workplace, including attitude of wunna towards workers, communication with wunna, role of wunna in the workplace. Do not use for actions of wunna (physical, verbal and sexual abuse, withholding salary, etc).

WORK – CHANGING JOBS	Changing jobs	Use to code for descriptions of motivations for and difficulties associated with changing jobs, any barriers associated with changing jobs in Thailand
WORK – LACK FREEDOM OF MOVEMENT	Lack of freedom of movement	Use to code for discussion of any barriers to freedom of movement from the workplace, during working hours or during time off, including limitations due to fear of arrest or needing to pay a bribe to authorities
WORK – FREEDOM OF MOVEMENT NO PROBS	Freedom of movement	Discussion of lack of problems associated with freedom of movement from the workplace
WORK – CONTACT OUTSIDE	Contact outside workplace	Use to code for descriptions of ability or inability to contact others outside the workplace, i.e. use phones at worksite
WORK – NEGATIVE CONSEQUENCES SPEAKING OUT	Negative consequences of speaking out	Use to code for descriptions of problems individuals encounter if they speak out about problems in the workplace, i.e. complain about salary deductions
WORK – PHYSICAL ABUSE	Physical abuse	Use to code for any experiences of physical abuse in the work place
WORK – SEXUAL ABUSE	Sexual abuse	Use to code for any experiences of sexual abuse in the work place
WORK – VERBAL ABUSE	Verbal abuse	Use to code for any experiences of verbal abuse in the work place
WORK – DEBT	Debt	Use to code for any debt willingly or unwillingly in the work place
WORK – FEAR	Fear	Use to code for descriptions of fear experienced in workplace for any reason

WORK – DRUG USE	Drug use	Descriptions of drug use in the work environment
WORK – POSITIVE EXPERIENCES	Positive experiences in workplace	Use to code for respondents' descriptions of positive experiences in workplaces, including that work pays well, boss treats them well, etc.
WORK – SEX WORK CUSTOMER	Sex workers' customers	Use to code for sex workers' descriptions of interactions with customers, including ability to select customers and customers' behavior
WORK – SEX WORK STIGMA	Stigma associated with sex work	Use to code for any descriptions of stigma associated with sex work
WORK – SEX WORK CONDOM NONUSE	Non-use of condoms in sex work	Use to code to examples of condom non-use in sex work environments, including reasons for non-use
WORK – SEX WORK VIRGINITY SALE	Virginity sale	Use to code for examples or descriptions of respondent being sold to a customer as a virgin during her experience as a sex worker in Thailand
WORK – SEX WORK UNDER 18	Sex work under 18	Use to code for examples of entry into and work in sex industry under the age of 18
3. MIG IN TH – Migration in Thailand	**All MIG IN TH codes refer to experiences and processes occurring during processes of migration <u>within</u> Thailand**	
MIG IN TH – REASONS	Reasons for migration within Thailand	Use this code when respondents describe reasons for migrating within Thailand, including social, economic and political reasons
MIG IN TH – MEANS OF TRANSPORT	Means of transport	Use this code for respondents' descriptions of means of transport within Thailand
MIG IN TH – DECEIT	Deceit	Use this code for respondents' descriptions of experiences of deceit in migration within Thailand
MIG IN TH – COSTS	Costs	Use this code for descriptions of costs incurred directly due to travel to Thailand, for example, paying for bus tickets

MIG IN TH – DEBT	Debt	Use this code for descriptions of debt – either personal or familial – incurred directly due to travel within Thailand
MIG IN TH – CARRIER/ BROKER	Use of carrier or broker	Use this code for respondents' descriptions of role of carrier or broker, personal experience of using carrier or broker, and descriptions of benefits or limitations of using a carrier or broker, for migration within Thailand.
MIG IN TH – PHYSICAL ABUSE	Physical abuse	Use this code for descriptions of personal experiences of physical abuse in travel to Thailand, or descriptions of others' experiences of physical abuse in migration within Thailand
MIG IN TH – SEXUAL ABUSE	Sexual abuse	Use this code for descriptions of personal experiences of sexual abuse in travel to Thailand, or descriptions of others' experiences of sexual abuse in migration within Thailand
MIG IN TH – VERBAL ABUSE	Verbal abuse	Use this code for descriptions of personal experiences of verbal abuse in travel to Thailand, or descriptions of others' experiences of verbal abuse in migration within Thailand
MIG IN TH – FEAR	Fear	Use this code for respondents' experiences of fear during travel to Thailand
MIG IN TH – DANGERS HAZARDS	Dangers and hazards	Use this code for respondents' experiences of dangers and hazards during travel to Thailand
4. DOCUMENTS	**All DOCUMENTS codes refer to role of documents in migration processes and work environments, including process of obtaining, costs and debt incurred, descriptions of types of documents and problems associated with possession and non-possession of documents. This includes immigration documentation, work**	

DOCUMENTS – MIGRATION TO THAILAND	Use of documents in migration to Thailand	Use to code for respondents' discussion of the role of documents in their migration to Thailand, including presence or absence of documents, problems associated, solutions to lack of documents
DOCUMENTS – MIGRATION WITHIN THAILAND	Use of documents in migration in Thailand	Use to code for respondents' discussion of the role of documents in their migration within Thailand, including presence or absence of documents, problems associated, solutions to lack of documents
DOCUMENTS – WORKING IN THAILAND	Use of documents working in Thailand	Use to code for respondents' discussion of the role of documents in their experiences working in Thailand
DOCUMENTS – PROCESS	Process of obtaining documents	Use to code for descriptions of process of obtaining documentation, including costs associated with obtaining documents and required steps
DOCUMENTS – PROBLEMS WITHOUT THAILAND	Problems due to lack of documents	Use to code for any problems associated with not having documents while working or living in Thailand
DOCUMENTS – DEBT	Debt due to documents	Use to code for any personal or familial debt incurred, willingly or unwillingly, due to obtaining documentation in Thailand
DOCUMENTS - RESTRICTIONS	Restrictions due to documents	Use to code for any restrictions on changing jobs or freedom of movement due to obtaining documents, including problem of employers retaining documents or debt to employers acting as a restriction
DOCUMENTS – LACK OF PROBLEMS	Lack of problems due to documents	Use to code examples of respondents' lack of problems living and working in Thailand without documents, including lack of problems being arrested/ lack of difficulty obtaining documents

5. AUTHORITIES	**All AUTHORITIES codes refer to instances of discussion of the role of authorities (meaning, any police or immigration officials) <u>in Thailand</u> in different elements of migrant workers' experiences**	
AUTHORITIES – ARREST	Arrest by authorities	Use to code for description of personal experience of arrest by authorities, or knowledge of instances of arrest of other migrant workers
AUTHORITIES – ESCAPE	Escape from authorities	Use to code for description of actions taken by migrant workers to escape arrest by authorities
AUTHORITIES – PHYSICAL ABUSE	Physical abuse by authorities	Use to code for descriptions of personal experiences, or descriptions of others' experiences, of physical abuse by authorities in any context
AUTHORITIES – SEXUAL ABUSE	Sexual abuse by authorities	Use to code for descriptions of personal experiences, or descriptions of others' experiences, of sexual abuse by authorities in any context
AUTHORITIES – FEELINGS	Feelings as response to experiences with authorities	Use to code for descriptions of feelings associated with threat of authorities, or direct experiences with authorities, including fear, anxiety, sadness, etc.
AUTHORITIES – BRIBERY	Bribery of authorities	Use to code for description of personal experience or knowledge of process of bribing police or authorities
AUTHORITIES – DEPORTATION	Deportation by authorities	Use to code for descriptions of personal experience or knowledge of process of deportation by authorities
AUTHORITIES – BOSS	Interaction of boss and authorities	Use to code for descriptions and explanations of role that boss plays as intermediary between migrant workers and authorities, i.e. bribing authorities, telling migrant workers to stay home during workplace raids, bailing migrant workers out from jail

AUTHORITIES – OTHER PROBLEMS	Other problems associated with authorities	Use to code for examples of any other types of interactions with authorities not included in other codes
AUTHORITIES – LACK OF PROBLEMS	Lack of problems associated with authorities	Use to code for respondents' descriptions and explanations of lack of problems with authorities, including reasons why
6. HEALTH	**All HEALTH codes refer to statements related to health status, impact of migration or work on physical or mental health status, access to health services and presence of major health risks**	
HEALTH – ACCESS TO SERVICES	Access to health services	Use to code for descriptions of issues associated with access to health services, including cost of services, travel to services, availability of services and quality of services
HEALTH – GENERAL STATUS	Health status	Use to code for descriptions of health issues that respondents have that are not related to workplace health issues, i.e. health conditions from prior to migration, health conditions acquired outside of workplace
HEALTH – USE OF INFORMAL SERVICES	Informal health services	Use to code for descriptions of types and use of informal health services, including traditional remedies, and reasons for utilization
HEALTH – RISKS AT WORK	Health risks in workplace	Use to code for direct risks to migrant workers' health experienced in the work place, including occupational hazards and environmental hazards
HEALTH – UNCLEAN WATER	Unclean water	Use to code for examples of problem of unclean water in the workplace and impacts on health
HEALTH – HYGIENE	Hygiene	Use to code for descriptions of problems associated with lack of hygiene in the workplace and impacts on health

HEALTH – INJURIES WORK	Workplace injuries	Use to code for description of injuries personally experienced or occurred to other migrant workers in work place
HEALTH – INFECTIOUS DISEASES WORK	Infectious diseases at workplace	Use to code for descriptions of infectious diseases due to experiences in and living conditions in work place
HEALTH – NON-INFECTIOUS DISEASES WORK	Non-infectious diseases at workplace	Use to code for descriptions of non-infectious diseases due to experiences in and living conditions in work place
HEALTH – EMOTIONAL RESPONSE TO PROBLEMS	Emotional response to problems	Use to code for descriptions of feelings and behaviors associated with problems migrant workers face; Do **not** include feelings/ emotions that are reasonable responses to threatening situation, i.e. fear
7. NETWORKS	**All NETWORKS codes refer to discussion of size of social networks, means through which migrants contact each other and barriers to participation in a survey**	
NETWORKS – SIZE	Social network size	Use to code for responses to questions about social network size, i.e. How many other migrant workers do you know?
NETWORKS – SOCIAL SUPPORT	Social support	Use to code for respondents' descriptions of sources of social support
NETWORKS – MEANS OF CONTACT	Means of contacting other migrant workers	Use to code for responses to question of how migrant workers keep in touch/ make contact with other migrant workers

NETWORKS – BARRIERS TO SURVEY	Barriers to participation in survey	Use to for descriptions of potential barriers for participation in planned survey for TAP, i.e. working hours, distance to travel, unwillingness to talk about problems, concerns about confidentiality, concerns about ramifications

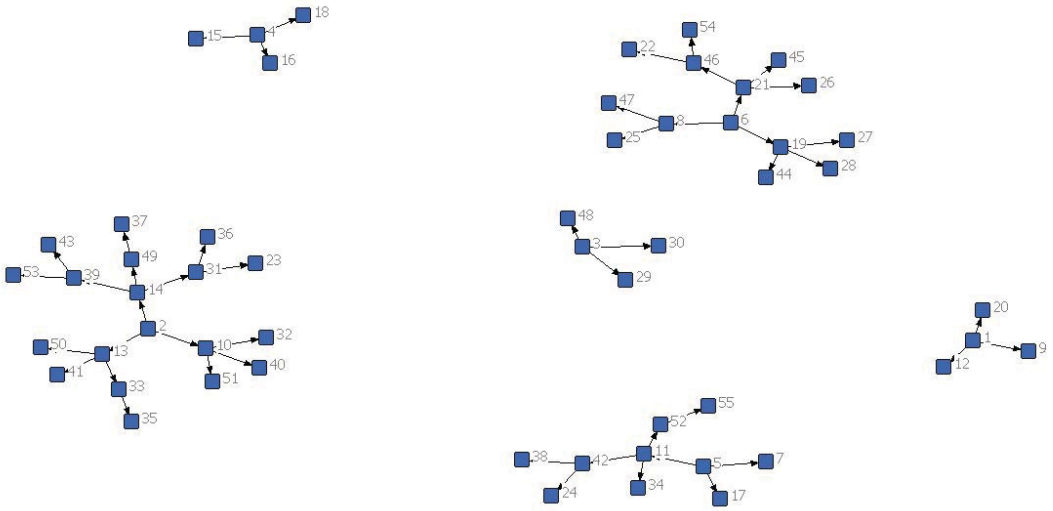
Appendix 2 - RDS reporting guidelines, as per White et al, 2012:

Section	Suggested reporting guidelines (White et al 2012)	Data/ description included in present study
Study design		
Study Design	State why RDS is considered the most appropriate sampling method	Described in Chapter V, *Quantitative Methods – Sampling*
Setting	Describe formative research methods and findings used to inform RDS study design	Described in Chapter V, *Quantitative Methods – Sampling*
Participants	Give the eligibility criteria, number, sources and methods of seed selection	Described in Chapter V, *Quantitative Methods – Sampling*
Participants	State if additional seeds were required, and if so, when and how recruited and started.	Described in Chapter V, *Quantitative Methods – Sampling*
Participants	State if there was any variation in study design during data collection	Described in Chapter V, *Quantitative Methods – Sampling*
Participants	Give the eligibility criteria for subsequent recruits if it differs from seeds	Described in Chapter V, *Quantitative Methods – Sampling*
Participants	Give number, types (eg. Mobile/ static) and location of recruitment venue(s)	Described in Chapter V – *Quantitative Methods – Procedure*
Participants	Report wording of network size question(s)	Described in Chapter V – *Quantitative Methods – Instrument*
Variables	State if and how recruiter-recruit relationship was tracked	Described in Chapter V – *Quantitative Methods – Procedure*
Data sources/ measurement	Describe methods to assess eligibility and reduce repeat enrolment	Described in Chapter V, *Quantitative Methods – Sampling*
Data sources/ measurement	Quality checks (i.e. were returned coupons actually distributed and redeemed only once?)	Described in Chapter V, *Quantitative Methods – Sampling*
Statistical methods	Describe all statistical methods, including name and description of the analytical methods used to take into account RDS	Described in Chapter V, *Quantitative Methods – Analysis*

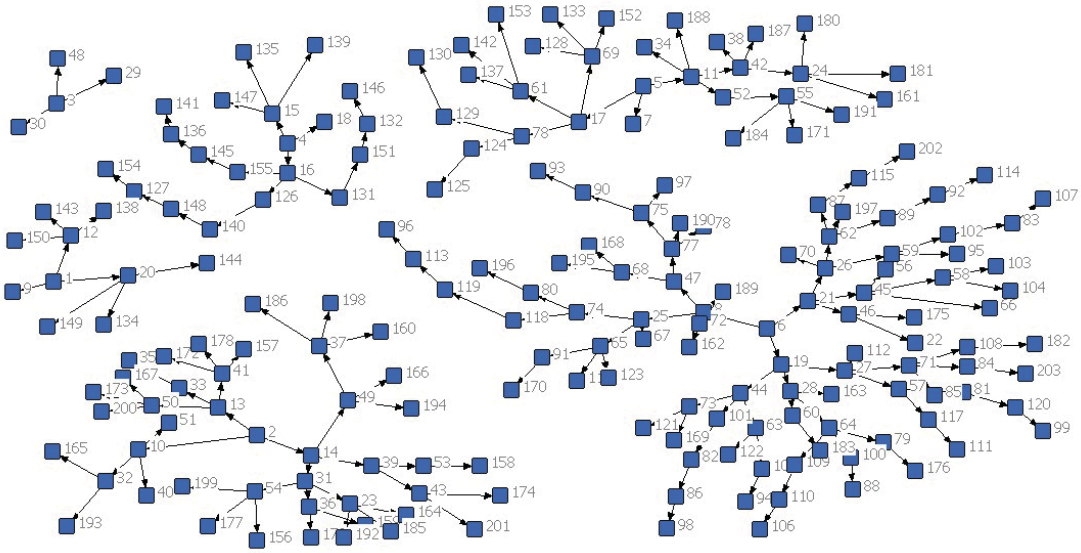
	sampling strategy	
Statistical methods	Report package software and settings values	Use of RDSAT reported
Statistical methods	Report any criteria to support statements on whether estimator conditions or assumptions were met, for example, 'RDS equilibrium reached'	Given the research goals (which did not include estimating a prevalence), point and interval estimators were not generated and discussion of RDS equilibrium was not included
Statistical methods	State if seeds included in each analysis	Described in Chapter V, *Quantitative Methods – Analysis*
Results		
Participants	Report on number of individuals at each stage of study, including: • Final number of seeds • Number examined for eligibility • Number confirmed eligible • Number included in study • Number returned for incentive collection • Number included in analysis	Reported in Chapter V, *Quantitative Methods – Sampling* Number returned for incentive collection not applicable in this study, as there was no secondary incentive Seeds included in analysis, so number included in study and number included in analysis is the same
Participants	Give reasons for non-participation at each stage, including coupon rejection	Reasons for non-participation or coupon rejection were not recorded in this study
Participants	Report number of coupons distributed and returned	Reported in Chapter V, *Quantitative Methods – Sampling*
Participants	Report number of recruits by seed and number of RDS recruitment waves	Reported in Chapter V, *Quantitative Methods – Sampling*
Main results	Report unadjusted estimates and their stated precision (i.e. 95% confidence interval)	Not applicable – did not report estimates
Main results	If applicable, report adjusted estimates and their stated precision (i.e. 95% confidence	Not applicable

	interval)	
Other analyses	Report other sensitivity analyses, for example, different RDS estimators, different network size definitions	Did not conduct sensitivity analyses

Appendix 3 – examples of Netdraw diagrams used in this study



Netdraw diagram for agriculture sample 1



Netdraw diagram for agriculture group – final sample

Appendix 4 – Full survey instrument

Trafficking Assessment Project (TAP) Prevalence Survey Instrument လူကုန်ကူးမှုစမ်းစစ်မှုပရောဂျက် (TAP) ပျံနှံ့မှုခြုံငုံလေ့လာရေး အထောက်အကူ				
1. ကဒ်ပြားခြေရာခံသည့် အချက်အလက် Coupon Tracking Data	Consent obtained? သဘောတူညီမှုရရှိပြီး	Yes ဟုတ်	No မဟုတ်	
1.1 အင်တာဗျူး နံပါတ် Interviewer ID				
1.2 ကဒ် သို့မဟုတ် မူရင်းလူ၏ နံပါတ် Coupon or seed number				
1.3 ယနေ့နေ့စွဲ (နေ့/လ/နှစ်) Today's date (DD/MM/YY)	_ _ / _ _ / _ _			
1.4 လွှဲပြောင်းပေးသူ (ကဒ်နံပါတ်) Referred by (coupon number)				
ထိုအချက်အလက်ကို ကဒ်ပြားမှတ်တမ်းတွင်ရော ဤနေရာတွင်ပါ ဖြည့်ပါ။ Fill in this information in the coupon log and here.				
1.5 သင်၏အလုပ်တွင် လက်ရှိ သို့ မကြာသေးခင်က လုပ်ကိုင်နေသော မြန်မာပြည်မှ သင်သိသည့် အသက် ၁၈ နှစ် အထက် ရွှေပြောင်း အလုပ်သမား မည်မျှရှိသလဲ။ How many migrant workers who are over 18 and are currently or recently working in your job from Burma do you know?				
1.6 အထက်ပါလူများထဲမှာ ဘယ်နှစ်ယောက်က သင့်ကိုသိသလဲ။ Of these people from above, how many know you?				
1.7 အထက်ပါ သင့်ကိုသိသောသူများထဲမှ ဘယ်နှစ်ယောက်ကို ပြီးခဲ့သည့်အပတ်က သင်တွေ့ခဲ့သလဲ။ Of these people who know you, how many did you see in the past week?				
1.8 အထက်ပါသင်တွေ့ခဲ့သောသူများထဲမှ ဘယ်နှစ်ယောက်နှင့် ပြီးခဲ့သည့်အပတ်က စကားပြောခဲ့သလဲ။ Of those people you saw, how many did you speak to in the past week?				
1.9 အထွက်ကဒ်ပြား ၁ Coupon 1 Out				
1.10 အထွက်ကဒ်ပြား ၂ Coupon 2 Out				
1.11 အထွက်ကဒ်ပြား ၃ Coupon 3 Out				
2. ဖြေဆို သူ၏ကိုယ်ရေးအချက်အလက်များ Respondent Demographics				
2.1 ကျား/မ (0) ကျား (1) မ Sex (0) Male (1) Female	Male ကျား (0)		Female မ (1)	
2.2 သင်အသက်ဘယ်လောက်ရှိပြီလဲ။ (နံပါတ်ကိုထည့်သွင်းပါ) How old are you? (Enter number)				
2.3 မည်သည့်တိုင်းရင်းသားအုပ်စုဖြစ်သနည်း။ (1) ကရင် (2) ကယား (3) ကချင် (4) ဗမာ (5) မွန် (6) ချင်း (7) ရခိုင် (8) ရှမ်း (9) အခြား What is your primary ethnic group? (Choose only one) (1) Karen (2) Kayah (3) Kachin (4) Burman (5) Mon (6) Chin (7) Rakhine (8) Shan (9) Other (specify)	1	2	3	4
	5	6	7	8
	9 _____			

