

**Health Status of and Health Risks to Male Nepalese
Migrants in the Middle East and Malaysia**

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Thesis title: Health Status of and Health Risks to Male Nepalese Migrants in the Middle East and Malaysia

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ABSTRACT

This thesis investigates the health status of and health risks to male Nepalese migrant construction and factory workers in the Middle East (West Asia) and Malaysia. After the more seasonal migration to India, the Middle East and Malaysia are the second most popular destinations for Nepalese workers. Differences in the health status and health risks for Nepalese workers associated with the type of work-place, demographic, socio-economic and health characteristics have been investigated in this Ph.D. This study adopted self-reported tools to measure general physical and mental health. These health risks have been measured in terms of perceived health risks and experience of work-related accidents at work.

This study uses a mixed-methods approach including questionnaires and in-depth interviews with male Nepalese migrant workers, upon their return to, or prior to their departure from Nepal. Questionnaire data (n=403) estimated the health status of migrant workers and the level of risk to which they are exposed. The interviews (n=20) with a sub-sample of the survey population has offered detailed. Ethical approval granted by the Nepal Health Research Council.

Nearly half of the respondents (46%) were aged 20 to 29, most were married (91%), without formal education or only had completed primary education (71%). Most (87%) rated their health as “very good/good or fair”. More than three quarters (79%) perceived their work environment as “very good/good or fair”. Two-thirds (65%) were satisfied with their accommodation abroad. The majority had semi-skilled jobs (69%) and 71% had registered with a doctor; 62% had national insurance; 17% had experienced a work accident. Overall, age was associated with self-reported poor health status as health appeared to worsen with increasing age. Perceived diet, health risks and the work environment were strongly associated with self-reported poor health status. Age, satisfaction with accommodation, work environment and country of work were strongly associated with accidents at work. Country of work and health insurance were significantly associated with not visiting a doctor abroad.

The qualitative findings focus on six main themes: (a) push factors of migration; (b) pull factors; (c) living abroad; (d) working abroad; (e) health and health services; and (f) suggestions to improve health and well-being. The in-depth interviews confirmed that Nepalese migrant workers experienced accidents at work, skin problems, heart attacks, mental health issues and even death. In general, employers were perceived not to value the health of migrant workers enough and due to the pressures of work many workers took risks.

A significant minority of Nepalese migrant workers working in the Middle East and Malaysia have experienced work-related risks, unsafe and stressful working and living

environments and delayed medical treatment. Health and safety at work should focus on encouraging employers to provide safe work environments by giving health and safety training to ensure potential harm reduction. However, the main evidence from this study is that the majority of Nepalese male migrant workers do report a fairly positive experience e.g. with their health, health insurance and access to health services, of living and working abroad. This phenomenon coupled with the poor living and working conditions in Nepal helps explain why workers are willing to work in high risk jobs and in relatively poor working conditions abroad.

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DECLARATION

I hereby declare that this thesis, presented in accordance with the requirements for the degree of Ph.D. at Bournemouth University, has been composed by myself and has not been submitted in any previous application for a degree. All quotations have been distinguished by quotation marks and sources of information have been specifically acknowledged.

Pratik Adhikary

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LIST OF ABBREVIATIONS

AC	-	Air Conditioning
AIDS	-	Acquired Immune Deficiency Syndrome
CBS	-	Central Bureau of Statistics
CDR	-	Central Development Region
CI	-	Confidence Intervals
EDR	-	Eastern Development Region
EWCS	-	European Working Conditions Survey
FWDR	-	Far Western Development Region
GP	-	General Practitioner
HACE	-	High Altitude Cerebral Oedema
HCA	-	Health Care Assistant
HIC	-	High-Income Countries
HIV	-	Human Immune Deficiency Virus
ILO	-	International Labour Organisation
IOM	-	International Organisation of Migration
LIC	-	Low-Income Countries
LPG	-	Liquefied Petroleum Gas
ME	-	Middle East
MWDR	-	Mid-Western Development Region
NHRC	-	Nepal Health Research Council
NHS	-	National Health Services
NIDS	-	National Institute of Development Studies
NLSS	-	Nepal Living Standards Survey
NRs	-	Nepalese Rupees
OR	-	Odds Ratios
SLC	-	School Leaving Certificate
SPSS	-	Statistical Package for the Social Sciences
SRH	-	Self Reported Health
STIs	-	Sexually Transmitted Infections

UAE	-	United Arab Emirates
UK	-	United Kingdom
UN	-	United Nations
UNDESA	-	United Nations Department of Economic and Social Affairs
UNDP	-	United Nations Development Programme
USA	-	United States of America
USD	-	United States Dollars
WDR	-	Western Development Region
WHO	-	World Health Organisation

CHAPTER 1 INTRODUCTION

1.1 Background

Migration is an integral part of human existence (Datta, 2004) and has occurred across the world since the beginning of human civilisation (Bhattarai, 2005) bringing millions of diverse and disparate people together (Gushulak *et al.*, 2009). Bhende and Kanitkar (1978) suggest that millions of people leave their usual place of residence and move to other countries (international level) in search of better opportunities. Not all migration is permanent: a proportion of migrants go to work in a different country with the aim of returning to their birth country in due course. This category is referred to as ‘temporary migrant workers’. Many migrant workers from Low-Income Countries (LIC) work as low-skilled labourers in wealthier countries (Benach *et al.*, 2011).

An estimated three percent of the global population in 2000 lives outside their country of birth for more than a year (Stilwell *et al.*, 2004). Infrastructural development, easy transportation and communication have significantly increased human migration in recent years at unprecedented rates (Michael *et al.*, 2006). International mobility has more than doubled over the past four decades, increasing from about 82 million in 1970 to 214 million in 2010 and to 232 million in 2013; migrants move to both high income countries (HIC) and low income countries (LIC) (IOM, 2010; UNDESA, 2013). Nevertheless, a small majority (57%) of migrants settle in HIC (IOM, 2010). Most recently, Europe and Asia have received two thirds of international migrants. In 2013, Europe received 72 million (m), Asia 71 m, Northern America 53m, Middle East (West Asia) 26.6m, Africa 19m and Oceania 8m immigrants (UNDESA, 2013). Migration in terms of gender is nearly balanced. In general, the percentage of female migrants (49%) is approximately the same as males, but the proportion of female emigrants is slightly higher in Europe (52.3%) and Oceania (51.2%) but lower (38%) in the Middle East (IOM, 2010). In addition, age-related migration is also on the increase worldwide. The total number of young migrants (< 20 years of age) is now 34.8m compared with 37m older migrants (aged 60 and above) in 2013 (UNDESA, 2013).

Similar to general migration, work-related migration, i.e. temporary migrant workers, is also growing (Stilwell *et al.*, 2004) and increasingly visible around the world. IOM (2011) has defined ‘migrant workers’ as workers (skilled, semi-skilled or unskilled) who move from home country to destination countries for the purpose of employment. The number of people living and working abroad continues to rise and there has been a significant growth in temporary labour migration from the LIC to the HIC (IOM, 2010). In 2010, an estimated 105.5m migrant workers work outside their country, of these, a third of global migrant workers worked in Europe followed by Asia (29%) and North America (24%) (ILO, 2010). Several studies in HIC (e.g., Canada, Spain, Germany and in the United States) indicate that immigrants are overrepresented in risky occupations and industries with higher injury and fatality rates; the term ‘risky occupation’ means immigrants are employed in physically demanding high-risks jobs. These studies have found that immigrants have higher levels of several diseases, accidents, injuries and hearing loss etc. (Orrenius & Zavodny, 2009; Smith *et al.*, 2009; Solé *et al.*, 2010). Also, migrant workers around the world tend to be employed in more risky jobs in selected industries such as agriculture, farming, construction, manufacturing, or transportation (Ahonen *et al.*, 2007; Amuedo-Dorantes & Borra, 2013; Dong & Platner, 2004; Reid, 2010; Schenker, 2010) and have higher rates of occupational injury than native-born workers (Rosano *et al.*, 2012; Schenker, 2010). At the same time, in many countries around the world, remittances are key sources of national income that motivate the sending of semi-skilled and unskilled workers abroad. It is estimated that the total remittances worldwide flowing to LIC in 2013 is around US \$414 billion (Ratha *et al.*, 2013).

1.1.1 Migrants workers from Nepal

Similar to other countries in the world, there is both internal and external migration in Nepal. Of the international migrants, those going to HIC like Australia, Canada, UK and the USA are generally skilled and often migrate permanently (Bohra-Mishra, 2011), for example doctors and nurses (Radha, 2009-2010; Sapkota *et al.*, 2014). However, in recent years there has been a

significant rise in migration of Nepalese people to the Middle East and South East Asia mainly as temporary foreign workers (Shrestha, 2011). Some note that the countries commonly known as the Middle East are perhaps better referred to as West Asia in geographical terms, but since the term ‘Middle East’ is so widely used the remainder of the thesis will use the term Middle East throughout. Most temporary workers migrating to these countries are classed as unskilled or low-skilled and work in risky occupations such as construction, industry and farming (Baruah & Tuladhar, 2012; *The Kathmandu Post*, 2013). Some of the key reasons for the migration of these temporary workers include employment opportunities abroad and associated high exchange rates (see Table 1.1) (Joshi *et al.*, 2011b; Rauniyar, 2009b; Nepal Rastra Bank, nd). Concurrent with the increase in foreign migrant workers, there has been a significant rise in the remittances that Nepal is receiving (Kollmair *et al.*, 2006; Shrestha, 2011). For example, in 2013 alone, Nepal received US \$4.5 billion remittances from migrant workers which is equivalent to almost a quarter of its national income (Eileen, 2013).

Table 1.1: Mean exchange rates of Nepalese Rupees for relevant currencies

Time period	One unit of the country's currency in Nepali Rupees			
	US dollar*	Qatari Riyal	Saudi Riyal	Malaysian Ringgit
2009	77.78	21.29	20.58	21.92
2010	72.86	20.01	19.43	22.64
2011	74.03	20.40	19.81	24.27
2012	85.13	23.38	22.70	27.55
2013	93.33	25.63	25.05	29.61

* i.e. one US \$ in 2009 cost 77.78 NRs.

One of the biggest issues facing migrant workers is their health. As many of them work under poor conditions or in dangerous occupations (Orrenius & Zavodny, 2009; Peoples *et al.*, 2010; Pérez *et al.*, 2012), the next section highlights the health issues of migrants around the world.

1.1.2 Health issues of migrants in general

Migration can have a profound effect on the health and well-being of those who migrate. The impact of migration on migrants' health is complex and involves broader issues revolving around: (a) access to health care services; (b) availability of quality of care; and (c) the types of illnesses they are exposed to which are directly related to the types of jobs they carry out. Evidence suggests that migrant workers are at high risk due to hazardous occupational exposures, injuries and death (Tsai, 2012). Similarly, migrant workers face a number of risks while abroad for work owing to discrimination, language barriers, legal status, cultural barriers and socio-economic problems (WHO, 2003). As a result, migrants' health has become a key global public health issue since globalisation as the volume of migrants has rapidly increased (Gushulak *et al.*, 2009). Migrants often experience social exclusion, lack of health and safety training, communication problems, difficulties in gaining access to health services in the host country and a lack of injury compensation (Ahonen *et al.*, 2007). More importantly, as migrants work away from their family, community and social network, the lack of social networks and connections coupled with poor working and living conditions can lead to physical and mental illnesses (Aranda *et al.*, 2000; Caplan, 2007; Ll acer *et al.*, 2009). Also, labourers or unskilled migrants are often engaged in the so-called '3 D' jobs (Difficult, Dirty and Dangerous) and can be regularly exposed to serious occupational health hazards and prone to accidents (Benach *et al.*, 2010; Fern andez & Ortega, 2008; Joshi *et al.*, 2011b; Seddon *et al.*, 2002). It is not surprising that low-skilled migrant workers, particularly from LIC like Nepal, end up doing the kind of jobs the locals in receiving countries do not want to do. This is partly due to the low education and expectations of migrant workers as well as limited employment opportunities at home. The next section will examine the health issues of migrants in specific high risk industries like the construction, agriculture or farming sectors.

Often, migrant workers, especially from low-income countries like Nepal, work in labour-intensive industries in the receiving countries, for example in the service, agriculture or construction industries. For instance, migrant workers in the Middle East e.g. United Arab Emirates (UAE) are more likely to experience

depression and thoughts of suicide (Joshi *et al.*, 2011b). Work-related issues including low pay and long working hours are leading causes of depression and suicide (Al-Maskari *et al.*, 2011). Migrant agricultural workers are more prone to occupational injuries than general migrants (Villarejo & McCurdy, 2008). A study of immigrants in Italy and Spain has revealed that migrants who are employed in agriculture experience more health problems compared to native workers (Rosano *et al.*, 2012). In these Southern European countries, migrants are also more likely to experience skin diseases and musculoskeletal problems (ibid). North-American studies on migrant farm workers have found that Hispanic farm workers are more likely to report hearing loss compared to their English-speaking counterparts (Rabinowitz *et al.*, 2005). Occupational exposures to noise, mainly from tractors and other machinery are the leading causes of hearing loss (Rabinowitz *et al.*, 2005). Immigrant farm workers in Georgia (USA) experience high levels of heat-related illnesses (Fleischer *et al.*, 2013). Musculoskeletal injuries are also common among migrant and seasonal farm workers in the USA according to Weigel and Armijos (2012). Apart from work-related ill health, migrants in general also suffer from more general health problems than the local workers as outlined below by studies from Europe and the USA, although some studies have suggested the contrary (Ratnasingam, 2011; Ujcic-Voortman *et al.*, 2012).

General studies on migrants and health

Several studies on the health of migrants have identified migrants at risk of various health problems in the countries of their work/residence (Akhtar & Mohammad, 2008; Arcury & Quandt, 2007; Bollini & Siem, 1995; Eaton, 2004). A recent review concluded that obesity and diabetes are more common problems for Turkish and Moroccan migrants in Europe when compared the local western-European population (Ujcic-Voortman *et al.*, 2012). Migrants of Asian origin in the USA are more likely to suffer from obesity and diabetes than migrants from Europe (Oza-Frank & Narayan, 2012). Another study has indicated that Nepalese migrant workers in India are at high risk of acquiring human immuno deficiency virus (HIV) and/or sexually transmitted infections (STIs) (Poudel *et al.*, 2003; Poudel *et al.*, 2004).

However, not all studies identify migrants as at greater risk or with worse health than local populations. Some studies show that migrant workers are less prone to occupational accidents compared to local counterparts (Ratnasingam, 2011; Ratnasingam *et al.*, 2012). Also, a number of studies in HIC including Australia (Page *et al.*, 2007), Canada (Chen *et al.*, 1996), Germany (Razum *et al.*, 1998) and the USA (Singh & Siahpush, 2001) report that immigrants have better health than general ‘receiving country’ populations for some health indicators such as lower mortality rates and higher life expectancy. This phenomena is known as the “healthy immigrant effect” i.e. new immigrants are often healthier than the native-born population (Biddle *et al.*, 2007; Frisbie *et al.*, 2001; McDonald & Kennedy, 2004). It is also known that the healthy immigrant effect is a temporary phenomenon and over the years, migrants have seen a decline in their health thereby equalizing or even deteriorating their health status to that of the local population (Biddle *et al.*, 2007; Frisbie *et al.*, 2001; McDonald & Kennedy, 2004).

Few studies, have examined the health issues or health experience of individual migrant workers, in particular male Nepalese migrants workers working in risky occupations such as those in construction sectors. In Europe, a number of studies have been conducted to understand the views and experiences of health care professionals and the difficulties of providing care to migrant workers (Abbott & Riga, 2007; Hargreaves *et al.*, 2008; Hultsjo & Hjelm, 2005) to improve the health of migrants. Various problems including language difficulties, lack of health insurance, social deprivation and traumatic experiences, lack of familiarity with the health care system, cultural differences, different ideas about understandings of illness and treatment, negative attitudes towards immigrants among staff and patients, and lack of access to medical history have been identified as relating to the access or provision of health care services to migrants (Priebe *et al.*, 2011). Female migrants’ specific health issues will be discussed in more detail in the following section to highlight the context and risks they face although they have not been part of the current study due to its focus on male migrants.

1.1.3 Health issues of female migrants

Similar to general migrants, female migrants also experience various health issues. Female migrants face health problems due to their perceived inferior social status and unique biological characteristics (Adanu & Johnson, 2009; Carballo *et al.*, 1996). Migrant women also suffer sexual abuse, rape and violence in migrant-receiving countries (Joshi *et al.*, 2011b). The higher vulnerability of women to sexual abuse and violence also places them at risk of STIs and HIV (Arachchi, 2013; Carballo *et al.*, 1996). Reproductive health is another serious global health problem that includes migrants (Carballo *et al.*, 1998; He *et al.*, 2012; Webber & Spitzer, 2010). Female migrant workers in China experience a high prevalence of self-reported reproductive tract infection symptoms (Lu *et al.*, 2012). In addition, unmarried migrant workers are more vulnerable to sexual and reproductive health problems (*ibid*). Another reproductive health example is that of Ethiopian-born migrants in Israel. The abortion rate of female migrants in this population is four times higher than local women and they face difficulty in receiving early care treatments (Dayan & Shyartzman, 2013). Death by suicide is another key issue for migrant workers around the world including women. Several studies report that the rates of attempted and successful suicide are high among South Asian women migrants (Bhugra, 2002; Raleigh & Balarajan, 1992). Literature suggests that most female migrant workers around the world are involved either in the domestic or agricultural sectors (FAO, 2011; ILO, 2013a). The next section highlights the literature relating to female agricultural workers.

Female agricultural workers

Almost half of the global migrants are women who are employed mainly in the domestic, agricultural or farming sectors (FAO, 2011; ILO, 2013a; UNDESA, 2009). Women make important contributions to the agricultural economies in all regions of the world. For example, the agricultural sector globally employs more than two fifths (43%) of women in its labour market and in LIC (FAO, 2011). Similar to general migrant workers, female migrant agricultural workers also experience occupational health issues (Habib & Fathallah, 2012). Evidence suggests that migrant women who work in the agricultural sector are more likely

to experience reproductive abnormalities (De la Torre & Rush, 1989; Gwyther & Jenkins, 1998; Hansen & Donohoe 2003; Smith, 1986). A further study on Mexican women migrant farm workers in the US highlights that they are more likely to report anxiety, depression and suicidal thoughts due to social isolation, hopelessness and acculturative stress (Magana & Hovey, 2003). The key health issues for migrant women domestic workers are described in the following section.

Female domestic workers

In recent years, the demand for domestic workers has increased worldwide to around 53m domestic workers worldwide (ILO, 2013a). Most of them, 83%, are women employed in many countries across Latin America, the Caribbean, Europe, Gulf countries and the Middle East (ibid). Asia is the main domestic labour supplier for these regions. The Middle East is one of the most popular destinations for migrant women domestic workers from Asian countries including e.g. Bangladesh, Pakistan, the Philippines and Sri Lanka (Arachchi, 2013). There are no recorded data on the number of Nepalese female migrants in the Middle East. Recently, the Nepalese Government banned females (under 30 years of age) from going as migrant workers to Gulf countries (*The Daily Star*, 2010). However, thousands of Nepalese women workers use illegal routes to enter these countries. It is estimated that about 200,000 Nepali women are working in Middle Eastern countries and most of them are engaged in domestic labour (*BBC News*, 2012). Published studies on migrant domestic workers show that female workers may experience numerous problems in destination countries (Jarallah, 2009; Shah, 2004). A study on Sri Lankan migrant workers has reported that female workers encounter a number of problems in Middle-Eastern countries including limited freedom of movement, lack of social protection, poor living and working conditions, harassment, violence and mental illness (Arachchi, 2013). Another study in Hong Kong has found that Filipino female domestic workers face high risks of psychosocial stressors (Lau *et al.*, 2009). Family problems, work-related difficulties including abuse by employers and financial difficulties are the leading causes of these psychosocial problems (ibid).

The health of women migrants is not always worse in receiving countries compared with their home countries. Some studies suggest that migrants can have a positive health experience when they move from LIC to HIC (Ny *et al.*, 2007; Read & Reynolds, 2012; Rice & Naksook, 1998; Shafiei *et al.*, 2012). For instance, a study on Middle Eastern mothers in Sweden and their experiences of maternal health services and their partner's involvement concluded that female immigrants have better health compared to their health when they were in the Middle East (Ny *et al.*, 2007). Women from Afghanistan are perceived to have had more positive experiences of maternity care in Australia (Shafiei *et al.*, 2012). Similarly, another Australian study of Thai immigrant women found that most women experience better maternity services in Australia than in Thailand (Rice & Naksook, 1998). In the USA, Mexican and Middle Eastern immigrants' women report better health than the USA-born population (Read & Reynolds, 2012). The researcher's interest in the topic will now be outlined in the following section.

1.2 My interest in the topic

As a native Nepali, I have always been interested in the health and health-related issues of my fellow Nepalese citizens. However, my interest in this topic mainly stems from the curiosity I had in my early life about the lifestyle of people in different parts of Nepal and their migration. Being raised in the foothills of the Himalayas, I was exposed to the hardship of the people living there. I have witnessed how poverty, poor nutrition, lack of education, sanitation and health care services affect the overall health, longevity and lifestyle of people living in these villages. I was also curious to know why people from rural areas move to cities and towns. To understand these issues, I initially undertook a Master's degree in Population Studies (2000) from Tribhuvan University, Nepal, and investigated causes and consequences of rural-urban migration (Adhikary, 2001). To improve my understanding further in this subject, I completed a Master's degree in Health Services and Public Health Research (2007) from the University of Aberdeen. As part of the thesis, I investigated the health and lifestyle of Nepalese migrants in the UK (Adhikary *et al.*, 2008). This study provided me

with insights on the health and lifestyle of Nepalese migrants in the UK; but also stimulated me to conduct a more in-depth study into the health of Nepalese migrants in the Middle East and Malaysia, where many Nepalese migrate for work (Adhikary *et al.*, 2011).

1.2.1 Issues facing migrant workers in the Middle East and Malaysia

Published studies indicate that migrant workers face various health risks, e.g. work accidents, mental health issues and other lifestyle-related risks (Al-Arrayed & Hamza, 1995; Ciesielski *et al.*, 1991; Kuruvila *et al.*, 2006; Nandi *et al.*, 2009; Quandt *et al.*, 2001). These studies highlight the need for a more comprehensive examination of the health status of and health risks to migrant workers. Currently, over a million Nepalese, mostly males, work in Malaysia and in the Middle East, mainly in semi-skilled and unskilled jobs. Poorer people from the rural areas of Nepal make up a substantial proportion of these migrant workers (*Nepal news*, 2010). The literature also indicates that the construction and manufacturing industries are dangerous sectors to work in globally and those migrant workers are often at a more disadvantaged position compared to local workers (Bergdahl *et al.*, 2004; Gurcanli *et al.*, 2008; Leino-Arjas *et al.*, 2002). Thus, migrant construction and factory workers, often poor and illiterate, face a double burden of working in a dangerous sector from a disadvantaged position. Yet there are very few general studies on the health status of migrant workers from the rural regions of Nepal, and none on Nepalese migrant workers in the construction and factory industries of the Middle East and Malaysia. Also, policies to support them are lacking, in part due to limited capacity and capability within the Nepalese context to research issues of migration, health and vulnerability of migrant workers. As a student from Nepal, I am interested in completing research to fill these gaps in our knowledge especially around the risk to migrant workers who are employed in the most risky jobs.

My overall aim, therefore, is to explore and examine the health status of and health risks to male Nepalese migrant workers. Further details of my aims and objectives are presented at the end of the literature review section (Section 2.7).

1.3 Organisation of Thesis

This section outlines the nine individual chapters of the thesis. This first chapter has provided an introductory statement on global migration and the health problems of migrants generally, including the researcher's background and interest in the topic. Chapter two firmly places the study within the wider literature and contemporary research studies. Chapter three explains the theoretical perspectives on international migration. Chapter four outlines the methodological framework for this study. Chapters five and six present the findings and data analysis from this empirical study. Discussion of these findings is presented in chapter seven. The conclusions and recommendations are included in chapter eight and nine respectively. A brief summary of subsequent chapters is now given below.

Chapter 2: This chapter draws together related academic literature on work, health and risks to migrant workers in the Middle Eastern countries and Malaysia and Nepalese migrant workers abroad in general. Since migrant workers' perceptions cannot be understood without knowing more about their work experiences and experiences of health care services, the chapter also reviews the few available Nepalese occupational health studies. Finally, as the workplace focus for this thesis is on the construction and factory sectors, studies from across the globe have been included to help understand the inherent risks faced by workers in such work places.

Chapter 3: This chapter outlines and describes the key theoretical perspectives on international labour migration. Five key theories have been identified: (a) neo-classical economics theory; (b) dual labour market theory; (c) the new economics of migration (d) social capital and network theory; and (e) theories of migration and mental health.

Chapter 4: This chapter outlines the methodology and methods used to gather and analyse data for the research presented in this thesis including mixed-methods studies and their relative strengths and weaknesses. This chapter provides details of the survey among male Nepalese workers including sampling

methods and the questions related to health and risks. Concepts of logistic regression and its application are also introduced and discussed in this chapter. For the qualitative in-depth interview study, the process of the design, conduct and analyses, i.e. thematic data analysis are also explained and defended.

Chapter 5: This chapter describes the quantitative results and presents demographic, socio-economic and health characteristics and the living and work environments of respondents. The health status of the respondents is described using indicators of self-rated physical health. Similarly, mental health status, perceived health risks, accidents at work and the utilisation of health services are also examined. Variations in health status (including mental health), perceived health risks, accidents at work and utilisation of health services by Nepalese workers according to demographic, socio-economic and occupational health characteristics, living and working environments are also presented based on the outcomes of logistic regression.

Chapter 6: This chapter summarises the findings from the in-depth interview study. The thematic results are presented based on six key headings: (a) push factors of migration; (b) pull factors of migration; (c) migrant workers' experiences of living abroad; (d) experiences of working abroad; (e) health and health services; and (f) migrants' suggestions to improve health and wellbeing.

Chapter 7: Discussion of the findings contained in chapters five and six is presented in chapter seven. In this chapter, the quantitative findings are discussed in the light of the qualitative findings and the wider literature. This discussion focuses on seven key areas: (a) self-reported health status; (b) mental health status; (c) work-related accidents; (d) perceived health risks; (e) visits to doctors; (f) reasons for migration; and (g) theoretical explanations. This chapter ends with a section on the strengths and weaknesses of this Ph.D. research.

Chapter 8: This chapter presents the conclusions of the research. The five key conclusions centre round: (a) health experience (physical and mental health

status); (b) perceived health risks; (c) accidents at work; (d) doctor visits; and (e) reasons for migration.

Chapter 9: This is the final section of this thesis and outlines the recommendations emanating from the research. The recommendations for this study are focused on four key areas: (a) recommendations for academics; (b) recommendations for policy makers; (c) recommendations for practitioners; and (d) recommendations for training and education.