2.4 အမြင့်ဆုံးရရှိခဲ့သော ပညာရေးအဆင့် (1) ဘာမှမရှိ (2) မူလတန်း အဆင့် (၁ တန်း၊ ၂ တန်း) (3) မူ၃တန်းအဆင့် (၁ တန်း၊ ၄တန်း) (4) အလယ်တန်းအဆင့် (၅ တန်း၊ ၈ တန်း) (5) အထက်တန်းအဆင့် (၉ တန်း၊ ၁၀ တန်း) (6) အထက်တန်းထက်ကျော်သောအဆင့် (၁၀ တန်းလွန်) (7) အခြား (အသေးစိတ်ဖော်ပြပါ) What is the highest level of education you have completed? (1) None (2) Primary (1-2 Standard) (3) Primary (3-4 Standard) (4) Middle (5-8 Standard) (5) High School (9-10 Standard) (6) More than high school (7) Others (Please specify)	1	2	3
	4	5	6
	7 _____		
2.5 လက်ရှိအိမ်ထောင်ရေးအခြေအနေ (1) လူပျို/အပျို (2) အိမ်ထောင်ရှိ (3) လင်ယောက်ျားကွယ်လွန်(မုဆိုးမ) (4) အိမ်ထောင်ကွဲ (5) ပတ်သက်သူရှိ (ရည်းစား) What is your current marital status? (1) Single (2) Married (3) Widowed (4) Divorced (5) In a relationship	1	2	
	3	4	
	5		
2.6 [အိမ်ထောင်ရှိ သို့ ပတ်သက်သူရှိဆိုလျှင်] လက်ရှိတွင်သင်၏ အဖော်နှင့်အတူနေနေသလား။ (1) ဟုတ် (0) မဟုတ် [If married or in a relationship] Are you currently living with your partner? (1) Yes (0) No	Yes (1)	No (0)	
2.7 သင့်ကို ဘယ်မှာမွေးသလဲ။ (1) မြန်မာနိုင်ငံ (2) ထိုင်းနိုင်ငံ (3) အခြား (အသေးစိတ်ဖော်ပြပါ) Where were you born? (1) Burma (2) Thailand (3) Other (specify)	1	2	3
အကယ်၍ ဖြေဆိုသူမှ မေးခွန်း ၂.၇ ကို "မြန်မာပြည်" ဟုဖြေဆိုပါက မေးခွန်း ၂.၈ ၊ ၂.၉ နှင့် ၂.၁၀ တို့ကိုမေး ပါ။ If respondent answers "Burma" to question 2.7, ask questions 2.8, 2.9 and 2.10			
2.8 ထိုင်းနိုင်ငံကိုစရောက်စက အသက်ဘယ်နှစ်နှစ်လဲ။ How old were you when you first came to Thailand?			
2.9 ထိုင်းနိုင်ငံကို ဘယ်နှစ်က ရောက်တာလဲ။ What year was it when you first came to Thailand?			
2.10 ထိုင်းနိုင်ငံကိုဘာ့ကြောင့်လာခဲ့ရတာလဲ။ [ဖတ်ပြ၍ တခုထက်ပိုပြီး ဝိုင်းနိုင်ပါသည်။] (1) ပဋိပက္ခ သို့ အကြမ်းဖက်မှု (2) လိင်ပိုင်းဆိုင်ရာ သို့ ခန္ဓာကိုယ်ပိုင်းဆိုင်ရာ အကြမ်းဖက် မှု (3) ဝင်ငွေတိုးမှု/မြန်မာနိုင်ငံတွင် မိသားစုစားဝတ်နေရေး ပြဿနာ (4) မြန်မာနိုင်ငံမှ မိသားစုပြဿနာ (5) ထိုင်းနိုင်ငံမှ မိသားစု၊သူငယ်ချင်းများနှင့် လာရောက်ဆက်သွယ်သည်။ (6) မြေပြဿနာများကြောင့် (7) အတင်းအကြပ်လုပ်အားပေးခိုင်းစေခြင်း (သို့) မြန်မာနိုင်ငံတွင် စစ်တပ်တွင်းသို့ စုဆောင်းခံရခြင်း (8) သဘာဝပတ်ဝန်းကျင်ပြဿနာ (ရေကြီးခြင်း ၊ မိုးခေါင်ခြင်း) (9) အခြား (အတိအကျဖော်ပြပါ) What was your motivation for coming to Thailand? [READ and Circle all that apply] (1) Conflict or violence (2) Physical or sexual abuse (3) Improve income/ livelihoods problems in Burma (4) Family problems in Burma (5) Join family or friends in Thailand (6) Land disputes (7) Forced labor or recruitment to armed forces in Burma (8) Environmental problems (flood, drought)	1	2	3	4
	5	6	7	8
	9 _____			

(9) Other (specify)		
2.11 ထိုင်းနိုင်ငံရှိ ဒုက္ခသည်စခန်းထဲတွင် နေဘူးသလား။ (1) ဟုတ် (0) မဟုတ် Did you ever live in a refugee camp in Thailand? (1) Yes (0) No	Yes (1)	No (0)
2.12 ထိုင်းနိုင်ငံရှိဒုက္ခသည်စခန်းတခုခုတွင် မှတ်ပုံတင်ထားဘူးပါသလား။ (1) ဟုတ် မှတ်ပုံတင်ထားဘူးပါသည် ။ (0) မဟုတ် မှတ်ပုံ မတင်ထားဘူးပါ ။ Have you ever been registered in a refugee camp in Thailand? (1) Yes, I have been registered (0) No, I have never been registered	Yes (1)	No (0)
2.13 မြန်မာနိုင်ငံကို ပိုက်ဆံပို့သလား။ (1) ဟုတ် (0) မဟုတ် Do you send money to Burma? (1) Yes (0) No	Yes (1)	No (0)
2.14 ထိုင်းနိုင်ငံတွင် သင်၏အပတ်စဉ် မိသားစုပျမ်းမျှဝင်ငွေဘယ်လောက် ရှိသလဲ။ What is your average household weekly income in Thailand?		
2.15 ထိုင်းနိုင်ငံရှိသင့်မိသားစု အတွက် ပြီးခဲ့သည့် ရက် ၃၀ တွင် အောက်မှမည်သည့် ဖော်ပြချက်နှင့် အကိုက်ညီဆုံးဖြစ်ပါသ လဲ။ (1) အမြဲတမ်းစားစရာအလုံအလောက်ရှိကာ စားချင်သည့် အစားအစာများလည်းဖြစ်ပါသည်။ (2) စားစရာအလုံအလောက်ရှိသော်လည်း စားချင်သောအ စားအစာများတော့ မဟုတ်ပါ။ (3) တခါတရံတွင် စားရန်အစားအစာ မလုံလောက်ပါ။ (4) အခါတော်တော်များများတင် စားရန်အစားအစာမလုံ လောက်ပါ။ Which of the following statements best describes your household in Thailand in the last 30 days? (1) We always have enough to eat and the kinds of food that we want to eat; (2) We have enough to eat but not the kinds of food that we want to eat; (3) Sometimes we don't have enough to eat; (4) Often we don't have enough to eat	1	2
	3	4
2.16 ခင်ဗျားမှာ အသက် ၁၈ နှစ်အောက်ကလေး ဘယ်နှစ်ယောက် ရှိသလဲ [ကလေးမရှိပါက "၀" ဟု ရေးပါ။] How many children do you have under the age of 18? [If no children, write zero]		
3. ရွှေ့ပြောင်းမှုသမိုင်း နှင့် အတွေ့အကြုံများ Migration History and Experiences		
3.1 အလုပ်အတွက် ထိုင်းနိုင်ငံတွင်း၌သွားလာသော သို့မဟုတ် ထိုင်းနိုင်ငံသို့ လာရောက်သော ခရီးစဉ်များအတွက် ကယ်ရီ/ ပွဲစား များကို အသုံးပြုခဲ့ဘူးပါသလား။ (1) ဟုတ် အသုံးပြုခဲ့ဘူးပါသည် ။ (0) မဟုတ် အသုံးမပြုခဲ့ဘူးပါ ။ Did you ever use a broker or carrier for movement or transport coming or traveling to Thailand or moving within Thailand for work? (1) Yes, I have used (0) No, I have never used	Yes (1)	No (0)

<table>
<tr><td rowspan="3">3.2 [ဟုတ် အသုံးပြုခဲ့ဘူးသည် ဟုဆိုပါက] ထို ပွဲစား/ကယ်ရီမှ အောက်ပါ တို့ကို ကူညီလုပ်ဆောင်ပေးသည်။
[ဖတ်ပြ၍ တခုထက်ပိုပြီး ဝိုင်းနိုင်ပါသည်။]
(1) ခရီးသွားလာမှု
(2) စစ်ဆေးရေးဂိတ်များတွင် ပိုက်ဆံပေးခြင်း
(3) ထိုင်းနိုင်ငံသို့ နယ်စပ်သို့ ဖြတ်ကျော်ပေးခြင်း
(4) အလုပ်အတွက်စုဆောင်းခြင်း
(5) လမ်းခရီးတွင် နေထိုင်ရန်နေရာ များအတွက်စီစဉ်ပေးခြင်း
(6) အလုပ်အတွက် လေ့ကျင့်ပေးခြင်း
(7) ထိုင်းနိုင်ငံတွင် အလုပ်လုပ်ကိုင်ခြင်းအပေါ် အကြံပေးခြင်း
(8) နေရာသစ်တွင် တစုံတယောက်နှင့် တွေ့ရန်စီစဉ်ပေးခြင်း
(9) အခြား - အသေးစိတ်ဖော်ပြပါ။
[If yes] Did your broker or carrier help with: [READ and select all that apply]
(1) Transportation
(2) Payment at checkpoints
(3) Crossing the border to Thailand
(4) Recruitment for a job
(5) Arranging for places to stay during travel
(6) Training for a job
(7) Advice on working in Thailand
(8) Arranging for someone to meet you at a new location
(9) Other – specify</td><td>1</td><td>2</td><td>3</td><td>4</td></tr>
<tr><td>5</td><td>6</td><td>7</td><td>8</td></tr>
<tr><td colspan="4">9 _____</td></tr>
<tr><td>3.3 ထိုင်းနိုင်ငံအတွင်းတွင် သို့မဟုတ် ထိုင်းနိုင်ငံသို့ သွားလာနေစဉ် တွင် အာဏာပိုင်များအား လာဘ်ငွေအတင်းအကြပ် ပေးရန် အခိုင်းခံခဲ့ရသလား။
(1) ဟုတ် (0) မဟုတ်
Were you ever forced to pay a bribe to any authorities during transport while traveling to Thailand or moving within Thailand?
(1) Yes (0) No</td><td colspan="2">Yes (1)</td><td colspan="2">No (0)</td></tr>
<tr><td>3.3a ထိုင်းနိုင်ငံသို့လာရောက်စဉ် (သို့) ထိုင်းနိုင်ငံတွင်း၌ သွားလာစဉ်တို့တွင် စစ်ဆေးရေးဂိတ်များတွင် ပိုက်ဆံပေးခဲ့ရဘူးသလား။
Have you ever had to pay money at a checkpoint while traveling to Thailand or moving within Thailand?
(1) Yes (0) No</td><td colspan="2">Yes (1)</td><td colspan="2">No (0)</td></tr>
<tr><td>3.4 ထိုင်းနိုင်ငံတွင်း သို့မဟုတ် ထိုင်းနိုင်ငံသို့ သွားလာနေစဉ်တွင် ငွေ (သို့) အခြားပစ္စည်းများ (အထောက်အထား စာရွက်စာတမ်းများ အပါအဝင်) အခိုးခံရသည့် အတွေ့အကြုံ ရှိခဲ့ဘူးလား။
(1) ဟုတ် ရှိခဲ့ဘူးသည် ။ (0) မဟုတ် မရှိခဲ့ဘူးပါ ။
Did you ever experience theft of money or other possessions (including documentation) while traveling to Thailand or moving within Thailand?
(1) Yes, I have experienced (0) No, I have not experienced</td><td colspan="2">Yes (1)</td><td colspan="2">No (0)</td></tr>
<tr><td>3.5 အကြမ်းဖက်ခံရတဲ့အတွေ့အကြုံများကို ဆွေးနွေးရန် ခက်ခဲ နိုင်မှန်း သိပါတယ်။ ထိုင်းနိုင်ငံတွင်း သို့မဟုတ် ထိုင်းနိုင်ငံသို့ သွားလာနေစဉ်တွင် သင့်အား ကိုယ်ထိလက်ရောက် သို့မဟုတ် လိင်ပိုင်းဆိုင်ရာအကြမ်းဖက် ခြိမ်းခြောက်ခံရခြင်းများ ကြုံတွေ့ခဲ့ဖူးပါသလား။
(1) ဟုတ် ကြုံတွေ့ခဲ့ဖူးပါသည် ။ (0) မဟုတ် မကြုံတွေ့ခဲ့ဖူးပါ ။
I know it can be difficult to discuss experiences of abuse. Have you ever experienced threats of physical or sexual violence while traveling to Thailand or moving within Thailand?
(1) Yes, I have experienced (0) No, I have not experienced</td><td colspan="2">Yes (1)</td><td colspan="2">No (0)</td></tr>
</table>

3.6 ထိုင်းနိုင်ငံတွင်း သို့မဟုတ် ထိုင်းနိုင်ငံသို့ သွားလာနေစဉ်တွင် လိင်ကိစ္စ သို့မဟုတ် လိင်ပိုင်းဆိုင်ရာ အပြုအမူတို့ ကို သင် မလုပ်ချင်ပဲလုပ်ခဲ့ရ ခြင်းမျိုးကြုံတွေ့ခဲ့ဖူးပါသလား။ (1) ဟုတ် ကြုံတွေ့ခဲ့ဖူးပါသည် ။ (0) မဟုတ် မကြုံတွေ့ခဲ့ဖူးပါ ။ Have you ever experienced unwanted sex or sexual acts while traveling to Thailand or moving within Thailand? (1) Yes, I have experienced (0) No, I have not experienced	Yes (1)	No (0)
3.7 ထိုင်းနိုင်ငံတွင်း သို့မဟုတ် ထိုင်းနိုင်ငံသို့ သွားလာနေစဉ်တွင် ကိုယ်ထိလက်ရောက်အကြမ်းဖက်ခံရခြင်း - အဓိပ္ပါယ်မှာ ထိုးခြင်း၊ ရိုက်ခြင်း၊ နာကျင်ထိခိုက်စေခြင်း သို့မဟုတ် အခြားအကြမ်းဖက်မှု များ တွေ့ကြုံခဲ့ဘူးပါသလား။ (1) ဟုတ် ခံခဲ့ရဘူးပါသည်။ (0) မဟုတ် မခံခဲ့ရဘူးပါ ။ Have you ever experienced physical abuse, meaning hitting, punching, getting beat up, or other violence while traveling to Thailand or moving within Thailand? (1) Yes, I have experienced (0) No, I have not experienced	Yes (1)	No (0)
3.8 ထိုင်းနိုင်ငံတွင်း သို့မဟုတ် ထိုင်းနိုင်ငံသို့ သွားလာနေစဉ်တွင် လှည့်ဖျား ခံရခြင်း၊လိမ်လည် ခံရ ခြင်း သို့ လိမ်ညာ ခံရ ခြင်း များရှိခဲ့ဖူးသလား (1) ဟုတ် ရှိခဲ့ဘူးပါသည် ။ (0) မဟုတ် မရှိခဲ့ဘူးပါ ။ Have you ever been deceived, defrauded or cheated while traveling to Thailand or moving within Thailand? (1) Yes, I have experienced that (0) No, I have not experienced that	Yes (1)	No (0)
3.9 ထိုင်းနိုင်ငံတွင်း သို့မဟုတ် ထိုင်းနိုင်ငံသို့ သွားလာနေစဉ်တွင် လုပ် ပိုင်ခွင့်၊ ရာထူးရာခံ ရှိသောတစုံတယောက်၏ အခွင့်အရေးယူခြင်း ကို ခံခဲ့ရဘူးသလား။ (1) ဟုတ် ခံခဲ့ရဘူးပါသည် ။ (0) မဟုတ် မခံခဲ့ရဘူးပါ ။ Did someone in a position of power ever take advantage of you while you were traveling to Thailand or moving within Thailand? (1) Yes, that has happened to me (0) No, that has not happened to me	Yes (1)	No (0)
3.10 ထိုင်းနိုင်ငံတွင်း သို့မဟုတ် ထိုင်းနိုင်ငံသို့ သွားလာနေစဉ်တွင် သင်၏ရွှေပြောင်းခြင်းကို စီစဉ်ပေးသည့်အတွက် အဖိုးအခ ပေးခဲ့ရဘူးသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever paid a fee for arranging your movement while traveling to Thailand or moving within Thailand? (1) Yes (0) No	Yes (1)	No (0)
4. အလုပ်အတွေ့အကြုံ Work Experiences		
4.1 ထိုင်းနိုင်ငံတွင် သင်လုပ်နေသော အလုပ်ကိုပြောပြပါ။ [အသံထွက်ဖတ်ပြကာ တခုထက်ပို၍ဝိုင်းပေးနိုင်ပါသည်။] (1) စက်ရုံအလုပ် (2) ဆောက်လုပ်ရေးအလုပ် (3) အိမ်တွင်းအလုပ် (4) လိင်မှုကိစ္စ အလုပ် (5) စားသောက်ဆိုင်/ဘား အလုပ် (6) စိုက်ပျိုးရေး (7) ဆိုင်အသေးလေးများ (8) အခြား (အသေးစိတ်ဖော်ပြပါ) Please tell me all the jobs you have had in Thailand? [READ OUT LOUD AND SELECT ALL THAT APPLY] (1) Factory work (2) Construction work (3) Domestic work (4) Sex work (5) Restaurant/ bar work (6) Agriculture (7) Small shop (8) Other (specify)	1 3 5 7	2 4 6 8 _____
4.2 အလုပ်ရှာဖွေရန် ပွဲစားကိုအသုံးပြုခဲ့ဖူး ခြင်းသို့မဟုတ် အသုံးပြုရန်ကြိုးစားခဲ့ဖူးခြင်းများ ရှိခဲ့ဖူးသလား ။ (1) ဟုတ် ရှိခဲ့ဘူးပါသည် ။ (0) မဟုတ် မရှိခဲ့ဘူးပါ ။ Did you ever use, or try to use, a broker to find a job? (1) Yes, I have	Yes (1)	No (0)

used (0) No, I have not used			

4.3 [ပွဲစားနှင့်သွားသည်ဆိုပါက] သူ/သူမကဘာ လုပ်ပေးလဲ။[အသံထွက်ဖတ်ပြကာ တခုထက်ပို၍ဝိုင်းပေးနိုင်ပါ သည်။] (1) အလုပ်နေရာသို့သွားလာရေး (2) အလုပ်ရှင်နှင့် မိတ်ဆက်ပေး (3) သင်တန်း ပေးခြင်း သို့ စီစဉ်ပေးခြင်း (4) အလုပ်အဆက်အသွယ်စီစဉ်ပေးခြင်း (5) အလုပ်မှတ်ပုံတင်အတွက်စီစဉ်ပေးခြင်း (6) နေရေးထိုင်ရေးအတွက်စီစဉ်ပေးခြင်း (7) အခြား (အသေးစိတ်ဖော်ပြပါ) [If Yes] What activities did he/she perform? [READ OUT LOUD AND CIRCLE ALL THAT APPLY] (1) Transportation to the job location (2) Introduction to the employer (3) Arranged for or provided training (4) Arrangement of work contract (5) Arrangement of work registration (6) Arrangement of living situation (7) Other (specify)	1	2	3
	4	5	6
	7 _____		
4.4 [မေးခွန်း ၄.၂ ကို ဟုတ် ဆိုပါက] ပွဲစားကိုဘယ်သူက ပိုက်ဆံပေးသလဲ။ (1) မိမိဘာသာ (2) မိသားစုမှ (3) အလုပ်ရှင်မှ (4) အခြား (အသေးစိတ်ဖော်ပြပါ) [If yes to 4.2] Who paid the broker? (1) Myself (2) Family (3) Employer (4) Other (specify)	1	2	3
	4 _____		
4.5 အလုပ်အကိုင် အတင်းအကြပ် သို့ ခြိမ်းခြောက်၍ လုပ်ခိုင်း ခြင်းခံရဘူးလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been threatened, pressured or compelled to take a job? (1) Yes (0) No	Yes (1)		No (0)
4.6 အလုပ်ရမည်ဆိုပြီး လှည့်ဖျား ခံရခြင်း၊လိမ်လည် ခံရခြင်း (သို့)လိမ်ညာ ခံရခြင်း များရှိခဲ့ဖူးသလား (1) ဟုတ် (0) မဟုတ် Have you ever been deceived, defrauded or cheated into taking a job? (1) Yes (0) No	Yes (1)		No (0)
4.7 သင်အလုပ်တခုကို လက်ခံရန်အတွက်တစုံတယောက် က ကိုယ်ထိ လက်ရောက် အင်အားသုံး ခိုင်းစေခြင်းခံရဘူးလား။ (1) ဟုတ် (0) မဟုတ် Has physical force ever been used by anyone to make you take a job? (1) Yes (0) No	Yes (1)		No (0)
4.8 သင်အလုပ်တခုကို လက်ခံရန်အတွက် အာဏာရှိသောလူ သို့ အာဏာ ပိုင်တို့မှ အမြတ်ထုတ်ဘူးပါသလား။ (အာဏာပိုင် သို့ အာဏာလုပ်ပိုင်ခွင့်ရှိသူ [ဥပမာ သူဌေး] တို့မှ အာဏာကိုအသုံး ပြုကာ မလုပ်လိုသောအလုပ်ကိုအ တင်းအကြပ်ခိုင်းစေခြင်း ဖြင့် သူတို့ အကျိုးအမြတ်တစုံတရာရအောင်လုပ်ခြင်း ခံရဘူးလား။) (1) ဟုတ် (0) မဟုတ် Have you ever felt that a person with power or authority took advantage of you to make you take a job? (1) Yes (0) No	Yes (1)		No (0)
4.9 သင်အလုပ်ထွက်ချင်ခဲ့သော်လည်း အပစ်ပေးခံရမည်ဟူသော စိုးရိမ် စိတ်ကြောင့် အလုပ်မှ မထွက်ခဲ့ရခြင်းမျိုးရှိခဲ့ဘူးသလား။ (1) ဟုတ် ရှိခဲ့ဘူးပါသည် ။ (0) မဟုတ် မရှိခဲ့ဘူးပါ ။ Have you ever been unable to leave a job due to a fear of punishment? (1) Yes, I have been unable (0) No, I have not been unable	Yes (1)		No (0)
4.10 အားလပ်ချိန်တွင် အလုပ်နေရာမှ အပြင်ထွက် ခွင် ကန့်သတ် ထားခြင်းမျိုး ခံခဲ့ရဘူးသလား။ (1) ဟုတ် ခံခဲ့ရဘူးပါသည် ။ (0) မဟုတ် မခံခဲ့ရဘူးပါ ။ Have you ever been restricted from leaving your workplace on your free	Yes (1)		No (0)

time? (1) Yes, I have been restricted (0) No, I have not been restricted		
4.11 အလုပ်နေရာမှ ထွက်ပြေးလွတ်မြောက်ရန် ကြိုးစားဘူးပါသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever tried to escape a workplace? (1) Yes (0) No	Yes (1)	No (0)
4.12 အလုပ်ရှင်ထံတွင် အကြွေးတင်နေသောကြောင့် အလုပ်မှထွက် မရခြင်းမျိုး ကြုံခဲ့ဘူးပါသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been unable to leave a job due to debt to an employer? (1) Yes (0) No	Yes (1)	No (0)
4.13 အလုပ်ရှင်မှ သင်၏ အထောက်အထားတခုခုအား အလုပ်လုပ်ရန် အတင်းအကြပ်ဖိအားပေးသည့် အနေဖြင့် သိမ်းယူထား ခြင်းမျိုး ခံခဲ့ရဘူးပါသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever had documents retained by an employer to force you to work? (1) Yes (0) No	Yes (1)	No (0)
4.14 သင်ဖျားနေသည့်အခါ အလုပ်လုပ်ရန် အတင်းအကြပ်ခိုင်း စေခံရဘူးသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been forced to work when you are sick? (1) Yes (0) No	Yes (1)	No (0)
4.15 အချိန်ပိုအတင်းအကြပ် ဆင်းခိုင်းတာခံရဘူးသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been forced to work overtime? (1) Yes (0) No	Yes (1)	No (0)
4.16 နေထိုင် စားသောက် စရိတ်တို့အတွက် လခဖြတ်ခြင်း ခံရ ဘူးလား။ (1) ဟုတ် (0) မဟုတ် Have you ever had payment deducted for food and living expenses? (1) Yes (0) No	Yes (1)	No (0)
4.17 လုပ်ခမပေးပဲ အတင်းကြပ် အလုပ်ခိုင်းစေခြင်းခံရဘူးလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been forced to work without payment? (1) Yes (0) No	Yes (1)	No (0)
4.18 သင်လစာကို အပစ်ပေးခြင်း သို့ ခြိမ်းခြောက်ခြင်း ပုံစံမျိုးဖြင့် ဖြတ်တောက်ခြင်း သို့ မပေးပဲထားခြင်းမျိုး ကြုံတွေ့ရဘူး လား။ (1) ဟုတ် (0) မဟုတ် Have you ever had your salary withheld or reduced as a form of punishment or threat? (1) Yes (0) No	Yes (1)	No (0)
4.19 ရဲဖမ်းမခံရအောင်ဟုဆိုကာ အလုပ်ရှင်အား သင့်လခထဲမှ အပိုထပ်ပေးရသည် များရှိဘူးလား။ (1) ဟုတ် (0) မဟုတ် Have you ever had to pay additional fees for police protection to your employer out of your salary? (1) Yes (0) No	Yes (1)	No (0)
4.20 အလုပ်ရှင်/ဝဏ္ဏ/မန်နေဂျာ တို့မှ ကန်ကျောက်ခြင်း (သို့) နာ ကျင်အောင်လုပ် ခြင်း သို့ ပါးရိုက်ခြင်း ခံရဘူးလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been kicked, hit or slapped by an employer, manager or *wunna*? (1) Yes (0) No	Yes (1)	No (0)
4.21 အလုပ်ရှင်/ဝဏ္ဏ/မန်နေဂျာ တို့မှ အော်ဟစ်သည်ကို ခံရဘူး လား။ (1) ဟုတ် (0) မဟုတ် Have you ever been yelled at by an employer, manager or *wunna*? (1) Yes (0) No	Yes (1)	No (0)
4.22 အလုပ်ရှင်/ဝဏ္ဏ/မန်နေဂျာ တို့မှအာဏာပိုင်များလက်သို့ အပ်မည်ဟု ခြိမ်းခြောက်ခြင်းမျိုးခံရဘူးလား။ (1) ဟုတ် (0) မဟုတ် Has an employer, manager or *wunna* ever threatened to turn you into authorities? (1) Yes (0) No	Yes (1)	No (0)
4.23 အလုပ်တွင် ထိခိုက်ခံရဘူးသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been injured at work? (1) Yes (0) No	Yes (1)	No (0)
4.24 မေးခွန်း ၄.၂၃ ကို ဟုတ် ဆိုပါက နောက်ဆုံးထိခိုက်ခံခဲ့ရမှုကို ဖော်ပြပါ။ If Yes to 4.23, describe most recent injury.		

4.25 မေးခွန်း ၄.၂၃ ကို "ဟုတ်" ဆိုပါက ထိုထိခိုက်မှုကြောင့် အလုပ်မှနားရက်ယူခဲ့ရပါသလား။ (1) ဟုတ် (0) မဟုတ် If Yes to 4.23, did this injury require you to take time off work? (1) Yes (0) No	Yes (1)	No (0)
4.26 မေးခွန်း ၄.၂၃ ကို "ဟုတ်" ဆိုပါက ထိုထိခိုက်မှုကြောင့် ဆေးကုသမှုခံယူခဲ့ရပါသလား။ (1) ဟုတ် (0) မဟုတ် If Yes to 4.23, did this injury require you to obtain medical care? (1) Yes (0) No	Yes (1)	No (0)
4.27 အလုပ်ကြောင့်ဟု သင်ယူဆသည့် ရောဂါ သို့မဟုတ် ဖျား နာမှုမျိုး သင့်တွင်ဖြစ်ခဲ့ဘူးပါသလား။ (1) ဟုတ် ဖြစ်ခဲ့ဘူးပါသည် ။ (0) မဟုတ် မဖြစ်ခဲ့ဘူးပါ ။ Have you ever had an illness or disease that you believed was related to your work? (1) Yes, I have had (0) No, I have not	Yes (1)	No (0)
4.28 မေးခွန်း ၄.၂၇ ကို "ဖြစ်ခဲ့ဘူးပါသည်" ဆိုပါက နောက်ဆုံး ဖြစ်ခဲ့သော ဖျားနာမှုကို ဖော်ပြပါ။ If Yes to 4.27, describe most recent illness.		
4.29 မေးခွန်း ၄.၂၇ ကို ဖြစ်ခဲ့ဘူးပါသည် ဆိုပါက ထိုရောဂါ သို့မဟုတ် ဖျားနာခြင်းကြောင့် အလုပ်မှ နားရက် ယူခဲ့ရပါသလား။ (1) ဟုတ် (0) မဟုတ် If Yes to 4.27, did this illness/disease require you to take time off work? (1) Yes (0) No	Yes (1)	No (0)
4.30 မေးခွန်း ၄.၂၇ ကို ဖြစ်ခဲ့ဘူးပါသည် ဆိုပါက ဟုတ်ခဲ့လျှင် ထိုဖျားနာမှု/ထိခိုက်မှုသည် ဆေးကုသမှုခံယူ ရသည်အထိဖြစ်ခဲ့ပါသလား။ (1) ဟုတ် (0) မဟုတ် If Yes to 4.27, did this illness/disease require you to obtain medical care? (1) Yes (0) No	Yes (1)	No (0)
အသံထွက်၍ဖတ်ပြပါ - အချို့ရွှေ့ပြောင်းအလုပ်သမားတွေဟာ လိင်ပိုင်းဆိုင်ရာ ကာအိန္ဒြေပျက်ပြားအောင် လုပ်ဆောင်မှုနဲ့ လိင်ပိုင်းဆိုင်ရာ အကြမ်းဖက်မှုများကို ကြုံတွေ့နေကြရတယ် လို့သိရပါတယ်။ ဒါတွေနဲ့ ပတ်သက်လို့ ကျနော်/ကျမ တို့ ဟာ အလွန်စိုးရိမ်မိပြီး ဒီအတွေ့အကြုံတွေဟာ ရွှေ့ပြောင်းအလုပ်သမားတွေ ကြားမှာဘယ်လောက်ထိများ ဖြစ်နေလဲဆိုတာကို နားလည်နိုင်ဖို့ ကြိုးစားနေကြတာပါ။ တချို့အတွေ့အကြုံတွေဟာ ပြန်ပြောပြဖို့ ခက်ခဲမယ်ဆိုတာ သိပါတယ်။ အောက်ပါ မေးခွန်းများကို တော့ ကျေးဇူးပြုပြီး အမှန်ကြုံတွေ့ခဲ့ရသလို ဖြေပေးစေချင်ပါတယ်။ ခင်ဗျားပြောပြတဲ့ အချက်အ လက်တွေကို ဘယ်သူ့ကိုမှ ပြန်မပြောပြပါဘူး။ နောက်ပြီး ဒီလေ့လာမှုမှာပါဝင်ပေးသူအားလုံးကိုလည်း ဒီမေးခွန်း တွေကို မေးတာဖြစ်ပါတယ်။ **READ OUT LOUD: We learned that some migrants are experiencing sexual harassment and violence. We are very concerned about this, and are trying to understand how common these experiences might be. I know some experiences are difficult to share. Please answer the following questions as honestly as you can. We will not tell anyone the information you tell us. Everyone who is doing this survey is being asked these questions.**		
4.31 မလိုလားအပ်တဲ့ လိင်ပိုင်းဆိုင်ရာ ပြောဆိုခံရမှုကို အလုပ်ထဲမှာ တွေ့ကြုံဘူးပါသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever experienced unwanted sexual comments in the workplace? (1) Yes (0) No	Yes (1)	No (0)
4.32 အလုပ်ထဲတွင် မလိုလားအပ်သော လိင်ပိုင်းဆိုင်ရာ တို့ထိမှုမျိုးတွေ့ကြုံဘူးပါသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever experienced unwanted sexual touching in the workplace? (1) Yes (0) No	Yes (1)	No (0)
4.33 အလုပ်ထဲတွင် အလိုမတူပဲ လိင်ဆက်ဆံခံခဲ့ရ ခြင်းမျိုး ကြုံတွေ့ခဲ့ဖူး ပါသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever experienced unwanted sex in the workplace? (1) Yes (0) No	Yes (1)	No (0)

4.34 လိင်ဆက်ဆံခဲ့ရ ခြင်းကြောင့် ငွေကြေး သို့မဟုတ် အခြားအကျိုး အမြတ်တခုခု ရရှိခဲ့ဘူးပါသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever received money or any other benefit in return for sex? (1) Yes (0) No	Yes (1)		No (0)	
4.35 မေးခွန်း ၄.၃၄ ကို ဟုတ် ဆိုပါက အသက်ဘယ်လောက်မှာ ထိုသို့ပထမဆုံး စတင် ဖြစ်ခဲ့သလည်း ။ If Yes to 4.34, how old were you when this first happened?				
4.36 မေးခွန်း ၄.၃၄ ကို ဟုတ် ဆိုပါက ဒီလိုလုပ်ခဲ့တာဟာ အလုပ်ထဲမှာလား။ (1) ဟုတ် (0) မဟုတ် If Yes to 4.34, did this happen in the workplace? (1) Yes (0) No	Yes (1)		No (0)	
4.37 အခုလက်ရှိအလုပ်က ဘာလဲ။ (1) စိုက်ပျိုးရေး (2) စက်ရုံ (3) အိမ်တွင်းအလုပ် (4) ဆောက်လုပ်ရေး (5) ဝန်ဆောင်မှုလုပ်ငန်း (အစားအစာဆိုင်၊ စားသောက်ဆိုင်) (6) ဆိုင်လုပ်သား (စူပါမားကက်၊ စတိုးဆိုင်ငယ်) (7) ဈေးအရောင်းစာရေး/လမ်းဘေး ဈေးသည် (8) ဖျော်ဖြေရေး (အက၊ ဘား အလုပ်၊ ကာရာအိုကေ) (9) လိင်အလုပ် (10) ရုံးအလုပ် (11) အခြား (အတိအကျဖော်ပြပါ) What is your current job? (1) Agriculture (2) Factory (3) Domestic work (4) Construction (5) Service work (food shop, restaurant) (6) Shop employee (supermarket, convenient store) (7) Market salesperson/ street vendor (8) Entertainment (dancing, bar work, karaoke) (9) Sex work (10) Office work (11) Other (specify)	1	2	3	4
	5	6	7	8
	9	10	11 _____	
4.38 လက်ရှိအလုပ်တွင် သို့မဟုတ် နောက်ဆုံးအလုပ်တွင် မည်မျှကြာကြာလုပ်ခဲ့လဲ။ (လဖြင့် စဉ် ပေးပါ။) How long have you been working in your current or most recent job? (list in months)				
4.39 လက်ရှိအလုပ် သို့မဟုတ် နောက်ဆုံးအလုပ် ထဲတွင် အခြေခံသန့်ရှင်းရေး အခြေအနေကို ထိန်းသိမ်း ထားပါသလား။ (ရှိပါသလား) [ဥပမာ - အိမ်သာများ သန့်ရှင်းကာ အစာစားသည့်နေရာများမှ သီးသန့်ရှိခြင်း၊ အမှိုက်ပုံးသည် သပ် သပ်ရပ်ရပ် ရှိကာလူများနေထိုင်သည့် နေရာများမှ သီးသီးသန့် သန့်ရှိခြင်း။] (1) ဟုတ် (0) မဟုတ် (2) တခါတရံ Are basic sanitary conditions maintained in your current or most recent job (e.g. Latrines clean and separate from food area, garbage is organized and separate from living area, etc) (1) Yes (0) No (2) Sometimes	Yes (1)	No (0)	Sometimes (2)	
4.40 လက်ရှိအလုပ် သို့မဟုတ် နောက်ဆုံးအလုပ်ထဲတွင် သောက်ရေ ကောင်းကောင်း ရနိုင်လား။ (1) ဟုတ် (0) မဟုတ် (2) တခါတရံ In your current or most recent job, do you have access to safe drinking water in the workplace? (1) Yes (0) No (2) Sometimes	Yes (1)	No (0)	Sometimes (2)	
4.41 လက်ရှိအလုပ် သို့မဟုတ် နောက်ဆုံးအလုပ် ထဲတွင် အန္တရာယ်ရှိသော စက်များနှင့် အလုပ်လုပ်ရသလား။ (1) ဟုတ် (0) မဟုတ် In your current or most recent job, do you work with dangerous machinery? (1) Yes (0) No	Yes (1)		No (0)	
4.42 [မေးခွန်း ၄.၄၁ ကို ဟုတ် ဆိုလျှင်] ထိုသို့လုပ်ကိုင်နိုင်ရန် သင့်ကို လုံလောက်စွာ လေ့ကျင့်ပေးထားသည်ဟုသင် ယူဆပါသလား။ (1) ဟုတ် (0) မဟုတ် If Yes to 4.41, do you feel you received adequate training? (1) Yes (0) No	Yes (1)		No (0)	
4.43 လက်ရှိအလုပ် သို့မဟုတ် နောက်ဆုံးအလုပ် ထဲတွင် ပိုးသတ်ဆေးများ သို့မဟုတ် အခြားဓာတုပစ္စည်းများနှင့် အလုပ်လုပ်ရသလား။ (1) ဟုတ် (0) မဟုတ် In your current or most recent job, do you work with pesticides or other chemicals? (1) Yes (0) No	Yes (1)		No (0)	
4.44 [မေးခွန်း ၄.၄၃ ကို ဟုတ် ဆိုလျှင်] ထိုသို့လုပ်ကိုင်နိုင်ရန် သင့်ကို လုံလောက်စွာ လေ့ကျင့်ပေးထားသည်ဟု သင် ယူဆ ပါသလား။ (1) ဟုတ်(0) မဟုတ် If Yes to 4.43, do you feel you received adequate training? (1) Yes (0) No	Yes (1)		No (0)	

4.45 လက်ရှိအလုပ် သို့မဟုတ် နောက်ဆုံးအလုပ် ထဲတွင် လစာကို အကြိမ်ဘယ်လောက်လောက် အချိန်မှန်ရဘူးသလဲ။ (1) အမြဲတမ်းနီးပါး (2) တခါတရံ (3) မရှိသလောက် (သို့) ဘယ်တော့မှ In your current or most recent job, how often do you receive your salary on time? (1) Almost always (2) Sometimes (3) Rarely or never	1	2	3
4.46 သင်၏လက်ရှိ သို့မဟုတ် နောက်ဆုံးအလုပ်တွင် အလုပ်နေရာ၌နေသလား။ (1) ဟုတ် (0) မဟုတ် In your current or most recent job, do you live on the worksite? (1) Yes (0) No	Yes (1)	No (0)	
5. အာဏာပိုင်များ **Authorities**			
အသံထွက်ဖတ်ပါ - "အာဏာပိုင်များအားဖြင့်၊ ဆိုလိုသည်မှာ မည်သည့် ရဲ သို့ လဝက အာဏာပိုင် မဆို" READ OUT LOUD: "By authorities, we mean any police or immigration authorities."			
5.1 ထိုင်းနိုင်ငံ ၌အလုပ်(သို့)အိမ် ပြင်ပတွင်ရှိနေစဉ် အာဏာ ပိုင်များမှ ရပ်တန့်ခိုင်းခြင်းမျိုး ခံခဲ့ရဘူးသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been stopped by authorities while outside the workplace and home in Thailand? (1) Yes (0) No	Yes (1)	No (0)	
5.2 ထိုင်းနိုင်ငံတွင်ရှိနေစဉ်အတွင်းအာဏာပိုင်များမှ သင့်ထံမှလာဒ် ပေးရန်အခိုင်းခံရဘူးပါသလား။ (1) ဟုတ် (0) မဟုတ် Have authorities ever demanded a bribe from you while you have been in Thailand? (1) Yes (0) No	Yes (1)	No (0)	
5.3 ထိုင်းနိုင်ငံတွင် ရှိနေစဉ်တွင် အာဏာပိုင်များမှ အလုပ်ထဲသို့ဝင် ရောက်ဖမ်းဆီးခြင်းမျိုးခံခဲ့ရဘူးသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever experienced a workplace raid by authorities while in Thailand? (1) Yes (0) No	Yes (1)	No (0)	
5.4 ထိုင်းနိုင်ငံတွင် ရှိနေစဉ်တွင် အဖမ်းခံခဲ့ရဘူးသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been arrested while in Thailand? (1) Yes (0) No	Yes (1)	No (0)	
5.5 ထိုင်းနိုင်ငံတွင် ရှိနေစဉ်တွင် အာဏာ ပိုင်များမှ ကိုယ်ထိလက် ရောက်အကြမ်းဖက်မှုမျိုး ခံခဲ့ရဘူးသလား။ကိုယ်ထိလက်ရောက်အကြမ်းဖက်ခြင်းဆိုရာတွင် ထိခိုက်နာကျင်စေခြင်း၊ ထိုးကျိတ် ခြင်း၊ ရိုက်နက်ခြင်း နှင့် အကြမ်းဖက်မှုအခြားပုံစံများကိုဆိုလိုပါ သည်။ (1) ဟုတ် (0) မဟုတ် Have you ever been physically abused by authorities while in Thailand? By physical abuse, I mean hitting, punching, getting beat up, and other forms of violence. (1) Yes (0) No	Yes (1)	No (0)	
5.6 ထိုင်းနိုင်ငံတွင် ရှိနေစဉ်တွင် အာဏာ ပိုင်များမှ လိင်ပိုင်းဆိုင်ရာ အကြမ်းဖက်မှုမျိုး ခံခဲ့ရဘူးသလား။လိင်ပိုင်းဆိုင်ရာအကြမ်းဖက်မှု ဟု ဆိုရာတွင် မလိုလားသော ထိတွေ့ခြင်း သို့မဟုတ် လိင်ပိုင်းဆိုင်ရာအပြုအမူ သို့မဟုတ် အတင်းအကြပ်ပြုလုပ်သည့် လိင် ကိစ္စ တို့ကိုဆိုလိုသည်။ (1) ဟုတ် (0) မဟုတ် Have you ever been sexually abused by authorities while in Thailand? By sexual abuse I mean unwanted touching or unwanted or forced sex. (1) Yes (0) No	Yes (1)	No (0)	
5.7 ထိုင်းနိုင်ငံတွင်ရှိနေစဉ်တွင် အာဏာပိုင်များမှ မြန်မာပြည်သို့မိမိမပြန်ချင်ပဲ ပြန်ပို့ခြင်းခံခဲ့ရဘူးသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever been sent back to Burma involuntarily by authorities while in Thailand? (1) Yes (0) No	Yes (1)	No (0)	

6. Mental Health

Safety Questions
လုံခြုံရေးမေးခွန်းများ

1. What
   ဘာ
   a. ***"I am going to ask you some questions about safety."***
      ကျွန်ပ်သင့်ကို လုံခြုံမှုနဲ့ပက်သက်တဲ့ မေးခွန်းတွေ မေးပါမယ်။

2. Why
   ဘာကြောင့်
   a. ***"We ask every person these questions because we want to be sure you are safe."***
      ကျွန်ပ်တို့ လူနာတစ်ဦးချင်းဆီကို ဒီမေးခွန်းတွေ မေးလေ့ရှိပါတယ်။ ဘာလို့လဲဆိုတော့ သင်လုံခြုံမှုရှိမရှိဆိုတာကို သေချာသိချင်လို့ပါ။

3. Assess:
   ဆန်းစစ်ပါ။
   a. ***Do you think about killing yourself?***
      သင့်ကိုယ်သင် သတ်သေဖို့ တွေးမိပါလား။

   b. ***Do you have a plan for killing yourself?***
      သင့်ကိုယ်သင် သတ်သေရန်အတွက် အစီအစဉ်ရှိလား။

   c. ***Do you have a way to complete that plan, access to what you would need?***
      အဲ့ဒီအစီအစဉ်ကို အကောင်အထည်ဖော်ဖို့ နည်းလမ်းရှိပါသလား၊ ဘာတွေလိုအပ်မလဲ။

   d. ***Have you ever tried to kill yourself before?***
      သင်အရင်ကသေကြောင်းကြံဖို့ ကြိုးစားဖူးလား။

Directions for SAW staff member: SAW ဝန်ထမ်းများအတွက် ညွှန်ကြားချက်

If client says yes to b, c, or d, call the SAW Mental Health Focal Point immediately!
ဝင်ရောက်လာသူကb, c, dတို့ကို ဟုတ်သည်ဆိုပါကSAWစိတ်ကျန်းမာရေး ဆက်သွယ်ရမည့်သူ ကိုချင်ချင်းဆက်သွယ် ပါ။

If client says yes to a, call the SAW Mental Health Focal Point when you complete your interview with the client.
ဝင်ရောက်လာသူမှ a ကို ဟုတ် ဟုဖြေပါက ဝင်ရောက်လာသူနှင့် အင်တာဗျူးလုပ်ပြီးသောအခါမှ SAW စိတ်ကျန်းမာရေး ဆက်သွယ်ရမည့်သူ ကိုခေါ်ပါ။

လုပ်ဆောင်ပေးခဲ့သောအလုပ် (သက်ဆိုင်ရာ အကွက်ကို ခြစ်ပါ)
ACTION TAKEN (Check relevant box)

ဖြေဆိုသူမှ အားလုံးကို မဟုတ် ဟုဖြေပါသည်။ Client Answered NO to all	ဖြေဆိုသူမှ မေးခွန်း a ကို ဟုတ် ဟုဖြေပါသည်။ Client Answered YES to a	ဖြေဆိုသူမှ b, c သို့မဟုတ် d ကို ဟုတ် ဟုဖြေပါသည်။ Client Answered YES to b, c or d

အသံထွက်၍ဖတ်ပြပါ - ထိုမေးခွန်းအားလုံးအတွက် ပြီးခဲ့သည့် ရက်၃၀ အတွင်း ထိုပြဿနာများကို ဘယ်နှစ်ကြိမ်မျှတွေ့ကြုံခဲ့ရသလဲ။
READ OUT LOUD: For all these questions: how often in the last 30 days have you experienced this problem?