Each chapter ends with a short chapter summary. Finally, in the various appendices, a sample questionnaire and in-depth interview guide for the survey and qualitative study and ethical approval letter from NHRC are included in appendices 2, 6 and 3 respectively.

1.4 Chapter summary

Overall, this chapter has set the scene for the remaining chapters of this thesis. This chapter has highlighted key issues related to general global migration, as well as the health issues of migrant workers in particular. This global picture has helped to formulate the aims and objectives for this thesis and put them in a wider perspective (Section 2.7). Section 1.1.3 has provided a brief overview of health issues in women working abroad for completeness in order to put the research planned for this thesis into a wider perspective. A more reflective piece (Section 1.2) has outlined the Ph.D. candidate's interest in the research topic of health and migration and has helped the reader to understand the researcher's perspective. This includes a reflection on potential biases, such as the gender and education of the interviewer and the selection of target countries, issues that will be returned to in Section 4.4 of the Methods and Section 7.9.1.2 of the Discussion. Section 1.3 outlined each individual chapter separately. The next chapter reviews the wider literature on the topic of work, migration and health.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

In support of the proposed study, this section includes a synthesis of the literature on work, health and risk, issues associated with migration in the Middle East and Malaysia, issues on Nepalese migrants abroad and workers in Nepal, health care services in the home country and the justification for factory and construction workers being the participants in this study. Published literature has been searched using a strategy (Appendix 1) including a number of electronic databases and key word combinations, and published books and reports from a number of United Nations (UN) agencies. The bibliographies of published articles retrieved from electronic searches have also been reviewed and relevant articles retrieved for further analysis. The relevant literature is reviewed under the following sections:

- Work, health and risk
- Migrant workers in the Middle East and Malaysia
- Nepalese migrant workers abroad
- Nepal and work

The first section presents relevant literature on work, health and risk.

2.2 Work, health & risk

2.2.1 Work and health

The work environment is a key factor that affects the health and wellbeing of many workers across the globe (Ettner & Grzywacz, 2001; Mojinyinola, 2008), hence, the existence of occupational health as an academic health discipline. This chapter will provide an insight into some of the work-related health (physical and mental) issues of workers working in different occupations. The first section highlights work and physical health issues. The subsequent section of this chapter highlights that being a migrant worker is in itself a risk factor (see 2.2.1.5).

2.2.1.1 *Physical health issues in work places*

The literature indicates that construction workers suffer from a wide range of physical health issues that include eye problems as reported amongst construction workers in, for example, South-African (Deacon *et al.*, 2005) and Lebanese (Nuwayhid *et al.*, 2003) contexts. Accidents have often been reported in studies of construction workers (Abdul-Aziz, 2001; Al-Arrayed & Hamza, 1995; Murty *et al.*, 2006; and Nuwayhid *et al.*, 2003).

Several studies have shown that long working hours lead to accidents and injuries at work (van der Hulst, 2003), increased mortality (Steenland, 2000) and a number of physical health problems including disability retirement (Krause *et al.*, 1997), fatigue (Park *et al.*, 2001) and cardiovascular disease (Liu & Tanaka., 2002). A study of the US working-age population reveals that increasing work hours heightens the risk of hypertension (Yang *et al.*, 2006); whilst another review study suggests that workers working long hours are at a higher risk of coronary heart diseases (Virtanen *et al.*, 2012). Working long hours and sleep problems are also often reported in other studies. For instance, a study of Japanese white-collar workers suggests that long working hours lead to sleep problems (Nakashima *et al.*, 2010). A number of studies have also highlighted that working long hours causes a sleep disturbance and increased fatigue (Basner *et al.*, 2007; Hale, 2005; Kivistö *et al.*, 2008).

Other studies have highlighted that health care professionals also experience various work-related health problems including eye problems and sleep disturbance. In Thailand, health care workers (i.e. dentists) experience musculoskeletal pain, percutaneous injury, eye and hearing problems (Chowanadisai *et al.*, 2000). A Chinese study on the effect of sleep quality on day-cycle fatigue in ward nurses reveals that the sleep quality of nurses working shifts is generally poor (Yang *et al.*, 2008). Another study on sleep quality among health care workers in Iran suggests that workers experience poor sleep quality and that poor sleep has a significant association with a lower SRH score. Female, divorced, shift working and older age groups are more likely to experience poor sleep quality (Ghalichi *et al.*, 2013). Norwegian nurses working

on night shift reported more insomnia and chronic fatigue than nurses without any night shift work experience (Øyane *et al.*, 2013). A number of studies highlight that workers, including professional bus drivers, experience back pain. Many professional bus drivers in Israel experience lower-back pain due to uncomfortable seating and inappropriate back support (Alperovitch-Najenson *et al.*, 2010). Lower-back pain is also a major health problem for taxi drivers in Japan (Funakoshi *et al.*, 2003). The possible contributing factors to this problem are the driver's seat pan, whole-body vibration and job stress (ibid). Low-skilled and less educated factory workers in Fiji experience various physical health problems including body pains and kidney problems (Chand, 2006). Back pain problems are fairly common as they have also been reported for Nepalese studies (e.g. Adhikary *et al.*, 2011; Joshi *et al.*, 2011b; NIDS, 2006) and non-Nepalese studies (Ahonen *et al.*, 2009; Azaroff *et al.*, 2004; Ratnasingame *et al.*, 2011). Most studies discussed in this section are small-scale, cover a range of occupational groups (e.g. health care professionals, drivers and low-skilled workers) and lack in-depth information. Also, studies are often cross-sectional surveys (i.e. offering purely quantitative information rather than additional qualitative insights) and cover work-related physical health issues of national and general workforces. Hence, the literature suggests that there is a gap in our knowledge around patterns of work-related migration and some of the key problems faced by these workers. In other words, this suggests the need for further research focusing on migrant workers and their work-related health risks using a mixed-methods approach. The following discussion moves to look at the existing literature on work and mental health.

2.2.1.2 *Mental health issues in work places*

Having outlined some of the physical health issues concerning work in the previous section, this section will focus upon mental health issues and work. Some factors such as workplace environment, individual factors and poverty influence the mental health of workers (Chopra, 2009; Graham & Shier, 2010; Hansen *et al.*, 2012). Mental health problems (including depression and phobia) are often the most prevalent disorders in the general working population

(Sanderson & Andrews, 2006). Low job quality is the leading cause of depression and anxiety in workers (Sanderson & Andrews, 2006). A study of the US working-age population reveals that increasing work hours heightens the risks of hypertension (Yang *et al.*, 2006); whilst a Spanish study shows that men working long hours (50-51 hrs) experience poorer mental health (Artazcoz *et al.*, 2009). The levels of psychiatric morbidity, burnout and work dissatisfaction are high in colorectal and vascular surgeons working in the National Health Service (NHS), UK; these levels are likely to impact adversely on patient satisfaction and service quality (Sharma *et al.*, 2008). In a further UK study on mental health and stress in the workplace in this case of general practice (GP), suggests that health care professionals experience mental distress (Calnan *et al.*, 2001). Among different occupational groups, doctors and managers (30%) experience more mental health problems compared to district nurses (27%), health visitors (24%) and practice nurses (22%) whereas non-health workers i.e. receptionists/administrative/clerical staff (17-19%) have much fewer mental health issues (*ibid*). Similarly, an in-depth study of Health Care Assistants (HCAs) in the UK suggests that these workers experience frustration due to poor salaries and lack of information about their role when they start employment (Vail *et al.*, 2011). However, one of the positive experiences of HCAs is the good support received from GP team members (*ibid*).

Low social support at work is another determinant of mental illness (Netterstrøm *et al.*, 2008; Shields, 2006). Netterstrøm *et al.* (2008) found the association of low support from co-workers and one's supervisor results in an increased risk of depression. Similarly, public high-school teachers in Tunisia experience burnout and stress at work leading them to experience psychological distress with the risk of increased absenteeism at work. Poor working conditions, administrative difficulties and difficulties with pupils and their relatives are key factors of burnout and stress (Chennoufi *et al.*, 2012). A study of primary school teachers in Cyprus also found that personality and work-related stressors are associated with differing dimensions of burnout (Kokkinos, 2007).

Not all studies report that the work environment is the leading cause of mental illness among workers. A study of male Japanese white collar workers suggests that long working hours are negatively associated with the risk of hypertension (Nakanishi *et al.*, 2001). Thus, this study indicates that working long hours may not contribute to the development of hypertension. Similarly, a Canadian study on the relationship between work stress and mental disorders in the working population found that an imbalance between work and family life is one of the strongest risk factors of mental disorders in workers (Wang *et al.*, 2008). Some of the work-related physical and mental health problems, and risk perceptions at work will be further discussed in the following section.

2.2.1.3 *General health risks at work*

Not all work carries the same risk. Working conditions differ widely between jobs and therefore, as a consequence, workers are confronted with a large variation in terms of safety and health risks in the workplace (Leoni, 2010). This section aims to review the wider literature on risk perception in various occupational groups.

In general, older workers are seen as having a lower injury risk than younger workers (Salminen, 2004). However, one European study suggests that older workers (aged 55-65 years) are more ‘vulnerable’ compared to younger workers, as for example, older workers are more likely to perceive work-related health and safety risks, and to report mental, physical and fatigue health problems (Jones *et al.*, 2011). In South Africa, older construction workers have been exposed to dust, noise, chemicals, welding fumes, paint, working at heights and stress (Deacon *et al.*, 2005). This could simply be because older workers have been in the workplace longer, and therefore have been exposed more. A French study of male railway workers demonstrates that both younger and older workers are at high risks of falling and injuries due to handling equipment, collision with moving objects and using hand tools (Chau *et al.*, 2009). In addition, this French study also found that risks to workers decreased with the increment of employment period (*ibid*), suggesting that there is a learning curve i.e. after the

initial starting phase workers learn to work safer. Butani (1998) also reports a higher risk of injury in newly hired workers with limited experience compared to workers with longer job experiences. A further review study suggests that workers working long hours are approximately at 40% excess risk of coronary heart diseases (Virtanen *et al.*, 2012). An in-depth review study on shift work and chronic diseases notes that female night-shift workers are at high risk of breast cancer and shift workers generally are at high risk of cardiovascular diseases (Wang *et al.*, 2011). Similarly, a study of Irish pig farm workers suggests that these farm workers are at risk of developing work-related respiratory disease (McDonnell *et al.*, 2008). One Egyptian study of agricultural workers highlights that occupational and environmental exposures to farming increases the risk of bladder cancer (Amr *et al.*, 2013). A recent Iranian study suggests that several occupational groups such as truck and bus drivers, skilled agricultural, forestry and fishery workers, metal industry workers, domestic housekeepers and construction workers are at increased risk of bladder cancer (Khoubi *et al.*, 2013). Another study in Iran has found that workers working in coal mines are at high risks of low blood pressure due to exposure to carbon dioxide gas (Khodabandeh-Shahraki & Azizzadeh-Forouzi, 2012).

An Australian study of government personnel reveals that workers perceived poor health in terms of musculoskeletal issues, fatigue and de-motivation due to prolonged sitting (Gilson *et al.*, 2011). Similarly, an in-depth study of Australian construction workers suggests that workers perceive risks of occupational injury and illness (Lingard, 2002). The majority of workers knowingly took unnecessary risks and these risks included working at heights without using correct safety procedures (i.e. using unsafe scaffolding), using power tools and failing to use correct safety equipment (ibid). Italian workers perceived that they had the greatest health risks (i.e. work-related accidents) during the summer period and the peak of work-related accidents occurred on days with hot weather conditions (Morabito *et al.*, 2006). A study of the perception of health risks among college students in China reported that college students perceive high health risks with motor vehicle accidents, chemical and air pollution, cigarette smoking and pesticides in food (Zhang & Fan, 2013). A study of gas station

workers in Brazil identified that workers are exposed to four main types of risks: (a) chemical (i.e. dust, gases, vapors, fumes); (b) physical (i.e. moisture, noise, heat, vibrations); (c) physiological (poor posture, repetitive strain, slippery surfaces); and (d) biological (bacteria, virus, fungi) (Cezar-Vaz *et al.*, 2012). In addition, the majority of workers experience occupational accidents due to fuel leaks, skin and eye contact with fuel (ibid). Other studies have highlighted that transportation is one of the higher risk occupations. For example, Helmkamp *et al.* (2012) suggest that US transportation workers face a high risk of obesity and hypertension. An Australian study also highlights that transportation workers are comparatively at a higher risk of obesity and being overweight compared to administrative or clerical workers (Allman-Farinelli *et al.*, 2010). Amuedo-Dorantes and Borra (2013) suggest that immigrants in Spain working in transportation sectors face higher risks of ill-health compared to native workers. Although, these studies highlight transportation is one of the riskier occupations, this Ph.D. study has not included this sector because most male Nepalese workers are employed in either construction or manufacturing sectors in the Middle East and Malaysia (Baruah & Tuladhar, 2012; Joshi *et al.*, 2011b; *The Kathmandu Post*, 2013). Therefore, this review of the literature reveals there is a wider variety of risk perceived as well as experienced in the work place. However, it does not cover detailed information about construction and factory workers. It is therefore important to consider briefly the more risky occupational groups of construction and manufacturing workers. The next section looks closely at the health risks of and to this population.

2.2.1.4 *Health risks of construction & factory workers*

Compared to the occupations mentioned above, construction and factory workers generally have a higher risk of ill health and accidents, for example, construction workers face a higher risk of occupational disability than general /skilled workers (Arndt *et al.*, 2005). Hard physical labour, with frequent lifting and carrying heavy weights, exposure to vibrations, climatic influences, noise and dust affect their health (ibid). Research of male construction workers in Sweden has found that occupational exposure increases mortality due to chronic obstructive

pulmonary disease, even among those who do not smoke cigarettes (Bergdahl *et al.*, 2004). In addition, the occupational disabilities among workers are mainly due to musculoskeletal disorders, cardiovascular disease and mental disorders (Arndt *et al.*, 2005). A cross-sectional study of radiographic abnormalities among Dutch construction workers has revealed that young construction workers involved in grinding, hammering, drilling, cutting, sawing and polishing face high risks of radiographic abnormalities (Nij *et al.*, 2003). Research in Turkey has highlighted that construction workers face high risks of fatal injuries owing to falls, electric shocks and injuries from falling objects (Gurcanli *et al.*, 2008). Research in Finland found that construction machinery operators are at high risk of back injury (Leino-Arjas *et al.*, 2002). A study about occupational fatalities of Hispanic construction workers in the US has found that these construction workers experience significantly higher risks in the workplace than non-Hispanic construction workers (Dong & Platner, 2004). Dong and Platner (2004) also note that an almost double proportion of Hispanic construction workers are likely to be killed by occupational injuries compared to their non-Hispanic counterparts. Other research of construction workers in Malaysia has suggested that young male construction workers face high risks of deaths, accidents and injuries (Murty *et al.*, 2006). Another research study (large study, n=5340) in Malaysia suggested that industrial workers (mainly workers in the furniture industry) are more prone to occupational accidents e.g. cuts, bruises and sprain (Ratnasingam *et al.*, 2011). Chinese construction workers in Mauritius are not satisfied with their working conditions in terms of a lack of health and safety and long working hours (Suntoo & Chittoo, 2011). Factory workers in Fiji are exploited in terms of poor pay, poor working conditions, inhuman abuse and fear of job loss (Chand, 2006). The next section will outline some of the health issues related to migrant workers who cope with higher risks than local workers.

2.2.1.5 *Working in another country*

People working in another country (i.e. migrant workers) do so at a higher risk than local workers (Ahonen *et al.*, 2007; Alexe *et al.*, 2003; Bollini & Siem, 1995). Mental health problems including stress and nervousness are common for

migrant workers in Spain (Agudelo-Suárez *et al.*, 2009). Research in the US has found that foreign workers are at high risk of heat-related illnesses as well as death (Jackson & Rosenberg, 2010). Migrant workers in a range of different industries are vulnerable in terms of their health status due to a variety of factors such as working in low paid and high risk jobs, a lack of health insurance and language problems in the host countries (Arcury & Quandt, 2007; Jian, 2010; Littlefield & Stout, 1987). Research in India has highlighted an increasing prevalence of skin diseases among migrant construction workers, who can work in a hot and humid climate and in over-crowded and unhygienic working conditions (Kuruvila *et al.*, 2006). Another research study in Lebanon has revealed that migrant construction workers are at high risk of feet and eye injuries and being struck by an object whereas falls are more common for these workers (Nuwayhid *et al.*, 2003). Asian migrant construction workers face higher risks of occupational accidents and injury compared with the general population of Bahrain (Al-Arrayed & Hamza, 1995). Research of Bangladeshi migrant construction workers in Malaysia has revealed that migrant workers are more prone to accidents and injuries and work in unsafe conditions compared with the general population of Malaysia (Abdul-Aziz, 2001). Another study of Asian factory workers in the UK suggests that male immigrants have higher accident rates than the male general population of the UK (Lee & Wrench, 1980). Similarly, a study of car engine factory workers in UK reveals that the accident rate is higher among Asian workers than West Indian and white workers (Baker, 1987). Another study of migrant contract workers working in the furniture industry in Malaysia has revealed that migrants are at high risk of cuts, bruises, sprains, sleep disturbance and/or stress/family tension (Ratnasingam *et al.*, 2011). These are some of the range of studies highlighting how dangerous it is to work in construction and manufacturing industries. Therefore, this background literature gives credence to the focus of this thesis and subsequent research on the construction and manufacturing industries. A general overview of migration in the Middle East and Malaysia is included in the next section.

2.3 Migrant workers in the Middle East and Malaysia

The Middle East and Malaysia are amongst the major migrant receiving countries in the world. There is a growing number of illegal migrants globally, including those in the Middle East and Malaysia (Castles & Miller, 2009). Illegal migrants move from their country of origin to destination countries not following the regulatory norms of countries of origin, transit and destination. In other words, migrants enter host countries illegally (without any documentation or meeting immigration regulations) in order to stay and/or work in these countries (IOM, 2011). It is not considered practical to approach and collect information about illegal migrants as it is perceived difficult to gain appropriately disclosed information about their status. Hence, a decision has been made to approach only legally employed workers for this Ph.D. study, although it is recognized that occasionally official data or studies on migrant workers may inadvertently include (some of the) illegal migrant workers.

An estimated 26.6 million migrants (of whom 38% are female) were in the Middle East in 2010, an increase of 4.5 million migrants compared to 2005 (UNDESA, 2009). In the period from 2005 to 2010 the net migration rate still increased in the Middle East from 9.2 to 9.8 migrants per thousand of the population (ibid). Some Middle Eastern countries have a high share of foreign workers making up their total labour forces. For example, Qatar has one of the highest (94%) proportion of migrant workers as part of its total labour force followed by United Arab Emirates (UAE) (83%) and Kuwait (83%) (ILO, 2013b).

Similar to Middle Eastern countries, Malaysia is another popular destination (in South East Asian countries) for migrant workers. An estimated 1.6 million (7.0 % of total population) migrants were in Malaysia in 2000; most of them in low-skilled jobs (e.g., construction, manufacturing and agriculture). This figure increased to 2.0 million in 2005 and 2.4 million in 2010 (UNDESA, 2009). Most of the migrant workers in Malaysia are from Asian countries (ILO, 2007). In recent years, Malaysia has been one of the more popular destination for millions of migrant workers from Indonesia, Nepal (about half a million Nepalese

migrants work in Malaysia), Bangladesh, India and Philippines (*The Kathmandu Post*, 2013). These migration data justify the need for the research to focus on migrant workers in the Middle East and Malaysia. Health risks facing migrants in these areas, the Middle East and Malaysia, are now discussed in the following section.

2.3.1 Health issues of migrant workers in the Middle East and Malaysia

Similar to other countries receiving large numbers of immigrants, migrants in the Middle-East and Malaysia also face difficulties in adjusting to their new society including adopting safe and healthy life-styles. One study of Middle Eastern immigrants from Asia has found that migrants from poorer groups are at a higher risk of mental illness due to their living and working conditions (Arnold & Shah, 1984). A review of occupational injuries in Bahrain has revealed that immigrants are at higher risks of having accidents than national workers and that this risk is still higher for immigrant construction workers (Al-Arrayed & Hamza, 1995). Research carried out among Filipino home-care workers in Israel has concluded that they are at a high risk of workplace injuries, verbal abuse and hunger (Ayalon, 2008). Similarly, the prevalence of pulmonary tuberculosis among migrant workers in Kuwait is higher than the general population (Akhtar & Mohammad, 2008). A review study in the UAE has suggested that migrant construction and domestic labourers are victims of debt bondage and face wage exploitation. Moreover, domestic workers in the UAE have experienced high rates of physical, sexual and psychological abuse (Sönmez *et al.*, 2011). A second study in the UAE has found that migrant workers are at risk of mental illness including depression and suicidal thoughts (Al-Maskari *et al.*, 2011).

Work-related accidents, deaths and suicides are common in Gulf countries and Malaysia (*The Himalayan Times*, 2011). It is estimated that two Asians die per day on Dubai construction sites and a case of suicide occurs every four days (Keane & McGeehan 2008). In addition to this, the suicide rate appears highest among Indian workers in UAE (in 2008); the main reasons behind these deaths appear to be financial or psychological (Kannan, 2012). Likewise, independent

research from the trade construction publication, *Construction Week*, has reported that 880 migrant construction workers (460 Indian, 375 Pakistani and about 45 Bangladeshi) died in the UAE in 2004, yet the Dubai Municipality only recorded 34 deaths in the same period (Human Rights Watch, 2006).

Prevalence of tuberculosis among Asian migrants (mainly from India, Pakistan and Nepal) working in Qatar's garment industry is high (Al-Khal *et al.*, 2005). Similarly, lower urinary tract symptoms are common in young male immigrants (mostly of Indian origin) in Qatar (Prasad *et al.*, 2006). In addition, a study of immigrants in food handling occupations has revealed that those immigrants from the Indian sub-continent and the Philippines are more likely to carry hookworms (Abu-Madi *et al.*, 2008). Research carried out among Nepalese migrants in Gulf countries and Malaysia has found that migrants are at a high risk of stomach pain, malaria, blood pressure, kidney failure and mental problems (NIDS, 2006). A recent study of Nepalese migrants in the Gulf countries has shown that migrants working in construction industries are at a higher risk of accident and injury (Joshi, 2009). Likewise, another observational study among Nepalese workers has found that the Nepalese are importers of Hepatitis E in Qatar (Ibrahim *et al.*, 2009). A review paper on immigrants also suggests that immigrant workers in Malaysia (Abas *et al.*, 2011), Singapore (Bong *et al.*, 1976), Australia (Corvalan *et al.*, 1994) and UK (Lee & Wrench, 1980) have worse working conditions than native workers (Salminen, 2011). In Malaysia, Indian workers are three times more likely to experience occupational injuries than native workers (*ibid*). Similarly, a study about Asian migrant workers (mainly from Indonesia, Pakistan and Myanmar) working in Malaysia has found that migrant workers are at a higher risk of accidents, multiple injuries and cranio-cerebral injuries than the general population (Murty *et al.*, 2006). This review has highlighted that migrants working in the Middle East and Malaysia experience a range of health issues. Therefore, this combination of empirical evidence from two generally risky occupations (e.g. manufacturing and construction industries) and two geographical areas justifies the research focus of this thesis on the Middle East and Malaysia. Having examined the health issues experienced by migrant workers in general, it is considered that further in-sight

on their experience is necessary. The next section outlines general information on those migrating from Nepal to other countries.

2.4 Nepalese migrant workers abroad

2.4.1 International migration trends and patterns in Nepal

Although Nepal a landlocked country situated between the populous lands of China to the north and India to the south remained closed to the outside world for many years, Nepalese people started to emigrate from the beginning of the 19th century. The main reasons for migration were: recruitment to the British Army in former British India (Bhattraï 2007; Subedi, 1991), forced labour within the country, and poverty in general (Kansakar, 2003). However, until 1950, emigration to countries other than neighbouring South Asian countries was limited. The collection of data about migration within Nepal started with the 1920 census; however, its scope was quite limited until the first scientific census of 1952/54. According to the 1952/54 census, 198,130 people (2.3% of population) were living abroad for more than six months. Of those, 97.3% originated from the mountain and hill districts of Nepal. The number of Nepalese living abroad for more than six months has increased rapidly in each subsequent census reaching 402,977 (2.7%) in 1981, 656,290 (3.7%) in 1991, 762,181 (3.4%) in 2001 and 1,921,494 (7.25%) in 2011 (CBS, 2002; CBS, 2012).

It is the case that until 2001, most Nepalese migrants went to India; 79.4 % of migrants in 1952; 93.1% in 1981, and 89.2% in 1991. Although the absolute number of Nepalese migrants moving to India continues to increase, in 2001 the proportion of Nepalese emigrants to India actually decreased to 77.3%. The main reason for the decrease in the proportion of migrants to India in 2001 was the flow of Nepalese to other countries such as Saudi Arabia (8.9%), Qatar (3.2%), UAE (1.7%) and Hong Kong (1.6%) (CBS, 2002). As most Nepalese migrating to India and the Middle East were there in search of temporary jobs, the majority were males. The 2001 census in Nepal reported that the proportion of males and females among Nepalese migrants was 89.1% and 10.9% respectively.

International labour migration from Nepal to the Middle East and Malaysia is a new phenomenon and started three decades ago (Bhattarai, 2005). In the beginning, relatively high volumes of Nepalese migrants were concentrated in Middle Eastern countries (i.e. Gulf States) but the direction slightly changed later with people migrating to Malaysia in the last decade (ibid). The selection of destination countries is based on income and education (the socio-economic status) of Nepalese migrants as well as the types of work available in the receiving countries (Adhikary *et al.*, 2008; Adhikary *et al.*, 2011; Bhandari, 2012; Dhungel, 1999; Gurung & Adhikari, 2004; Joshi *et al.*, 2011b; Sapkota *et al.*, 2014). For example, people with poorer status migrated to India, the Middle East and Malaysia (Adhikary *et al.*, 2011; Joshi *et al.*, 2011b) whereas people with better socio-economic status moved towards Europe, America, Australia, Canada, Japan and South Korea (Adhikary *et al.*, 2008; Bhandari, 2012; Sapkota *et al.*, 2014).

The number of Nepalese migrant workers going to Malaysia and the Middle East has increased in recent years. To date, most migrant workers in Malaysia are from Indonesia followed by those from Nepal, which is the second largest labour supplying to Malaysia (*The Kathmandu Post*, 2010). It is estimated that there are about 519,000 Nepalese migrant workers in Malaysia, 465,000 in Qatar and 321,000 in Saudi Arabia working in semi-skilled or manual roles; most are males and a substantial proportion are employed in the construction and manufacturing sectors (Baruah & Tuladhar, 2012; Mohamed *et al.*, 2012; *Nepal news*, 2010; Sani, 2010; *The Kathmandu Post*, 2013). This general migration pattern gives credence to the focus of this research in the Middle East and Malaysia in the construction and manufacturing sectors. Along with the increased flow of migrant workers, there has also been a concurrent increase in the remittance that Nepal has received from migrant workers, the equivalent of \$2.93bn US dollars (NRs. 209 billion) in 2008 (Rauniyar, 2009b). The next section focuses on health issues associated with Nepalese migrants abroad.