စိတ်ဓါတ်ကျခြင်း
Depression

	Problem ပြဿနာ	 တခါမှမရှိ Never	 တခါတရံ Sometimes	 အကြိမ်တော်တော်များများ Often	 အချိန်တိုင်း All the time
6.1	Feeling hopeless about the future; don't care what will happen ရှေ့အနာဂါတ်အတွက် မျှော်လင့်ချက်မရှိဟု ခံစားရခြင်း။ "မျှော်လင့်ချက်မဲ့၊ ဘာဖြစ်ဖြစ်ဂရုမစိုက်တော့ဘူး"	0	1	2	3
6.2	Crying easily, cry ငိုကြွေးလွယ်ခြင်း။ ငိုယိုခြင်း။	0	1	2	3
6.3	Feeling sad, unhappy ဝမ်းနည်းမှုခံစားရခြင်း။ မပျော်ရွှင်ခြင်း။	0	1	2	3
6.4	Feeling lonely အထီးကျန်သည်ဟု ခံစားရခြင်း။	0	1	2	3
6.5	Loss of sexual interest or pleasure ကာမဆက်ဆံရာတွင် စိတ်ဝင်စားမှုမရှိ (သို့) ကာမအရသာမရှိခြင်း။	0	1	2	3
6.6	Feeling no interest in things/ less interest in daily activities, no more interest in work မည်သည့်အကြောင်းကိစ္စကိုမျှစိတ်ဝင်စားမှုမရှိခြင်း (သို့မဟုတ်) နေ့စဉ်လုပ်ငန်းဆောင်တာများတွင် စိတ်ဝင်စားမှုမရှိ ခြင်း၊ "အလုပ်မှာ စိတ်ဝင်စားမှုမရှိတော့ဘူး"	0	1	2	3
6.7	Feeling low in energy, slowed down အင်အားချည့်နဲခြင်း၊ အင်အားတဖြည်းဖြည်းကျဆင်းလာသကဲ့သို့ ခံစားရခြင်း	0	1	2	3
6.8	Poor appetite, no appetite for food အစားအသောက်ပျက်ခြင်း၊ အစာစားချင်စိတ်မရှိခြင်း	0	1	2	3
6.9	Difficulty falling asleep, staying asleep, can't sleep well အိပ်ပျော်ရန်ခက်ခဲခြင်း၊ အိပ်ပျော်ပြီးပြန်နိုးလျှင် လည်း ဆက်လက်အိပ်ပျော်ရန် ခက်ခြင်း။ အိပ်မပျော်ခြင်း။	0	1	2	3
6.10	Thoughts of ending your life, commit suicide မိမိဘဝကိုအဆုံးစီရင်ရန် အတွေးဝင်ခြင်း။ "ကိုယ့်ကိုယ်ကို သတ်သေခြင်း"	0	1	2	3
6.11	Feeling of being trapped or caught, feels very uncomfortable and smothered "စိတ်ကျဉ်းကြပ်၊ မွန်းကြပ်သည်ဟု ခံစားရခြင်း"	0	1	2	3
6.12	Worrying too much about things; worried အကြောင်းအရာများအတွက် စိတ်ပူပန်မှုများခြင်း။ "စိုးရိမ်ပူပန်ခြင်း"	0	1	2	3
6.13	Blaming self for things မိမိကိုယ်ကို အပြစ်တင်ခြင်း။	0	1	2	3

6.14	Feeling everything is effort အရာရာကိုခက်ခက်ခဲခဲလုပ်ကိုင်ရသည်ဟုခံစားရခြင်း။	0	1	2	3
6.15	Feelings of worthlessness, no value တန်ဖိုးမရှိ၊ အဖိုးမတန်ဟု မိမိကိုယ်ကိုခံစားရခြင်း။	0	1	2	3
6.16	Don't talk to anyone "ဘယ်သူနဲ့မှစကားမပြောဘူး"	0	1	2	3
6.17	Disappointed "စိတ်ညစ်တယ်"	0	1	2	3

အသံထွက်၍ဖတ်ပြပါ - ထိုမေးခွန်းအားလုံးအတွက် ပြီးခဲ့သည့် ရက်၃၀ အတွင်း ထိုပြဿနာများကို ဘယ်နှစ်ကြိမ်မျှတွေ့ကြုံခဲ့ရသလဲ။
READ OUT LOUD: For all these questions: how often in the last 30 days have you experienced this problem?

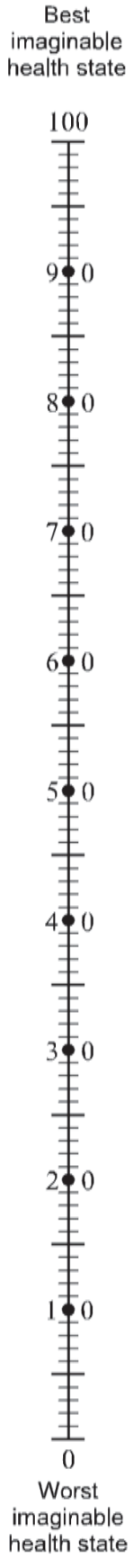
စိုးရိမ်ပူပန်ခြင်း
Anxiety

	Problem ပြဿနာ	 တခါမှမရှိ Never	 တခါတရံ Sometimes	 အကြိမ် တဝက်ခန့် Half of the time	 အကြိမ် တော် တော်များများ Often	 အချိန်တိုင်း All the time
6.18	Suddenly scared for no reason အကြောင်းမရှိဘဲရုတ်တရက် ကြောက်ရွံ့ခြင်း။	0	1	2	3	4
6.19	Feeling fearful, afraid, afraid all the time စိတ်ထဲတွင် ကြောက်စိတ်ဝင်ခြင်း၊ အမြဲတမ်းကြောက်ရခြင်း။	0	1	2	3	4
6.20	Faintness, dizziness မူးမေ့ခြင်း၊ မူးတယ်။	0	1	2	3	4
6.21	Nervousness or shakiness inside စိုးရိမ်ကြောက်ရွံ့ခြင်း(သို့)စိတ်ထဲတွင်တုန်လှုပ်ခြင်း။	0	1	2	3	4
6.22	Heart beats quickly နှလုံးခုန်မြန်	0	1	2	3	4
6.23	Trembling, feel very shaky ခြေတုန်လက်တုန်ဖြစ်ခြင်း။ တုန်တုန်ရီရီဖြစ်ခြင်း	0	1	2	3	4
6.24	Feeling tense or keyed up စိတ်တင်းကျပ်ခြင်း (သို့) ချုပ်နှောင်ထားခြင်းခံရသလိုမျိုး ခံစားရခြင်း။	0	1	2	3	4
6.25	Spells of terror or panic ကြောက်ရွံ့ခြင်း (သို့)အထိတ်တလန့် ဖြစ်ခြင်းများ	0	1	2	3	4
6.26	Feeling restless, fidget all the time ငြိမ်ငြိမ်နေ၍မရခြင်း၊ ဂဏှာမငြိမ်ဖြစ်ခြင်း၊	0	1	2	3	4
6.27	Distrust, feel suspicious လူတစ်ဦးဦးကို အယုံအကြည်မရှိ၊ မယုံသင်္ကာစိတ်ရှိ	0	1	2	3	4
6.28	Feel stress စိတ်ဖိစီးမှုခံစားရခြင်း	0	1	2	3	4

7. အကြွေး Debt			
7.1 လက်ရှိအကြွေးတင်နေပါသလား။ (1) ဟုတ် (0) မဟုတ် Are you currently in debt? (1) Yes (0) No	Yes (1)		No (0)
7.2 [မေးခွန်း ၇.၁ ကို ဟုတ် ဆိုပါက] အောက်ပါတို့ကို အသံထွက်ဖတ်ပြ၍ ဖြစ်နိုင်သော အကြောင်းပြချက် အားလုံး ကိုဝိုင်းပါ။ (1) ထိုင်းနိုင်ငံသို့ ရွှေ့ပြောင်းနေထိုင်ခြင်းကြောင့် (2) ထိုင်းနိုင်ငံအတွင်းတွင် ရွှေ့ပြောင်းနေထိုင်ခြင်းကြောင့် (3) မှတ်ပုံတင်ခြင်း/အထောက်အထားပြုလုပ်ခြင်းကြောင့် (4) ကျန်းမာရေးစောက်ရှောက်မှုစရိတ်များကြောင့် (5) စားသောက် နေထိုင် စသည့်နေ့စဉ် ကုန်ကျစရိတ်များ ကြောင့် (6) အလုပ်အတွက် ဝယ်ခြမ်းရခြင်းများကြောင့် (ဥပမာ အ ဝတ်အစား၊ မိတ်ကပ်) (7) အခြား - အသေးစိတ်ဖော်ပြပါ။ If Yes to 7.1, CIRCLE ALL THE REASONS THAT APPLY [READ OUT LOUD] (1) Migration to Thailand (2) Migration within Thailand (3) Obtaining registration/ documentation (4) Health care costs (5) Daily costs - food, accommodation, etc (6) Purchases for work (i.e. clothes, make up) (7) Other – specify	1	2	3
	4	5	6
	7 _____		
7.3 [မေးခွန်း ၇.၁ ကို ဟုတ် ဆိုပါက] သင်မည်သူ့ထံတွင် အကြွေးတင်နေပါသလဲ။ အောက်ပါတို့ကို အသံထွက်ဖတ်ပြ၍ တခုထက်ပို ၍ ဝိုင်းနိုင်ပါသည်။ (1) မိသားစုဝင် (2) အလုပ်ရှင် (3) ဝန္ကာ/အလုပ်မှ အခြားသူ (4) ပွဲစား/ကယ်ရီ (5) အခြား (အသေးစိတ်ဖော်ပြပါ) If Yes to 7.1, who are you are in debt to? [READ OUT LOUD AND CIRCLE ALL THE REASONS THAT APPLY] (1) Family member (2) Employer (3) *Wunna*/ other person at workplace (4) Broker/ carrier (5) Other (specify)	1	2	3
	4	5 _____	
7.4 [မေးခွန်း ၇.၁ ကို ဟုတ် ဆိုပါက] သင်၏အကြွေးကြောင့် သင့်မိသားစုအတွက် ပြဿနာရှိပါ သ လား။ (1) ဟုတ် (0) မဟုတ် If Yes to 7.1, does your debt cause problems for your household's well-being? (1) Yes (0) No	Yes (1)		No (0)
8. အလုပ်သမားမှတ်ပုံတင်ခြင်း **Worker Registration**			
8.1 ထိုင်းအစိုးရထံတွင် ရွှေ့ပြောင်းအလုပ်သမားအဖြစ် မှတ်ပုံတင်ဘူးသလား။(ထိုင်းအစိုးရထံတွင် အလုပ်သမားလက်မှတ်လုပ် ဘူးပါသလား။) (1) ဟုတ်၊ လက်ရှိမှတ်ပုံတင်ထားပါသည်။ (2) ဟုတ်၊ သို့သော် လက်ရှိမတင်ထားပါ။ (3) မဟုတ်၊ ထိုင်းအစိုးရနှင့်မည်သည့်အခါကမှ မှတ်ပုံမတင်ဘူးပါ။ Have you ever been registered as a migrant worker with the Thai government? (1) Yes, currently registered (2) Yes, but currently don't have (3) No, have never been registered with the Thai government	1	2	3

8.2 (ေမးခွန်း ၈.၁ ကို"ဟုတ်၊လက်ရှိမှတ်ပုံတင်ထားပါ သည်။" ဟုဆိုပါက) သင့်တွင် မှတ်ပုံတင်ထားသော မူရင်းအထောက်အထား ရှိ ပါသလား။ (မိတ္တူ မဟုတ်သော) (1) ဟုတ် ရှိပါသည်။ (0) မဟုတ် မရှိပါ ။ If Yes (currently registered) to 8.1, do you have your original registration documents (not a copy)? (1) Yes, I have (0) No, I do not have	Yes (1)		No (0)
8.3 (ေမးခွန်း ၈. ၂ ကို မဟုတ် မရှိပါ ဆိုပါက)သင်လိုအပ်လျှင် သင်၏မူရင်းအထောက် အထားကိုရယူနိုင်ပါသလား။ (1) ဟုတ် (0) မဟုတ် If No to 8.2, Can you get your original documents if you want? (1) Yes (0) No	Yes (1)		No (0)
8.4 [ေမးခွန်း ၈.၁ ၏ ၂ သို့မဟုတ် ၃ ကို ရွေးချယ်ပါက] လက်ရှိ တွင်ဘာကြောင့် မှတ်ပုံမတင်ရသလဲ။ (အားလုံးကိုအသံ ထွက်ဖတ်ပြ၍ တခုထက်ပို၍ ဝိုင်းနိုင်ပါသည်။) (1) ဈေးကြီးလွန်း/မတတ်နိုင် (2) လုပ်နည်းလုပ်ဟန်များနားမလည် (3) မှတ်ပုံတင်မရတော့သည့် အချိန်ကျမှရောက်လာ (4) အလုပ်ရှင်မှလုပ်ခွင့်မပြု (5) ဘာအကျိုးကျေးဇူးမှမရှိသောကြောင့် (6) မှတ်ပုံတင်ရန် အကြိုးမဝင်သောကြောင့်	1	2	3
If 2 or 3 to 8.1, why are you not currently registered? [READ ALL OUT LOUD AND CIRCLE ALL THAT APPLY] 1. Too expensive/ cannot afford 2. Do not understand process 3. Arrived in non-registration period 4. Employer does not allow 5. Do not see benefit 6. Not authorized to be registered	4	5	**6**
8.5 မြန်မာနိုင်ငံတွင်ရော ထိုင်းနိုင်ငံတွင်ပါ သင့်၌ အခြား မည်သည့် ပုံစံ အထောက်အထား မျိုးရှိပါသလဲ ။ (1) ဟုတ် (0) မဟုတ် Do you have any other form of documentation, either from Thailand or Burma? (1) Yes (0) No	Yes (1)		No (0)
8.6 [ေမးခွန်း ၈.၅ ကို ဟုတ် ဆိုပါက] ဟုတ်ဆိုပါက အခြားဘာအထောက်အထား (လက်မှတ်) သင့် တွင်ရှိသလဲ (တခုထက်ပို၍ ဝိုင်းနိုင်ပါသည်။) (1) ကုလသမဂ္ဂ (ယူအန်) မှလက်မှတ် (ဒုက္ခသည် ID လက် မှတ်၊ အခြား) (2) ထိုင်းအစိုးရမှ လက်မှတ် (ကျန်းမာရေးလက်မှတ်၊ နေ ထိုင်ခွင့်လက်မှတ်၊ အခြား) (3) မြန်မာအစိုးရမှ လက်မှတ် (ယာယီပတ်စ်ပို့၊ အခြား) (4) အခြား -	1		2
If Yes to 8.5, what other documents do you have? [CIRCLE ALL THAT APPLY] (1) Documents from the United Nations (refugee ID, other) (2) Documents from the Thai government (health card, residency card, other) (3) Documents from the Burmese government (temporary passport, other) (4) Other:_____	3		4 _____

9. ၁၁။ ကျန်းမာရေး Health	
9.1*ယနေ့သင်၏ကျန်းမာရေးအခြေအနေ မည်မျှကောင်းသည် ဆိုးသည်ကို ဤစကေးမျဉ်းပေါ်တွင် ကျေးဇူးပြု၍ ညွှန်ပြပေးပါ။ သင်မည်သို့ခံစား နေရသည်ဆို သည်ကို ညွှန်ပြမည့် စကေးပေါ်မှ အမှတ်ပေါ်သို့ လိုင်းဆွဲပေးခြင်းဖြင့် ထိုကိစ္စကို လုပ်ဆောင်ပေးပါ။* *Please indicate on this scale how good or bad your health is today. Do this by drawing a line to whatever point on the scale indicates how you feel.* *သင်စဉ်းစားနိုင်သည့် ကျန်းမာရေး အကောင်းဆုံးအခြေအနေမှာ ၁၀၀ ဖြစ်၍ အဆိုးဆုံးအခြေအနေမှာ ၀ ဖြစ်ပါသည်။* *The best state you can imagine is 100 and the worst state you can imagine is 0.* [ဖြေဆိုသူအား စကေး ကိုပြ၍ ၎င်းမှယနေ့မည်သို့ခံစားရသည်ဟု ဖော်ပြသည့် နံပါတ်ကိုဖြတ်၍ လိုင်းတခု ဆွဲခိုင်း ပါ။ ၎င်းမှ ရေးဆွဲသည့်အမှတ်နှင့် တူညီသောနံပါတ်ကိုအောက်မှ အကွက်ထဲတွင် ထည့်သွားပါ။] [SHOW THE RESPONDENT THE SCALE AND HAVE THEM DRAW A LINE THROUGH THE NUMBER THAT REPRESENTS HOW THEY FEEL TODAY. ENTER THE NUMBER MATCHING THE POINT THEY DRAW IN THE BOX BELOW]	



9.2 မည်သည့် အကြောင်းကြောင့်မဆို ကျန်းမာရေးစောင့်ရှောက်မှုလိုသည့်အခါတွင် မရရှိခြင်းမျိုး ဖြစ်ခဲ့ဘူးပါသလား။ (1) ဟုတ် ဖြစ်ခဲ့ဖူးပါသည် ။ (0) မဟုတ် မဖြစ်ခဲ့ဖူးပါ ။ Have you ever gone without healthcare when you needed it for any reason? (1) Yes (0) No	Yes (1)	No (0)
9.3 သင့်တွင် STD (လိင်ကူးစက်ရောဂါ) ရှိသည်ဟု ဆရာဝန် သို့ အခြားကျန်းမာရေးစောက်ရှောက်မှုကျွမ်းကျင်သူ တဦးဦး မှပြောဘူးပါသလား။ STD (လိင်ကူးစက်ရောဂါ) ဆိုသည် မှာ ဥပမာ ဂနိရီယား၊ စစ်ဖလစ်၊ အသဲရောင်အသားဝါ B သို့မဟုတ် HIV တို့ကိုဆိုလိုပါသည်။ (1) ဟုတ် (0) မဟုတ် Have you ever been told by a doctor or other health care professional that you had an STD? By STD we mean, for example, gonorrhea, syphilis, Hepatitis B, or HIV. (1) Yes (0) No	Yes (1)	No (0)
9.4 နောက်ပိုင်းမေးခွန်းများသည် ဆက်ဆံရေးနှင့်ပတ်သက်ပါ သည်။ ဆက်ဆံရေးသည် အတက်အကျ များရှိမည်ကိုမိမိတို့သိရှိကာ အောက်ပါမေးခွန်းများကို ဖြေဆိုရာတွင်အဖြစ်မှန်များကိုသာ ဖြေဆိုရန် ပြောချင်ပါသည်။ အောက်ပါတို့သည် သင်တို့စကားများ ရန်ဖြစ်နေသည့်အခါမျိုးတွင် ဖြစ်တတ်ပါသည်။ သင့်အား သင့်၏အိမ်ထောင်ဘက် သို့ ရည်းစား မှထိခိုက် နာကျင်စေခြင်း၊ တွန်းထိုးခြင်း၊ ပါးရိုက်ခြင်း၊ အသက်ရှူမရ အောင်လုပ်ခြင်း သို့ ကိုယ်ထိလက်ရောက် နာကျင်စေခြင်း များပြုလုပ်သည်ကို ခံရဘူးသလား။ (1) ဟုတ် (0) မဟုတ် These next questions ask about relationships. We know that relationships can have ups and downs, and we ask you to be honest in answering the following questions. These things might happen when you are arguing or fighting. Have you ever been hit, pushed, slapped, choked or otherwise physically hurt by your spouse or a boyfriend/girlfriend? (1) Yes (0) No	Yes (1)	No (0)
9.5 လိင်ဆက်ဆံရန်အတွက် ဖိအားပေးခြင်း၊ ခြိမ်းခြောက်ခြင်း သို့မဟုတ် အတင်းအကြပ်ပြုလုပ်ခြင်းကြောင့် သင်မလုပ်လိုသော်လည်း သင်၏အိမ်ထောင်ဖက် သို့ ရည်းစား နှင့် လိင်ဆက်ဆံဘူးပါသလား။ (1) ဟုတ် (0) မဟုတ် Have you ever had sex with your spouse or a boyfriend/girlfriend when you did not want to because they used pressure, threats or force to make you have sex? (1) Yes (0) No	Yes (1)	No (0)
9.6 *အောက်ပါမေးခွန်းသည် အမျိုးသမီးများအတွက်သာဖြစ်သည်။* ဘယ်နှစ်ကြိမ်လောက် သင်မလိုခြင်ပဲ ကိုယ်ဝန်ရခဲ့ဘူးပါသလဲ။	1	2

(1) ဘယ်တုန်းကမျှမရခဲ့ဘူးပါ (2) တခါ (3) နှစ်ခါ (4) သုံးခါ နှင့် အထက် *The following question is for women only:* How many times have you been pregnant when you didn't want to be? (1) Never (2) Once (3) Twice (4) Three times or more	3	4