2.4.2 Health issues of Nepalese migrant workers abroad

There is a growing literature on international migration looking at the health and well-being of migrant workers, but very little investigating the health and well-being of migrant workers from Nepal. This chapter reviews the general issues around migration from Nepal and health issues among Nepalese migrant workers.

Similar to migrant workers from all around the world, Nepalese migrant workers also experience serious health and safety problems in host countries including death on some occasions. There have been several serious incidences involving Nepalese migrants working abroad; for example, the massacre of twelve Nepalese workers by an Iraqi extremist group in 2004 (Stillman, 2011). Although deaths are not common, occupational deaths among Nepalese migrant workers in the Middle East are commonly reported; more than five hundred workplace-related deaths were reported in the Gulf region among Nepalese workers in 2008 (*Infoshop news*, 2008). Poor labour conditions may have contributed to these deaths. Other reports highlight the death of 24 Nepalese workers in one month in Qatar alone due to cardiac arrests, respiratory diseases, kidney failure, heart attack, road accidents or suicide (*Nepal News*, 2009a), and the death of 12 Nepalese and 11 Indian cleaners on a capsized ship in July 2009 (*Nepal News*, 2009b). Workplace related accidents, including deaths, however, seem to be officially underreported. For example, 30 Nepalese workers died in the UAE in 2005, yet the employer only recorded one death in the same period (Hadid, 2005). The causes of these deaths according to the Embassy of Nepal in the UAE included cardiac arrest (n=13), suicide (n=7), road accidents (n=7) and unknown (n=2) (*ibid*). In addition, anecdotal evidence shows that high mortality rates might be associated with large intakes of home-made alcohol and risky jobs (Joshi, 2009).

A recent study with Nepalese migrant workers returning to Nepal established that they often work in risky occupations (such as construction) and frequently face accidents and injuries (Joshi *et al.*, 2011b). However, one limitation of this study is that it was unable to collect in-depth qualitative information from the Nepalese

migrant worker as the study only figured out the size of problems in the country of migration. Similarly, cases of industrial accidents are high in Malaysia. Research on migrants in Malaysia found that workers experience work-related accidents including cuts, bruises and sprains (Ratnasingam *et al.*, 2011). The Nepalese Embassy in Malaysia has reported that 192 Nepalese lost their lives due to industrial accidents in five years the proceeding (Rauniyar, 2009a). Recent news highlighted that in 2011 over 800 Nepalese workers died abroad in addition to 160 cases of suicide (*The Himalayan Times*, 2011).

In addition to occupational injuries and deaths, migrant workers are also at risk of suffering from other infectious or mental illnesses. Studies of Nepalese migrant workers in India (including returnee migrants) identified that Nepalese migrant workers are not only vulnerable to HIV/STIs but also created high-risk situations by spreading HIV/STIs in the far western part of Nepal (Poudel, 2003; Poudel *et al.*, 2004; Vaidya & Wu, 2011). There are also reports of poor working conditions for Nepalese migrant workers such as noise, pollution, heat at work, and lack of sanitary and bathroom facilities (Frost, 2004). A recent study of Nepalese migrants in the UK found that migrants with low levels of education and an insecure immigration status (e.g. refugee/asylum seeker) are far more likely to have poor dental hygiene and lack of regular exercise than those with higher levels of education and secure immigration status (Adhikary *et al.*, 2008). This UK-based study is small-scale and lacks depth as it is used a purely questionnaire-based, quantitative, approach.

General issues identified by Gurung and Adhikary (2004) include key problems such as low salaries, sexual exploitation of women, inadequate protection and insurance against death and accidents abroad (excluding India). Some studies have suggested that Nepalese migrant workers working in new environments with long working hours and poor living and working conditions are more likely to suffer from accidents and other health problems (Adhikary *et al.*, 2011; Joshi *et al.*, 2011b; NIDS, 2006). Hence, the available literature suggests that there is a gap in our knowledge, i.e. although patterns of work-related migration and some of the key problems workers face are reasonably well documented, there is a lack

of in-depth insight. This suggests that the need for further focused qualitative and mixed-methods research on the health and well-being of Nepalese migrant workers is highly appropriate.

In order to understand the health of Nepalese workers abroad, it is necessary to understand some of the key issues related to their health, especially work and health in Nepal. The following few sections summarise work, working and living conditions and health and health care systems in Nepal.

2.5 Nepal and work

According to the latest census (2011), the total population of Nepal is 26.5 million and most (83%) live in rural areas (CBS, 2012). More people are beginning to live in cities as the urban population has increased from 14% in 2001 to 17% in 2011. There are also more people of working age (15-59 years) in general as this population has increased from 54% in 2001 to approximately 57% in 2011.

Nepal is one of the poorest countries in the world, in fact it is the 31st poorest country in the world out of 214 countries (World Bank 2014d) where industrialisation is still in its infancy. Per capita income per year in Nepal for 2012 was equivalent to US\$ 700 (World Bank, 2014a) which is very low compared to many high-income countries. The major non-agricultural sectors of employment are manufacturing, trade, government jobs, hospitality and tourism, and these sectors employ about a quarter (24%) of the population. The remaining three quarters of the population are engaged in the agricultural industry (CBS, 2012).

It is, however, important to highlight that Nepalese agriculture, which is principally subsistence farming, is very different than that practised in many western countries. The landholding in Nepal is highly fragmented and small; average landholding per family is about 0.7 ha and more than 75% of holdings have less than 1 ha of land (Nepal, National Planning Commission, 2003). In

contrast, the average family size that depends on it is relatively large; averaging 4.88 people per family (CBS, 2012). The majority of farmers in Nepal, therefore, are hardly able to supply their basic needs from this agricultural existence. Furthermore, the land in Nepal has been inherited through generations leading to further fragmentation of landholding (Niraula, 1995). However, this also ensures that almost every family has a piece of land. As a result, most people who live in rural Nepal have their own family land where they mainly grow crops for family consumption, but also cash crops in different seasons when possible (IFAD, 2013; Karkee, 2008). Farming is therefore a default occupation, i.e. one is engaged in agriculture until he or she can find a better paid job elsewhere (Kayastha *et al.*, 1999). Therefore, agriculture in Nepal, whilst being the main source of employment providing the income and livelihood for the majority of the population, is hardly rewarding. This results in a high incentive for young people to look for a job elsewhere, including low-paid labour jobs in foreign countries.

2.5.1 Living and working conditions in Nepal

Owing to the poor economy of the country, the standard of living in Nepal is low. About a quarter of the population lives below the poverty line (UNDP, 2013). Nonetheless, given the landholding system in Nepal, most people in the rural areas own their own land. Most people (85%) live in their own houses. Only a small fraction (13%) of the total population lives in rented accommodation. However, a higher proportion (40%) of households live in rented accommodation in urban areas (CBS, 2012). Apart from some urban centres, most accommodation is primitive with no running water, a limited or no supply of electricity; no chimney for firewood smoke and no bathroom or toilets (ibid).

In Nepal, the Nepal Living Standard Survey (NLSS) has reported that about one in five households rate their drinking water facility as poor (CBS, 2011b); and less than half (48%) of households are served by tap/piped water (CBS, 2011a). Other common sources of drinking water are tube-well/hand pumps (35%) (CBS,

2012). Firewood is the major source of cooking fuel in Nepal. Two thirds (64%) of households depend on firewood for cooking purposes (ibid). About half of the population (44%) have access to electricity and only 5 percent of the rural people have access to electricity from the national grid (World Bank, 2014b). More than a half of the population (57%) do not have toilet/latrine facilities at home (Pradhan, 2011). Having examined living conditions, the review will now move to look at working conditions in Nepal.

Currently 15 million people (57%) in Nepal are considered of working age (15-59 years of age). The majority (80%) of the population is employed in the agricultural sector or small scale family farming (CBS, 2012). Less than a quarter is employed in other sectors such as industry, services, hospitality, trade etc. Every year more than 300,000 people enter the labour market (Islam, 2014)). However, the national economy is contracting with a consequential decrease in employment opportunities (ibid). Also, conflicts and political instability in the past decade have created insecurities among the public resulting in heavy displacement of workers and their families, and even the closing of limited industries (Do & Iyer, 2010).

Very little information is available about the work, workplace environment, health and safety, and work-related health problems in Nepal. Occupational or work-related accidents are reported as one of the major health problems in Nepal (Kumar *et al.*, 2003). An earlier review of published literature identified a lack of research in occupational health and safety aspects of Nepalese workers (Poudel *et al.*, 2005). However, a recent review has suggested that occupational health problems are common among Nepalese workers and the overall situation is less than satisfactory (Joshi *et al.*, 2011a). Statistics on work-related accidents or injuries are still lacking. Anecdotal reporting has estimated that at least three to seven per cent of people die or are injured every year due to work-related accidents. People working in the construction, manufacturing and agriculture sectors are at high risk compared to other sectors (Joshi *et al.*, 2003; Joshi *et al.*, 2011a; Pun, 2011). Research on occupational health is a new field in Nepal as it is now being recognised as a growing public health problem (Joshi & Dahal,

2008; Poudel *et al.*, 2005; Skyberg, 2011). The existing literature on work and health risks in Nepal will be mapped out in the following section.

A recent review found the overall status of occupational safety and health in Nepal to be quite poor (Joshi *et al.*, 2011a). The main issues are poor health and safety standards at work, and lack of awareness among the workers of the risks involved i.e. exposure to hazards and preventive measures (ibid). A study on possible occupational lung cancer in Nepal suggested that lung cancer risk was higher among workers working in agricultural, construction, transportation and manufacturing sectors (considered as risky occupations) compared to less risky occupations such as administrative workers, business, students and home makers (Joshi *et al.*, 2003). Another study on industrial accidents reported that 21.6% workers experienced work-related accidents per year (Kumar *et al.*, 2003). Here poor work environment, exploitation at work (no break time), long working hours, lack of regular health check-ups and lack of health insurance were some of the issues identified (ibid). Young migrant factory workers in Nepal experience early sexual behavior and are more likely to have multiple partners and not use. These factors put them at increased risk of HIV/AIDS (Puri & Cleland, 2006). People involved in domestic work in rural Nepal are more likely to suffer from respiratory illnesses due to exposure to dust particles when compared to urban people (Kurmi *et al.*, 2008). A Nepalese survey on occupational stress among high-level managers suggested that managers experience high levels of stress due to work overload, role conflict, poor peer relations, and strenuous working conditions (Kayastha *et al.*, 2012). Nepalese porters commonly experience diverse illnesses including fever, suspected typhoid, high-altitude cough, gastroenteritis, severe anxiety, high-altitude cerebral oedema (HACE), and cellulitis-induced septicaemia (Law & Rodway, 2008).

Occupational health risks have also been identified among medical professionals. A cross-sectional study on occupational accidents of medical-interns in Nepal has identified that they are at high risk of occupational accidents with needles (Pandit *et al.*, 2005). Also, almost half of the interns in this study did nothing to protect themselves from occupationally transmitted diseases, due mainly to lack

of knowledge (ibid). The occupational exposure to bodily fluids and blood-borne pathogens is very high among basic health care workers in Nepal (Timilshina *et al.*, 2011). Additionally, they experience irregular supplies of materials, equipment and instruments which prevents them from using infection control measures. This study also shows that health workers have poor knowledge and insufficient training regarding safe handling of instruments and waste disposal procedures as outlined in universal precaution guidelines (ibid).

In addition to occupational health risks, other work-place-related issues that could influence productivity and motivations are also identified in some studies. For example, a study of job satisfaction among hospital nurses suggests that the majority of nurses are satisfied with their work (Shrestha & Singh, 2010). For them, “being considered a resource of health” provided the highest sense of satisfaction whereas “lack of opportunities for further education and training” provided the lowest sense of satisfaction (ibid:84). Shrestha *et al.* (2008) also found that health problems are confined not only to medical staff in hospitals but to those working in private clinics, e.g. dentists suffered from musculoskeletal pains such as neck, shoulder and back pain. Similar problems have been found among medical students highlighting inadequate facilities, low salaries, lack of security, issues with professional development, a lack of equipment in health centres and distance from families as a number of work-related problems (Shankar & Thapa, 2012). These medical students wanted facilities in rural areas and health centres to be improved (ibid). Having highlighted issues raised by health care workers and students, the next section deals specifically with health issues and health care provision in Nepal.

2.5.2 Health issues and health care services in Nepal

This section briefly reviews the major health issues and health care services in Nepal. The major health problems from the population’s health perspective are infectious diseases, malnutrition and lack of access to health care services (Rai *et al.*, 2002). The Nepal Living Standards Survey (NLSS) 2010/2011 reported that 20% of the population experience acute illness and injuries (i.e. sickness with

cold/fever, diarrhea) and 12% of Nepalese people experience chronic illness including gastrointestinal diseases, rheumatism related, high/low blood pressure and asthma (CBS, 2011a).

Health care services in Nepal are provided by both the public and private sector (Rai *et al.*, 2001). The public health service is focused largely on primary health care (Bentley, 1995; Karkee & Jha, 2010). The Government of Nepal has allocated less than 3% of the national budget to the health sector (Regmi *et al.*, 2004). Government health services are not equally distributed in the country. A number of large hospitals are located in urban areas (Gautam, 2011). For example, there are three or four major hospitals in Kathmandu (with specialists and specialist facilities) and regional hospitals (with limited specialists). Each region has a number of districts and each district has a main hospital with no specialist facilities but is staffed with some medical doctors (although many remote district hospitals do not have a doctor's post). However, some of these district hospitals are staffed by medical assistants (Karkee & Jha, 2010; Rai *et al.*, 2001). People can see doctors or medical assistants in these hospitals or health posts by paying reasonable registration fees. Yet, patients do have to pay for their hospital stay and purchase drugs themselves. There are government supported public health programmes, e.g. safe motherhood or childhood immunisation programmes for which village health workers, supervised by medical assistants, organise visits or campaigns in different parts of the country (Barker *et al.*, 2007).

Most recently, there has been an expansion of private health institutions including hospitals and nursing homes aiming to provide health services in wealthy or urban areas (Rai *et al.*, 2001). However, rural areas generally do not have access to high quality private hospitals although limited private practice by physicians and/or medical assistants does exist in some rural centres. This is partly through the growth of private pharmacies, where sometimes trained pharmacists act as general medical advisors. Health care facilities are often of poor quality, particularly in rural areas. Moreover, the poor and excluded do have limited access to basic health care services (Hackney, 2012; Maru *et al.*, 2013).

The reasons for this are the high cost and limited accessibility of medical services, especially in the rural areas where in certain cases one has to walk several hours to see a medical professional. Lack of health awareness also impedes the public's access to health care services (Niraula, 1994).

There is also a shortage of trained health professionals to deliver quality health services mainly in rural parts of the country (Baral *et al.*, 2013; Hamal *et al.*, 2011; IRIN, 2007; Maru *et al.*, 2013). Similarly, public health services are hampered by low wages and insufficient incentives for government employees to operate in the field. Other issues such as financial or non-financial incentives, professional advancements, educational opportunities and workplace environments also affect the delivery of quality health services (Hamal *et al.*, 2011).

Mental health services receive limited resources as the government spends only about 1% of the total health budget on the mental health sector (WHO, 2006). The majority of modern health care institutions across the country lack a mental health facility. The main key challenges for mental health services in Nepal according to Regmi *et al.* (2004) are a lack of:

- adequate human resources
- access to services across the country
- public awareness
- adequate policy

Furthermore, geographical diversity and poor infrastructural development including a lack of airlink services and good quality roads makes the delivery of health care a particularly difficult problem in many areas of Nepal (Hackney, 2012; Sharma & Ross, 1990). The government has yet to develop effective planning and policy regarding the management of health system and related human resources.

Available data suggest that about two thirds (69%) of people suffering from an acute illness visit or consult a medical practitioner, for example, about 28% consult a medical assistant, and a 25% visit a doctor. However, the level of consultation with a doctor is much higher in urban areas (43%) whereas those with a medical assistant is higher in rural areas (46%) (CBS, 2011a). The possible reasons for this urban-rural difference include the availability of different types of medical professionals (e.g. doctors being concentrated in urban centres, and rural areas being served by medical assistants), differing perceptions of health services and levels of education and knowledge around health and hygiene.

In summary, the health services infrastructure is poorly funded (Regmi *et al.*, 2004) and access to health care facilities remains low, particularly in rural areas. Literacy rates among adults are low (66%), and even lower (57%) among women (CBS, 2012). Education is one of the major socio-economic factors that influence a person's attitude and behaviour, including attitudes towards the use of health care facilities (Weiss *et al.*, 1991). In general, the higher the level of education, the more knowledgeable an individual is about the use of health services (Lynch *et al.*, 1997; Vaidya *et al.*, 2013). These and other socio-economic factors have contributed to Nepal's health indices remaining very low by international standards. For example, Nepal's adult (15-59 years) mortality rate is 197 per 1,000 male adult population (World Bank, 2014c). This mortality rate is several folds higher than those recorded in many developed countries. From this figure it is clear that health indices in Nepal are unacceptably poor and need to be addressed through a number of interventions and improvements. This general overview of Nepal, its health status and health care infrastructure, will help set the experiences of migrant workers in this study into perspective; a context of a low-income country where disease prevalence is fairly high and occupational health risk is also high.

2.6 Chapter summary

Overall, this chapter has presented the existing literature on migration, migrant workers and health (physical and mental) in general, work and risk perceptions, health risks to construction and factory workers, health risks to migrant workers including Nepalese migrant workers in the Middle East and Malaysia and health issues of Nepalese workers in Nepal. This literature shows that most of the workers, both migrants and natives, as well as skilled and unskilled workers, experience various physical and mental health problems at some time in their lives. The occupational risks range from mild to fatal cases. Common health problems identified among workers include accidents, injuries, or disability, musculoskeletal pain, eye problems, hypertension, hearing problems, low back pain and kidney problems. Poor health and safety at work, risk-taking and exposure to chemical, physical and biological substances are some of the leading health hazards. Similarly, depression, anxiety, stress, mental distress and burnout are some of the mental issues experienced by workers. In addition, low wages, low social support, long working hours, exploitation at work (no breaks), a lack of health insurance and poor access to health services are some of the issues identified that predispose migrant workers to physical or mental illness.

Construction and factory workers are generally at a higher risk of ill health across the globe. The Middle East and Malaysia are popular destinations for many migrant workers, including Nepalese ones. Migrant workers working in these countries do so at higher risk than local workers. For example, most Asian migrant workers in the Middle East and Malaysia work in construction and factories and are at higher risk of work-related accidents, deaths and suicides. The reader must bear in mind that workers in Nepal are also at a relatively high risk of accidents and have poor health access; especially people living in remote areas of Nepal have difficulties in accessing health care services.

The gaps in the literature (as highlighted in Sections 1.1.1, 1.2.1 and 2.4.2) suggest the need for research into the health and risks of Nepalese workers abroad. The detailed aims and objectives of the research are listed in the

following section. The individual methods chosen as part of this mixed-methods study will be outlined in a subsequent chapter (Section 4.2).

2.7 Aims & objectives of the thesis

Aim

This Ph.D. thesis sets out to explore and analyse the general health status of and health risks to Nepalese male migrants working in the Middle East and Malaysia.

Objectives

The objectives for the proposed study are divided into two groups; those relating to the quantitative survey and those more appropriately addressed by qualitative interview techniques.

Quantitative objectives

- 1) To describe the general (physical and mental) health status of male Nepalese migrant workers in the Middle East and Malaysia in the construction and manufacturing sectors, the latter focusing on factory workers.
- 2) To examine the health risks to male Nepalese migrant workers in the Middle East and Malaysia in the selected sectors.
- 3) To establish the health seeking behaviour of the same male Nepalese migrant workers in the Middle East and Malaysia.

Qualitative objectives

The final objectives are for the qualitative study which aimed to be completed sequentially after the collection of the quantitative data.

- 4) To explore how the working and living conditions of male Nepalese construction and manufacturing (focus on factory workers) sector migrants in the Middle East and Malaysia affects their outlook and expectations of health, lifestyle and their health-seeking behaviour.

5) To link the findings for objectives 1-4 with existing theories that attempt to explain labour-related migration.

The theoretical aspects of migration focussing on the objectives defined in this section are reviewed in the following chapter.

CHAPTER 3 THEORETICAL PERSPECTIVES

3.1 Introduction

This chapter discusses the key reasons for international migration from a theoretical perspective (Section 2.7, objective 5). Social theory helps the researcher and reader to better understand the reasons for international migration and the health risks related to this labour migration process. The theoretical overview in this section (Table 3.1) is constructed based on an appraisal of a number of previous studies. In the second section, key theories about international migration are synthesised. This is to help the reader to understand the researcher's interpretation of these theories as the latter are applied to the analysis in the Discussion of this thesis (Section 7.8).

Over the last three decades, immigration has emerged as a major force throughout the world (Massey *et al.*, 1993). Economically more developed countries are attracting migrant workers from low-income countries (Malecki & Ewers, 2007). As a result, many countries around the world are experiencing rapid increases in labour migration (Massey *et al.*, 1993). In many destination countries, international migrants are an important source of labour supply to alleviate manpower constraints and facilitate rapid economic growth.

The next few paragraphs outline some of the key reasons why migrant workers migrate from one region to other or from less developed countries to more developed countries. Kline (2003) and Zimmermann (1996) note that people migrate due to two main sets of reasons 'push' and 'pull' factors, a division which is also documented elsewhere in the literature. Several studies (e.g. Adhikary *et al.*, 2011; Banerjee, 1983; Boere, 2010; Boyd, 1989; Datta, 2004; Fawcett, 1989; Thieme, 2007; Wilson, 2010) have identified a number of negative factors known as 'push factors' which are often present in less developed countries of origin and positive pull factors in more developed countries of destination. These are presented in Table 3.1.

Table 3.1: Common push and pull factors for migrant workers

Push factors	Pull factors
<ul style="list-style-type: none"> • Lack of job opportunities • Political instability or conflict • Economic crisis • Poverty 	<ul style="list-style-type: none"> • Demand of workers • Employment opportunities • High exchange rate • Savings • Security • Friends & families

(Sources: Adhikary *et al.*, 2011; Banerjee, 1983; Boere, 2010; Boyd, 1989; Datta, 2004; Fawcett, 1989; Thieme, 2007; Wilson, 2010).

As outlined in the Chapter 2, in destination countries many migrant workers are vulnerable to exploitation in terms of fear of losing their jobs, extremely low wages, being underpaid or not being paid at all and poor access to health services (Adhikary *et al.*, 2011; Joshi *et al.*, 2011b; NIDS, 2006). In addition to these findings, low-skilled migrant workers appear to experience more health problems in the host country (Adhikary *et al.*, 2011). Although the relationship between migration and health has been widely discussed in the literature, no specific theory has ever been developed on the health experiences of labour migrants. However, a number of theoretical models with differing concepts and assumptions have been developed in the field of international migration, and are briefly highlighted below, these include:

- Neo-classical economics: macro theory
- Neo-classical economics: micro theory
- The new economics of migration
- Dual-labour market theory
- Social capital and network theory
- Theories of migration and mental health
- Other push-pull theories

3.2 General theories on international migration

3.2.1 Neo-classical economics: macro theory

This theory is one of the oldest and best-known theories of international migration, aimed at explaining labour migration (Massey *et al.*, 1998). The macro theory suggests that the geographic difference in the supply of and demand for labour for both migrant sending and receiving countries are key drivers for migration. This theory is based on the following assumptions: (a) international migration occurs due to wage differences in migrant sending and receiving countries; (b) migration will not occur in the absence of wage differentials; (c) labour markets are the primary mechanisms for inducing movements; and (d) government-policy interventions affect migration in origin and destination countries.

3.2.2 Neoclassical economics: micro theory

This theory views migrants as individual rational actors who decide to move on the basis of a cost-benefit calculation that leads them to expect a positive net return (Sjaadstad, 1962). The assumptions of this theory are: (a) migrants are expected to go where they are able to earn highest wages; (b) human capital characteristics that increase the probability of employment in the destination countries will lead to increased migration; (c) individual characteristics, social conditions or technological factors lower migration costs resulting in international movement; (d) international movement does not occur in the absence of differences in earnings and employment rates between countries; and (e) controlled international migration through government policies. This means discouraging individuals from migrating by promoting employment in the origin countries, reducing employment in the destination countries and increasing the cost of migration.

3.2.3 The new economics of migration

This theory emerged in the 1980s and 1990s and it is the improved form of neo-classical migration theory (Stark, 1991). This theory rejects neo-classical models as it challenges the many assumptions and conclusions of neo-classical migration

theories. The key message or insight of this theory is that a migration decision is made by larger units or related people i.e. by families (not individuals) or households where people maximise expected family income, minimise risks to the family, and overcome barriers to credit and capital. Households are in a position to control risks to their economic well-being by diversifying the allocation of household resources (Massey *et al.*, 1993), so-called family labour. To maintain economic well-being, some of the family members can be allocated in the local economy whereas others may be sent to foreign labour markets. When the local economy deteriorates and fails to bring sufficient income, the household can rely on migrant remittances for support. The assumptions of this theory are: (a) the wage differential is not a necessary condition for international migration; (b) economic development in the place of origin will not reduce the pressures of international migration; and (c) governments influence migration through their policies e.g. labour markets, insurance markets, capital markets and future markets.

3.2.4 Dual-labour market theory

This theory argues that international migration stems from the intrinsic labour demands of modern industrial societies. Piore (1979) is one of the proponents of this theory who argues that international migration is caused by a permanent demand for immigrant labour that is inherent to the economic structure of developed nations. He adds that immigration is not caused by push factors in sending countries (low wages or high unemployment), but by pull factors in receiving countries (a chronic and unavoidable need for foreign workers). The 'dual', meaning 'two', in the 'dual-labour market theory' refers to two labour markets that exist in developed economies or in HIC. There is a primary labour market (or sector) for skilled educated staff and a secondary labour market for more less skilled occupations that are more likely to be filled by women and migrant workers (Shimada, 2005). This built-in demand for immigrant labour stems from four fundamental characteristics of HICs' economies. These characteristics are: (a) structural inflation; (b) motivational problems; (c) economic dualism; and (d) the demography of labour supply.