10. လိင်လုပ်ငန်း **Sex Work**		
လိင်လုပ်ငန်းများမှာ ဆက်စပ်လုပ်ကိုင်နေရတဲ့ အမျိုးသမီးများရဲ့ ဘဝဟာဘယ်လိုရှိ မယ်ဆိုတာကို လေ့လာနားလည်နိုင်ဖို့ မိမိတို့မှ ကြိုးစားနေပါတယ်။ လူကြီးမင်းရဲ့ အတွေ့အကြုံတွေကို မိမိတို့ကို ဝေမျှပေးတဲ့အတွက် ကျေးဇူးတင်ပါတယ်။ We are trying to understand what life is like for women that are involved in sex work. Thank you for sharing your experiences with us.		
10.1 လိင်အလုပ်ကို မည်မျှကြာကြာ လုပ်ကိုင်ခဲ့ပါသလဲ။ (1) ၁ နှစ် (သို့) ၁ နှစ် အောက် (2) ၂ နှစ် (သို့) ၂ နှစ် အောက် (3) ၃ နှစ် (သို့) ၃ နှစ် အောက် (4) ၄ နှစ် (သို့) ၄ နှစ် အောက် (5) ၄ နှစ် အထက် For how long have you been trading sex? (1) 1 year or less (2) 2 years or less (3) 3 years or less (4) 4 years or less (5) more than 4 years	1 3 5	2 4
10.2 လိင်လုပ်ငန်းကို သင်ဘယ်လို စပြီး လုပ်ခဲ့ရပုံ သို့မဟုတ် စတင်ဝင်ရောက်ခဲ့ရပုံ ကို ဘယ်လို ဖော်ပြလို့ရမလဲ။(အောက်ပါတို့ကို အသံထွက်ဖတ်ပြကာ တခုထက်ပို၍ ဝိုင်းပေးနိုင် ပါသည်။) (1) အလှည့်ဖျားခံလိုက်ရလို့ပါ။ (2) အတင်းအကြပ် အခိုင်းခံရလို့ပါ။ (3) ဖိအားပေးခြင်း၊ ခြိမ်းခြောက်ခြင်း သို့မဟုတ် အခြားနည်းနဲ့ အကြပ်ကိုင်ခံရခြင်း ကြောင့် (4) ကိုယ့်ကိုယ်ကို ထောက်ပံ့ဖို့ တခြားရွေးစရာ မရှိတော့ဘူး ထင်လို့ပါ။ (5) မူးယစ်ဆေး သို့မဟုတ် အရက် သုံးစွဲဖို့ ပိုက်ဆံ လိုအပ်လို့ပါ။ (6) ဒီလိုလုပ်တာဟာ ပိုက်ဆံရှာဖို့ နည်းလမ်းကောင်းတခုလို့ စဉ်းစားခဲ့လို့ပါ။ How would you describe how you entered or first began sex work? [READ OUT LOUD AND CIRCLE ALL THAT APPLY] (1) I was tricked (2) I was forced (3) I was pressured, threatened or otherwise coerced (4) I felt I had no other options for supporting myself (5) I needed money to support drug or alcohol use (6) I thought it would be a good way to earn money	1 3 5	2 4 6
10.3 လက်ရှိ သင် မည်သည့်နေရာတွင် လိင်လုပ်ငန်းကို စီးပွားဖြစ်လုပ်ကိုင်နေပါသလဲ။ (အောက်ပါတို့ကို အသံထွက်ဖတ်ပြကာ တခုထက်ပို၍ ဝိုင်းပေးနိုင် ပါသည်။) (1) စားသောက်ဆိုင် (2) ကာရာအိုကေ ဘား (3) အခြားပုံစံနှင့်ဘား (4) အနိပ်ခန်း (5) လမ်းပေါ်တွင် (6) အထူးအိမ် (ပြည့်တန်ဆာအိမ်) (7) ဖုန်း မှတဆင့် (8) အခြား (အသေးစိတ်ဖော်ပြပါ) Where are you currently trading sex? [READ OUT LOUD AND CIRCLE ALL THAT APPLY] (1) In a restaurant (2) In a karaoke bar (3) In another type of bar	1 3 5	2 4 6

(4) In a massage parlor (5) On the street (6) Special house (prostitute house) (7) Through a phone (8) Other (specify _____)	7	8 _____

10.4 ဖောက်သည်များနှင့် ချိန်းဆိုမှုကို ဘယ်လို လုပ်သလဲ။ (အောက်ပါတို့ကို အသံထွက်ဖတ်ပြကာ တခုထက်ပို၍ ဝိုင်းပေးနိုင် ပါသည်။) (1) ဖောက်သည်နှင့် တိုက်ရိုက်ချိန်းဆိုမှုလုပ်သည်။ (2) မန်နေဂျာ (သို့) ပွဲစား မှ ချိန်းဆိုမှုလုပ်ပေးသည်။ (3) အခြား (ကျေးဇူးပြု၍ အတိအကျဖော်ပြပါ) How are arrangements usually made with paying clients? [READ OUT LOUD AND CIRCLE ALL THAT APPLY] (1) I make arrangements directly with clients (2) A manager or broker makes the arrangements (3) Other (please specify)	1	2	3
10.5 သင်ငြင်းချင်လျှင် ဖောက်သည်ကို ငြင်းခွင့် ရှိသလား။ (1) ဟုတ် ရှိသည်။ (0) မဟုတ် မရှိပါ။ Are you able to refuse clients if you want to? (1) Yes, I can refuse (0) No, I cannot refuse	Yes (1)		No (0)
10.6 [မေးခွန်း ၁၀.၅ ကို မဟုတ် ဆိုပါက] ဘာ့ကြောင့်မဟုတ်၊ မရှိရသလဲ။ (အောက်ပါတို့ကို အသံထွက် ဖတ်ပြကာ တခုထက်ပို၍ ဝိုင်းပေးနိုင် ပါသည်။) (1) ဖောက်သည်မှအကြမ်းဖက်မည်ကို စိုးရိမ် သဖြင့် (2) မန်နေဂျာမှအကြမ်းဖက်မည်ကို စိုးရိမ် သဖြင့် (3) ပိုက်ဆံလိုချင်သဖြင့် (4) အခြား (အတိအကျဖော်ပြပါ) If No to 10.5, why not? [READ OUT LOUD AND CIRCLE ALL THAT APPLY] (1) Fear of abuse from client (2) Fear of abuse from manager (3) Need the money (4) Other (specify)	1	2	3 4 _____
10.7 တပတ်တွင် ဘယ်နှစ်ရက်ခန့် အလုပ်လုပ် သလဲ။ (လိင်ရောင်းဝယ်ခြင်း) (1) (တပတ်လျှင်) ၁ - ၂ ရက် (2) (တပတ်လျှင်) ၃ - ၄ ရက် (3) (တပတ်လျှင်) ၅ - ၆ ရက် (4) ၇ ရက် About how many days do you work (sell sex) each week? (1) 1-2 days per week (2) 3-4 days per week (3) 5-6 days per week (4) 7 days	1	2	
	3	4	
10.8 ပြီးခဲ့သည့် "လ" ကို ပြန်စဉ်းစားကြည့်လျှင် နေ့စဉ်အလုပ်ချိန်မှာ ပျမ်းမျှ ဖောက်သည် ဘယ်နှစ်ယောက်လောက်နဲ့ လိင်ကိစ္စ ပြုလုပ်ခဲ့ရသလဲ။ (1) မရှိ (2) တယောက် (3) နှစ်ယောက် (4) သုံးယောက် (5) လေးယောက်နှင့်အထက် Thinking of the past month, what is the average number of clients that you have sex with in your daily working hours? (1) None (2) One (3) Two (4) Three (5) Four or more	1	2	
	3	4	
	5		
10.9 ပြီးခဲ့သည့် ၆ လတွင် ဖောက်သည်များနှင့် လိင် ဆက်ဆံသည့်အခါ ဘယ်နှစ်ကြိမ် လောက် ကွန်ဒုံး သုံးခဲ့လဲ။ (1) အမြဲတမ်း (2) တခါတရံ (3) မသုံးသလောက် သို့မဟုတ် လုံးဝမသုံး Over the past 6 months, how often do you use a condom with clients during sex? (1) Always (2) Sometimes (3) Rarely or never	1	2	3
10.10 ပြီးခဲ့သည့်နှစ်က ဖောက်သည်များနှင့် စအိုမှ လိင် ဆက်ဆံမှု ပြုခဲ့သလား။ (1) ဟုတ် လုပ်ခဲ့ပါသည် ။ (0) မဟုတ် မလုပ်ခဲ့ပါ ။ Over the past year, have you had anal sex with clients? (1) Yes, I did (0) No, I did not	Yes (1)		No (0)

ပြီးခဲ့သည့်နှစ်တွင် အောက်ပါတို့မှ တခုခု ဖြစ်ခဲ့ပါက ပြောပြပေးပါ။ Please tell us if any of the following has happened in the past year:		
10.11 ပြီးခဲ့သည့်နှစ် တွင် သင်က ကွန်ဒုမ်း ကိုသုံးစေချင် သော်လည်း ဖောက်သည်မှ အသုံးပြုရန်ငြင်းဆန် ခြင်း ကြုံ ဘူးပါသလား။ (1) ဟုတ် ကြုံဘူးပါသည် ။ (0) မဟုတ် မကြုံဘူးပါ ။ In the past year, has a client ever refused to use condom when you wanted to use one? (1) Yes, I have experienced (0) No, I have not experienced	Yes (1)	No (0)
10.12 ပြီးခဲ့သည့်နှစ်တွင် လိင်ဆက်ဆံနေစဉ်အတွင်း ဖောက်သည်က ကွန်ဒုမ်း ကို ချွတ်ပစ် ခြင်း ကြုံ ဘူးပါသလား။ (1) ဟုတ် ကြုံဘူးပါသည် ။ (0) မဟုတ် မကြုံဘူးပါ ။ In the past year, has a client ever removed a condom during sex? (1) Yes, I have experienced (0) No, I have not experienced	Yes (1)	No (0)
10.13 ပြီးခဲ့သည့်နှစ်တွင် သင်က ကွန်ဒုမ်းသုံးရန် အတင်း တိုက်တွန်း သဖြင့် ဖောက်သည်မှ စိတ်ဆိုးလာ ခြင်း ၊ အကြမ်းဖက်လာ ခြင်း (သို့) အကြမ်းဖက်ခြိမ်းခြောက်လာ ခြင်း ကြုံ ဘူး ပါသလား။ (1) ဟုတ် ကြုံဘူးပါသည် ။ (0) မဟုတ် မကြုံဘူးပါ ။ In the past year, has a client ever become angry, violent or threatened you with violence, when you insisted on condom use? (1) Yes, I have experienced (0) No, I have not experienced	Yes (1)	No (0)
10.14 ပြီးခဲ့သည့်နှစ်တွင် ဖောက်သည်က သင့်အား ဖိအားပေး ခြင်း(သို့) အတင်းအကြပ် လိင်ဆက်ဆံခိုင်း ခြင်း ကြောင့် သင်မလုပ်ချင်သည့် အချိန်တွင် လိင်ဆက်ဆံခဲ့ရဘူးသလား။ (သို့သော် ကိုယ်ထိလက်ရောက် ပြုမူခြင်းမျိုးမဟုတ်) ဥပမာ - ဖောက်သည်က သင့်အား အန္တရာယ်ပြုမည် ဟု ခြိမ်းခြောက်ခဲ့ခြင်း ၊ သင့်အား တခုခုဒုက္ခရောက်သွားမည်ဟု ခြိမ်း ခြောက်ခဲ့ခြင်း သို့မဟုတ် သင်က လိင်ဆက်ဆံရန် မငြင်းဆန်နိုင် ဟု ထင်သွားစေရန်ပြုလုပ်ခဲ့ခြင်း ။ (1) ဟုတ် ခံခဲ့ရဘူးပါသည်။ (0) မဟုတ် မခံခဲ့ရဘူးပါ ။ In the past year, have you ever sex with a client when you did not want to because he pressured you, or insisted on sex (but did not use physical force). For example, if a client threatened to harm you, threatened to get you in some type of trouble, or made you feel that you could not refuse sex. (1) Yes, I have experienced (0) No, I have not experienced	Yes (1)	No (0)
10.15 ပြီးခဲ့သည့်နှစ်တွင် ဖောက်သည်က သင့် ကို အတင်းအကြပ် သို့မဟုတ် အကြမ်းဖက်၍ လိင်ဆက်ဆံခိုင်းသောကြောင့် သင်မလုပ်ချင်သည့် အချိန်တွင် လိင်ဆက်ဆံခဲ့ရဘူးပါသလား။ (ထိခိုက် နာကျင်စေခြင်း၊ အတင်း တွန်းလဲ၍ ဖိထားခြင်း (သို့) လက်နက်တခုခု သုံးခြင်း) (1) ဟုတ် ခံခဲ့ရဘူးပါသည် ။ (0) မဟုတ် မခံခဲ့ရဘူးပါ ။ In the past year, have you ever had sex with a client when you did not want to because he used violence or force (like hitting, holding you down, or using a weapon) (1) Yes, I have experienced (0) No, I have not experienced	Yes (1)	No (0)
10.16 ပြီးခဲ့သည့်နှစ်တွင် လိင်အင်္ဂါဖြင့် လိင်ဆက်ဆံခြင်း (သို့) ပါးစပ် ဖြင့် လိင်ဆက်ဆံခြင်း တို့ကိုဖောက်သည်နှင့်သဘောတူ လုပ်ပေးရပြီး ၊ နောက်ထပ် စအိုနှင့် လိင်ဆက်ဆံရန် ပြောဆိုခြင်း ခံခဲ့ရဘူးလား။ (1) ဟုတ် ခံခဲ့ရဘူးပါသည် ။ (0) မဟုတ် မခံခဲ့ရဘူးပါ ။ In the past year, have you ever agreed to vaginal or oral sex with a client and later been asked for anal sex (1) Yes, I have experienced (0) No, I have not experienced	Yes (1)	No (0)
10.17 ပြီးခဲ့သည့်နှစ်တွင် သင်က စအိုနှင့်လိင်ဆက်ဆံရန် ငြင်းဆန်သည့် အတွက် ဖောက်သည်က ပိုက်ဆံမပေးဟု ခြိမ်းခြောက်ခံ ခဲ့ဘူး သလား။ (1) ဟုတ် ခံခဲ့ရဘူးပါသည် ။ (0) မဟုတ် မခံခဲ့ရဘူးပါ ။ In the past year, have you ever had a client threaten to not pay you if you don't agree to anal sex (1) Yes, I have experienced (0) No, I have not experienced	Yes (1)	No (0)
10.18 ပြီးခဲ့သည့်နှစ်တွင် ဖောက်သည်တယောက်နှင့်သွားရန် သဘောတူပြီးမှ ထိုဖောက်သည်က နောက်ထပ် ယောကျ်ားများနှင့် လိင်ဆက်ဆံရန် ပြောဆိုခြင်း(သို့) မျှော်လင့်ခြင်း ခံရဘူးသလား။ (1) ဟုတ် ခံခဲ့ရဘူးပါသည် ။ (0) မဟုတ် မခံခဲ့ရဘူးပါ ။ In the past year, have you ever been asked or expected to have sex with additional men by a client after agreeing to go with only one client (1) Yes, I have	Yes (1)	No (0)

experienced (0) No, I have not experienced		
10.19 ပြီးခဲ့သည့်နှစ်တွင် ရဲ သို့မဟုတ် အခြားအရာရှိ တဦးဦးက အဖမ်းမခံရရန် အပေးအယူလုပ်သည့်အနေဖြင့် ပိုက်ဆံမယူဘဲ လိင်ဆက်ဆံရန် တောင်းဆိုဘူးပါသလား။ (1) ဟုတ် တောင်းဆိုဘူးပါသည် ။ (0) မဟုတ် မတောင်းဆိုဘူးပါ ။ In the past year, have you ever had police or other officials demand free sex in exchange for not being arrested (1) Yes, I have been asked (0) No, I have not been asked	Yes (1)	No (0)
10.20 ပြီးခဲ့သည့်နှစ်တွင် ရဲ သို့မဟုတ် အခြားအရာရှိ တဦးဦးက သင့်အား အခြားနည်းလမ်းများဖြင့် ကာအိန္ဒြေ ပျက်အောင် လုပ်ဘူးပါသလား။ (1) ဟုတ် လုပ်ဘူးပါသည် ။ (0) မဟုတ် မလုပ်ဘူးပါ ။ In the past year, have you ever had police or other officials harass you in other ways (1) Yes, I have been harassed (0) No, I have not been harassed	Yes (1)	No (0)
10.21 သင်လိင်အလုပ် စ လုပ်ခဲ့သည့် ပထမလအကြောင်းကို ကျေးဇူးပြုပြီး ပြန်စဉ်းစားပေးပါ။ ထိုပထမလတွင် ဖောက်သည်နှင့် စအိုမှ လိင်ဆက်ဆံမှု ပြုခဲ့ပါသလား။ (1) ဟုတ် လုပ်ခဲ့ပါသည် ။ (0) မဟုတ် မလုပ်ခဲ့ပါ ။ Please think back to the first month you were involved in sex work. Did you have anal sex with a client during this first month? (1) Yes, I did (0) No, I did not	Yes (1)	No (0)
10.22 ထိုပထမလအတွင်းတွင် လိင်အင်္ဂါ (သို့) စအို နှင့် လိင် ဆက်ဆံရန် အတင်းအကြပ်ခိုင်းစေခြင်း ခံခဲ့ရဘူးလား။ (1) ဟုတ် ခံခဲ့ရဘူးပါသည် ။ (0) မဟုတ် မခံခဲ့ရဘူးပါ ။ Were you forced to have vaginal or anal sex by a client in this first month? (1) Yes, I was (0) No, I was not	Yes (1)	No (0)
10.23 ထိုပထမလတွင် သင့်အားအပျိုအစစ်အဖြစ် ဖောက်သည်များထံ လိင်ဆက်ဆံခံစေခဲ့သလား။ (1) ဟုတ် (0) မဟုတ် Were you presented to clients as a virgin in this first month? (1) Yes (0) No	Yes (1)	No (0)

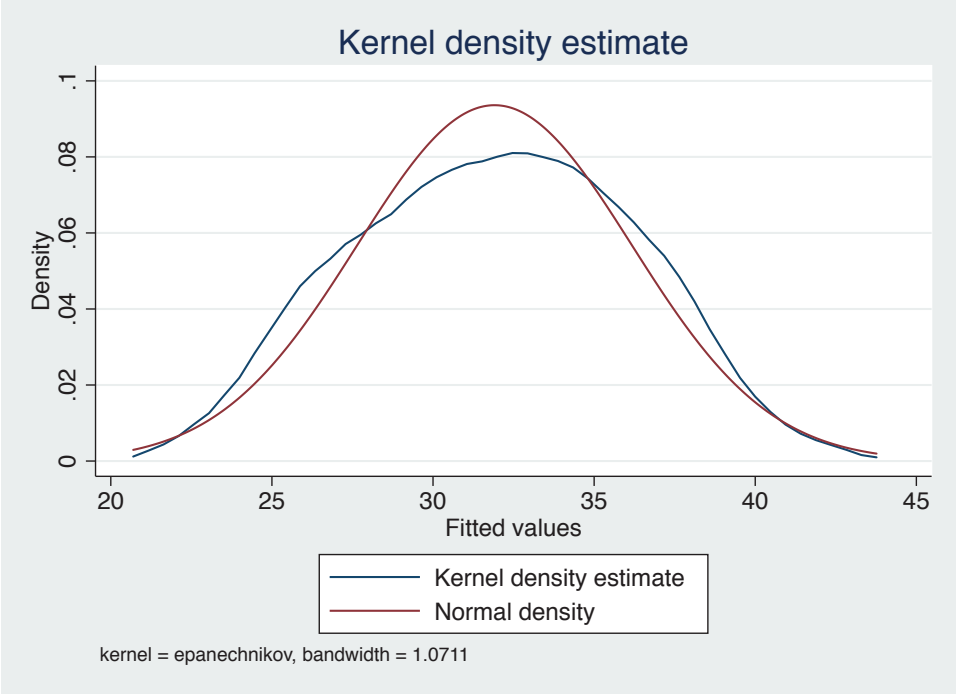
11. အင်တာဗျူးလုပ်သူများ အတွက် အပြီးသတ်အဆင့်များ Finishing Steps For Interviewers		
11.1 ဖြေဆိုသူမှ ကဒ်ပြားနှင့်ပတ်သက်သော သင်တန်းနှင့်တကွ ကဒ်ပြားများကိုရရှိသွားသည်။ (1) ဟုတ် (0) မဟုတ် Respondent Received Coupon Training and Coupons (1) Yes (0) No	Yes (1)	No (0)
11.2 အင်တာဗျူးမေးသူမှ ကဒ်ပြားနံပါတ်များကို ကဒ်ပြားမှတ်တမ်း နှင့် ပုံစံတွင်မှတ်သားသည်။ (1) ဟုတ် (0) မဟုတ် Interviewer recorded Coupon Numbers in Coupon Log and on Form (1) Yes (0) No	Yes (1)	No (0)
11.3 ဖြေဆိုသူမှ ပိုက်ဆံရရှိသွားသည်။ (1) ဟုတ် (0) မဟုတ် Respondent received Incentive (1) Yes (0) No	Yes (1)	No (0)
11.4 အင်တာဗျူးလုပ်မည့်နေရာ (1) ဖုတ်ဖရကျောင်း (2) ဖုတ်ဖရအိမ် (3) ဖုတ်ဖရအခြား (4) မဲဆောက်စက်ရုံ (5) မဲဆောက်အိမ် (6) မဲဆောက်အခြား Location of Interview (1) Phop Phra School (2) Phop Phra Home (3) Phop Phra Other (4) Mae Sot Factory (5) Mae Sot Home (6) Mae Sot Other	1	2
	3	4
	5	6
11.5 အင်တာဗျူးလုပ်မည့် ဘာသာစကား (1) ဗမာ (2) ကရင် (3) အခြား (အသေးစိတ်ဖော်ပြပါ) Language interview conducted in (1) Burmese (2) Karen (3) Other (specify)	1	2
	3 _____	
12. ပုံစံ Form		
12.1 ပုံစံကိုအပြည့်အစုံဖြည့်ထားပါသလား (1) ဟုတ် (0) မဟုတ် Was the form fully completed? (1) Yes (0) No	Yes (1)	No (0)
12.2 [မေးခွန်း ၁၂.၁ ကို မဟုတ် ဆိုပါက] အကယ်၍မေးခွန်း ၁၁ ကို မဟုတ် ဆိုပါက၊ ပုံစံဖြည့်စွက်ခြင်း မပြီးဆုံးရ သည့်အကြောင်းအရင်းက ဘာလဲ။ ၁။ ဖြေဆိုသူမှ အာတာဗျူးဆက်လုပ်ရန် ငြင်းဆန်သောကြောင့် ၂။ ချက်ချင်းလုပ်ဆောင်မှုလိုအပ်သော အရေးပေါ်ကိစ္စဖြစ်သောကြောင့် ၃။ အခြား (အတိအကျဖော်ပြပါ) If No to 12.1, what was the reason the form was not completed? (1) Respondent refused to continue (2) Emergency requiring immediate action (3) Other (specify)	1	2
	3 _____	
12.3 သုတေသန မန်နေဂျာ၏ လက်မှတ် Research Manager Sign-off - မြန်မာလိုအားလုံးကို စစ်ဆေး၍ အင်္ဂလိပ်လိုဘာသာပြန်များထည့်ပါ။ - မေးခွန်းအားလုံးကိုမှန်မှန်ကန်ကန် ဖြည့်ထားမထား သေသေချာချာ စစ်ပါ။ - ကဒ်ပြားနှင့်ဆိုင်သောအပိုင်းနှင့်တိုက်၍ ကဒ်ပြားမှတ်တမ်းကိုစစ်ဆေးပါ၊ ထိုနှစ်ခုတူနေပါစေ။ - Review all Burmese in form and put English translations - Review to ensure all questions are filled correctly - Check Coupon Log against Form Coupon Section – ensure they are the same		
"အချက်အလက်ထည့်သွင်းရန်အတွက်" သေတ္တာထဲတွင် ဖိုင်တွဲပါ။ File in "For Data Entry" Box		