The following sections briefly describe each characteristic. Starting with structural inflation, if there are low wage rises for unskilled native workers (working in the secondary sector) compared to skilled workers in primary sectors, local unskilled worker will try to leave their secondary sector jobs for better ones in the primary sector (Piore, 1979). Secondly, motivational problems refers to foreign workers being motivated to work in low-skilled jobs for low earnings, because of the relatively high income these equate to in their home country, whereas native workers reject these kinds of jobs (Shimada, 2005). Thirdly, according to economic dualism there is a permanent work force and reserve labour which expands or contracts as the economy fluctuates. Workers who are “capital intensive” are more costly to be employed, trained in the primary labour market and those in the secondary labour market are more hired and fired as required. Thus HICs recruit more or less foreign workers as their economic situation requires (Champlin & Hake, 2006). Finally, demography of labour supply, means that in modern societies, the decline of birth rates and educational development results in local young people being less attracted to work in lower-class jobs. Consequently, there is a labour shortage. Therefore, employers are forced to recruit foreign workers to fill these gaps.

3.2.5 Social capital and network theory

People migrate owing to a number of reasons. One of the main reasons for labour migration relates to economic forces. Lee (1966) argues that migration facilitates the flow of information back from the place of destination to the origin, which facilitates the passage for later migrants. For example, new migrants may obtain information regarding employment, a good place to live and or residence papers from friends and relatives at the place of destination (Subedi, 1991). Further, movement of people takes place with links such as colonial ties, trade or investment flows (Castles & Miller, 2009). Massey and colleagues (1993) revealed sets of interpersonal ties such as bonds of kinship, friendship and shared community origin connecting migrants, former migrants, and non-migrants at both places of origin and destination. In addition, network theory argues that the interpersonal ties or network among migrants lowers the costs and risks of

migration. Network connections establish a form of social capital that accesses employment in these destination countries (Massey *et al.*, 1993). Similarly, this theory considers that social networks and connections result in exchanges, obligations and shared identities that in turn provide potential support and access to resources for each individual (Bourdieu, 1986). This theory argues that in the absence of good social networks and connections, migrants face a higher risk of physical and mental illness (Aranda *et al.*, 2000; Finch & Vega, 2003; Stewart *et al.*, 2008).

3.2.6 Theories of migration and mental health

This theory is based on the experience of immigrants in the USA. Kuo (1976) looked theories of migration and mental health in an empirical studies with Chinese-Americans. The assumption of this theory is that the process of settling in a new society is stressful and that the tension produced by attempts at adjustment begins immediately upon the immigrant's arrival. The theory includes three theoretical notions i.e. (a) social isolation; (b) goal-striving stress; and (c) cultural change/shock (Bhugra & Ayonrinde, 2004; Kuo, 1976). Kuo (1976) explains how these notions impact on stress and mental health. The following sections briefly explain each notion.

3.2.6.1 Social isolation

Social isolation theory suggests that migration involves not only physical separation from a place of origin but also separation from mutual rights, obligations and networks of social interaction. According to this theory, migrants may experience loneliness (Ponizovsky & Ritsner, 2004). The most antisocial and negative experiences of the place of destination are all associated with migration. Bhugra and Becker (2004) write about cultural bereavement when they discuss migration and mental health issues.

3.2.6.2 Goal-striving stress

This theory outlines a unique aspect of the immigrant's adjustment problem, so-called unfulfilled aspirations. It occurs owing the difference between an

immigrant's expectations and actual achievement (Sellers & Neighbors, 2008). Stress increases when an immigrant fails to achieve his or her goals or aspirations.

3.2.6.3 *Cultural change/shock*

The cultural change theory explains that cultural change has a distracting effect on the psychological orientation of immigrants (Kuo, 1976). This theory further adds that the greater the acculturation, the greater the psychological distress. Others have expressed this in a stronger manner and write about cultural shock rather than just change (Parker *et al.*, 1969; Waxler, 1974). Cultural shock theory postulates that those immigrants who enter into a society, which is different from their own native community, experience greater difficulty in adjusting compared to those immigrants entering a new society with a similar cultural background (Bhugra & Jones, 2001; Parker *et al.*, 1969). So, in the context of this thesis, Nepali workers going to India, a somewhat similar culture to Nepal, face less difficulty adjusting than Nepali workers going to the Middle East and/or Malaysia as the contrast in these cultures is greater. This theory also suggests that the shorter the immigration period, the greater the shock and mental distress.

Kuo's (1976) main findings are: (a) immigrants' mental health has positive associations with social status; (b) the stress of adjusting and adapting alone exerts substantial negative effects on mental health; (c) geographical mobility correlates with poor mental health; (d) goal-striving stress tends to increase symptoms of psychiatric distress.

3.2.7 Other push-pull theories

Lee (1966) explains that migration is a result of "push" and "pull" factors at both the area of origin and destination (Table 3.1). The former is a "negative" factor tending to force migrants to leave areas of origin while the latter is "positive", attracting migrants to destination in expectation of improving the quality of their lives. According to Lee, the decision to migrate and the process of migration are determined by four factors. These are: (a) factors associated with the area of

origin; (b) factors associated with the area of destination; (c) intervening obstacles; and (d) other personal factors.

Fawcett (1989) introduced the concept of “linkages” into the international migration literature. He suggests that the movement of people from one country to another increases owing to certain factors, so-called “linkages”, otherwise labelled as “network” or “connections”. He classifies these “linkages” into four categories: (a) state-to-state relations; (b) mass culture connections; (c) family and personal networks; and (d) migrant agency activities. One may view these so-called linkages as the “pull-factors” listed in Table 3.1.

Ravenstein (1899) proposes a number of “Laws of migration”. This theory is based on the historical experience of Western Europe. According to Ravenstein’s laws, people move from areas of low economic opportunities (i.e. push factors) to those of high economic opportunities (i.e. pull factors). In this theories or ‘laws’, volume of migration depends on distance, i.e. the greater the distance, the lower the number of migrants because migration cost (travel) is more expensive.

Further critical discussion of theoretical explanations of labour migration and its contribution to understanding Nepalese migrants’ experiences is presented in the Discussion chapter (see Section 7.8).

3.3 Chapter summary

Overall, this chapter has explained some of the key theoretical views about international migration. Neo-classical economic theory suggests that international labour migration is simply a result of supply and demand where as dual labour market theory posits that migration is driven by a demand for low-level labour that citizens in the local labour market are unwilling to satisfy. The main insight of the new economics of migration is that migration decisions are made by larger units of related people i.e. family or households where people maximise expected family income and minimise risks to the family. Similarly, social capital and network theory reveals that migration takes place owing to sets

of interpersonal ties for both places of origin and destination. Migration theories related to mental health suggest that settling into new environments is stressful and can be socially isolating. Negative experiences from the destination countries may also impact the mental health of migrants.

A range of these models will be used in Chapter 7 to help interpret the research data from a more theoretical perspective. The detailed research methodology and method applied in this thesis is presented in the following chapter.

CHAPTER 4 METHODOLOGY & METHODS

4.1 Introduction

This chapter discusses both the methodology and methods applied in this Ph.D. study. The chapter begins with the case for a mixed-methods approach to achieving the study aims and objectives. The research design, study site, study period, target population and research tools (methods) used in the study are also described. Similarly, the sampling process and data collection are also discussed. Finally, the pilot study and its implications for the main study and ethical considerations are also incorporated.

4.2 The case for mixed-methods

Quantitative and qualitative research methods originate from different traditions (Johnson *et al.*, 2007; Lingard, 2008). Quantitative research begins with predetermined, instrument-based questions, designed to test a priori hypotheses. In contrast, qualitative methods typically involve naturalistic or holistic collections of data through observation or from the perspective of the participants (Testa *et al.*, 2011). Mixed-methods research is characterised as research that contains elements of both qualitative and quantitative approaches (Denscombe, 2010; Lingard, *et al.*, 2008; Patton, 1990; Rocco *et al.*, 2003). Creswell and Plano-Clark (2007) and Leech and Onwuegbuzie (2009) define mixed-methods as a process of collecting, analyzing and mixing both quantitative and qualitative data in a single study or series of studies. Recently, there has been growing international interest in combining qualitative and quantitative methods in a single study; so-called mixed-methods research (O’Cathain *et al.*, 2007). In addition, mixed- methods studies are common in health services research (*ibid*), but there is still limited direction on and much confusion about how to combine qualitative and quantitative research techniques (Sandelowski, 2000). However, researchers mention different ways of mixing methods and at many levels, including both quantitative and qualitative elements in a single study (Creswell, 2009; Lingard *et al.*, 2008; Rocco *et al.*, 2003; Sandelowski, 2000). For example, Sandelowski (2000) suggests a combination of methods that demonstrate how

mixed-methods studies might operate at various stages i.e. within (a) sampling: combinations include criterion sampling from instrument scores, random purposeful sampling, and stratified purposeful sampling; (b) data collection: combinations include the use of instruments for fuller qualitative descriptions, for validation, as guides for purposeful sampling, and as elicitation devices in interviews; (c) data analysis: combinations include interpretively linking qualitative and quantitative data sets. Just as important is the justification of why to mix these aspects. Published studies describe various rationales of mixing two methods in a single study. For example, Green *et al.* (1989) suggest five broad purposes of mixing methods: (a) triangulation (i.e. seeking convergence and corroboration of results from different methods studying the same phenomenon); (b) complementary (i.e. seeking elaboration, enhancement, illustration, clarification of the results from one method with results from the other method); (c) development (i.e. using the results from one method to help inform the other method); (d) initiation (i.e. discovering paradoxes and contradictions that lead to the framing of the research question); and (e) expansion (i.e. seeking to expand the breadth and range of inquiry by using different methods for different inquiry components). In addition, methods are mixed to expand the scope or breadth of research and improve the analytic power of their studies (Sandelowski, 2000) and to better understand, explain or build on the results from the other approach (Creswell, 2009). The overall strengths and weaknesses of mixed-methods research are presented in Table 4.1.

Table 4.1: Strengths & Weaknesses of Mixed-Methods Research

Strengths

- Provides a better understanding of research problems than either approach alone.

- Strengthens research results:

Mixed-methods research provides strength that balances the weaknesses of both quantitative and qualitative research. For example, quantitative research may be weak in understanding context because the voices of participants are not directly heard. Personal (researcher) bias is less likely to affect the quantitative results as the researcher is in the background. Qualitative research could alleviate some of these weaknesses. Similarly, it is difficult to generalise findings in qualitative research. The reasons underpinning this relate to: (a) researcher bias; the personal interpretation made by researcher; and (b) small samples may not represent large populations. Quantitative research often does not have these weaknesses. Hence, a combination of the two approaches can help balance the weakness of either approach.

- Addresses different research questions:

Mixed-methods research can address research questions a single method is unable to. It provides more comprehensive evidence for studying a research problem than either quantitative or qualitative research alone. Researchers are free to use any kinds of tools of data collection that are associated with qualitative or quantitative research.

- Is “practical”:

The researcher is free to use all potential methods to address a research problem. Researchers can use words and numbers to solve research problems. They can also employ certain skills i.e. observing people or recording behaviour. Hence, mixed-methods is one of the preferred ways of understanding the world and the use of words and numbers can provide a more complete picture of the area under scrutiny.

Table 4.1 Continued.

Weaknesses

- Takes more time and resources to collect and analyse both quantitative and qualitative data.
- Can be difficult for a single researcher to carry out both qualitative and quantitative research, especially if two or more approaches are expected to be used concurrently (i.e. it might require a research team approach).
- The researcher has to learn about multiple methods and approaches and understand how to mix them appropriately.
- Some of the details of mixed-method research remain to be worked out fully by research methodologists (e.g. problems of paradigm mixing, how to qualitatively analyse quantitative data and how to interpret conflicting results).

(Source: Johnson & Onwuegbuzie, 2004)

Some of the issues highlighted by Johnson and Onwuegbuzie (2004) are not widely reported in the general literature on mixed-methods, but other strengths and weaknesses are widely recognized by other researchers such as Creswell (2009) and Denscombe (2010). As previously discussed in Sections 2.3.1 and 2.4.2 there is research problem related to migrant workers. Previous studies have highlighted the need for a more comprehensive examination of the health status of and health risks to male Nepalese migrant workers working in Middle Eastern and Malaysian construction and manufacturing industries. A mixed-method approach is a more comprehensive way to address the aims of this study (Section 2.7) than either quantitative or qualitative research alone. The next section summarises the research design of this thesis.

4.3 Research design

This study has a cross-sectional design whereby both quantitative and qualitative research techniques, methods and concepts have been combined into a single study (Johnson & Onwuegbuzie, 2004). This Ph.D. study is based on mixed-methods comprising: (1) a quantitative questionnaire-based study to establish the kind of issues and the size of the respective problems experienced by Nepali migrant workers; and (2) a qualitative interview study with a sub-sample of those who completed the questionnaire to gain in-depth insight in the underlying reasons and explanations. The mixing of methods in this thesis has occurred in participant selection, data collection as well as during the analytical stages. The quantitative part of the study is based on a cross-sectional survey of male Nepalese migrants (legal migrants) working in factories or construction sectors in the Middle East (Qatar and Saudi Arabia) and Malaysia. Specifically, the interviewees for the qualitative portion of the study (i.e. face-to-face interviews) have been selected as a sub-sample from those participants who had completed the survey. These interviewees were selected on the basis of a number of key characteristics. In the analytical stage, the interpretation of the quantitative survey results has been supported by analyse of the qualitative data. Both elements of these mixed-methods approaches are described below in detail.

The mixed-methods approach used in this study has combined both a survey (Bowling, 2002) and in-depth interviews (Silverman, 2009; van Teijlingen & Forrest, 2004). A cross-sectional survey is a valuable social science tool to gather pertinent information from a population by studying a sample of that population (Creswell, 2009). A cross-sectional survey can provide key information on associations and risk factors (Peat *et al.*, 2002). In addition to this, a cross-sectional survey is perceived as cost-effective (Creswell, 2009), easy to conduct and can provide timely results (Peat *et al.*, 2002).

However, a structured questionnaire used in such studies may not be detailed enough to gather information on specific areas that are likely to vary significantly between individuals such as health and in particular, mental health issues and lifestyle behaviours. Hence, a detailed qualitative interview (in-depth interviews)

to gather additional factors is considered necessary because in-depth interviews can provide rich and in-depth information about the experiences of interviewees (DiCicco-Bloom & Crabtree, 2006). It is considered that face-to-face-interviews are more feasible than conducting focus group discussions with groups of construction and factory workers because of the inclusion of mental health and stress issues which are more difficult to discuss for Nepalese men in public places (Devkota, 2011; Nishi, 2013). Furthermore, organising focus groups may not have been feasible when some of the interviews were likely to be conducted at the airport (see below). The next section describes the study site, study period and target population in more detail.

4.4 Study site, study period and target population

It would have been ideal to interview migrant workers in their host countries. For this reason, a number of universities in destination countries (e.g. Qatar and Malaysia) were approached to obtain potential access and ethical approval for a study. A contact at a university in Qatar seemed interested but actual support was not forthcoming. As there were no positive responses from the host countries, a decision was made to approach migrant workers in Nepal when they returned for holiday or for good from the Middle East and Malaysia. The study population for this study is therefore male Nepalese migrant workers (labourers through to more senior workers) in construction and factory sectors, working in the Middle East and Malaysia and who were returning to or leaving Nepal. Based on the number of Nepalese migrant workers in the Middle East, it was originally envisioned to interview migrants in Saudi Arabia, Qatar and Baharain (see Appendix 2) (Baruah & Tuladhar, 2012; Toumi & Chief, 2013). However, during the study period migrant workers returning from Bahrain could not be identified. Hence, the study participants included Nepalese migrant workers in Saudi Arabia, Qatar and Malaysia only. Also it was important that people had enough work experience abroad to be able to talk about it, hence it was decided to only recruit migrant workers who had been abroad for at least six months.

The study was conducted between July and October 2011. The reason behind carrying out fieldwork in this time frame was that these are the festive seasons (months) in Nepal when more workers were likely to return to Nepal. Ethical approval for this study was obtained from the ethical committee of the Nepal Health Research Council (see Appendix 3). Survey data were collected at three different locations in Kathmandu. The three locations where study participants were identified were: (a) Tribhuban International Airport, Kathmandu; (b) hotels/guest houses/lodges near the airport; and (c) referrals from the already enrolled study participants i.e. snowball sampling (Bowling, 2002). Tribhuban International Airport is the only international airport in Nepal where study participants could easily be approached during their transit through the airport. Potential study participants were approached at the airport upon their arrival or before their departure, recruited for the study and subsequently interviewed as appropriate. However, due to the limited time people spent at the airport, interested participants were asked to meet later and upon their consent, interviewed at temporary residences (e.g. guest houses/hotels/lodges) in Kathmandu where they often spend a few days. Additional study participants were identified through referrals; enrolled participants could refer their colleagues returning from the Middle East and Malaysia to Nepal.

The following criteria were used to identify study participants:

- **Inclusion criteria:** Adult males from Nepal over the age of 18 years, who had worked abroad for at least six months and were currently working or worked as their last job (before returning to Nepal for good) in the construction and manufacturing sectors of the three selected three countries i.e. Malaysia (from South East Asia), Qatar or Saudi Arabia (from the Middle East) and were currently in Nepal either temporarily or permanently.

- **Exclusion criteria:** Adult males from Nepal who have worked less than six months and who have left work in the construction and manufacturing sectors (e.g. factory workers) more than three months ago were excluded from the study. Similarly, Nepalese working in countries other than those

three listed above and all female workers were also excluded from the study.

In the next section, sampling, sample size and the sampling process will be discussed.

4.5 Sampling, sample size and sampling process

4.5.1 Sampling

Sampling is the process of selecting a sub-set of cases of the total population to represent the entire population in a study (Aldridge & Levine, 2001). As this study used mixed-methods, two different sampling procedures were used. Convenience sampling was used to recruit study participants for the questionnaire (quantitative) survey and purposive sampling was used for the qualitative part (face-to-face interview) of the study.

4.5.2 Sample size and sampling for the quantitative study

The aim of this study has been to find out the health status of and health risks to male Nepalese migrant workers in the Middle East and Malaysia. In the absence of precise data, it was considered that health services utilisation would provide an indirect indication of the health status of the migrant workers. Therefore, the percentage of Nepalese migrants (45%) visiting a physician within a year in a host country, based on a previous study (Adhikary, 2007), has been used as a basis for the sample size calculation. Consequently, the number of participants (with 95% confidence) required to estimate health services utilisation, which would indirectly measure health status and health risk, for the Nepalese migrant workers, with a 5% allowable variation, is estimated at between 365 - 380 (Table 4.2) using a standard sample size calculation formula (Machin *et al.*, 2008). The number of samples required with different assumptions is presented in Table 4.2. As the sample size was estimated using an indirect measure rather than the poor health status itself, the worst case scenario for the sample size estimation, with a 5% allowable variation (i.e., 380), was considered necessary for the study.

Table 4.2: Estimation of sample size with different percentage of allowable variation with 95% confidence.

% of Nepalese utilising health services (Estimate)	Allowable variation in one side	
	5%	7%
40%	365	187
50%	380	195
60%	365	187

The sampling process could not be random as there was no complete sampling frame e.g. of a list of individual Nepalese workers meeting the inclusion/exclusion criteria from which a random sample could be drawn. Therefore, for the questionnaire study, a convenience sampling approach was used to select the participants (Bowling, 2002). The researcher approached four hundred and three (n=403) study participants for this questionnaire study.

4.5.3 Sample size and sampling for qualitative study

Interview-based studies involving a small number of respondents are more common in social science research (Crouch & McKenzie, 2006). Since the aim of this qualitative study was to explore and examine the general health status of and health risks to Nepalese male migrant construction and factory workers, the selection of participants was highly focused. Twenty participants (n=20) were approached for a further in-depth interview to gain a deeper understanding of their health status, lifestyle and living and working conditions in the host country. Key characteristics including age (age range), part of world where they were working (Middle East or Malaysia), experience of accidents (yes or no), self-reported health status (very good/good/fair or poor/very poor) and self-reported work environment (very good/good/fair or poor/very poor) were stratified in order to achieve maximum variation among the study participants. The sample size for this part of the study is based on the so-called ‘complete collection’ (Flick, 1998) and was further guided by my supervisors’ experiences.

Therefore, the sample for the interview study is a sub-sample of the quantitative study and based on purposive sample (Section 4.3). Since it was estimated that

there are nearly double the numbers of Nepalese migrant workers in the Middle East compared to Malaysia (*Nepal news, 2010*), the proportion of interview participants working in Malaysia is half of that from the Middle East.

4.6 Data collection tools

4.6.1 Logistic considerations

Contacts were developed in Nepal for identification of the study population. Tribhuvan international airport, guest houses, hotels and lodges near the airport and the recruitment agency were contacted in order to act as a conduit for this research. Participating guest house and hotel owners offered access to premises and offered contact details of guests they had staying with them.

4.6.2 Ethical considerations

The study was put forward for ethical approval to the Nepal Health Research Council (NHRC). Ethical approval was obtained prior to the study from the NHRC, Nepal (Ref no: 462 and Ref no: 1190 see letter: Appendix 3). A recent publication reminded the researcher that applying for ethical approval in a LIC such as Nepal is of great importance (van Teijlingen & Simkhada, 2012). The need to apply for research ethical approval in Nepal meant that separate approval from Bournemouth University was not formally required.

Again prior to the onset of the research in this thesis, consent was obtained from Tribhuvan International Airport and hotels/guest houses/lodges near to the Airport to gain access to migrant workers in these areas. Similarly, participants were personally requested to consent to their participation in the study either in writing or verbally once the participant information sheet had been read or read out. It should be noted that some migrant workers had poor literacy skills. The participant information sheet that included the research purpose was explained to the participants and it was clearly highlighted that participation in the study was voluntary. Confidentiality and anonymity were guaranteed as names of interviewees or exact locations mentioned in the interviews, such as names of

villages they came from or companies they worked for were not included in the transcripts or the final thesis.

4.6.3 Instruments

For the quantitative part of the study, a structured and pre-tested questionnaire was administered to fulfil Objectives 1-3. The survey questionnaire which was translated into Nepali is provided in Appendix 2. Pre-testing (van Teijlingen & Hundley, 2001) was conducted to test and refine study questions, methods and tools for data collection, as explained in Section 4.6.8 on the pilot study and pre-testing.

For the qualitative part of the study, an interview guide was developed based on the outcomes of (a) the survey pilot study; (b) the literature read for this thesis; and (c) personal experiences and insights. The interviews were semi-structured (van Teijlingen & Forrest 2004) and the questions were, as much as possible, open-ended (Walford *et al.*, 2010). The semi-structured interviews were used to explore health, work and life experiences and access to and use of health services. The interview schedule is provided in Appendix 6.

4.6.4 Data collection

Data were collected quantitatively through the application of a structured questionnaire and qualitatively through in-depth interviews. Thus, a structured questionnaire for data collection and analysis was used for the larger sample (Dovona-Ope, 2008). This questionnaire solicited generic demographic, socioeconomic, health and lifestyle related information from respondents. In addition to the questionnaire addressing working conditions, questions on living conditions and health services utilisation were also incorporated in the later sections. Most respondents were approached at the international airport, followed by hotels/lodges/guesthouses. No incentives, such as money, were offered to participants who consented to participate in this research.

The interview guide consisted of three main sections. The first section covered the background of study participants that included the participants' background; and their experience of the host country. The second section focused on research topics that covered (a) working conditions; (b) living conditions; (c) health and health experience; (d) access to health services; and (e) use of health services in the host countries. The third section summarised the research i.e. the author summarised the content of the interview. Finally, the researcher provided an opportunity for participants to ask any questions.

Migrant workers completing the survey questionnaire were asked if they were interested in taking part in a further individual interview at a later time. They were asked for contact details to arrange the interview either on the same day or the following day after the survey. All interviews were conducted in a quiet place without interaction of other people either in the hotels/guesthouses/lodges or in a respondent's temporary residence. Most interviews took place either in the morning or early evening at a time suitable to each participant. The length of the interviews ranged between 1 hour and 1 hour and 45 minutes. All twenty semi-structured interviews were recorded using a digital audio recorder in Nepali and were conducted by the researcher who is a native Nepali speaker.

4.6.5 Reliability and validity for the quantitative study

- **Reliability:** The questionnaire was pre-tested among Nepalese migrants who had work experience in the Middle East and Malaysia to check the reliability of the research instrument. The questionnaire was then revised and amended following the pre-testing (see Section 4.6.8.5) and the final version of the questionnaire was used in the main study (Kimberlin & Winterstein, 2008).
- **Validity:** To ensure the face validity and content validity, the questionnaire was reviewed based on existing literature and consultation with experts in the field (McColl *et al.*, 2001). Furthermore, face validity refers to whether "on its face" the instrument seems a good translation of

the construct; this was ensured through constructive criticism from the supervisory team and colleagues who had experience in the field of public health research. Content validity is different from face validity as the former focuses on the quality of items that have been developed to measure the construct of interest (Kimberlin & Winterstein, 2008). Content validity usually depends on the judgement of experts in the field. Here, the content validity of the instrument was ensured through the regular review and critical observations from the supervisory team as well as the piloting of the instrument (Section 4.6.8).

4.6.6 Data quality assurance mechanisms for the qualitative part of study

The issue of how to assess quality is an important issue in the field of qualitative research (Flick, 2009; Patton, 2002). In this thesis, the author applied four data quality assurance mechanisms: (a) credibility; (b) transferability; (c) dependability; and (d) confirmability to ensure the validity and reliability of the results (Flick 2009; Lincoln & Guba, 1985). A brief description of the above mentioned data quality assurance mechanisms is presented in the following sections.

4.6.6.1 Credibility

Silverman (2000) suggests that the ability of a researcher to evaluate his or her findings compared to existing studies is a key criterion from which to examine credibility. Similarly, Lincoln and Guba (1985) state that credibility is an evaluation as to whether or not the research findings represent a “credible” interpretation of the data from the participants’ original data. Denscombe (2010), Flick (2009), Lincoln and Guba (1985), Patton (2002) and Silverman (2000) all use a number of techniques to ensure credibility in qualitative research. However, in this thesis, the researcher used two main techniques: the credibility of the researcher (Lincoln & Guba, 1985; Patton, 2002) and an examination of previous research findings (Lincoln & Guba, 1985; Silverman, 2000).

(a) Credibility of the researcher

Patton (2002) and Lincoln and Guba (1985) note that background, qualifications and experiences of the investigator are important elements to ensure credibility in qualitative research. Patton (2002) adds that the investigator is the major instrument of data collection and analysis in qualitative studies. Considering the views of Lincoln and Guba (1985) and Patton (2002), the researcher attended research training including research methods and data analysis during his Ph.D. journey. In addition to this, the supervisory team with their experience in qualitative research, examined the research instrument and reviewed coded data developed by the author in this thesis. Also, the author and the supervisors compared and discussed differences between coding (so-called inter-rater reliability) and then clarified subsequent codes.

(b) Examination of previous research findings

Silverman (2009) suggests that the ability of the researcher to relate his or her findings with existing studies is another key criterion for evaluating works of qualitative inquiry. The author examined the findings of this Ph.D. study with the findings of previous research to ensure the credibility of the qualitative inquiry.

4.6.6.2 Dependability

Flick (2009) suggests that dependability in qualitative research is checked through a process of auditing that includes the raw data, data collection and recording, data reduction and summary of results. In this thesis, the author ensured dependability with careful transcription and analysis of the data. Moreover, a detailed report about the process of this study including in-depth methodological descriptions to enhance dependability has been provided in this thesis.

4.6.6.3 Confirmability

Confirmability or objectivity is interpreted as consistency of meaning (Flick, 2009) when two or more independent researchers analyse the same data and arrive at the same conclusions. In this Ph.D. study, a second bi-lingual Nepalese

individual with a research background in Public Health translated back into Nepali a portion (20%) of the translated transcripts by the Ph.D. student for quality-control to ensure the accuracy of the translation by the Ph.D. candidate; so-called back-translation (Sechrest *et al.*, 1972). This second translator came up with almost identical words which verified my translations and gave assurance of the quality of his original translations.

4.6.6.4 *Transferability*

Transferability is another data quality assurance mechanism within qualitative research and is equivalent to generalisability in more quantitative research. The transformation of qualitative results from one context to another is called transferability. The author of this Ph.D. study used techniques to fully describe “all the contextual information about the field-work sites” as recommended by Guba and Lincoln (1985:316) to ensure transferability. In addition to this, data collection methods, number and length of the data collection sessions and data collection period have also been detailed in this thesis.

The author’s previous research and data collection experience have helped ensure high quality data collection. Moreover, the use of audio recording devices helped the researcher to check the quality of the data collected. The recordings allowed for transcription and this helped to establish an accurate record of each interview.

4.6.7 Data quality assurance mechanisms for quantitative study

The author spot checked completed survey questionnaire data to minimise errors or missing information. Intensive supervision during entry of the survey data reduced data entry errors and duplication in data entry before data analysis. All questionnaires were entered on a database and ten percent of these were entered twice to check the quality of the data entering process. The two entries were subsequently compared for each variable and discrepant results were checked against the original questionnaire. There were just two typing errors found in this checking process. This double entry process is standard practice in quantitative data entry (Reynolds-Haertle & McBride, 1992).

4.6.8 Pilot study and pre-testing

4.6.8.1 Background

Pilot studies or pre-testing play a pivotal role in the planning of larger-scale studies (Lancaster *et al.*, 2004). Moreover, pilot studies enable researchers to test ideas, evaluate and refine methods, assess participant and investigator burden and benefit, refine project timelines and identify unanticipated problems or test out cost effective solutions compared with larger studies (Carfoot *et al.*, 2004; Fox & Venture, 1983; van Teijlingen *et al.*, 2001).

In social science research, researchers mainly use pilot studies in two different ways: a) in small scale feasibility studies; and b) in pre-testing particular research instruments (van Teijlingen & Hundley, 2002). The pilot testing of this Ph.D. study has been important in establishing the content validity of the questionnaire and to improve the wording and format of survey questions (Creswell, 2009). Another important benefit of conducting a pilot study is that it might give advanced warning of where the main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated (van Teijlingen & Hundley, 2002).

Although well-designed and well-conducted pilot studies can inform the research process and occasionally likely outcomes, there are some limitations. One must remember that “completing a pilot study does not guarantee the success of the full-scale survey” (van Teijlingen & Hundley 2005: 220). Similarly, a pilot study can be “time-consuming, frustrating, and fraught with unanticipated problems” (ibid: 221). Nonetheless, “it is important to deal with them before investing a great deal of time, money and effort in a full study” (ibid: 221). Therefore, a pilot study was undertaken during the second and third week of November 2010 to test the draft structured questionnaire.

4.6.8.2 Research instrument

As previously discussed (see Section 1.2.1), there are limited studies on the health status and risks to Nepalese migrants who work in the Middle East and

Malaysia as construction and factory workers. However, there have been studies conducted with Nepalese migrants in other countries (e.g. UK) and with non-Nepalese migrants elsewhere. As a result, the draft questionnaire was developed by adapting questions from a health and lifestyle survey of Nepalese migrants in UK (Adhikary *et al.*, 2008), a social survey of Chinese migrants and views on their work, education, and living conditions in Russia (Larin, 2009) and the Vietnam migration survey (GSO, 2004).

Additional questions were identified based on the review of the literature and were incorporated into the final questionnaire. Researchers with similar research backgrounds were requested to provide feedback to improve the research questionnaire. Questions found from studies conducted elsewhere in the world were also adapted for the Nepalese context. After this process the whole instrument was translated into Nepali. Thus, the developed structured questionnaire was pre-tested in the pilot study as this was considered an essential element in guiding the design of the study (van Teijlingen & Hundley, 2002).

For the quantitative part of the study, pre-testing has been used to test and refine the study questions, methods and tools for data collection (van Teijlingen & Hundley, 2001). Pre-testing for the questionnaire was done in Nepal with migrant workers who had experience of working in the Middle East and Malaysia. Face-to-face interviews were conducted using a draft structured questionnaire. Similarly, the questionnaire was pre-tested with five migrant workers over the telephone by the researcher.

Prior to the pre-testing researchers with similar research backgrounds to the Ph.D. student were requested to provide feedback to improve the interview guide. This resulted in very few minor changes to the wording of the draft interview guide. The semi-structured interview guide was subsequently pilot tested by the researcher in two in-depth interviews; both were held in Nepal with migrant workers employed in Qatar. These pilot interviews were audio-recorded, transcribed and analysed. The pilot highlighted a few minor issues that were used to refine the interview schedule for the full study. Also for the qualitative part of

the study, the interview guide was developed from and based on the outcome of the literature review and pre-testing of the quantitative questionnaire, as well as from personal experiences/insights.

4.6.8.3 Access to population for pilot study

For this pilot study, the researcher had contacted colleagues and other possible personal contacts in Kathmandu city and different Middle Eastern and Malaysian cities to explore the possible number of Nepalese workers still working and living in the Middle East and Malaysia, or those who had returned to Nepal either on holiday or for good. Arrangements were made to recruit study participants at the gathering for the Nepali festival ‘Tihar’ in Nepal. This festival normally falls in the months of October or November. Migrant workers were more likely to be in Nepal in festive seasons either for a holiday or for good and therefore it was considered that ‘Tihar’ would be one of the best times to recruit study participants.

4.6.8.4 Implementation of the pilot study

Potential study participants were identified from the contact list provided by a number of recruitment agencies and from the researcher’s network of Nepali contacts. Participants were given more comprehensive written and verbal explanations about the pilot project and asked whether they agreed to participate. Once informed consent was obtained, the pilot study included five telephone interviews (in host countries) and by distributing paper copies of the questionnaires to five participants (in Nepal) during a two week period in November 2010. The reason behind conducting telephone interviews was to increase the participation rate and include participants who had been working in the destination countries during the pilot study period. Furthermore, participants were also requested to give feedback and comments on any unclear or ambiguous questions/terminology; whether variations would be required to capture reality as well as the flow of the questions whether the questionnaire was of acceptable length; and whether instructions to skip certain questions were necessary for selected respondents.

4.6.8.5 Findings of the pilot study

All ten participants (five by phone and five in person) completed the questionnaire. Participants' responses were examined to refine the research instrument for the main study. Although there were no major changes to the structure of the questionnaire, several questions were re-worded to make these clearer and a number of additional questions were considered as highly appropriate and included in this study (e.g. see question 16, 22 and 43 in Table 4.3). Thus, the following major revisions were made to the questionnaire based on the pilot study feedback (Table 4.3).

Table 4.3: Questionnaire changes after pilot study

Before	After
Q No. 17 Compared to one year ago, how would you rate your health in general now?	Q No.16 In general, how would you rate your health now compared to that before going abroad?
Q No. 19 Do you smoke? “If yes, how many cigarettes do you smoke during an average day?”	Q No. 18 Do you smoke cigarettes or tobacco abroad? “If yes, how would you rate your smoking: heavy, normal, weak & don't know?” Q No. 20 Do people you work with smoke cigarettes or tobacco?
Q No. 21 Do you drink alcohol?	Q No. 21 Do you drink alcohol abroad? Q No. 22 Have you ever felt drunk whilst drinking alcohol abroad? : Yes, No, Not sure - New question added. Q No. 25 Do people you work with drink alcohol abroad? – New question added.
Q No. 27 How do you usually make the water pure to drink?	Q No. 28 How do you usually make your drinking water clean abroad? -a new option i.e. clean tap water (not necessary to clean) added
Q No. 31 How do local people behave towards you?	Q No. 32 In general, how do local people in your host country behave towards you?
Q.No.43 Over the last 12 months, have your friends experienced any work-related accidents abroad?	Q No. 43 Over the last 12 months, have your friends experienced any work-related accidents abroad? If yes, what kind of work-related accident? 1. Road accident 2. Fall 3. Electric shock 4. Heart attack 5. Attempted suicide 6. Burn 7. Cut 8. Fractures 9. Others – A new question added.
Q No. 49 If you get ill, what would you do first? “see a physician/doctor”	Q No. 54 If you get ill, what would you do first? “go to government hospital”- slightly modified “See a company Nurse “ - an extra option added.
Q No. 50 What is your main concern or worry about working abroad?	Q No. 55 What is your main concern or worry about working abroad? -added extra option “no future”, for people thinking there was no future for them a migrant workers.

- 1 Question number 17, “Compared to one year ago, how would you rate your health in general now?” was evaluated. Participant responses to this question centred on a lack of clarity so the structure of the question was changed to “In general, how would you rate your health now compared to

that before going abroad?” (Question number 16 in the final questionnaire).

- 2 Most of the respondents recommended for question number 19, “Do you smoke?” to be revised to include the words “cigarettes or tobacco”. Similarly, the second part of question 19 was reworded from, “If yes, how many cigarettes do you smoke during an average day?” to “If yes, how would you rate your smoking: heavy, normal or weak?” (Question number 18 in the final questionnaire). Furthermore, an additional question “Do people you work with smoke cigarettes or tobacco?” (Question number 20 in the final questionnaire) was included.
- 3 For question number 21, (Question number 21 in the final questionnaire), “Do you drink alcohol?”, an extra question “Have you ever felt drunk after drinking alcohol?” (Question number 22 in the final questionnaire) was added. The main reason for including the additional question was that this question indicated their perception towards drinking. Similarly, an extra question “Do people you work with drink alcohol abroad?” (Question number 25 in the final questionnaire) was added on the later part of the question in the final questionnaire. This additional question further investigated the drinking habits of their colleagues.
- 4 For question number 27 (Question number 28 in the final questionnaire), “How do you usually make the water pure to drink?”, was changed to “How do you usually make your drinking water clean abroad?” A new extra option added (see Table 4.3).
- 5 For question number 31 (Question number 32 in the final questionnaire), respondents advised a minor change to the question to “In general, how do local people in your host country behave towards you?”.
- 6 Almost all respondents recommended for question number 39 (Question Number 43 in the final questionnaire) to include an additional follow-up

Question: “if yes, what kind of work related accident have you experienced: road accident, fall, electric shock, heart attack, committing to Suicide, burn, cut, fracture, others.....?”.

- 7 In question 49 (Question number 54 in the final questionnaire), “If you get ill, what would you do first?” an extra option of “See a company Nurse or camp boss” was provided, and another option “see a physician/doctor” was slightly changed to “go to government hospital” in the final questionnaire.
- 8 In question 50 (Question number 55 in the final questionnaire) “What is your main concern or worry about working abroad?” an additional response of “no future” was added to the final questionnaire.
- 9 Most of the pilot study respondents commented that the employer provided health cards or medical cards once they had started their job abroad. They used this card for medical problems to see clinicians in the company they worked for and to see physicians in host country hospitals. Some got free healthcare treatment. Accordingly, the researcher added two questions (Question number 47 and question number 49 in the final questionnaire.), namely “Do you have life insurance?” and “Do you have health/medical cards?”.

The pre-testing provided important feedback for timely corrections, revisions and improvements of the study instruments, although it did not indicate a need to majorly revise the study design before the deployment of the full scale study.

4.6.9 Data management of main study

The researcher collected all the quantitative data (survey questionnaires) and qualitative data (in-depth interviews). Once the questionnaire had been administered, each questionnaire was immediately scanned for missing data and general completion accuracy. The researcher approached the respondents

immediately, to ask any missing questions and too see if there were any problems in the completion of the questionnaire. All the completed questionnaire surveys were collected and compiled. The next step was the coding of the responses in preparation for data entry. The raw data were then checked for errors and any errors corrected. A code was given for each variable and a missing value if applicable. The quantitative data were entered using the Statistical Package for the Social Sciences (SPSS Inc. 2009) version 18.0 for data analysis (Field, 2005). Following data entry, the supervisory team randomly verified just under ten percent of questionnaires to see if there were any errors in the data entry process as previously stated in Section 4.6.7. The plan was to code the few open-ended questions in the questionnaire quantitatively by hand (Creswell, 2009). However, in the end there were so few open-ended answers that the decision was made to ignore them and get the more in-depth information through the interviews.

For the qualitative study, the tape-recorded interviews with the migrant workers were transcribed verbatim into Nepali to ensure that the transcripts represented the written text (Poland, 1995). The researcher read the transcribed material in Nepali at the same time as listening to audio recorded material, and made corrections if necessary. The transcriptions were then translated into English (for quality control of the translation, please see Section 4.6.6.3).

4.6.10 Data analysis

4.6.10.1 Quantitative data analysis

Most of the structured questions for the quantitative study had multiple choice responses. Cross tabulations were generated between various explanatory variables e.g. demographic variables, occupation and socio-economic characteristics and outcome variables. The main outcome variables for this study were self-reported health status (physical health), mental health (had a mental health problem in the last month abroad), perceived health risks at work, accidents at work and visits to the doctor (utilisation of health care services). Health care utilisation was captured by whether respondents had visited a doctor in the last twelve months or not. A code book consisting of the original coding

used in the questionnaire and any re-coding for the analysis of each of the explanatory variables and outcome variables is presented in Appendix 4 (see Tables 4.4 to Table 4.6). Chi-square tests with continuity correction were applied to investigate the association between variables in 2 by 2 tables, and the Pearson Chi-square test was applied to other forms of tables (e.g. 3 by 2 tables). A Chi-square test for trend was applied to investigate the association between ordinal and categorical variables or binary outcome variables (Field, 2005).

Multiple logistic regression using the enter method was used to investigate the associations between major independent predictors and the dichotomous outcome variables. The reason behind using the enter method was to control for variable selection (ibid). Outcome variables were dichotomised with the coding in the same direction of worsening health status e.g. very good/good/fair coded as 0 and poor/very poor as 1 for self-reported health status (see Table 4.5). Similarly, the explanatory variables were coded in the same direction to ensure consistency of coding with the outcome variables e.g. very good/good/fair as 0 and poor/very poor as 1 for self-rated work environment (see Table 4.4).

The researcher used multiple logistic regression because cross tabulations only provide a simple association between outcome variables and independent variables (predictor). Whereas regression analysis is an accepted statistical method for assessing the association between independent variables (risk factor) and outcome variables, statistically adjusting for potential confounding effects of other covariates (Lee, 1986). Furthermore, logistic regression is the most popular technique available for modelling dichotomous dependent variables (for example, Hosmer & Lemeshow, 2000; LaValley, 2008).

Ordinal regression analysis has not appropriate for this study as some of the outcome variables (e.g, self-reported health status and mental health problems) have small numbers and small numbers do not strengthen the analysis. Hence a decision was made to use simple logistic regression analysis by combining outcome variables into two groups (Manor *et al.*, 2000; Petrie & Sabin, 2009).

For the analysis, independent variables were added in blocks of demographic, socio-economic, type of job (which correlates highly with country), country of work, health and lifestyle characteristics. The researcher used SPSS to select the parsimonious model using the enter method. A parsimonious (simpler) model (Field, 2005) was then selected including only those explanatory variables which were found to be statistically significant ($p < 0.05$) in the preliminary analysis. This process, in theory, should lead to a model with stronger associations (i.e. we can be more certain that the findings are significant), though it is noted that this method does perhaps explain a slightly smaller part of the associations found. The Nagelkerke R-square test was used to measure the variance in the data explained by the models i.e. how well the model fits the data (Kinner & Gray, 2010). For the purpose of analysis, the outcome variable (self-reported health status) originally consisting of five categories was dichotomised (see code book in Appendix 4, Table 4.5), with those reporting poor or very poor health as “poor general health” recoded as 1 versus those who reported their health as “fair/good” as no cases reported their health as “very good” and recoded as 0.

The other outcome variable of mental health problems (i.e. reported feelings of nervousness, hopelessness, restlessness, depression, everything was an effort and worthlessness in the last month abroad) originally consisting of six categories (all of the time, most of the time, some of the time, a little of the time, none of the time and don’t know) was grouped into two categories. Category 1 consisted of responses “all of the time/most of the time/some of the time/a little of the time”. Similarly, category 2 consisted of “none of the time” (no cases reported “don’t know”). In the analysis, respondents who were situated in category 1 were recoded as 1 versus those who answered category 2 and were recoded as 0 (see code book Appendix 4, Table 4.6).

The outcome variable perceived health risks at work consisted of three categories. The “don’t know” group was combined with the “no” group. It is considered that “don’t know” had very few cases (only three responses) and therefore it was not appropriate to make a different group for this analysis. In the analysis, respondents who perceived to have health risks at work were recoded as

1. At the same time those who did not perceive to have health risks and those who reported “don’t know” were recoded as 0. The next outcome, variable accidents at work (have you experienced a work-related accident abroad?), consisted of two categories. In analysis, respondents who reported “yes” were recoded as 1 whilst those who reported “no” were recoded as 0 (see Appendix 4 Table 4.5).

Similarly, another outcome variable, health care utilisation or doctor visit (how many times in the last 12 months have visited a doctor in your host country?) was categorised into two groups. In analysis, respondents who did not visit doctor were recoded as 1 whilst those who visited doctor were recoded as 0. The explanatory variables health insurance and doctor registration, originally consisting of three categories, were collapsed into two groups. Respondents who reported “no/don’t know” were recoded as 1 and those who reported “yes” were recoded as 0. The reason behind combining the “don’t know” category with the “no” category was that it was assumed most likely that those who did not know whether they had health insurance (or registration with a doctor) did not have any.

4.6.10.2 Qualitative data analysis

All qualitative data (in-depth interviews) were recorded on a digital audio recorder. These data were transcribed verbatim, translated into English and coded to each question according to the responses of participants (Creswell, 2009; Poland, 1995). The translator was the bi-lingual researcher in order to strengthen the rigour of language-based inquiry (Larkin *et al.*, 2007). This work aimed to convey the true meaning of participants’ experiences.

The qualitative data in this thesis were analysed using thematic analysis techniques (Bradley *et al.*, 2007; Braun & Clarke, 2006; Creswell, 2009; Forrest Keenan *et al.*, 2005). This method was used due to its flexibility and accessibility to researchers with little or no experience of qualitative research (Braun & Clarke, 2006). Also, thematic analysis was considered an appropriate tool as it aims to summarise key features of large bodies of data (Attride-Stirling, 2001).

In this thesis, thematic analysis was completed in six phases (Braun & Clarke, 2006). These six phases are now explained in the following sections.

Phase 1: familiarisation with the data

In this thesis, familiarisation with the data was undertaken in four main ways. First, the author made himself familiar with the depth and breadth of the content (Braun & Clarke, 2006) by listening to the collected data. Secondly, the author familiarised himself with the data while transcribing and translating the interview based data (Creswell, 2009). Next, the author checked the transcripts back against the original audio recordings for accuracy (Braun & Clarke, 2006). Finally, further familiarity with the transcribed data was gained through reading and re-reading the data, as advised by Creswell (2009) to generate initial codes and to develop potential themes (Braun & Clarke, 2006; Forrest Keenan *et al.*, 2005).

Phase 2: generating initial codes

The process of generating codes is part of thematic analysis (Forrest Keenan *et al.*, 2005; Miles & Huberman, 1994). Generally, codes identify a feature of the data that appears interesting to the analyst (Braun & Clarke, 2006). Therefore, the researcher read and re-read the entire transcripts to generate codes (Forrest Keenan *et al.*, 2005). In this phase, lists of ideas or segments of text were generated manually to develop initial codes (Creswell, 2009). The supervisors independently also developed draft codes. Then, higher level codes were developed from this list of ideas. The supervisory team also examined the codes developed by the author and checked these against their own; this process is often referred to as inter-rater reliability (Mays & Pope, 1995).

Phase 3: searching for themes

In this phase, the author sorted the different codes i.e. the list of codes developed in Phase 2 to create potential (Creswell, 2009) or basic themes (Attride-Stirling, 2001). Different coloured highlighter pens and pencils were used to highlight different themes (Forrest Keenan *et al.*, 2005). A thematic overview (figure see

Section 7.7, p178) has constructed after reviewing the sifted and sorted themes (Braun & Clarke, 2006; Forrest Keenan *et al.*, 2005).

Phase 4: reviewing themes

This phase involved reviewing and refining the themes. In this phase, the author continued to re-visit the themes that were developed in Phase 3, and examined whether the extracted data fully supported these themes or not and creating new themes as necessary. Attride-Stirling (2001:395) called this stage “organising themes” in order to reveal more of what has going on in the textual data. For this stage, the author read all the collated extracts for each theme and also read the literature. Finally, refined themes were developed during this phase. Regular feedback from the supervisory team also helped to refine the themes in this phase.

Phase 5: defining and naming themes

The author began to extract data and themes developed in phase 4 and organised them into a coherent and internally consistent account with accompanying narrative (Braun & Clarke, 2006). Indeed, these are macro themes which are often called global themes by Attride-Stirling (2001). These global themes are a summary of the main themes of Phase 4 and a revealing interpretation of the texts (*ibid.*). During this process, the author identified main six themes arising from this qualitative part of the study.

Phase 6: producing the report

This is the final phase of data analysis where the author interprets the data. In this phase, when all the data has been sifted and mapped using key themes, a report of the data is produced, and the data set as a whole is interpreted (Braun & Clarke, 2006; Creswell, 2009). Therefore, in summary, the following stages: familiarisation with the data, development of codes and themes, construction of a thematic map and production of a final report have been completed in this thematic analysis (Bradley *et al.*, 2007; Braun & Clarke, 2006; Creswell, 2009; Forrest Keenan *et al.*, 2005).

4.6.11 Combining the two methods in this thesis

Combining quantitative and qualitative approaches in this thesis has occurred in sample selection (Section 4.3) and data analysis (Section 7.2 to 7.6). Although, the quantitative and qualitative findings are presented separately in the following chapters, the discussion chapter combines these analyses by presenting first the quantitative data followed by the qualitative data as part of an attempt to add explanatory depth to the study in line with the work of Tashakkori and Teddlie (1998).

4.7 Chapter summary

In this chapter, the reasons for selecting a mixed-methods approach have been summarised. For instance, a mixed-methods approach has aimed to provide quantitative data to help assess the size of the problem, whilst at the same time offering further detailed insight into the problem through in-depth interviews with a sub-sample of the target population. A structured survey questionnaire has been used to measure the relationship between health risks factors and predictive factors. In addition, the health status of and health risks to male Nepalese migrants has been explored using in-depth interviews with a sub-sample of questionnaire respondents. The key reason for conducting the research in Nepal has been discussed although attempts have been made to carry out the research in the Middle East and Malaysia. The data collection period for this study was from July to October 2011. The reason behind this time frame is that these are important festive seasons when more workers were likely to return to Nepal. The target population for this study is those workers who have worked for at least six months in host countries and who worked in the construction or manufacturing sectors. Also, the process of selecting study participants has been sketched out. Additionally, the sample selection criteria for qualitative part of the study, the design of the interview guide and the general administering of the research processes have also been outlined.

This chapter has also described how the survey questionnaire has been developed and modified. The reasons for using a pilot study to test the questionnaire and its outcome on slight revision of the questionnaire have been included. Finally, the

chapter has explained how the qualitative and quantitative data have been analysed. In the following chapter the analysis of the questionnaire survey is presented.

CHAPTER 5 RESULTS QUANTITATIVE RESEARCH

5.1 Introduction

The previous chapter discussed the research methodology adopted in this thesis. The next two chapters will present the quantitative or survey results of this study. The first section describes the demographic and socio-economic characteristics, health and lifestyle profiles, and living and working conditions of the study subjects i.e. Nepalese migrant workers working in the Middle East and Malaysia. The second part (Section 5.3 onwards) presents the relationship between the independent variables (e.g. demographic, occupation and socio-economic and lifestyle characteristics) and dependent variables (e.g. health outcomes, accident at work, perceived health risks and health care utilisation). Appropriate statistical tests and logistic regressions have been applied to assess the association between explanatory variables and independent variables as methods of statistical analysis have already been described in detail in Chapter 4.

5.2 Descriptive Statistics

5.2.1 Response Rate

423 study participants were approached at the research site in Kathmandu, Nepal. Four hundred and three (95.0%) gave informed consent and completed the survey questionnaire. Hence, a total of 403 completed questionnaires are included for analysis in this study. The twenty people who declined to participate were generally too busy to undertake the survey.

5.2.2 Demographic characteristics

The demographic characteristics of the 403 respondents are presented in Table 5.1. Nearly half of the respondents (45.9%) are in the age group between 20 and 29 years. Almost all respondents (91.3%) are married. Almost a quarter (24.6%) of respondents had no formal education. Less than half had received primary level education and only 2.0% had completed higher secondary levels. The

majority of respondents (69.2%) had a semi-skilled job e.g. factory workers, carpenters and electricians, whilst the rest worked in unskilled jobs abroad.

Regarding the caste/ethnic origin of respondents, the higher caste Brahmins/Chhetris comprised just over a quarter (26.8%) of the respondents followed by Gurung/Tamang/Sherpa (17.4%) and Madhesi/Tharu (15.9%). In the analysis several ethnic groups from the more mountainous areas, i.e. Gurung, Tamang and Sherpa are combined as these are small sub-groups in the study with some shared social and cultural characteristics; similarly Madhesi/Tharu which are both ethnic groups from the southern plains with shared characteristic are combined (see Table 5.1). Almost all respondents (96.5%) were born in Nepal, though a few (3.5%) were born in neighbouring India (i.e. outside Nepal). Of the five development regions of Nepal, a numerically higher proportion of respondents (29.3%) were from the eastern development region. In comparison, very few (0.7%) were from the far western development region of Nepal. An equal proportion (33.3%) of respondents worked in Qatar, Saudi Arabia and Malaysia. The reason behind choosing an equal proportion of participants in these countries has been to maintain a balance in the numbers from each country. As the proportion of people in the Middle East is almost double that from Malaysia (*Nepal news*, 2010) a double proportion of study participants were selected from the Middle East.

Table 5.1 Demographic characteristics of the respondents (n=403).