DATA ENTRY: အချက်အလက်ထည့်သွင်းခြင်း

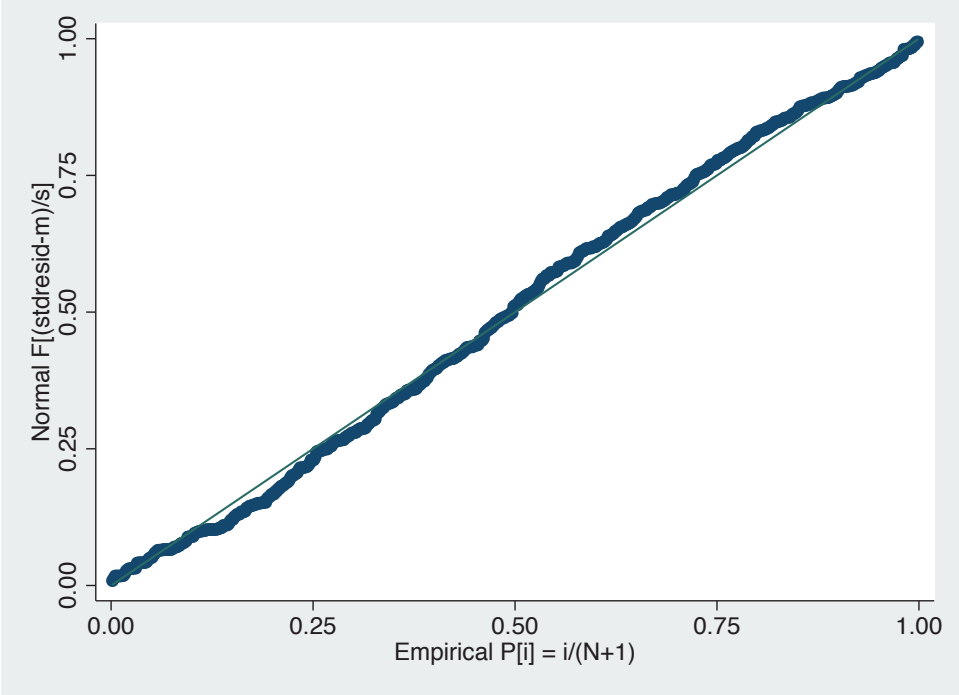
1. Data entry staff ID အချက်အလက်ထည့်သွင်းသည့်ဝန်ထမ်း၏ နံပါတ် _____
2. Date (MM/DD/YY) နေ့စွဲ (ရက်/လ/နှစ်) _ _ / _ _ / _ _

Appendix 5 – regression diagnostics for multivariate models

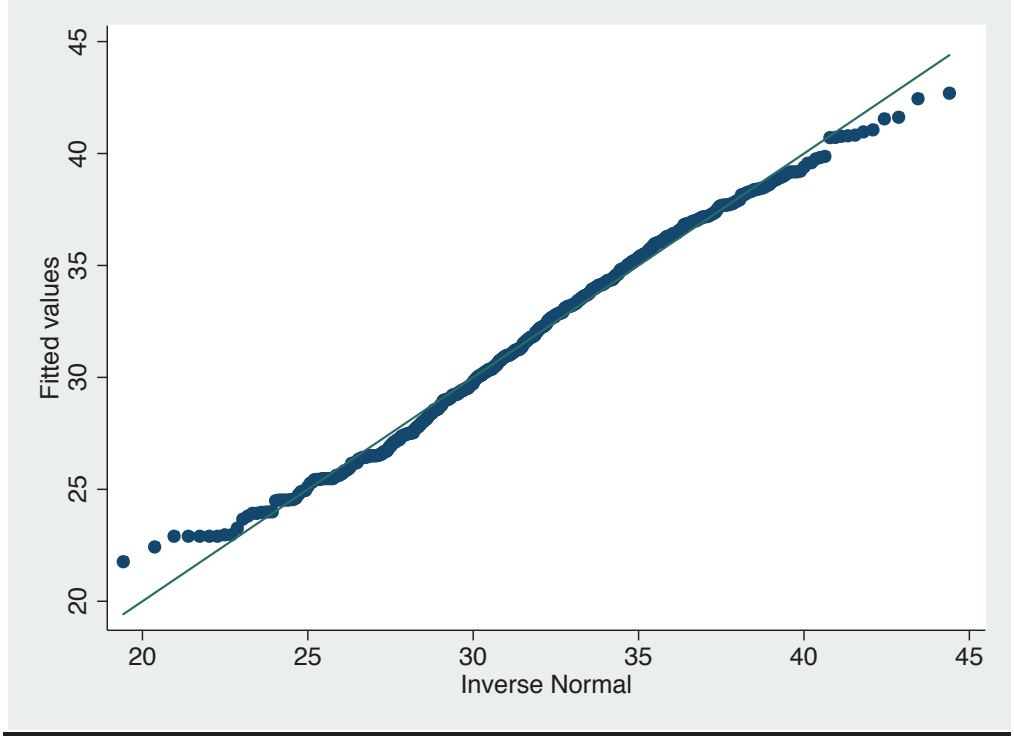
1. **<u>Agriculture – depression:</u>**



Kernel density plot

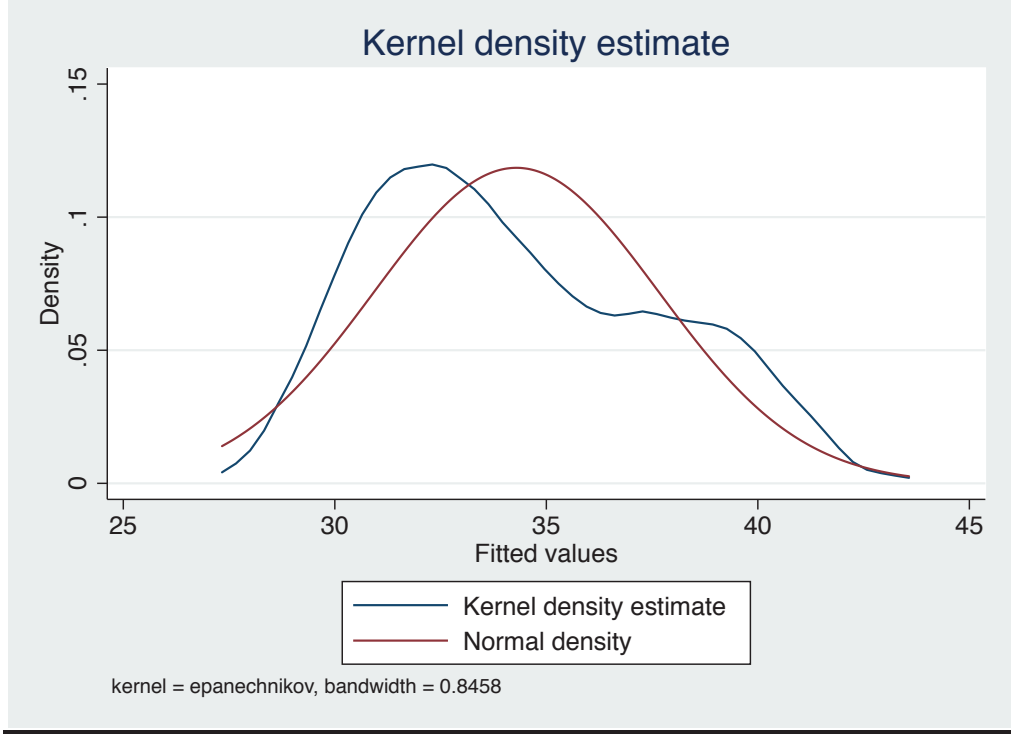


Pnorm plot

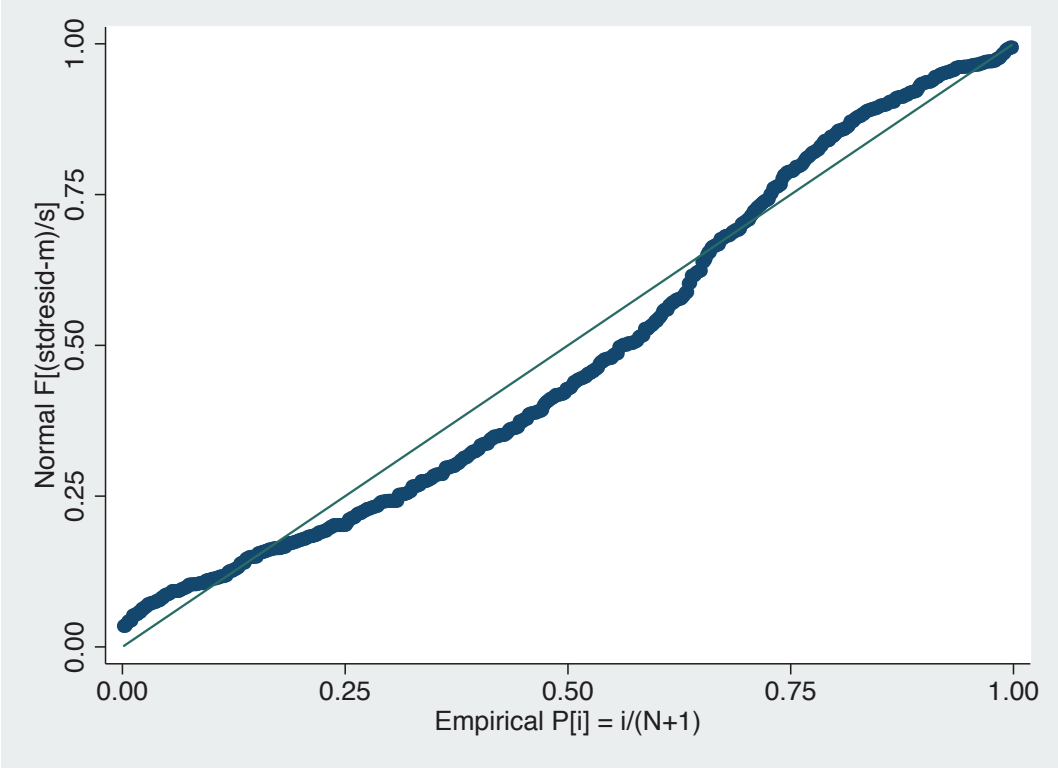


Qnorm plot

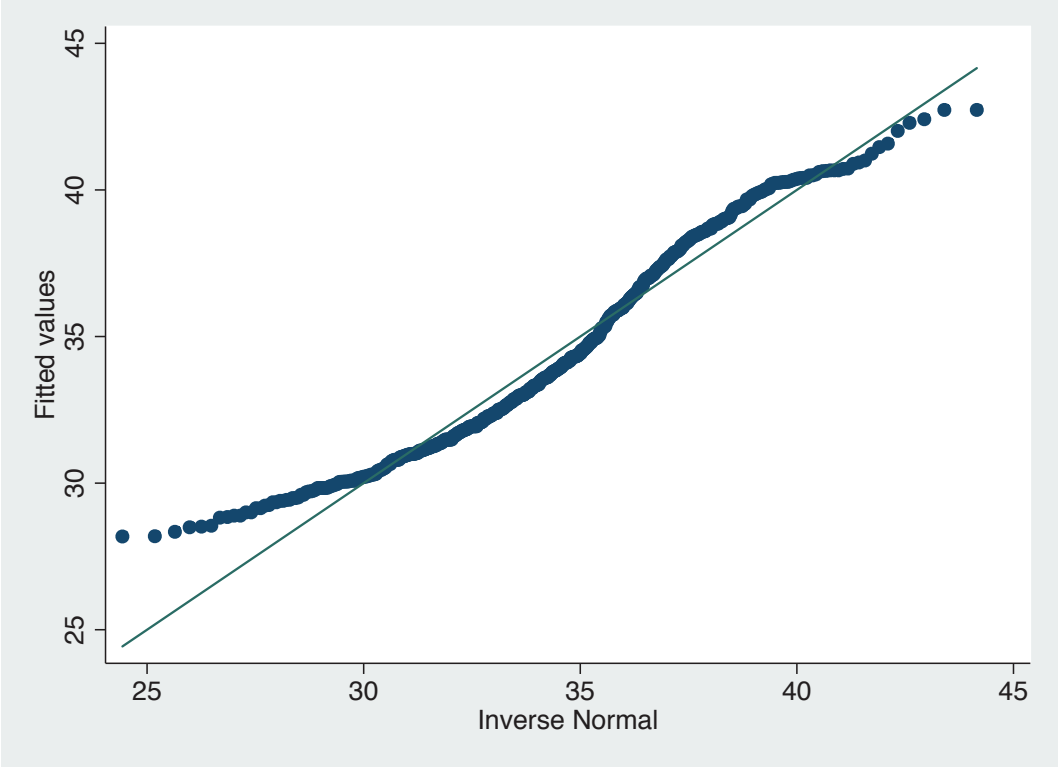
2. <u>Factory – depression</u>



Kernel density plot

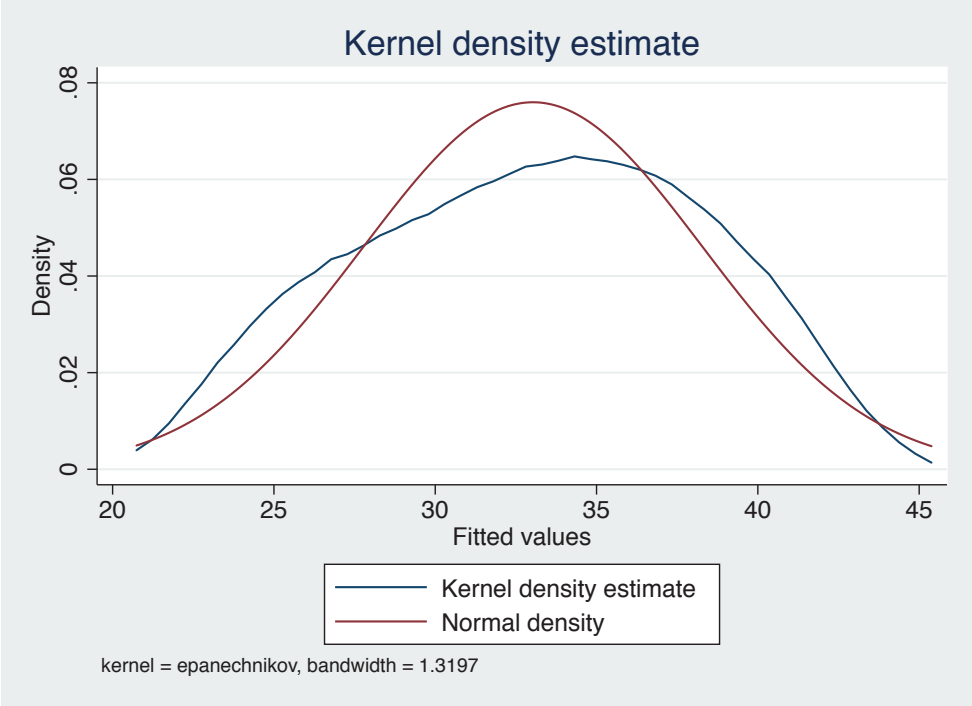


Pnorm plot

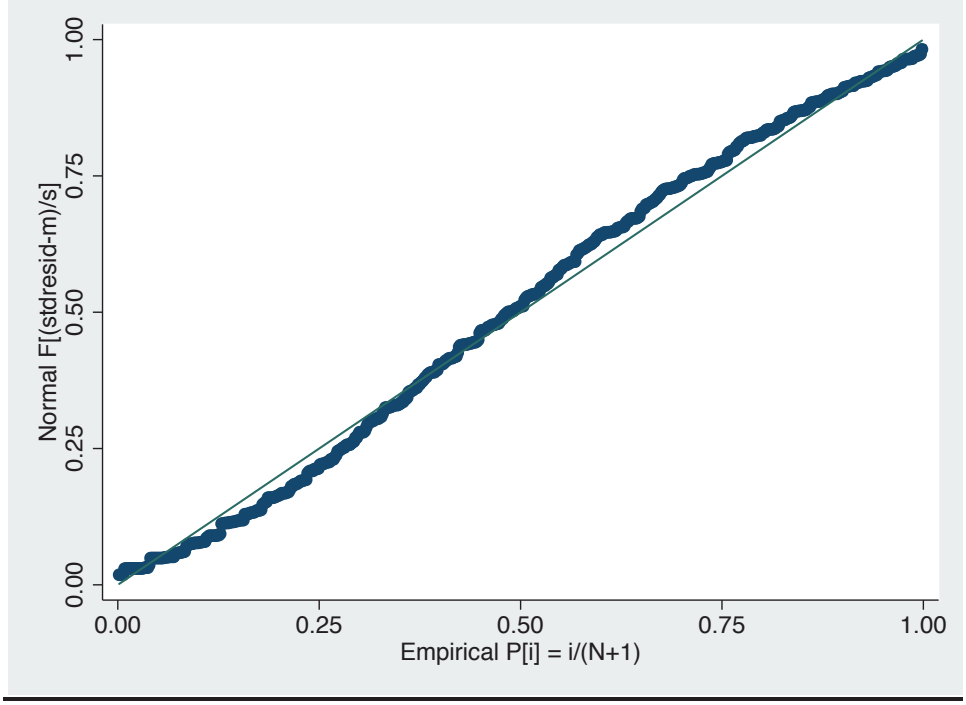


Qnorm plot

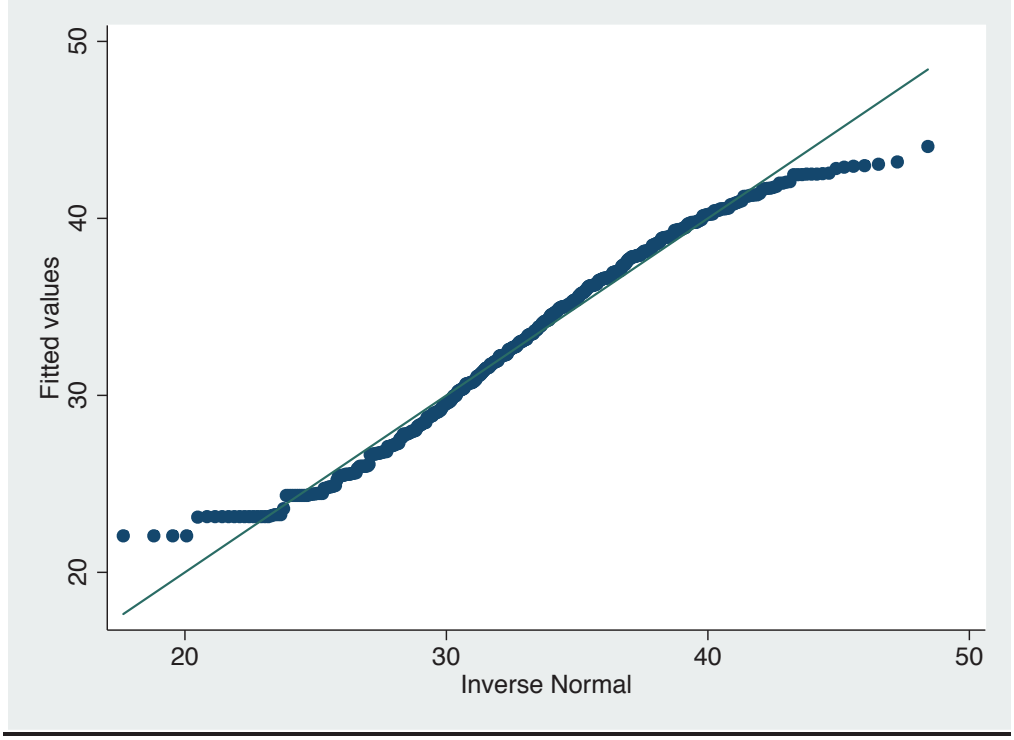
3. Sex industry – depression



Kernel density plot

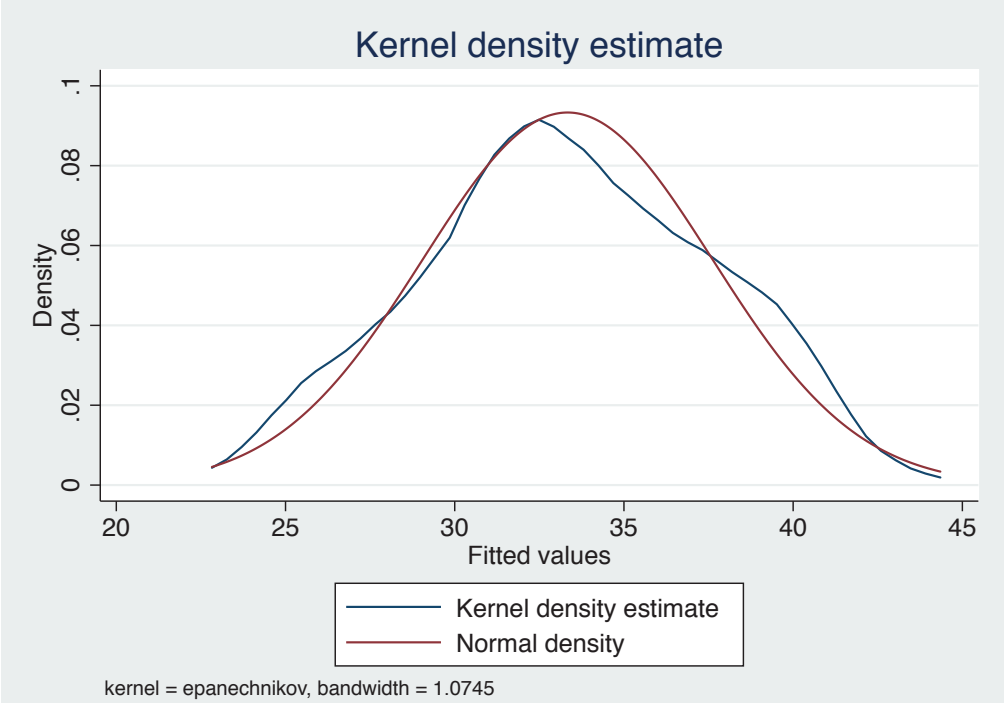


Pnorm plot

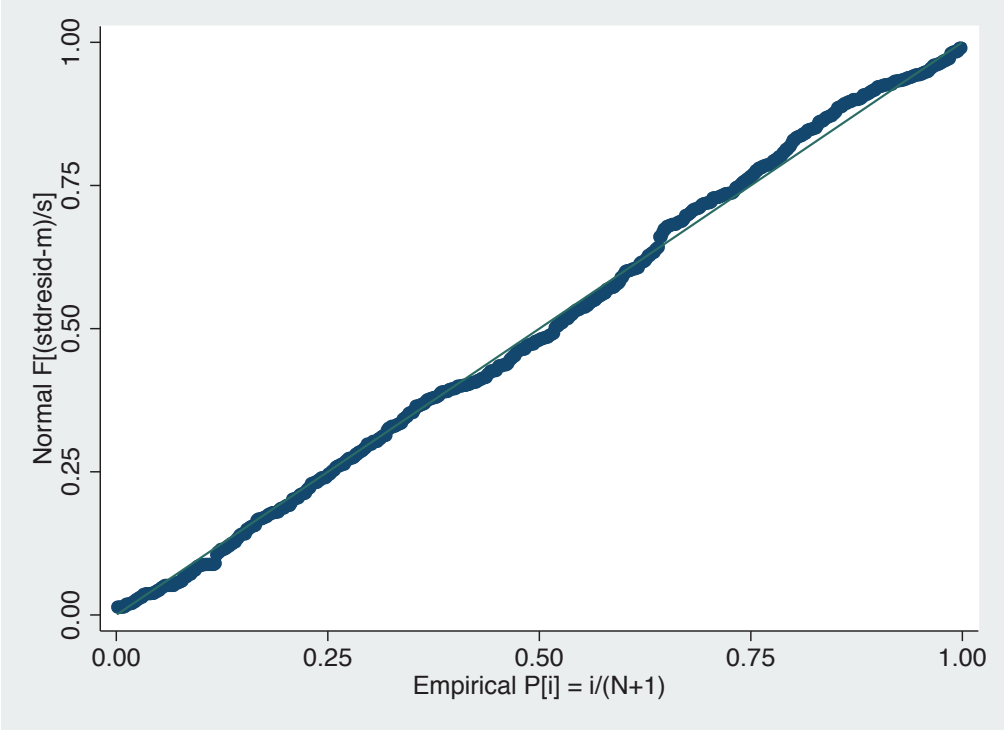


Qnorm plot

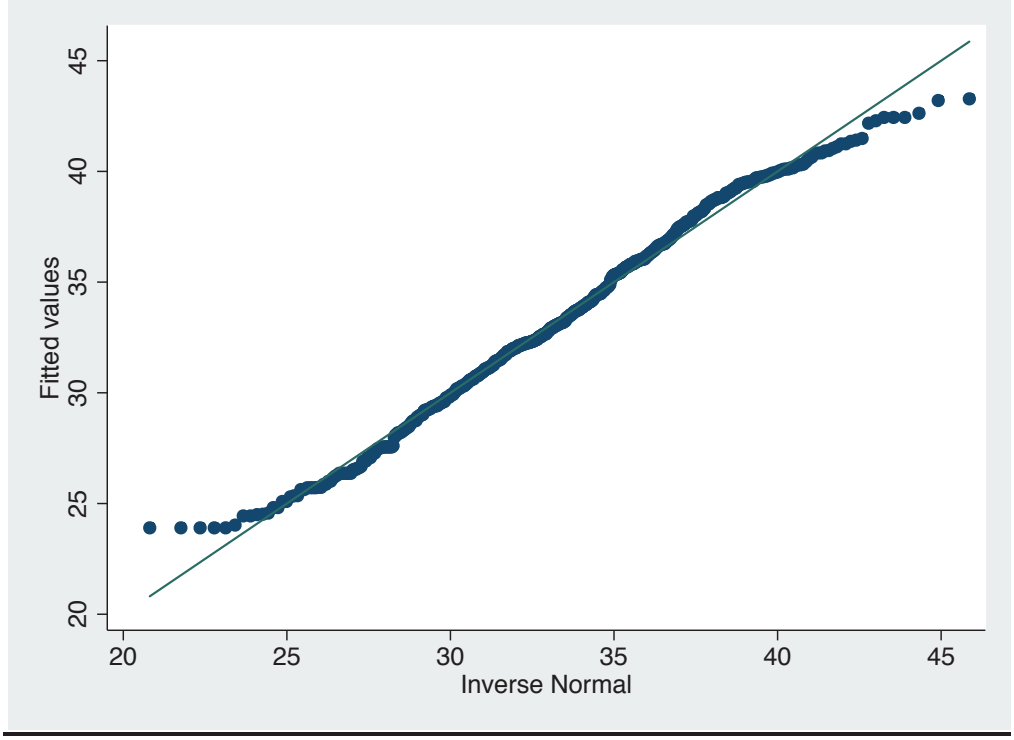
4. **<u>Whole sample – depression:</u>**



Kernel density plot

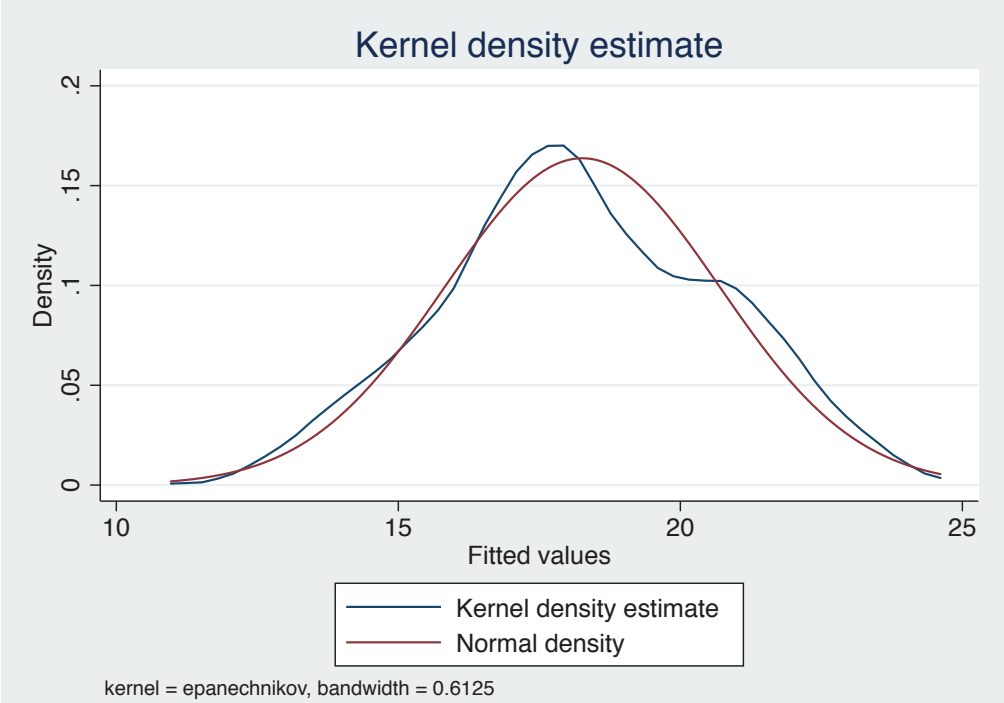


Pnorm plot

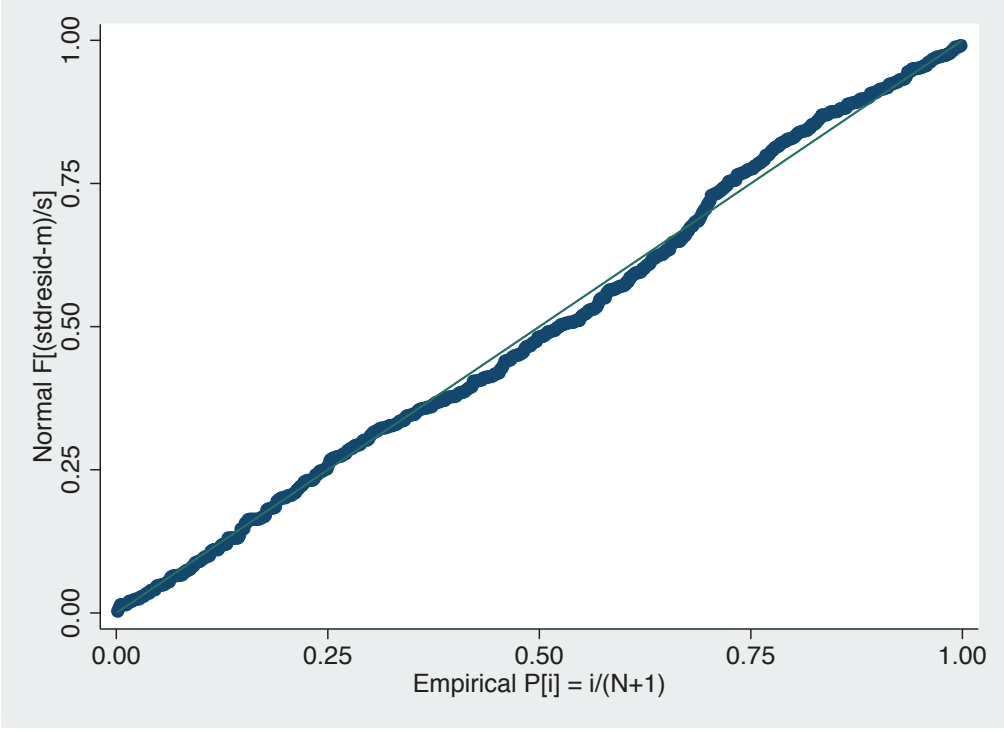


Qnorm plot

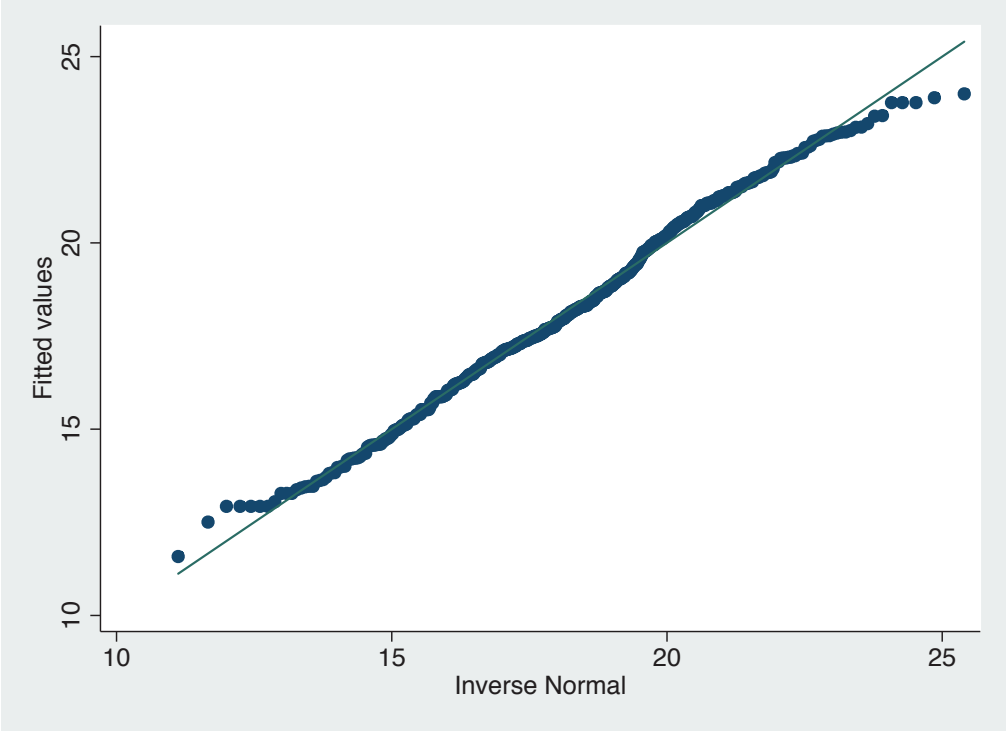
5. **Agriculture – anxiety:**



Kernel density plot

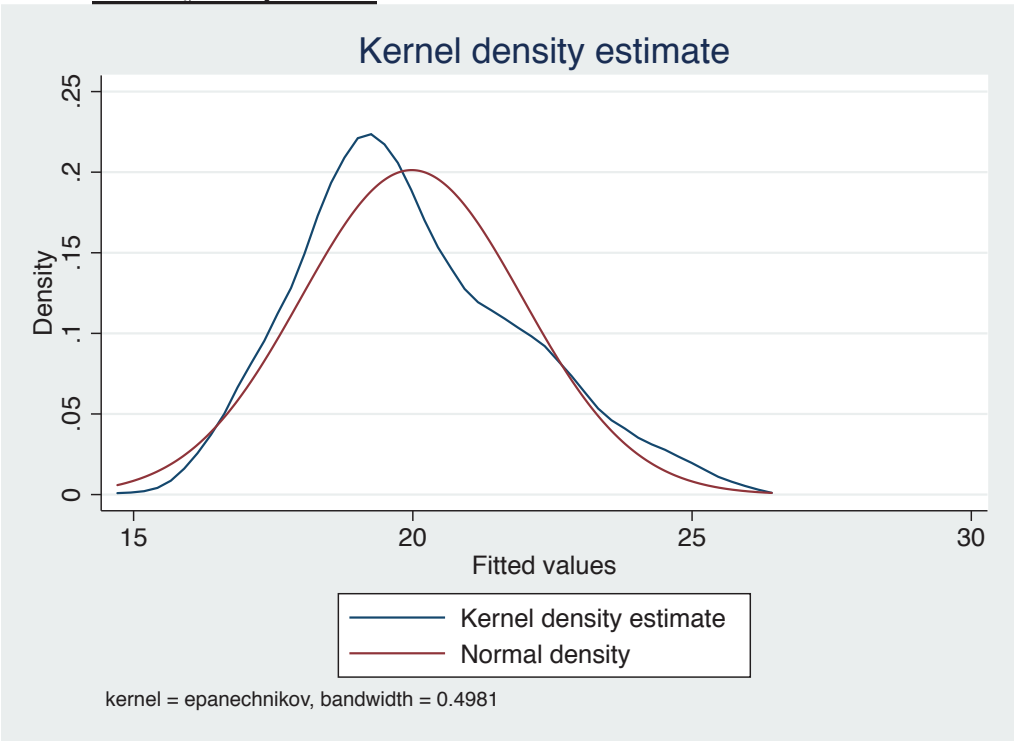


Pnorm plot

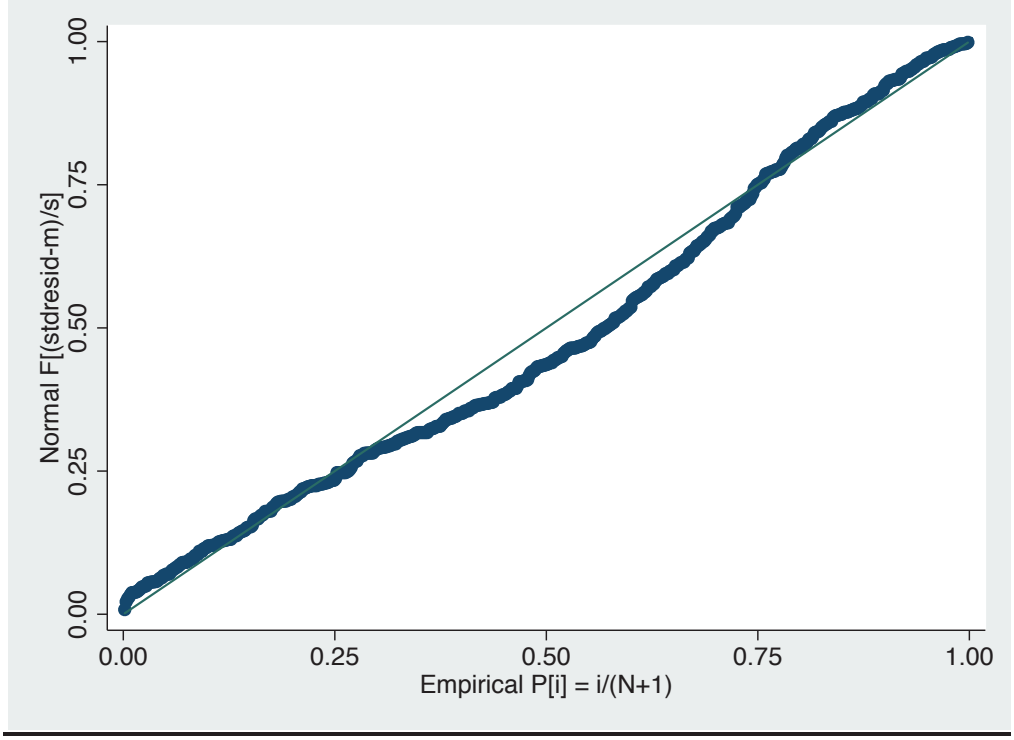


Qnorm plot

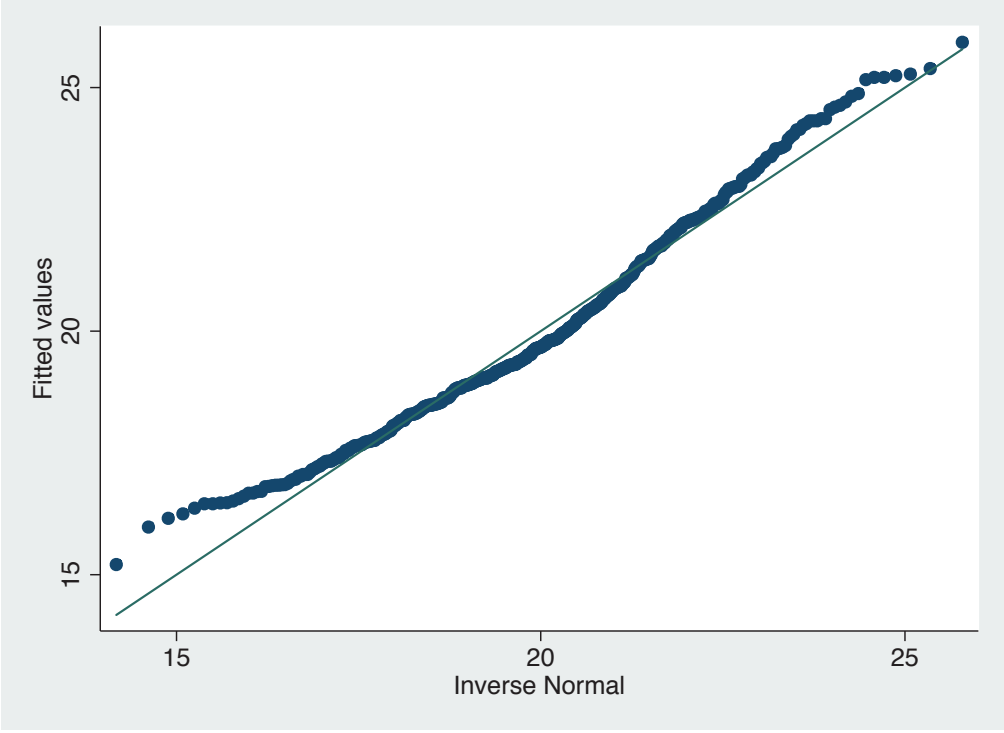
6. Factory – depression



Kernel density plot

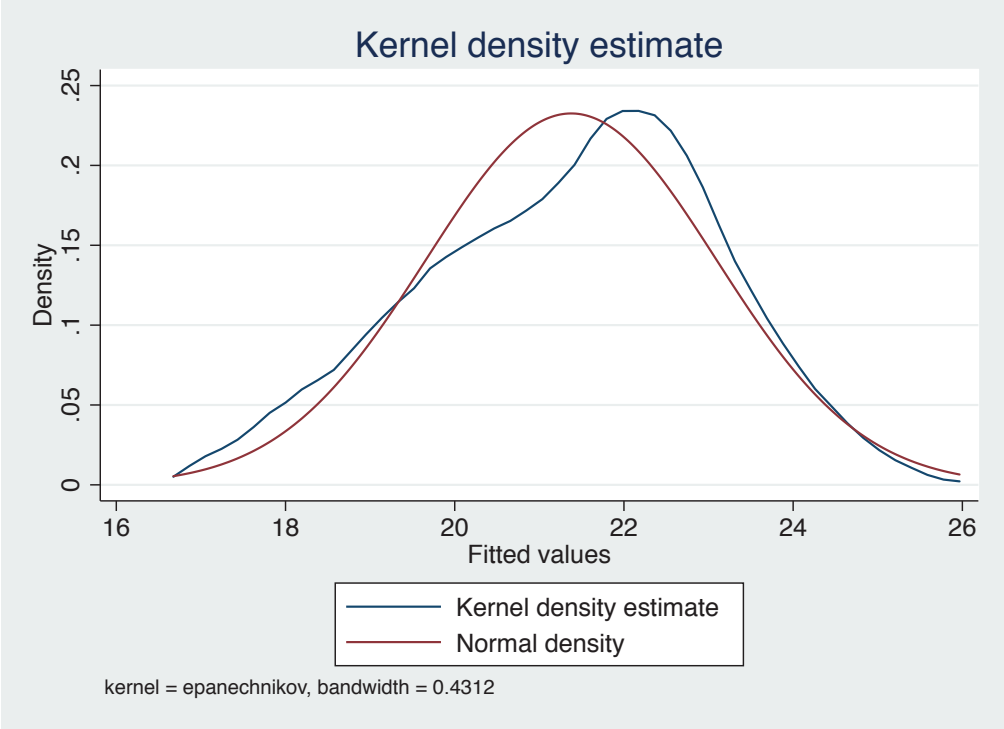


Pnorm plot



Qnorm plot

7. **Sex industry – anxiety**



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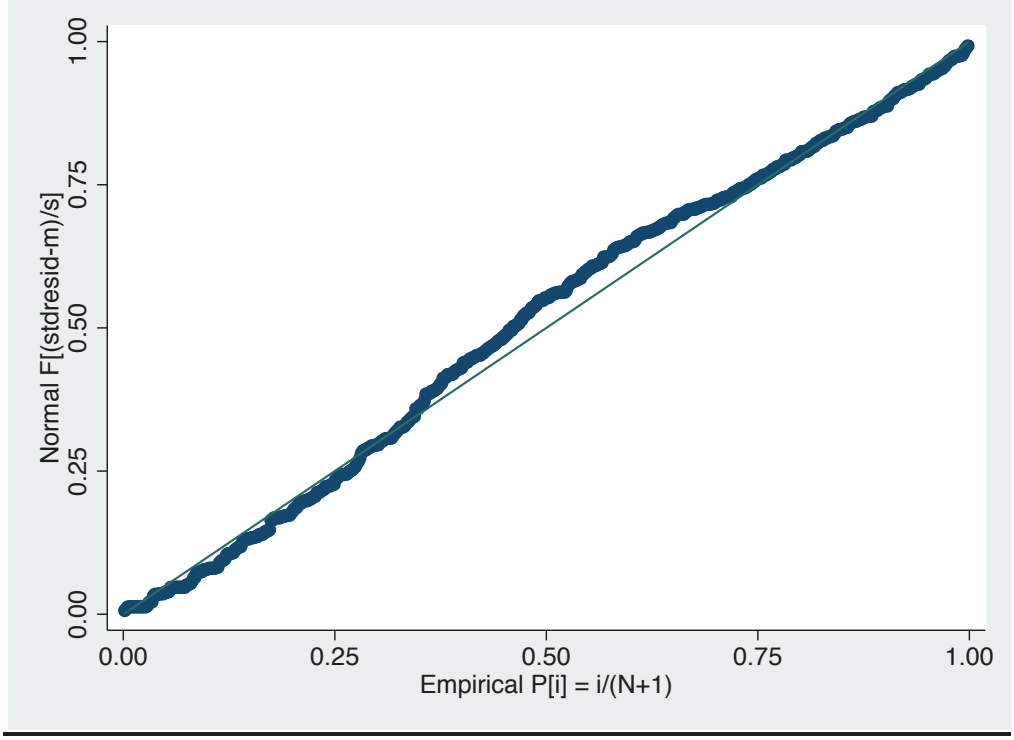