Variables	Number	Percentage
Age group		
20-29 years	185	45.9
30-39 years	158	39.2
40+ years	60	14.9
Marital status		
Married	368	91.3
Unmarried	35	8.7
Education		
None	99	24.6
Primary	186	46.2
Secondary/School Leaving Certificate (SLC)	110	27.3
Higher Secondary Education	8	2.0
Occupation in host countries		
Semi-skilled including factory workers, plumbers, carpenters, painters, bricklayers, electrician, supervisor etc.	279	69.2
Unskilled including labouring	124	30.8
Caste/Ethnicity		
Brahmin/Chhetri	108	26.8
Gurung/ Tamang/ Sherpa	70	17.4
Madhesi/Tharu (Terai ethnic group)	64	15.9
Others	56	13.9
Magar	52	12.9
Rai/Limbu	33	8.2
Newar	20	5.0
Place of birth		
Eastern Development Region (EDR)	118	29.3
Western Development Region (WDR)	105	26.1
Central Development Region (CDR)	94	23.3
Mid-Western Development Region (MWDR)	69	17.1
Far Western Development (FWDR)	3	0.7
India	14	3.5
Country of work abroad		
Qatar	135	33.5
Saudi Arabia	134	33.3
Malaysia	134	33.3

The following section describes the socio-economic characteristics of the respondents.

5.2.3 Socio-economic characteristics of respondents

Socio-economic characteristics such as income, dependent children and duration of stay in the host country have been tabulated in Table 5.2. Whilst working abroad, two fifths of respondents had an income in Nepalese Rupees (NRs) $\geq 200,000$ (2,366 USD) per annum and more than a quarter (29.3%) had income

less than NRs $\leq 100,000$ (1,183 USD) per year. Nearly half (49%) of the respondents had three or more dependent children in Nepal. About two thirds (63.0%) of respondents had been abroad for three years or more.

Table 5.2: Distribution of respondents (n=403) by socio-economic characteristics

Variables	Number	Percentage
Total income (Nrs) (per annum)		
$\leq 100,000$ (1,183 USD)	118	29.3
100,001-199,999 (1184-2365 USD)	123	30.5
$\geq 200,000$ (2,366 USD)	162	40.2
Dependent children in Nepal		
One	67	19.0
Two	112	31.7
Three or more	174	49.3
Duration of stay abroad		
≤ 2 years	149	37.0
3-4 years	171	42.4
>4 years	83	20.6

The key health characteristics of respondents are described below.

5.2.4 Health characteristics of respondents

The health characteristics of respondents are presented in Table 5.3. In this survey nearly half (48.9%) of the respondents rated their health as “fair”, whereas 38.0% of respondents rated their health as “good or very good”. The majority of respondents (70.5%) rated their present health as about the same compared to when they lived in Nepal, whereas nearly a quarter of respondents rated their present health as worse compared to when they lived in Nepal. The percentage who reported not having mental health issues is more than three quarters (77.0%). Most respondents (70.5%) registered with a doctor abroad, and 64.0% of the respondents had visited a doctor in the last 12 months. Nearly two thirds of respondents were covered by health insurance. However, a very low proportion (4.5%) of respondents had life insurance.

Table 5.3: Health profile of respondents (n=403)

Variables	Number	Percentage
Health (physical health)		
Very good/Good	153	38.0
Fair	197	48.9
Poor/Very Poor	53	13.2
Present health compared to when lived and worked in Nepal		
Much better	22	5.5
About the same	284	70.5
Worse	96	23.8
Can't say	1	0.2
Had a mental health problem	93	23.0
Registered with a doctor	284	70.5
Had a medical check in the last 12 months	258	64.0
Had a health insurance	251	62.3
Had a life insurance	18	4.5

A description of the lifestyle-related characteristics of respondents is presented in the following section.

5.2.5 Respondents' lifestyle

The lifestyle-related characteristics of the respondents are summarised in Table 5.4. More than half of the respondents (53.1%) perceived that they had a fair diet while a quarter (26.6%) considered it poor. Most respondents (91.6%) used a water filter when drinking water abroad. Almost three quarters (73.2%) of respondents' residences had a pit latrine and almost all of them (99.3%) shared this toilet with other people at their residence. Two thirds of respondents smoked while half consumed alcohol; most of them (66.0%) consumed alcohol occasionally. Nearly all respondents (92.8%) did not take exercise most days. The possible explanation of having a high percentage of people not doing exercise is discussed in more detail in the discussion chapter (Section 7.2). More than half of the respondents (56.6%) expressed their main concern abroad related to economic hardship. Only a very small proportion of respondents (3.5%) engaged with Nepalese socio-cultural organisations abroad.

Table 5.4: Lifestyle characteristics of respondents (n=403)

Variables	Number	Percentage
Perceived diet		
Very good/Good	82	20.3
Fair	214	53.1
Poor/Very Poor	107	26.6
Method for obtaining clean drinking water		
Boil/Add chlorine/Clean tap water	34	8.5
Use water filter	369	91.6
Toilet facility at residence		
Flush or pour flush toilet	108	26.8
Pit latrine/ Bucket toilet	295	73.2
Sharing the toilet	400	99.3
Smoking habit	266	66.0
Alcohol drinkers	202	50.1
Frequency of alcohol consumption among drinkers		
Daily/ Almost Daily	3	1.5
2-3 times per week/Once a week	65	32.2
Occasionally	134	66.3
Exercise most days abroad		
Yes	29	7.2
No	374	92.8
Main Concern/Worry working abroad		
Lack of social support / Fear of losing job/ No future	35	8.6
Economic hardship	228	56.6
Mechanistic lifestyle	61	15.1
Climate	79	19.6
Association with Nepalese communities	14	3.5

Some of the key characteristics related to working conditions of the respondents are summarised in the following section.

5.2.6 Working conditions of respondents

The working conditions of respondents are presented in Table 5.5. More than half (51.9%) of respondents rated their work environment as fair whereas just a quarter (26.8%) rated their work environment as good or very good. Less than half of respondents (46.4%) reported that their health had been at risk at work. About one sixth of respondents (17.1%) had experienced work-related accidents and one fifth of respondents had visited an accident and emergency department during the last 12 months owing to work-related incidents.

Table 5.5: Working conditions of respondents (n=403)

Variables	Number	Percentage
Work environment		
Very good/Good	108	26.8
Fair	209	51.9
Poor/Very Poor	86	21.3
Perceived health risks at work	187	46.4
Experienced work-related accidents	69	17.1
Visited accident and emergency department	84	20.8

The next section depicts the living conditions of respondents.

5.2.7 Living conditions of respondents

Respondents' perceptions of living conditions are presented in Table 5.6. More than three quarters (80.4%) of respondents reported that most of the migrants from different parts of the world who worked with them were not quite satisfied or absolutely unsatisfied in terms of their health and safety, accommodation, food etc. However, focusing on living conditions only, two thirds (65.3%) of survey respondents were satisfied with their accommodation. Nearly a quarter (23.3%) of respondents reported that the local people were friendly whereas more than a third (34.7%) of respondents reported that local people were not friendly. However, 18.4% of respondents reported that they did not have any contact with local people.

Table 5.6: Living conditions of respondents (n=403)

Variables	Number	Percentage
Respondent perceptions of other migrants living abroad		
Satisfied	75	18.6
Not quite satisfied/ Absolutely unsatisfied	324	80.4
Difficult to answer	4	1.0
Accommodation abroad		
Satisfied	263	65.3
Not quite satisfied	129	32.0
Absolutely unsatisfied	8	2.0
Difficult to answer	3	0.7
Perception to local people		
Friendly	94	23.3
Neutral	49	12.2
Not friendly	140	34.7
Hostile	40	9.9
No contact	74	18.4
Difficult to answer/don't know	6	1.4

5.2.8 Summary of section: respondents' characteristics

This section has presented the profile of Nepalese migrants working abroad. Overall, most of the migrant workers are less than 40 years old, married and very few of them have completed higher education. More than two thirds of migrants have worked in semi-skilled jobs. Most of them perceive they have a fair diet, health and work environment and the majority are covered by health insurance. Nearly two thirds of Nepalese workers are satisfied with their accommodation abroad. The next section goes on to examine the factors associated with health among the Nepalese migrant workers.

5.3 Analysis of factors associated with health status and risks

This section describes the associations between the demographic, socio-economic, and lifestyle explanatory characteristics and the health outcomes of interest (physical health status, mental health status, health risks at work and health services utilisation (doctor visits in the last 12 months abroad).

5.3.1 Factors associated with physical health status

The association between health status and demographic variables, occupation and socio-economic characteristics and health and lifestyle characteristics (Table 5.7) will now be examined. There are seven variables, namely, age, satisfaction with the accommodation abroad, smoking habit, diet, perceived occupational health risk, work environment and working hours (per week) with a statistically significant association with physical health status.

Age is highly significantly associated with self-reported physical health status ($P=0.008$). About twice as many respondents (17.0%) in the age group 30-39 years rated their own health as poor or very poor compared to the respondents in the age group of 20-29 years (9%) and ≥ 40 years (8.0%). In comparison, nearly twice as many (18.6%) respondents not satisfied with their accommodation rated their health as poor or very poor compared to 10.3% of respondents satisfied with their accommodation abroad, again this is statistically significant ($P=0.028$). In other words, self-rated health and self-rated accommodation appear to be related.

Surprisingly, a comparatively higher proportion (18.2%) of respondents who did not currently smoke reported poorer (poor or very poor) health than respondents who did smoke (10.5%) again another statistically significant association ($P=0.044$). Health status also differed between workers who positively or negatively rated their diet. Approximately a quarter (23.4%) of respondents who rated their diet as poor/very poor also rated their health as poor/very poor. Interestingly, 9.5% of respondents who rated their diet as fair/good/very good, rated their health as poor/very poor. Again, this is a highly significant finding ($P=0.001$).

Approximately a quarter (22.5%) of respondents who perceived health risks at work rated their health as poor or very poor compared to the respondents who did not (5.1%), again a highly significant association ($P<0.001$). More than one third (36.0%) of respondents who rated their work environment as poor or very poor also rated their health as poor or very poor, compared to a much lower proportion (6.9%) of workers who rated their work environment as fair, good or very good. The work environment abroad is also highly significantly associated with health status ($P<0.001$). Respondents who had a poor or very poor work environment are more likely to experience poor or very poor health. A significantly higher proportion (18.2%) of respondents who had worked more than 70 hours per week rated their health as poor or very poor compared to (10% of) those who worked less than or equal to 70 hours per week. The health status of respondents significantly deteriorated as the working hours increased ($P=0.028$). Remaining factors such as ethnicity, marital status, education, occupation, income, country of work, duration of stay, health insurance, doctor registration, alcohol consumption and taking part in exercise most days held non-significant associations ($P>0.05$) with self-reported health status.

Table 5.7: Association between demographic, socio-economic, lifestyle characteristics and self-reported health status

Variable	Self-reported health status				p-value
Demographic variables	Poor/ very poor		Good/fair		
	No.	%	No.	%	
Age					
20-29 years	16	8.6	169	91.4	
30-39 years	27	17.1	131	82.9	
40 + years	10	7.9	50	83.3	0.008
Ethnicity					
Brahmins/Chhetri	9	8.3	99	91.7	
Others	44	14.9	251	85.1	0.118
Marital status					
Married	51	13.9	317	86.1	
Unmarried	2	5.7	33	94.3	0.271
Satisfaction with accommodation abroad					
Satisfied	27	10.3	236	89.7	
Not satisfied	26	18.6	114	81.4	0.028
Education					
Sec/SLC/HS	13	11.0	105	89.0	
Primary	23	12.4	163	26.1	
None	17	17.2	82	82.8	0.373
Occupation and socio-economic characteristics					
Current occupation in host countries					
Semi-skilled job	36	12.9	243	87.1	
Unskilled job	17	13.7	107	86.3	0.951
Work environment					
Very good/good/fair	22	6.9	295	93.1	
Poor/very poor	31	36.0	55	64.0	<0.001
Country of work/					
Malaysia	20	14.9	114	85.1	
Middle East	33	12.3	236	87.7	0.557
Duration of stay abroad					
<4 years	32	13.3	209	86.7	
≥4 years	21	13.0	141	87.0	1.000
Work hours (average per week)					
≤70 hours	25	10.0	224	90.0	
>70 hours	28	18.2	126	81.8	0.028
Income in Nepalese Rupees (per annum)					
>150000 (\$1701)	16	9.9	146	90.1	
≤150000 (\$1701)	37	15.4	204	84.6	0.149

Table 5.7: Continued.

Health insurance					
Yes	30	12.0	221	88.0	
No	23	15.1	129	84.9	0.445
Doctor registration					
Yes	36	12.7	248	87.3	
No	17	14.3	102	85.7	0.784
Perceived health risks at work					
No	11	5.1	205	94.9	
Yes	42	22.5	145	77.5	<0.001
<i>Health and Lifestyle Characteristics</i>					
Diet					
Good/fair	28	9.5	268	90.5	
Very poor/poor	25	23.4	82	76.6	0.001
Current smoking status					
Non-smoker	25	18.2	112	81.8	
Smoker	28	10.5	238	89.5	0.044
Alcohol consumption/Drinking habit					
Non-alcoholic	29	14.4	172	85.6	
Alcoholic	24	11.9	178	88.1	0.543
Take part in exercise most days					
Yes	5	17.2	24	82.8	
No	48	12.8	326	87.2	0.696

Notes:**Sec- Secondary****SLC- School Leaving Certificate****HS- Higher Secondary (including College and University)**

Multivariate logistic regression analysis has been used to adjust for all factors and to find out which are independently significantly associated with self-reported physical health status (details of the modelling process have been described already in Section 4.6.10.1). Results indicate that there are four key statistically significant variables associated with physical health status. When controlling for all other factors, overall, age is highly significantly associated with self-reported health status ($P=0.007$). Interestingly, those in older age groups i.e. 30-39 years ($OR=4.0$; 95% $CI=1.7-9.6$) and ≥ 40 years ($OR=3.0$; 95% $CI=1.0-9.0$) are significantly more likely to self report having poor or very poor health compared to those aged 20-29 years. Similarly, respondents who rated a poor or very poor work environment are 6.8 times more likely (95% $CI=3.2-14.6$) to perceive poor or very poor health than the respondents who rated a very good, good or fair work environment. Respondents who perceived having health risks at work are 4.7 times more likely (95% $CI = 2.1-10.5$) to experience poor or very poor health compared to the respondents who did not perceive health risks at work. Surprisingly, respondents who did not take exercise most days are significantly less likely ($OR=0.1$; 95% $CI = 0.0-0.5$) to perceive poor or very poor health (Table 5.8). The remaining factors hold non-significant relationships ($P>0.05$) with self-reported health status.

Table 5.8: Odds ratios (OR) with 95% confidence intervals (CI) and P values from logistic regression model of self-reported health status of 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p- value
<i>Demographic variables</i>			
Age			0.007
20-29 years (RC)	1.000		
30-39 years	3.998	1.660-9.628	0.002
40 + years	3.019	1.014-8.988	0.047
Ethnicity			
Brahmins/Chhetri (RC)	1.000		
Others	2.318	0.874-6.149	0.091
Marital status			
Married (RC)	1.000		
Unmarried	1.110	0.195-6.315	0.906
Satisfaction with the accommodation abroad			
Satisfied (RC)	1.000		
Not satisfied	2.000	0.971-4.122	0.060
Education			0.741
Sec/SLC/HS (RC)	1.000		
Primary	0.811	0.325-2.022	0.652
None	1.127	0.375-3.389	0.832
<i>Occupation and socio-economic characteristics</i>			
Current occupation in host countries			
Semi-skilled job (RC)	1.000		
Unskilled job	1.353	0.551-3.321	0.509
Work environment			
Very good/good/fair (RC)	1.000		
Poor/very poor	6.831	3.187-14.639	<0.001
Country of work/			
Malaysia (RC)	1.000		
Middle East	0.650	0.233-1.814	0.411
Duration of stay abroad			
<4 years (RC)	1.000		
≥4 years	1.282	0.609-2.700	0.514
Work hours (average per week)			
≤70 hours (RC)	1.000		
>70 hours	1.289	0.562-2.955	0.549
Income in Nepalese Rupees (per annum)			
>150000 (\$1701) (RC)	1.000		
≤150000 (\$1701)	1.612	0.706-3.680	0.257

Table 5.8: Continued.

Health insurance			
Yes (RC)	1.000		
No	0.976	0.428-2.223	0.953
Doctor registration			
Yes (RC)	1.000		
No	1.231	0.527-2.877	0.632
Perceived health risks at work			
No (RC)	1.000		
Yes	4.706	2.106-10.513	<0.001
<i>Health and Lifestyle Characteristics</i>			
Diet			
Good/fair (RC)	1.000		
Very poor/poor	2.023	0.960-4.265	0.064
Current smoking status			
Non-smoker (RC)	1.000		
Smoker	0.532	0.245-1.156	0.111
Current alcohol consumption status			
Non-alcoholic (RC)	1.000		
Alcoholic	0.830	0.374-1.841	0.646
Take part in exercise most days			
Yes (RC)	1.000		
No	0.148	0.041-0.535	0.004

Nagelkerke R Square=.375

Notes

RC-Reference Category

Sec- Secondary

SLC- School Leaving Certificate

HS- Higher Secondary (including College and University)

The parsimonious logistic regression model included only those explanatory variables significantly associated with self-reported health status. Overall, age is significantly associated with self-reported health status. Age groups i.e. 30-39 years (OR=3.0; 95% CI=1.4-6.3) and 40+ years (OR=3.1; 95% CI=1.2-8.2) are significantly more likely to perceive poor or very poor health compared to those aged 20-29. Similarly, respondents who rated a poor or very poor work environment are 7.5 times more likely (95 % CI=3.8-14.8) to perceive poor or very poor health than respondents who rated a very good, good or fair work environment. Respondents who perceived health risks at work are 4.9 times more likely (95% CI = 2.3-10.4) to experience poor or very poor health compared to respondents who did not perceive health risks at work. Surprisingly, respondents who did not take exercise most days are significantly less likely (OR=0.2; 95%

CI = 0.1-0.7) to perceive poor or very poor health compared to those who did (Table 5.9). Since the four explanatory variables are the same in the multivariate and parsimonious logistic regression, the results are very similar.

Table 5.9: Odds ratios (OR) with 95% confidence intervals (CI) and P values from parsimonious logistic regression model of self-reported health status of 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p-value
Age			0.010
20-29 years (RC)	1.000		
30-39 years	2.955	1.398-6.249	0.005
40 + years	3.091	1.169-8.174	0.023
Work environment			
Very good/good/fair (RC)	1.000		
Poor/very poor	7.467	3.763-14.815	<0.001
Perceived health risks at work			
No (RC)	1.000		
Yes	4.867	2.271-10.431	<0.001
Take part in exercise most days			
Yes (RC)	1.000		
No	0.221	0.070-0.694	0.010

Nagelkerke R Square=.302

Notes

RC-Reference Category

A Nagelkerke's R-square test has been used as a measure of the variance in the data as explained by the model. The R-square value .302 indicates that 30% of variance in the data may be explained by four variables, (a) age; (b) work environment; (c) perceived health risks at work; and (d) taking part in exercise most days. This R-square value is slightly less than the 37.5% of the variance that is explained by all variables. The R-square value tells us that the variance can be largely explained by the four variables listed above; i.e. 30% of the variation in the data is explained by only four variables and that all the other variables together explained only a further 7.5% of the variation. The following section describes the factors associated with mental health.

5.3.2 Factors associated with mental health

The association between mental health problems and other factors is presented in Table 5.10. Three variables, namely perceived health risks at work, work environment and registration with a doctor are significantly associated with mental health problems. A respondent reporting health problems is more likely to report mental health problems too. As the proportion of respondents reporting mental health problems was much higher among those who perceived having health risks at work (34%) compared to just 13% of respondents who did not perceive health risks at work. It is interesting to note that perceived health risks at work are highly significantly associated with mental health problems ($P<0.001$). Just one third (33%) of respondents who had a poor or very poor work environment experienced mental health problems compared to one fifth (21%) of respondents who had a very good or good or fair work environment. Therefore, there is a significant association between mental health and work environment ($P=0.027$).

Nearly one third (30%) of respondents who had not registered with a doctor experienced mental health problems compared to one fifth of respondents who had registered, again a statistically significant association ($P=0.037$). The remaining factors such as age, ethnicity, marital status, satisfaction with accommodation abroad, education, occupation, country of work, duration of stay abroad, work hours, income, health insurance, diet, current smoking status, current alcohol consumption status and taking part in exercise most days are all hold non-significant associations ($P>0.05$).

Table 5.10: Association between demographic, socio-economic, lifestyle characteristics and mental health

Variable	Mental health (mental problem)		p- value
	No.	%	
<i>Demographic variables</i>			
Age			
20-29 years	51	27.6	
30-39 years	31	19.6	
40 + years	11	18.3	0.140
Ethnicity			
Brahmins/Chhetri	29	26.9	
Others	64	21.7	0.340
Marital status			
Married	83	22.6	
Unmarried	10	28.6	0.550
Satisfaction with accommodation abroad			
Satisfied	58	22.1	
Not satisfied	35	25.0	0.586
Education			
Sec/SLC/HS	29	24.6	
Primary	47	25.3	
None	17	17.2	0.273
<i>Occupation and socio-economic characteristics</i>			
Current occupation in host countries			
Semi-skilled job	62	22.2	
Unskilled job	31	25.0	0.629
Work environment			
Very good/good/fair	65	20.5	
Poor/very poor	28	32.6	0.027
Country of work/			
Malaysia	24	17.9	
Middle East	69	25.7	0.107
Duration of stay abroad			
<4 years	55	22.8	
≥ 4 years	38	23.5	0.978
Work hours (average per week)			
≤70 hours	56	22.5	
>70 hours	37	24.0	0.815
Income in Nepalese Rupees (per annum)			
>150000 (\$1701)	41	25.3	
≤150000 (\$1701)	52	21.6	0.453
Health insurance			
Yes	56	22.3	
No	37	24.3	0.728

Table 5.10: Continued.

Doctor registration			
Yes	57	20.1	
No	36	30.3	0.037
Perceived health risks at work			
No	29	13.4	
Yes	64	34.2	<0.001
<i>Health and Lifestyle Characteristics</i>			
Diet			
Good/fair	72	24.3	
Very poor/poor	21	19.6	0.393
Current smoking status			
Non-smoker	33	24.1	
Smoker	60	22.6	0.825
Current alcohol consumption status			
Non-alcoholic	43	21.4	
Alcoholic	50	24.8	0.495
Take part in exercise most days			
Yes	7	24.1	
No	86	23.0	1.000

Notes:**Sec- Secondary****SLC- School Leaving Certificate****HS- Higher Secondary (including College and University)**

Multivariate logistic regression analysis has been applied to find out what factors are independently significantly associated with mental health after controlling for other variables (please see results in Table 5.11). When adjusting for other factors, there are just two key statistically significant variables associated with mental health status. The first is perceived health risk at work. Respondents who perceived health risks at work are 3.3 times more likely (95% CI=1.9-5.6) to experience mental health problems than those respondents who do not perceive health risks. The second variable, work environment, holds borderline significance ($P=0.049$). Respondents who rated their work environment as poor or very poor are 1.8 times more likely (95% CI=1.0-3.4) to experience mental health problems than those respondents who rated their work environment as very good, good or fair. Remaining factors such as age, ethnicity, marital status, satisfaction with accommodation abroad, education, occupation, country of work, duration of stay abroad, work hours, income, health insurance, diet, current smoking status, current alcohol consumption status and taking part in exercise most days are again all hold non-significant associations ($P>0.05$) (Table 5.11).

Table 5.11: Odds ratios (OR) with 95% confidence intervals (CI) and P values from logistic regression model of Mental health of 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p- value
<i>Demographic variables</i>			
Age			
20-29 years (RC)	1.000		
30-39 years	0.573	0.319-1.028	0.062
40 + years	0.640	0.278-1.473	0.294
Ethnicity			
Brahmins/Chhetri (RC)	1.000		
Others	0.723	0.401-1.304	0.281
Marital status			
Married (RC)	1.000		
Unmarried	1.434	0.586-3.513	0.430
Satisfaction with the accommodation abroad			
Satisfied (RC)	1.000		
Not satisfied	1.040	0.612-1.765	0.886
Education			
Sec/SLC/HS (RC)	1.000		
Primary	1.089	0.589-2.013	0.787
None	1.048	0.458-2.400	0.912
<i>Occupation and socio-economic characteristics</i>			
Current occupation in host countries			
Semi-skilled job (RC)	1.000		
Unskilled job	0.925	0.496-1.726	0.807
Work environment			
Very good/good/fair (RC)	1.000		
Poor/very poor	1.841	1.000-3.387	0.049
Country of work			
Malaysia (RC)	1.000		
Middle East	1.593	0.788-3.222	0.195
Duration of stay abroad			
<4 years (RC)	1.000		
≥4 years	1.155	0.682-1.955	0.592
Work hours (average per week)			
≤70 hours (RC)	1.000		
>70 hours	1.188	0.673-2.098	0.553
Income in Nepalese Rupees (per annum)			
>150000 (\$1701) (RC)	1.000		
≤150000 (\$1701)	0.843	0.488-1.456	0.540

Table 5.11: Continued.

Health insurance			
Yes (RC)	1.000		
No	0.918	0.502-1.679	0.781
Doctor registration			
Yes (RC)	1.000		
No	1.524	0.819-2.835	0.184
Perceived health risks at work			
No (RC)	1.000		
Yes	3.267	1.896-5.628	<0.001
<i>Health and Lifestyle Characteristics</i>			
Diet			
Good/fair (RC)	1.000		
Very poor/poor	0.582	0.312-1.087	0.089
Current smoking status			
Non-smoker (RC)	1.000		
Smoker	0.973	0.540-1.756	0.928
Current alcohol consumption status			
Non-alcoholic (RC)	1.000		
Alcoholic	1.520	0.866-2.667	0.145
Take part in exercise most days			
Yes (RC)	1.000		
No	0.756	0.280-2.041	0.582

Nagelkerke R Square=.160**Notes****RC-Reference Category****Sec- Secondary****SLC- School Leaving Certificate****HS- Higher Secondary (including College and University)**

The parsimonious (more simple) logistic regression model included only those explanatory variables significantly associated with mental health i.e. one variable ‘perceived health risk at work’. Respondents who perceived health risks at work are 3.2 times more likely (95% CI=1.9-5.2) to experience mental health problems than those respondents who did not perceive health risks (Table 5.12). Again, the two explanatory variables are the same in the multivariate and parsimonious logistic regression, so the results are very similar.

Table 5.12: Odds ratios (OR) with 95% confidence intervals (CI) and P values from parsimonious logistic regression model of mental health of 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p-value
Perceived health risks at work			
No	1.000		
Yes	3.150	1.902-5.214	<0.001

Nagelkerke R Square= .096

Again, the Nagelkerke’s R-square test has been applied to measure the variance explained by the model. The R-square value .096 indicates that 10% of variance in the data is explained by one variable, perceived health risks at work, compared to 16% including all variables.

5.3.3 Factors associated with perceived health risks at work

The association between perceived health risks at work and demographic variables, occupation, socio-economic and health and lifestyle characteristics will now be examined (Table 5.13). Six variables (i.e. marital status, accommodation in the host countries, diet, work environment, country of work and occupation in host countries) are statistically and significantly associated with perceived health risks at work.

Nearly half (48%) of the married respondents perceived they had health risks at work compared to only 29% of the respondents who were unmarried (29%). So, marital status is significantly associated with perceived health risks at work ($P=0.042$). More than half (54%) of the respondents who are not satisfied with their accommodation reported that their health is at risk compared to the respondents who are satisfied with their accommodation (43%) again, a statistically significant association ($P=0.045$).

A higher proportion (56%) of respondents who rated their diet as very poor or poor perceived greater health risks at work compared to respondents who rated their diet as very good, good or fair (43%). Perceived diet is therefore, highly significantly associated with perceived health risks at work ($P=0.026$).

It is interesting to note that more respondents who had a poor or very poor work environment (67%) reported health risks at work than those who worked in a very good/good/fair work environment (41%). Thus, there is a strong, significant association between work environment and perceived health risks at work ($P<0.001$). Also, a higher proportion (50%) of respondents who worked in the Middle East (construction sectors) reported that their health was at risk because of their work environment compared to those who worked in the Malaysian factory sector (39%). So, there is also a statistically significant relationship between country of work and perceived health risks at work ($P=0.040$). It has to be remembered that migration-target country and type of work are highly inter-related, due to the nature of jobs available to Nepalese migrant workers in Malaysia and the Middle East. As expected, respondents who had an unskilled

job (56%) are at a higher risk compared to those who with a semi-skilled jobs (42%). Therefore, occupation skill level is highly significantly associated with perceived health risks at work ($P=0.018$). The remaining factors such as age, ethnicity, education, duration of stay abroad, work hours, income, health insurance, doctor registration, current smoking status, current alcohol consumption status and take part in exercise most days are non-significant ($P>0.05$) with perceived health risks at work.

Table 5.13: Association between demographic, socio-economic, lifestyle characteristics and perceived health risks at work

Variable	Health Risks		p- value
<i>Demographic variables</i>	No.	%	
Age			
20-29 years	88	47.6	
30-39 years	77	48.7	
40 + years	22	36.7	0.255
Ethnicity			
Brahmins/Chhetri	49	45.4	
Others	138	46.8	0.890
Marital Status			
Married	177	48.1	
Unmarried	10	28.6	0.042
Satisfaction with accommodation abroad			
Satisfied	112	42.6	
Not satisfied	75	53.6	0.045
Education			
Sec/SLC/HS	50	42.4	
Primary	96	51.6	
None	41	41.4	0.150
<i>Occupation and socio-economic characteristics</i>			
Current occupation in host countries			
Semi-skilled job	118	42.3	
Unskilled job	69	55.6	0.018
Work environment			
Very good/good/fair	129	40.7	
Poor/very poor	58	67.4	<0.001
Country of work			
Malaysia	52	38.8	
Middle East	135	50.2	0.040
Duration of stay abroad			
<4 years	119	49.4	
≥4 years	68	42.0	0.174
Work hours (average per week)			
≤70 hours	112	45.0	
>70 hours	75	48.7	0.532
Income in Nepalese Rupees (per annum)			
>150000 (\$1701)	74	45.7	
≤150000 (\$1701)	113	46.9	0.891
Health insurance			
Yes	113	45.0	
No	74	48.7	0.541

Table 5.13: Continued.

Doctor registration			
Yes	123	43.3	
No	64	53.8	0.070
<i>Health and Lifestyle Characteristics</i>			
Diet			
Good/fair	127	42.9	
Very poor/poor	60	56.1	0.026
Current smoking status			
Non-smoker	72	52.6	
Smoker	115	43.2	0.095
Current alcohol consumption status			
Non-alcoholic	98	48.8	
Alcoholic	89	44.1	0.398
Take part in exercise most days			
Yes	9	31.0	
No	178	47.6	0.126

Notes:**Sec- Secondary****SLC- School Leaving Certificate****HS- Higher Secondary (including College and University)**

Multivariate logistic regression analysis has been applied to control for other factors. There are just two key statistically significant variables associated with perceived health risks at work. Marital status is significantly associated with perceived health risks ($P=0.022$). Unmarried respondents are significantly less likely ($OR=0.4$, $95\% CI=0.1-0.9$) to perceive health risks at work. Respondents who rated their work environment as a poor or very poor are 2.5 times more likely ($95\% CI=1.5-4.4$) to perceive health risks at work (Table 5.14). The variables previously found significant (e.g. current occupation in the host countries) hold non-significant association ($P>0.05$) with perceived health risks at work when controlling for other factors.

Table 5.14: Odds ratios (OR) with 95% confidence intervals (CI) and P values from logistic regression model of perceived health risks of 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p- value
<i>Demographic variables</i>			
Age			0.261
20-29 years (RC)	1.000		
30-39 years	0.869	0.535-1.413	0.572
40 + years	0.563	0.283-1.120	0.102
Ethnicity			
Brahmins/Chhetri (RC)	1.000		
Others	1.229	0.741-2.040	0.425
Marital Status			
Married (RC)	1.000		
Unmarried	0.356	0.148-0.860	0.022
Satisfaction with accommodation abroad			
Satisfied (RC)	1.000		
Not satisfied	1.461	0.927-2.302	0.103
Education			
Sec/SLC/HS (RC)	1.000		
Primary	1.217	0.712-2.081	0.473
None	0.802	0.406-1.581	0.524
<i>Occupation and socio-economic characteristics</i>			
Current occupation in host countries			
Semi-skilled job (RC)	1.000		
Unskilled job	1.261	0.737-2.157	0.397
Work environment			
Very good/good/fair (RC)	1.000		
Poor/very poor	2.548	1.470-4.415	0.001
Country of work			
Malaysia (RC)	1.000		
Middle East	1.713	0.949-3.092	0.074
Duration of stay abroad			
<4 years (RC)	1.000		
≥4 years	0.790	0.506-1.234	0.300
Work hours (average per week)			
≤70 hours (RC)	1.000		
>70 hours	1.203	0.741-1.953	0.455
Income in Nepalese Rupees (per annum)			
>150000 (\$1701) (RC)	1.000		
≤150000 (\$1701)	1.203	0.590-1.521	0.821

Table 5.14: Continued.

Health insurance			
Yes (RC)	1.000		
No	0.934	0.556-1.567	0.795
Doctor registration			
Yes (RC)	1.000		
No	1.548	0.900-2.663	0.114
<i>Health and Lifestyle Characteristics</i>			
Diet			
Good/fair (RC)	1.000		
Very poor/poor	1.394	0.843-2.305	0.196
Current smoking status			
Non-smoker (RC)	1.000		
Smoker	0.674	0.409-1.113	0.123
Current alcohol consumption status			
Non-alcoholic (RC)	1.000		
Alcoholic	0.975	0.606-1.568	0.917
Take part in exercise most days			
Yes (RC)	1.000		
No	1.896	0.786-4.576	0.155

Nagelkerke R Square= .166

Notes

RC-Reference Category

Sec- Secondary

SLC- School Leaving Certificate

HS- Higher Secondary (including College and University)

The parsimonious logistic regression included only those explanatory variables significantly associated with perceived health risks at work. Unmarried respondents are half as likely (OR=0.5; 95% CI=0.2-0.9) to perceive health risks. Similarly, respondents rating work environment as poor or very poor are three times more likely (95 % CI=1.8-4.9) to perceive health risks at work than respondents who rated a very good, good or fair work environment (Table 5.15). Since the two explanatory variables are the same in the multivariate and parsimonious logistic regression, the results are again very similar.

Table 5.15: Odds ratios (OR) with 95% confidence intervals (CI) and P values from parsimonious logistic regression model of perceived health risks of 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p-value
Marital status			
Married (RC)	1.000		
Unmarried	0.455	0.209-0.989	0.047
Work environment			
Very good/good/fair (RC)	1.000		
Poor/very poor	2.967	1.789-4.921	<0.001

Nagelkerke R Square= .077

Notes

RC-Reference Category

The Nagelkerke's R-square value 0.077 suggests that nearly half the variance in the data is explained by two variables - marital status and work environment. These explain 7.7% of the variance compared to 16.6% when all variables are included. The next section examines the association between accidents at work and several independent variables.

5.3.4 Factors associated with accidents at work

The association between accidents at work with different factors is presented in (Table 5.16). There are three key statistically significant variables associated with accidents at work. Respondents who are younger are less likely to have experienced a work-related accident. This association with age is statistically significant ($P=0.022$). A lower proportion (14%) of respondents who are satisfied with their accommodation compared to a quarter (24%) of respondents who are not satisfied, experienced work-related accidents. It is interesting to note that the proportion of accidents increased with the status of accommodation and accommodation abroad is strongly associated with accidents at work ($P=0.018$). It is also interesting that respondent who perceived a poor or very poor work environment experienced more accidents (34%) than those who worked in very good, good or fair work environments (13%). So, there is a highly significant positive association between work environment and accidents at work ($P<0.001$). Remaining factors such as ethnicity, marital status, education, occupation,

country of work, duration of stay abroad, work hours, income, health insurance, doctor registration, diet, current smoking status, alcohol consumption habit and taking part in exercise most days hold non-significant ($P>0.05$) statistical associations with accidents at work.

Table 5.16: Association between demographic, socio-economic, lifestyle characteristics and accidents at work

Variable	Accidents at work		p- value
Demographic variables	No.	%	
Age			
20-29 years	24	13.0	
30-39 years	28	17.7	
40 + years	17	28.3	0.022
Ethnicity			
Brahmins/Chhetri	20	18.5	
Others	49	16.6	0.763
Marital status			
Married	65	17.7	
Unmarried	4	11.4	0.482
Satisfaction with accommodation abroad			
Satisfied	36	13.7	
Not satisfied	33	23.6	0.018
Education			
Sec/SLC/HS	19	16.1	
Primary	36	19.4	
None	14	14.1	0.507
Occupation and socio-economic characteristics			
Current occupation in host countries			
Semi-skilled job	48	17.2	
Unskilled job	21	16.9	1.000
Work environment			
Very good/good/fair	40	12.6	
Poor/very poor	29	33.7	<0.001
Country of work/Work place abroad			
Malaysia	17	12.7	
Middle East	52	19.3	0.127
Duration of stay abroad			
<4 years	45	18.7	
≥ 4 years	24	14.8	0.383
Work hours (average per week)			
≤70 hours	39	15.7	
>70 hours	30	19.5	0.394
Income in Nepalese Rupees (per year annum)			
>150000 (\$1701)	25	15.4	
≤150000 (\$1701)	44	18.3	0.546
Health insurance			
Yes	43	17.1	
No	26	17.1	1.000

Table 5.16: Continued.

Doctor registration			
Yes	55	19.4	
No	14	11.8	0.089
Perceived health risks at work			
No	30	13.9	
Yes	39	20.9	0.086
<i>Health and Lifestyle Characteristics</i>			
Diet			
Good/fair	49	16.6	
Very poor/poor	20	18.7	0.724
Current smoking status			
Non-smoker	29	21.2	
Smoker	40	15.0	0.159
Drinking /alcohol consumption habit			
Non-alcoholic	38	18.9	
Alcoholic	31	15.3	0.414
Take part in exercise most days			
Yes	2	6.9	
No	67	17.9	0.198

Notes:**Sec- Secondary****SLC- School Leaving Certificate****HS- Higher Secondary (including College and University)**

Multivariate logistic regression analysis has been applied to find out which factors are significantly associated with accidents at work when adjusting for other variables. There are four key statistically significant variables associated with accidents at work. These five are: (a) age; (b) accommodation; (c) country of work; (d) work environment and (e) doctor registration. Interestingly, respondents aged 40 and over are four times more likely (95% CI=1.7-9.7) to experience work-related accidents compared with those aged 20-29 years. Accommodation is significantly associated with accidents at work. Respondents not satisfied with their accommodation are significantly more likely (OR=1.9, 95% CI=1.05-3.4) to experience accidents at work.

Similarly, respondents who worked in the Middle East are 3.6 times more likely (95% CI=1.5-8.5) to experience work-related accidents compared to those respondents who worked in Malaysia. There is a strong significant association between the work environment and accidents at work. Respondents who reported their work environment as poor or very poor are 3.5 times more likely (95% CI= 1.8-6.7) to experience work-related accidents. Respondents who are not registered with a doctor are significantly less likely (OR=0.3, 95% CI=0.1-0.7) to experience a work-related accident compared with those who had registered (see Table 5.17). The remaining factors are non-significantly associated ($P>0.05$) with accidents at work.

Table 5.17: Odds ratios (OR) with 95% confidence intervals (CI) and P values from logistic regression model of accident at work 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p- value
<i>Demographic variables</i>			
Age			0.007
20-29 years (RC)	1.000		
30-39 years	1.647	0.821-3.304	0.161
40 + years	4.047	1.687-9.710	0.002
Ethnicity			
Brahmins/Chhetri (RC)	1.000		
Others	1.004	0.508-1.985	0.990
Marital Status			
Married (RC)	1.000		
Unmarried	0.872	0.253-2.999	0.828
Satisfaction with accommodation abroad			
Satisfied (RC)	1.000		
Not satisfied	1.893	1.051-3.411	0.034
Education			
Sec/SLC/HS (RC)	1.000		
Primary	1.477	0.709-3.077	0.298
None	0.774	0.301-1.992	0.595
<i>Occupation and socio-economic characteristics</i>			
Current occupation in host countries			
Semi-skilled job (RC)	1.000		
Unskilled job	0.596	0.292-1.215	0.154
Work environment			
Very good/good/fair (RC)	1.000		
Poor/very poor	3.458	1.783-6.708	<0.001
Country of work			
Malaysia (RC)	1.000		
Middle East	3.592	1.512-8.534	0.004
Duration of stay abroad			
<4 years (RC)	1.000		
≥4 years	0.618	0.322-1.150	0.129
Work hours (average per week)			
≤70 hours (RC)	1.000		
>70 hours	1.645	0.839-3.227	0.147
Income in Nepalese Rupees (per annum)			
>150000 (\$1701) (RC)	1.000		
≤150000 (\$1701)	0.933	0.484-1.799	0.836

Table 5.17: Continued.

Health insurance			
Yes (RC)	1.000		
No	1.419	0.711-2.830	0.321
Doctor registration			
Yes (RC)	1.000		
No	0.306	0.139-0.676	0.003
Perceived health risks at work			
No (RC)	1.000		
Yes	1.213	0.663-2.219	0.532
<i>Health and Lifestyle Characteristics</i>			
Diet			
Good/fair (RC)	1.000		
Very poor/poor	0.616	0.311-1.222	0.166
Current smoking status t			
Non-smoker (RC)	1.000		
Smoker	0.667	0.346-1.288	0.228
Current alcohol consumption status			
Non-alcoholic (RC)	1.000		
Alcoholic	0.893	0.471-1.693	0.728
Take part in exercise most days			
Yes (RC)	1.000		
No	2.793	0.586-13.307	0.197

Nagelkerke R Square = .219

Notes

RC-Reference Category

Sec- Secondary

SLC- School Leaving Certificate

HS- Higher Secondary (including College and University)

The parsimonious logistic regression calculation has included only those explanatory variables that are significantly associated with accidents at work. There are five key statistically significant variables with accidents at work. Age is significantly associated with accidents at work. Respondents aged 40+ years are 2.8 times more likely (95% CI=1.3-6.0) to experience work-related accidents than those respondents who are aged between 20-29 years. Similarly, respondents who are not satisfied with their accommodation are twice as likely (95% CI=1.1-3.5) to experience work-related accidents. Respondents who rated their work environment as poor or very poor are 3.7 times more likely (95% CI=2.1-6.6) to experience work-related accidents than those respondents who rated a fair, good or very good work environment. It is noted that respondents who worked in the Middle East are nearly twice as likely (95% CI=1.0-3.6) to experience work-related accidents than those respondents who worked in Malaysia. Respondents who are not registered with a doctor are less likely (OR=0.5; CI=0.2-0.9) to experience work-related accidents than those respondents registered with a doctor abroad (Table 5.18). Since the four explanatory variables are the same in the multivariate and parsimonious logistic regression, again, the results are very similar.

Table 5.18: Odds ratios (OR) with 95% confidence intervals (CI) and P values from parsimonious logistic regression model of accidents at work of 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p-value
Age			0.025
20-29 years (RC)	1.000		
30-39 years	1.543	0.829-2.873	0.171
40 + years	2.828	1.332-6.003	0.007
Satisfaction with accommodation abroad			
Satisfied (RC)	1.000		
Not satisfied	2.000	1.143-3.500	0.015
Work Environment			
Very good/good/fair (RC)	1.000		
Poor/very poor	3.684	2.058-6.594	<0.001
Country of work			
Malaysia (RC)	1.000		
Middle East	1.930	1.021-3.648	0.043
Doctor registration			
Yes (RC)	1.000		
No	0.474	0.243-0.924	0.028

Nagelkerke R Square=.156

Notes

RC-Reference Category

Sec- Secondary

SLC- School Leaving Certificate

HS- Higher Secondary (including College and University)

The Nagelkerke's R-square value .156 indicates that 16% of variance in the data is explained by five variables (i.e. age, satisfaction with accommodation abroad, work environment, country of work and doctor registration) compared to 22% when all variables are included.

5.3.5 Factors associated with a doctor not being visited abroad

The association between not visiting a doctor abroad and demographic variables, occupation and socio-economic characteristics and health and lifestyle characteristics (Table 5.19) will now be examined. There is one single variable, namely health insurance, that is statistically and significantly associated with a doctor being not visited abroad ($P < 0.001$). More than double the proportion of respondents (54.6%) who had no health insurance had not visited a doctor abroad compared to 24.7% of respondents who hold health insurance abroad.

Table 5.19: Association between demographic, socio-economic, lifestyle characteristics and doctor being not visited (utilization of health care) abroad

Variable	Doctor being not visited abroad		p- value
	No.	%	
<i>Demographic variables</i>			
Age			
20-29 years	61	33.0	
30-39 years	66	41.8	
40 + years	18	30.0	0.138
Ethnicity			
Brahmins/Chhetri	38	35.2	
Others	107	36.3	0.933
Marital Status			
Married	135	36.7	
Unmarried	10	28.6	0.440
Satisfaction with accommodation abroad			
Satisfied	100	38.0	
Not satisfied	45	32.1	0.288
Education			
Sec/SLC/HS	42	35.6	
Primary	70	37.6	
None	33	33.3	0.767
<i>Occupation and socio-economic characteristics</i>			
Current occupation in host countries			
Semi-skilled job	98	35.1	
Unskilled job	47	37.9	0.672
Work environment			
Very good/good/fair	120	37.9	
Poor/very poor	25	29.1	0.168
Country of work			
Malaysia	40	29.9	
Middle East	105	39.0	0.089
Duration of stay abroad			
<4 years	89	36.9	
≥ 4 years	56	34.6	0.705
Work hours (average per week)			
≤70 hours	85	34.1	
>70 hours	60	39.0	0.382
Income in Nepalese Rupees (per annum)			
>150000 (\$1701)	59	36.4	
≤150000 (\$1701)	86	35.7	0.964
Health insurance			
Yes	62	24.7	
No	83	54.6	<0.001

Table 5.19: Continued.

Perceived health risks at work			
No	72	33.3	
Yes	73	39.0	0.278
<i>Health and Lifestyle Characteristics</i>			
Diet			
Good/fair	113	38.2	
Very poor/poor	32	29.9	0.159
Current smoking status			
Non-smoker	54	39.4	
Smoker	91	34.2	0.357
Current alcohol consumption status			
Non-alcoholic	72	35.8	
Alcoholic	73	36.1	1.000
Take part in exercise most days			
Yes	11	37.9	
No	134	35.8	0.979

Notes:**Sec- Secondary****SLC- School Leaving Certificate****HS- Higher Secondary (including College and University)**

Multivariate logistic regression analysis has been applied to find out the factors significantly associated with a doctor being not visited abroad when adjusting for other variables. There are two key statistically significant variables associated with a doctor not being visited abroad. Country of work is significantly associated with a doctor being not visited abroad and interestingly, respondents working in the Middle East are twice as likely (95% CI=1.1-3.9) not to have visited a doctor than those respondents working in Malaysia. Similarly, there is a strong significant association between health insurance and a doctor not being visited abroad. Respondents who had no health insurance abroad are 5 times more likely (OR=5.0, 95% CI=3.1-8.3) not to have visited a doctor abroad than those who had health insurance (Table 5.20). The remaining factors are not significantly associated ($P>0.05$) with a doctor not being visited abroad.

Table 5.20: Odds ratios (OR) with 95% confidence intervals (CI) and P values from logistic regression model of doctor being not visited of 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p- value
<i>Demographic variables</i>			
Age			
20-29 years (RC)	1.000		
30-39 years	1.531	0.912-2.573	0.107
40 + years	0.825	0.393-1.731	0.610
Ethnicity			
Brahmins/Chhetri (RC)	1.000		
Others	1.066	0.615-1.848	0.820
Marital Status			
Married (RC)	1.000		
Unmarried	0.550	0.220-1.378	0.202
Satisfaction with accommodation abroad			
Satisfied (RC)	1.000		
Not satisfied	0.624	0.380-1.026	0.603
Education			
Sec/SLC/HS (RC)	1.000		
Primary	0.890	0.503-1.573	0.688
None	0.723	0.350-1.494	0.381
<i>Occupation and socio-economic characteristics</i>			
Current occupation in host countries			
Semi-skilled job (RC)	1.000		
Unskilled job	1.161	0.656-2.053	0.608
Work environment			
Very good/good/fair (RC)	1.000		
Poor/very poor	0.582	0.319-1.065	0.079
Country of work			
Malaysia (RC)	1.000		
Middle East	2.111	1.136-3.924	0.018
Duration of stay abroad			
<4 years (RC)	1.000		
≥4 years	0.990	0.615-1.596	0.968
Work hours (average per week)			
≤70 hours (RC)	1.000		
>70 hours	1.655	0.994-2.756	0.053
Income in Nepalese Rupees (per annum)			
>150000 (\$1701) (RC)	1.000		
≤150000 (\$1701)	0.836	0.504-1.386	0.487

Table 5.20: Contined.

Variable	OR	95% CI for OR	p- value
Health insurance			
Yes (RC)	1.000		
No	5.085	3.095-8.354	<0.001
Perceived health risks at work			
No (RC)	1.000		
Yes	1.236	0.769-1.986	0.381
<i>Health and Lifestyle Characteristics</i>			
Diet			
Good/fair (RC)	1.000		
Very poor/poor	0.628	0.366-1.077	0.091
Current smoking status			
Non-smoker (RC)	1.000		
Smoker	0.627	0.369-1.065	0.084
Current alcohol consumption status			
Non-alcoholic (RC)	1.000		
Alcoholic	1.224	0.739-2.029	0.433
Take part in exercise most days			
Yes (RC)	1.000		
No	1.081	0.434-2.692	0.868

Nagelkerke R Square= .216

Notes

RC-Reference Category

Sec- Secondary

SLC- School Leaving Certificate

HS- Higher Secondary (including College and University)

The parsimonious logistic regression model has included only those explanatory variables found to be significantly associated with a doctor not being visited abroad. There are two key statistically significant variables with a doctor not being visited abroad; country of work and health insurance. Respondents working in the Middle East are 1.8 times more likely (95% CI=1.1-2.9) not to have visited a doctor abroad. Similarly, respondents with no health insurance are four times more likely (95% CI=2.6-6.2) not to have visited a doctor abroad (Table 5.21). Since the two explanatory variables are the same in the multivariate and parsimonious logistic regression, the results are again, very similar.

Table 5.21: Odds ratios (OR) with 95% confidence intervals (CI) and P values from parsimonious logistic regression model of doctor being not visited abroad of 403 Nepalese male migrant workers working in the Middle East and Malaysia, Nepal 2011.

Variable	OR	95% CI for OR	p-value
Country of work			
Malaysia (RC)	1.000		
Middle East	1.850	1.150-2.976	0.011
Health insurance			
Yes (RC)	1.000		
No	3.992	2.568-6.204	<0.001

Nagelkerke R Square= .139

Notes

RC-Reference Category

The Nagelkerke's R-square value .139 indicates that 14% of variance in the data is explained by two variables, country of work and health insurance, compared to 22% when all variables are included.

5.3.6 Factors associated with health status and risks: summary

This section has presented the factors associated with health status (including mental health), perceived health risks and accidents at work. Age is highly significantly associated with self-reported poor health status. This means that older respondents report having poorer health status than younger ones. Diet, perceived health risk and work environment are strongly associated with self-reported health status. There is also a strong association between perceived health risk and mental health. It seems that respondents who perceive health risks at work are more likely to experience mental health issues. Work environment is also associated with mental health. However, income, education level, health insurance and doctor registration are not associated with self-reported health status.

Age, accommodation and work environment are strongly associated with the reporting of accidents at work. Those aged ≥ 40 years are more likely to experience work-related accidents compared to younger age groups. Similarly, respondents who are not satisfied with their accommodation and who work in a poorer work environment are more likely to experience work-related accidents.

5.4 Chapter summary

The first part of this chapter presented the overall profile of Nepalese migrant workers in the Middle East and Malaysia. It shows that most of the migrants are young i.e. under the age of 40, married and with primary or no education. The majority of the workers perceive themselves to have a very good/good or fair diet, work environment and health status. Nearly half of the Nepalese workers perceived health risks at work. The study also demonstrates that Nepalese migrant workers have reasonable access to health care services. Many are covered by some kind of health insurance, but not all migrant workers are covered or in some cases the insurance is perceived as insufficient.

The second part of this chapter examined the factors associated with outcome variables i.e. health status (including mental health), health risks, accidents at

work and doctor visits in the last 12 months. Overall, age, perceived diet, perceived health risks and work environment are significantly associated with self-reported health status. Perceived health risk is significantly associated with mental health. The statistical analyses also demonstrate that the age group (e.g. 40+ years) of the workers, satisfaction with accommodation in the country of work, perceived work environment, work location and registration with a doctor are significantly associated with work-related accidents. However, only work location and having health insurance are significantly associated with not seeing a doctor abroad.

CHAPTER 6 QUALITATIVE RESULTS

6.1 Introduction

This chapter describes the qualitative results in two main sections. The first presents the socio-demographic characteristics of the interviewees and the second summarises the key themes generated from a thematic analysis of the interview data.