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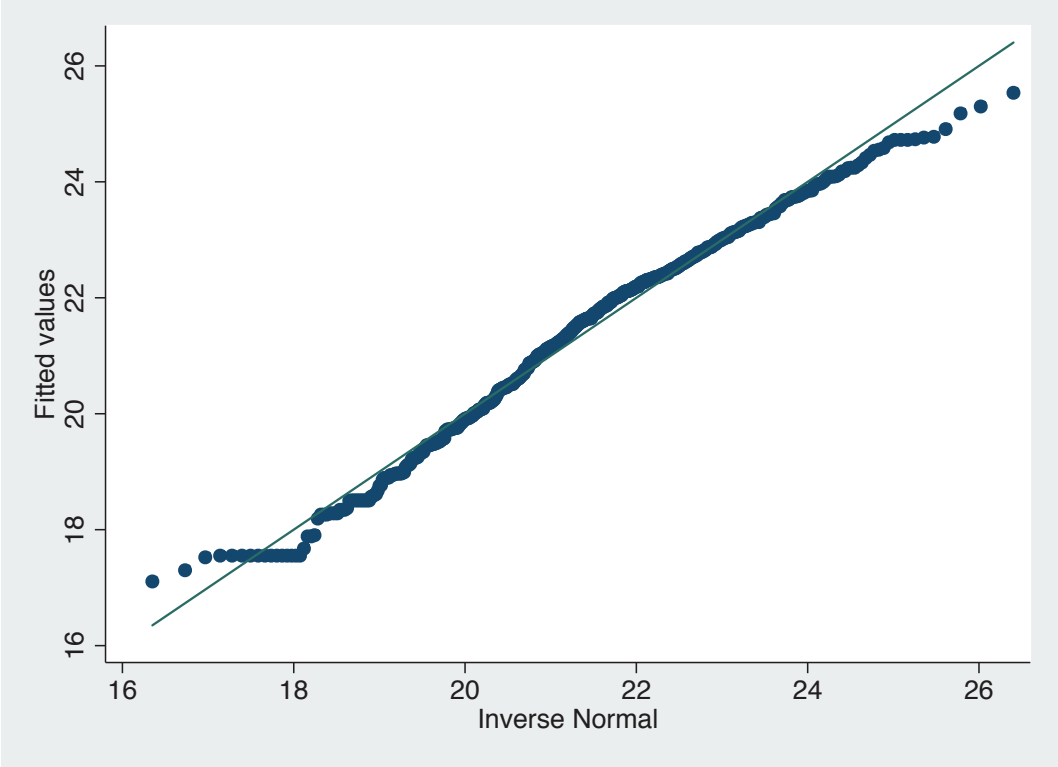
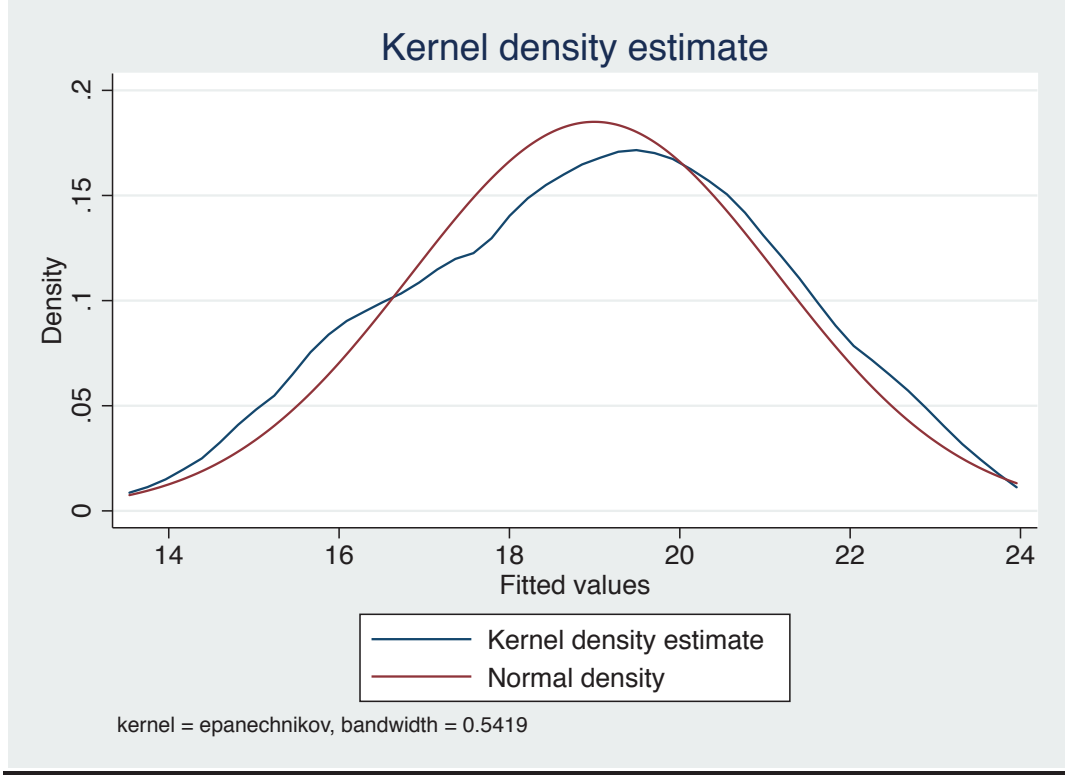
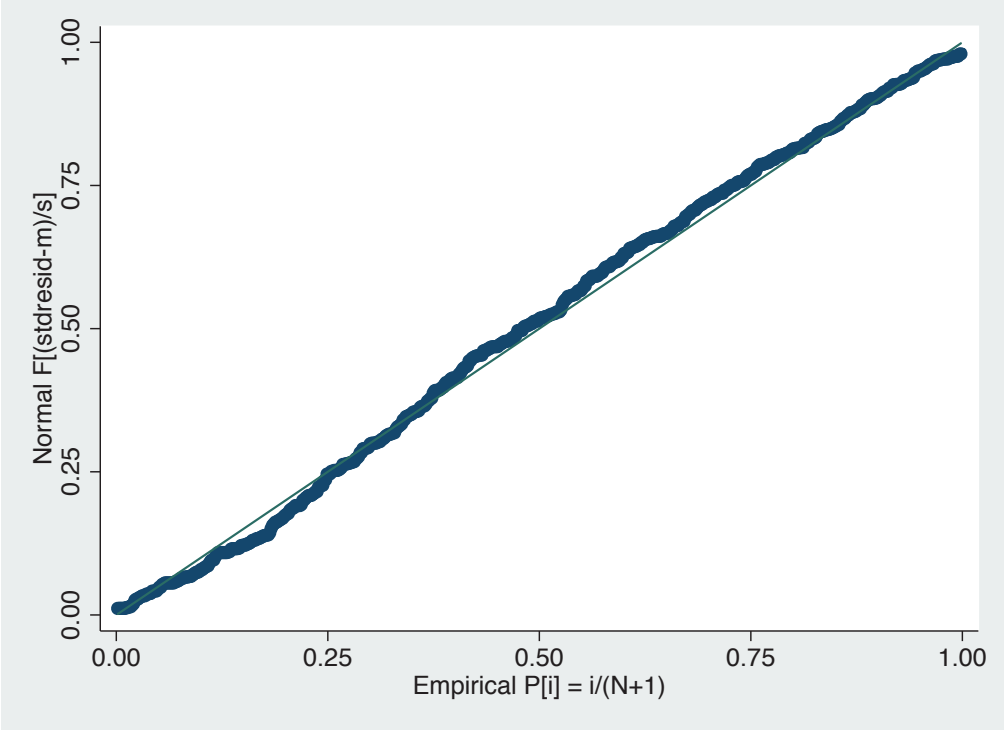


Qnorm plot

8. <u>Whole sample – anxiety</u>



Kernel density plot



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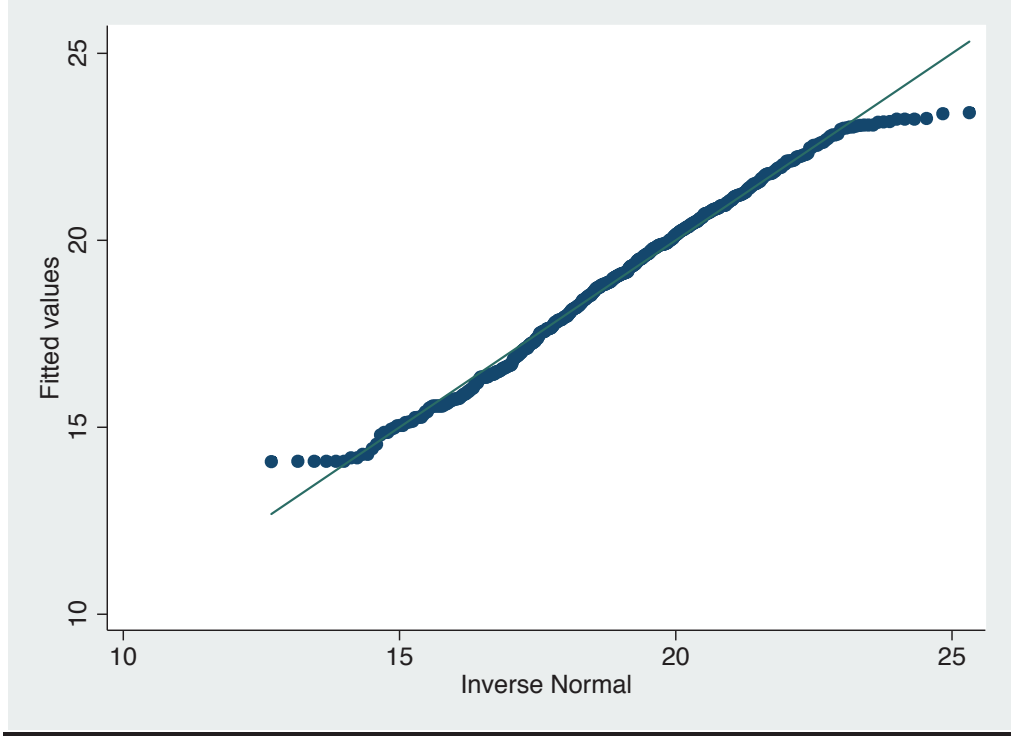

Qnorm plot

SARAH MEYER – CV

EDUCATION

Johns Hopkins Bloomberg School of Public Health (August 2009 – expected 2014)

- PhD Candidate, International Health (Health Systems) program
- Recipient of Certificate in Mental Health Research, 2011
- Center for Global Health, Summer Research Fund recipient, 2010
- Sommer Scholar – five year tuition and stipend fellowship
- General Sir John Monash Award – three year fellowship from Australian foundation

University of Oxford: MPhil in Development Studies – Distinction (2004 – 2006)

- Attended University of Oxford on 2004 Australia-at-Large Rhodes Scholarship
- Thesis research focused on refugee policy and projects in Uganda
- Research methods courses in qualitative and quantitative research methods

Monash University, Melbourne, Australia: Bachelor of Arts (Dean's Scholars) in history and politics; Honours year in politics (2000 – 2003)

PROFESSIONAL EXPERIENCE

Interagency Standing Committee Reference Group on Mental Health and Psychosocial Support in Humanitarian Settings – Consultant (Jan 2014 – ongoing)

- Lead internal evaluation and review of impact of Interagency Guidelines
- Draft ten case studies of implementation of Guidelines
- Draft recommendations for improved implementation and use of Guidelines

United Nations High Commission for Refugees – Lead Researcher (July 2013 – ongoing)

- Lead researcher for pilot project to develop and pilot measurement tools to assess protective environment for children in refugee camps
- Drafted concept note and proposals for external funding from donors
- Led instrument and research protocol development
- Led training, instrument piloting and data collection in Kiziba refugee camp, Rwanda, Dec 2013

World Health Organization – South East Asia Regional Office – Consultant (May 2013 – August 2013)

- Research concept paper and draft country profiles on "Principles and Practices of Healthy Borders in the Greater Mekong Region"
- Co-lead rapporteur for WHO Bi-regional meeting, Healthy Borders in the Greater Mekong Subregion, and co-author conference report

National AIDS Management Council, Thailand/ Thammasat University – Consultant (February 2013 – July 2013)

- Technical support for design, piloting and implementation of survey instrument and respondent-driven sampling approach to assess HIV risk behaviors amongst youth-at-risk in Thailand

- Development of field-operations manual and training materials to support sampling methodology

United Nations High Commission for Refugees – Consultant (April 2012 – July 2013)
- Review of UNHCR's MHPSS programs, including extensive literature review, mapping of UNHCR MHPSS programs and analysis of policy documents
- Interviewed UNHCR Headquarters and field staff, academics and MHPSS staff from other international organizations and NGOs and surveyed UNHCR field staff
- Analyzed interviews, documents and data to provide mapping of UNHCR MHPSS programs and recommendations for UNHCR policy
- Published full report with findings and recommendations, and presented to key stakeholders at UNHCR Headquarters, Geneva

Johns Hopkins School of Public Health and Social Action for Women, Trafficking Assessment Project, Mae Sot, Thailand – Research assistant (Jan 2012 – March 2013)
- Assisted in planning and design of State Department-funded grant to assess sex and labor trafficking from Burma to Thailand
- Qualitative fieldwork – oversight of 60 in-depth interviews with migrant workers, including interview guide design, research assistant training, and data quality improvement
- Quantitative fieldwork – designed quantitative survey, planned and oversaw large-scale survey of 600 migrant workers using respondent-driven sampling
- Quantitative analysis – conducted analyses on prevalence of trafficking using RDSAT and Stata for subsequent publications

Johns Hopkins School of Public Health and International Rescue Committee, Care for Child Survivors Project, Mae Hong Son, Thailand – Research associate (Feb 2011 – April 2012)
- Led qualitative fieldwork phase focusing on psychosocial wellbeing of Burmese children in refugee camps in Thailand
- Developed training slides, managed data collection and contributed towards data analysis
- Drafted report on qualitative findings for Gates Foundation; led manuscript development
- Developed quantitative screening instrument, adapted and designed psychosocial scales to assess children's exposures, symptoms and well-being
- Analyzed data from reliability and validity study of instrument

Johns Hopkins School of Public Health and Transcultural Psychosocial Organization, Cambodia – Fieldwork and research co-ordinator (June – August 2010)
- Developed research protocol and IRB application on labor trafficking and mental health
- Designed and implemented qualitative methods training for Cambodian research team

- Managed research team of four Cambodian staff for qualitative data collection
- Collected and analyzed data; wrote manuscripts for journal submission

American Jewish World Service – International Development Education Officer (October 2007 –July 2009)
- Researched, wrote and designed curriculum for AJWS service trips, focusing on international development topics including human rights, gender, food, trade and public health
- Trained service-learning program leaders on international development topics

Brookings – Bern Project on Internal Displacement, Brookings Institution – Intern (June 2007 – August 2007)
- Researched and wrote briefings related to project priorities
- Research assistance for Fellow and Deputy Director of the Project, Dr. Khalid Koser

Oxfam/ A Just Australia – Consultant Researcher (February 2007 – August 2007)
- Research fieldtrip on off-shore processing of refugees in Australia, including interviews with community advocates and Government officials, and visits to detention facilities
- Co-wrote report on off-shore processing and complementary protection of refugees

Refugee Law Project, Kampala, Uganda – Research Associate (July – Sept 2005)
- Research concerning self-reliance and rights of Sudanese refugees in North-Western districts of Arua and Yumbe
- Interviewed Government officials and policy makers, and host community members and refugees in refugee settlements

TRAINING AND TEACHING

- Lead trainer on respondent driven sampling for HIV risk behavior study, Thammasat University, Thailand, May 2013
- Guest lecturer, *Global Health,* San Jose State University, April 2013
- Co-trainer on respondent driven sampling for trafficking study, Johns Hopkins School of Public Health, Thailand, October 2012
- Lead trainer on qualitative research methods and human subjects research, Johns Hopkins School of Public Health, Thailand, February 2012 and May 2011; Cambodia, July 2010
- Tutor for Refugee Studies Centre International Summer School in Forced Migration, University of Oxford, 2006

PUBLICATIONS

- Sarah Meyer, W. Courtland Robinson, Nada Abshir, Aye Aye Mar, Michele R. Decker. "Trafficking, exploitation and migration on the Thailand-Burma border: a qualitative study," *International Migration, accepted*.
- Katherine Footer, Sarah Meyer, Len Rubenstein, Susan Sherman. "On the frontline of eastern Burma's chronic conflict – listening to the voices of local health workers," *in revision.*

- Sarah Meyer, W. Courtland Robinson, Sotheara Chhim, Judith K. Bass. "Labor migration and mental health in Cambodia: a qualitative study," *Journal of Nervous and Mental Disease, in press.*
- Sarah Meyer, Laura K. Murray, Eve Puffer, Jillian Larsen, Paul Bolton. "The nature and impact of chronic stressors on refugee children in Ban Mai Nai Soi camp, Thailand," *Global Public Health,* 8(7), 2013.
- Sarah Meyer, Hannah Tappis, William Weiss, Paul Spiegel, Alexander Vu. "Refugee health service utilization: more needs to be done," *American Journal of Disaster Medicine,* 6(4), 2011.
- William Weiss, Alexander Vu, Hannah Tappis, Sarah Meyer et al., "Utilization of outpatient services in refugee settlement health facilities: a comparison by age, gender and refugee versus host national status," *Conflict and Health,* 5(19), 2011.
- Sarah Meyer, "Displacement Risks in Africa: Book Review," *African Studies Quarterly,* 9(3), 2007.
- Sarah Meyer, "The 'refugee aid and development' approach in Uganda," *New Issues in Refugee Research Working Paper No. 131,* UNHCR, Geneva, October 2006.
- Sarah Meyer, "Clarifying Local Integration," *Forced Migration Review,* August 2006.

REPORTS

- "UNHCR's Mental health and Psychosocial Services for Persons of Concern," *UNHCR Policy Development and Evaluation Service,* June 2013
- "Qualitative Assessment of Children and Youth in Ban Mai Nai Soi refugee camp, Thailand," report to *Gates Foundation*, co-authored with Dr Laura Murray and Dr Eve Puffer, July 2011.
- "A price too high – the cost of Australia's approach to asylum seekers," *A Just Australia/ Oxfam,* August 2007.
- "Integration and Self-Reliance: Research Guide," *Forced Migration Online,* 2007.

PRESENTATIONS AND POSTERS

- "Research and practice in mental health and psychosocial support in humanitarian settings," *Melbourne School of Population and Global Health Seminar,* University of Melbourne, September 2013.
- "UNHCR's Mental Health and Psychosocial Services for Persons of Concern," *Report launch*, UNHCR Headquarters, Geneva, July 2013.
- "The nature and impact of stressors in a refugee camp: a qualitative study," *Children and War,* Salzburg, July 2013.
- "Migration and mental health: a case study of Burmese migrant workers in Thailand," *World Congress of Social Psychiatry,* Lisbon, July 2013.
- "Legal status and vulnerability amongst Burmese migrant workers in Thailand," *Within and beyond citizenship,* University of Oxford, April 2013.
- Panel convenor and presenter, "Displacement and migration on the Thailand-Burma border," *International Association for the Studies of Forced Migration,* Kolkata, January 2013.
- "Labor Trafficking and Health: A Qualitative Study," *Global Health Day, Johns Hopkins School of Public Health* – Blue ribbon winner, poster, March 2011.

- "'Internal Refugees' or 'Unlucky Citizens': An examination of internal displacement," *Montreal Institute for Genocide Studies, Concordia University,* March 2007.
- "Refugees, rights and self-reliance: A Case Study from Uganda," presentations at *University of Montreal* and *Centre for Refugee Studies, York University,* March 2007.
- "Self-Reliance and Livelihoods Approaches," *Violence, Militarisation and Livelihoods in East Africa Conference,* University of Oxford, May 2006.

AWARDS AND HONORS

- **Sommer Scholar 2009** – Johns Hopkins Bloomberg School of Public Health
- **General Sir John Monash Award 2009** – 3 years funded study at any institution outside of Australia from Australian foundation
- **Sauvé Scholars Program** – funded fellowship at McGill University, 2006 – 2007
- **Australia-at-Large Rhodes Scholarship**, 2004