6.2 Study participants' socio-demographic characteristics

A total of 20 study participants participated in the in-depth interviews. Of these, 15 were married and five were unmarried. Their ages ranged from 20 to 49 years, with the majority (60%) less than 30 years old. Half of the participants were from privileged main stream groups (Brahman/Chhetri); five were from different privileged ethnic groups such as Tamang, Limbu or Magar; four were from a disadvantaged ethnic group (Dalit); and one belonged to a Terai caste (Table 6.1). Half of the interviewees either had no education or a primary level of education. Two thirds of them worked in the Middle East and one third worked in Malaysia. More than half (55%) rated their health as fair or good. The majority (60%) rated their work environment as fair or good. Nearly half had experienced work-related accidents.

Table 6.1: Socio-demographic characteristics of study participants

ID	Characteristics								
	Place	Age	Acci	Health	Work	Ethnic.	Edu.	MS	LS
3*	Qatar	28	No	Fair	Poor	B/C	+12/I.A	M	2
4	Saudi Arabia	29	No	Good	Fair	B/C	Pri	M	10
5	Malaysia	23	No	Good	Good	D	SLC	M	4
6	Saudi Arabia	48	Yes	Fair	Fair	D	No	M	8
7	Saudi Arabia	49	Yes	Poor	Good	Cha	SLC	M	13
8	Malaysia	42	Yes	Fair	Fair	Lim	SLC	M	2
9	Qatar	41	Yes	Poor	Poor	Ta	No	M	6
10	Malaysia	20	No	Poor	Poor	B/C	SLC	M	1
11	Malaysia	25	No	Poor	Poor	B/C	Pri	M	3
12	Saudi Arabia	40	Yes	Very Poor	Poor	B/C	No	M	5
13	Qatar	23	No	Good	Good	B/C	SLC	UM	4
14	Saudi Arabia	21	Yes	Very Poor	Poor	Lim	Pri	UM	2
15	Malaysia	35	Yes	Very Poor	Poor	B/C	SLC	M	1
16	Malaysia	25	No	Good	Fair	D	Pri	UM	6
17	Malaysia	38	No	Poor	Fair	Ta	Pri	M	2
18	Qatar	40	No	Poor	Poor	D	Pri	M	6
19	Qatar	29	No	Good	Good	B/C	Pri	M	3
20	Qatar	27	No	Good	Good	B/C	SLC	M	2
21	Qatar	22	Yes	Good	Good	Ma	SLC	UM	2
22	Qatar	21	Yes	Good	Good	B/C	SLC	UM	2

Legend

Acci- Work-related accident,

Work -Working condition

Ethnic- Ethnicity, B/Cs- Brahmin and Chhetri, Da- Dalit, Ta-Tamang, Lim-Limbu, Ma-Magar, Cha-Chaudhary

Edu.- Education, No Edu- No Education, Pri Edu-Primary Education

SLC- School Leaving Certificate, I.A.+2 or Intermediate level

MS-Marital Status, M=Married, UM=Unmarried

LS-length of stay (in a year)

* ID numbers start at 3 as two pilot interviews are not included here.

6.3 Key themes

The analysis of the interviews revealed several sub-themes which are discussed below under six broad headings:

- push factors of migration
- pull factors of migration
- experiences of living abroad
- experiences of working abroad
- health and health services
- suggestions to improve health and well-being.

6.4 Push factors of migration

Factors affecting migration are very complex. People move for a combination of reasons. However, the following sub-themes emerged under the broad heading “push factors of migration”: economic and/or financial difficulties; political instability or conflict; and encouragement from friends and relatives.

6.4.1 Economic and/or financial difficulties

Economic factors play an important role in any migration process. The economic push factors that motivate Nepalese migrants to leave their country are: lack of jobs and opportunities; the need to support family; and individual circumstances (self-sufficiency). These are described briefly below.

Lack of jobs and opportunities

Many participants in this study thought that economic hardship in Nepal is caused by having few local job opportunities and this affects the lives of people greatly. Some said that they could not earn money owing to the lack of job opportunities and that they experienced economic difficulties in maintaining their livelihoods. Other participants suggested that they struggle to meet the needs of their family, for example:

I didn't complete any higher education. I was jobless in Nepal. The situation of the country was not good and I went abroad.

(B/C, SLC, Good health, Middle East, Age 27, Participant 20)

A construction worker from Saudi noted how his low income in Nepal made it difficult for him to survive and failure to meet the needs of his family:

I worked as a labourer in Nepal. My average income was about NRs 50 (US\$0.55) per day which was not sufficient for our livelihood. I had no money to fulfil the demands of my son, wife and mother which made me unhappy in Nepal. Hence I decided to go abroad for work.

(B/C, Low edu. Good health, Middle East, Age 29, Participant 4)

Although workers have a very low income in Nepal, a number of workers either borrow money from friends and family or sell property (e.g. land) to go abroad.

Needs to support family

A number of participants explained that although their socio-economic status for the often agrarian based Nepalese life-style was considered not too bad, they experienced financial difficulties in paying for their children's education and in meeting extra family needs that caused them to seek work abroad. Another Saudi construction worker noted pressure from his family:

I lived in [an] extended family, with my father and mother, my wife and children, my brother and sister and uncle's family. Our family income was not sufficient for our livelihood. Apart from this, my father and mother, my son and daughter had their own need for money. My income was not enough for their demands so I went abroad to earn more money and to fulfil the demands of my family.

(Cha, SLC, Poor health, Middle East, Age 49, Participant 7)

Although a factory worker in Malaysia did not have great financial problems in Nepal he still needed more money to pay for his children's education:

The economic situation of my family was okay. We are farmers so we don't have any choice except farming. Our family income was sufficient to manage our livelihood. We wanted to give priority for our children's

schooling and to improve their future. So, in fact, I went abroad to improve our future.

(Ta, Low edu. Poor health, Malaysia, Age 38, Participant 17)

Self-sufficiency

There was one specific interviewee, who was somewhat different from the rest; what we may call in qualitative terms a disconfirming case (Mays & Pope, 2000), as he reported becoming self-sufficient as the reason for migration. A young 21-year-old participant articulated that as an abandoned orphan and fully dependent on his grandmother, he decided to travel abroad to seek a brighter future:

My father passed away when I was two and my mother got married to someone else. I was dependent on my grandmother and she was hardly able to make ends meet. Then I went abroad to earn money.

(Lim, Low edu. Poor health, Middle East, Age 21, Participant 14)

Overall, participants experienced financial difficulties in managing their livelihoods, providing financial support to their family (including parents) and children's schooling. These are some of the key factors in motivating Nepalese migrants to work abroad. For these men, economic hardship in Nepal and their desire to improve their financial status are the main reasons for working abroad.

The next sub-theme, 'political instability or conflict' in Nepal is identified as another push factor of migration, as described below.

6.4.2 Political instability or conflict

Many participants argued that the politically unstable situation in Nepal has created many problems. Participants told many stories about political burdens, the uncertainty of their lives in Nepal and their decisions to leave the country. One quote highlights this to good effect:

Nepal experienced political instability over the last decade as there were no more job opportunities. Frequent strikes and rallies disturbed our daily life and there was no security. Thus I went abroad to work.

(B/C, Low edu. Good health, Middle East, Age 29, Participant 4)

Another factory worker in Malaysia experienced his life being in serious danger despite previously having a good social reputation and economic status. He expressed his situation like this:

I was involved in local politics in Nepal as I had a good reputation in the community. Later, the political situation of the country deteriorated and life was not safe. Then I decided to go abroad.

(Limbu, High edu. Fair health, Malaysia, Age 42, Participant 8)

A number of participants experienced the direct impact of political instability on their livelihoods. For example, feeling insecure and the frequent disturbance in their daily lives ‘forced’ them to leave the country for work. Political instability in the country is another motivator for Nepalese migrants to explore work abroad.

6.4.3 Encouragement from friends and relatives

Nepalese society has large extended families and family members are often dependent on each other for moral and financial support, help and advice. Consequently, decisions are made for the collective good will of the family and family members might be willing to lend or give some ‘seed-corn’ money for other members to explore a better paying job or business (Thieme, 2007).

Several participants in this study articulated that they received moral and financial support from friends and family members to go abroad with the hope of better overall returns on their original investment. The following expression from one of them exemplifies a family’s role in migration:

I completed school up to grade eight. Then I worked in the transportation sector (helping hand), but was not happy with the job, quit it and stayed home. My father encouraged me to go abroad.

(B/C, High edu. Poor health, Malaysia, Age 20, Participant 10)

A construction worker in Saudi Arabia was encouraged by his friends who also lent him money:

I received moral and financial support from my friends. Then I went abroad for work.

(B/C, Low edu. Good health, Middle East, Age 29, Participant 4)

Therefore, several participants experienced positive encouragement from friends and families to go abroad. Friends and families have offered moral and financial encouragement to work abroad, indicating their role as a key motivator in migration decisions.

6.4.4 Summary of push factors

Overall, economic problems and a poor economy are major reasons for Nepalese workers seeking to migrate abroad for work. Nepalese migrant workers have experienced financial difficulties in managing their livelihoods, providing financial support to their family and for children's schooling in Nepal. Other major reasons for moving to the Middle East and Malaysia include political instability and support from friends and relatives. A number of migrant workers who experienced insecurity in their lives owing to political uncertainty also sought employment abroad. A minority of workers received moral and financial support from friends and relatives to explore better job opportunities abroad.

6.5 Pull factors of migration

In addition to the push factors described above, this study has identified various "pull factors" for Nepalese workers in seeking employment abroad. Major themes identified within the pull factors include: employment opportunities,

foreign currency exchange rates and networks and support. These sub-themes are briefly highlighted below. The first sub-theme relates to employment opportunities.

6.5.1 Employment opportunities

A majority of study participants state that there are more job opportunities in the host countries, and these workers are attracted by this employment and in particular by earning higher wages. For example:

Economic reason drives people to go abroad and they have a dream of earning more money. I was also excited to earn more money and I went abroad.

(Lim, Low edu, Poor health, Middle East, Age 21, Participant 14)

Another construction worker in the Middle East notes the demand for unskilled workers:

There are no job opportunities in Nepal. My family's economic situation was poor. There is a demand for workers and unskilled labourers in Saudi's labour market. That's why I went to Saudi for work.

(Dalit, No edu, Fair health, Middle East, Age 48, Participant 6)

The next sub-theme relates to currency and money.

6.5.2 Foreign currency exchange rates/saving

A number of participants also considered that the exchange rate for foreign currencies is perceived as high and so translates into a substantial Nepalese income. For example, during the data collection period in 2011, the exchange rates of one Qatari Riyal equals NRs=20.40 (\$ 0.23); one Saudi Riyal is worth NRs=19.81 (\$ 0.22), and 1 Malaysian Ringgit is worth NRs=24.27 (\$ 0.28). Consequently a small saving in the host country could translate into a large amount of Nepali rupees. This has clearly inspired some to go abroad:

I don't think we can earn money if we go to India. I think we can earn more money in Malaysia than Nepal and India because the currency exchange rate is higher.

(Dalit, High edu. Good health, Middle East, Age 23, Participant 5)

In the eyes of many workers there will be more savings that can be sent back to their family while working in Saudi Arabia. One quoted:

As far as I know, workers can save more money in Saudi. For example, if workers earn 500 Riyal (\$ 137), monthly, they can save the whole amount. So, working in Saudi Arabia is highly advantageous.

(B/C, Pri edu. Good health, Middle East, Age 29, Participant 4)

A possible reason behind this individual's ability to save is that a number of workers working in larger companies receive benefits such as free accommodation and food from the employer. As a result, they are able to save all the money they earn in Saudi Arabia.

6.5.3 Networks and support

A number of participants suggested that they have been encouraged to move destination countries by their colleagues and friends. One construction worker in Saudi, for example, had received help from friends and then decided to work abroad. This illustrates the importance of networks making it easier for Nepalese workers to migrate. Socially speaking, existing circles of friends in the host countries are able to teach newcomers about the culture of the country, work environment, wages and information about shopping areas, as this construction worker in Saudi Arabia quoted:

I think Saudi is the best country to work in. My friends who already worked in Saudi encouraged me to apply for work there. They have provided information about the high salary and probability of saving more money than in other countries.

(Chaudhary, High edu. Poor health, Middle East, Age 49, Participant 7)

6.5.4 Summary of pull factors

A majority of migrant workers expect better salaries in the host countries. The prospect of employment and earning higher wages attracted most Nepalese migrant workers interviewed. The high exchange rate of foreign currencies and network and support of friends are other pull factors for Nepalese migrants. Existing circles of friends and their networks help not only to attract Nepalese migrants abroad but also help to settle these workers into their host countries once they have arrived.

Having outlined the pull factors, the next section focuses on the life experiences of migrants in their host countries.

6.6 Experiences of living abroad

The following sub-themes emerged under the broad heading of “experiences of living abroad”: living with close friends, leisure time, recreation and social activities and accommodation status at the country of work. They are described and illustrated below.

6.6.1 Living with close friends

Most participants mentioned that they shared an apartment with other Nepalese friends. Living in the company of Nepalese friends provided them with the opportunity to share their feelings, have fun together and also share meals. This made their living abroad relatively pleasant. One of the factory workers said:

It was not too bad to live abroad. The company provided four rooms for us. Three rooms were occupied by Nepalese workers and we maintained our cleanliness. People who shared the apartment were very close friends and we enjoyed being together. We lived happily abroad.

(B/C, High edu. Poor health, Malaysia, Age 20, Participant 10)

6.6.2 Leisure time, recreation and social activities

Many participants in this study explained that they had very limited leisure time i.e. mainly on a Friday in the destination Muslim countries. They spent their leisure time resting, watching TV, playing sports, reading newspapers, visiting markets and listening to music. Some workers also gave priority to bathing, laundry and cleaning their rooms whereas others gave priority to finding extra work over and above their regular work.

A construction worker in Qatar said:

We had a day off on Friday which we partly used to wash clothes and to clean the apartment. I preferred to watch TV. Normally we pre-planned Friday activities on Thursday and went to see friends and visited markets, the zoo and gardens. We were bored by our routine work and we went out on Friday to rejuvenate.

(Magar, High edu. Good health, Middle East, Age 22, Participant 21)

6.6.3 Accommodation

Many participants in this study said that they lived in apartments with limited facilities. For instance, apartments were perceived as not having enough space for the amount of people. Several participants also often experienced sleep disturbances and mentioned pollution or poor hygiene issues, including the cleanliness of toilets and bathrooms. For example:

The employer provided a small, congested room near the rubbish. The mosquitoes and rats bit my ear during the night and they disturbed our sleep. We saw snakes outside our room. Our room was near a jungle. People threw waste nearby. We didn't have clean drinking water.

(Limbu, High edu. Fair health, Malaysia, Age 42, Participant 8)

Another migrant worker in Qatar reported:

It was difficult to live abroad. We were about 15-20 workers in a single dormitory. We have to clean the dormitory ourselves. We were responsible for preparing our own food. We worked all day. We returned

to our room in the evening and prepared a meal. Sometimes we went to bed without food. We had a complex life abroad.

(Tamang, No edu. Poor health, Middle East, Age 49, Participant 9)

In contrast, some other employers provided better accommodation for their migrant workers. They provided decent sized rooms with Air Conditioning (AC), filtered water and cleaners. One migrant worker mentioned this type of living experience:

The company provided a good size room with an AC facility. We were eight friends sharing a dormitory, cooked our own food, maintained its cleanliness and lived happily. The company also provided a Nepali cleaner to clean the dormitory.

(Limbu, Low edu, Poor health, Middle East, Age 21, Participant 14)

Here is another story shared by a migrant worker in Qatar:

The company provided meat, fruits and food daily. We had a water filter. There were three buildings in our camp with four security personnel and five camp bosses. The camp boss ensured the cleanliness of the camp. They hired six to seven cleaners daily for cleaning. The shopping centre was inside the company. The hospital and the bank were within walking distance of our residence.

(B/C, High edu. Good health, Middle East, Age 29, Participant 19)

6.6.4 Summary of living conditions

The experience of Nepalese migrant workers regarding their living conditions abroad was diverse. While several Nepalese migrant workers reported that they lived in poor maintained crowded housings and had limited time for recreation and social activities, others had rather positive experiences. Some men stated that their accommodation had good amenities and was properly maintained. They were happy to share apartments with their close friends. Most interviewees spent spare time on leisure activities or visiting places.

The following section explains the working conditions of the migrant workers abroad.

6.7 Experience of working abroad

This section describes the Nepalese workers' experience of their work abroad. These experiences range from very positive, including learning new skills, to very negative, such as being put under pressure by managers in foreign workplaces. The following sub-themes emerged under this heading: learning new lessons, health and safety, pressure at work, income, work-related accidents, the poverty trap, temperature at work, working hours and communication. The first sub-theme highlights the kind of skills acquired and lessons learnt.

6.7.1 Learning new things

On a positive note, many study participants in all three countries shared that they gained new experiences; for example, developing their skills and ability to do certain work, improving their communication skills and increasing their levels of confidence. It is interesting to note that a number of migrant workers learnt about the value of money and friendship. One illiterate study participant mentioned his experience:

I have learnt the lesson that if we worked in Nepal as hard as we do abroad, we can also develop our country which would help to improve our economic situation.

(Dalit, No Edu. Fair health, Middle East, Age 48, Participant 6)

A factory worker in Malaysia observed:

In Nepal people waste time, for example, playing cards and carom board in the street, drinking alcohol, not helping their parents and wife in their daily work. People who have been abroad have learnt the lesson i.e. if we work hard we can harvest gold in our country.

(Limbu, High Edu. Fair health, Malaysia, Age 42, Participant 8)

In short, some migrant workers have displayed changes in their attitudes towards working in and its potential impact on Nepal.

6.7.2 Health and safety

The health and safety of migrant workers depends largely on the commitments and the choices of their employers. Many participants in this study reported that larger employers are better than smaller ones. Larger companies provided safety equipment, break times and appeared to give priority to the workers. Three of the interviewees in this study said their employers were very supportive and provided all necessary facilities. One of them explained:

The work environment in my company was good as the engineer stayed with us all the time at our work place. The company provided two hours break during eight hours of duty. There was provision of good security and supervision of our work. The company provided safety shoes, safety glasses, helmets, masks and hand gloves to workers.

(B/C, High edu. Good health, Middle East, Age 29, Participant 19)

In contrast, there are several stories of employers not providing safe working environments. One quoted:

The safety was only in the big companies. Our company was small and we didn't have any safety regulations at work. I worked wearing sandals and clothes I had taken from Nepal. Sometimes, I got cuts and injuries in my legs from the nails. We worked at a height of three to four flats without safety precautions. So it was very risky to work abroad.

(Tamang, No edu. Poor health, Middle East, Age 41, Participant 9)

Another factory worker in Malaysia added:

I worked in an iron factory as a machine operator. My job was risky as I came in frequent contact with chemicals. My main role was opening and

closing the door of the machine and putting in raw materials for production, thereby exposing myself to chemical fumes and liquids which could increase the risk of tuberculosis, skin problems, burns and injuries.

(B/C, High edu. Poor health, Malaysia, Age 20, Participant 10)

6.7.3 Pressure at work

A small number of migrant workers experienced undue pressure at work from senior staff members. On some occasions managers or employers had threatened workers that they would cut their salary if workers were unable to complete a task within a fixed time. One of them reflected:

There is a strict work environment. The employer puts a great deal of pressure on us. The manager or owner has threatened us that they will reduce our salary if we are unable to complete a task within a fixed time.

(Dalit, No edu. Fair health, Middle East, Age 48, Participant 6)

6.7.4 Perceived discrimination

Some workers were not happy with members of staff especially managers within their work environment. They perceived their behaviour as discriminatory. For example:

The supervisor and senior staff put pressure on workers. They dominated us as we were from Nepal. They used to make derogatory comments like “you came to work here because you have no options in Nepal”. We were upset but we could not do anything except work. We worked for three years in that environment.

(B/C, Low edu. Poor health, Malaysia, Age 25, Participant 11)

Not all migrant workers perceived discrimination only within their host country. A number of migrant workers also experienced discrimination from the recruitment agencies in Nepal. Upon their arrival abroad migrants experienced a different reality to the one they had been expecting. One interviewee explained:

The recruitment agencies are selfish. They charge a lot of money and send migrant workers with false statements/belief. For example, recruitment agencies issues visa for one post (job) but when workers reached their work place, the companies give different jobs.

(Ta, No edu. Poor health, Middle East, Age 41, Participant 9)

6.7.5 Income

A number of study participants in this study reported that they were happy with their wages and were able to save money. One of them on a good salary shared:

My experience is not too bad as I went to work abroad on a wage of 700 Riyals (\$192) per month. Now it is increased to 1320 Riyals (\$364) per month after three and half years. Sometimes, I receive around 1600-1700 Riyals (\$440-467) per month if I work overtime and I save around 1000 to 1100 Riyals (\$275-302) monthly.

(B/C, High edu. Good health, Middle East, Age 23, Participant 13)

In contrast, many participants suggested that they were paid poorly and often did not receive their salary regularly. They reported their salary to be quite low, ranging from 300 to 500 Riyal (\$ 80 to \$ 133) per month compared to workers from other employers or countries. Some of these workers shared that they had to spend most of their wages on food and clothing and could hardly save any money to send home.

A construction worker in Saudi Arabia expressed his views:

Nepalese workers are working in the low wage bracket which ranges from 300 to 500 Saudi Riyal (\$ 80 to \$ 133) monthly compared to workers from other countries i.e. 1400 Saudi Riyal (\$373.00) for Philippines and 1000 Saudi Riyal (\$267.00) for Indian workers.

(B/C, Pri. edu. Good health, Middle East, Age 29, Participant 4)

A factory worker in Malaysia also shared his experiences as follows:

I struggled for up to three years as I was a new member of the staff and experienced difficulties in picking up the work. In addition, they suspended me and underpaid me. The recruitment agency in Nepal fixed my wages at 481 (\$151) Malaysian Ringgit per month but the employer underpaid i.e. paid only 380 (\$119) Malaysian Ringgit per month.

(Dalit, Low edu. Good health, Malaysia, Age 25, Participant 16)

Another worker suggested the need for industrial action to receive the earned salaries:

Sometimes we didn't get our wages on time. Workers need to go on strike to resolve these problems.

(Limbu, High edu. Fair health, Malaysia, Age 42, Participant 8)

6.7.6 Experience of work-related accidents

Work-related accidents are also a major health concern for many migrant workers. Almost 17.0% of Nepalese migrant workers in the Middle East and Malaysia reported having a work-related accident (see Chapter 5 Section 5.2.6). As the experience of accidents was of critical interest to the aims and objectives, study participants were purposively selected so that almost half of the participants had experienced some sort of accidents (e.g. cuts, falls, fractures and other injuries) at work. The findings described here are meant to highlight the study participants' experiences of work-related accidents and to identify factors that study participants perceived as related to these accidents. The results should therefore not be interpreted as an indication of the volume of accidents nor the issues associated with them.

The work-related accidents described ranged from minor accidents with no long lasting impact to serious incidents causing life-long disability. Not all accidents happened due to the poor work-related safety standards of the employers: some

study participants noted that they experienced accidents owing to communication issues with colleagues and friends and managers, and by taking risk themselves.

A young construction worker who had experienced a very serious accident recalled:

One day one of my colleagues asked for help to fit a 2000 ton machine on the top of a building. Actually that was not part of my job but I agreed to help him. Then we tried to put the machine on the stand using a forklift although normally workers used a crane for such work. The machine however did not fit properly on the stand and the machine fell down and crushed half of my body.

(Limbu, Low edu. Poor health, Middle East, Age 21, Participant 14)

He was no longer able to work either abroad or in Nepal as he is now seriously disabled. When he was asked about the impact of the accident he explained that the accident had ruined his life:

I am unable to walk, can't go to meet friends. I have to struggle even to go to the toilet, take a shower or go outside. I need help for this. I am disturbed mentally. I am single and question myself how can I survive. I am thinking of asking the government for facilities as a disabled person.

(Limbu, Low edu. Poor health, Middle East, Age 21, Participant 14)

One of the study participants working in a factory in Malaysia said, pointing to his right hand, "I lost my four fingers", and explained in some detail:

I worked in a biscuit factory. My supervisor was Chinese and he put pressure on me at work. I didn't understand his language. During preparation of cream to make the biscuits I was trying to put sugar in the mixture. I always stopped the machine while putting items in it but that day my supervisor told me to put it in while the machine was still

running. He was standing at my side. I poured the sugar in the running mixture, and it cut four of my fingers.

(Limbu, High edu. Fair health, Malaysia, Age 42, Participant 8)

Another participant had also experienced a different accident:

One day I was working on a hole to pass the sewage pipe through the wall to the fourth floor. I was not wearing a safety belt or helmet that day. I slipped and fell from the fourth floor and was trapped in the hole. My back bone, legs and hands broke. I also have a vision problem.

(B/C, No edu. Poor health, Middle East, Age 40, Participant 12)

When he was asked about his feelings during and after the accident he reflected:

I thought I was at the final stage of dying. I didn't have any hope that I would live. I was really worried whenever my friends visited me. Later I felt a little better although I had no hope for my life and the future. Sometimes, I thought it would have been better if I died rather than staying in this situation.

(B/C, No edu. Poor health, Middle East, Age 40, Participant 12)

After the accident, he felt bitter as he had been placed in the worst possible situation economically. He argued:

I have borrowed NRs 300,000 (\$3281) to go abroad. I don't have sufficient funds or property to repay. I feel sad. I have two sons aged 13 and 11. I cannot imagine how my children will pay back that money.

(B/C, No Edu. Poor health, Middle East, Age 40, Participant 12)

6.7.7 Temperature at work

Most of the construction workers in this study experienced very high temperatures at work because they were based in the Middle East and worked outside. One of the construction workers articulated:

The work environment was very hot. We sweated all the time because of high temperatures. Sometimes we wanted to leave the job and return to Nepal.

(Chaudhary, High edu. Poor health, Middle East, Age 49, Participant 7)

In contrast, factory workers in Malaysia were more positive about temperatures at work because they were based in Malaysia and worked inside. One of them shared his view:

The work environment in my company was not too bad. The company provided a fan. So, the environment was okay.

(Ta, Low edu. Poor health, Malaysia, Age 38, Participant 17)

6.7.8 Working hours

Several study participants in both Middle Eastern countries mentioned that they worked long hours. One of the construction workers in Qatar said:

We worked from 5am in the morning to 5 pm in the evening. We only got our lunch at 2pm in the afternoon. All the other time, we only drank water and worked without any snacks.

(Tamang, No edu. Poor health, Middle East, Age 41, Participant 9)

In contrast many factory workers in this study explained that they had an option of working short shifts. One of them said:

It is difficult to work 12 hours shifts. I preferred to work short hours, i.e. 8 hours per day. A short shift is less boring. That's why I was happy to work.

(Dalit, High edu. Good health, Middle East, Age 23, Participant 5)

6.7.9 Communication problem

Many participants noted that upon their arrival Nepalese people had limited knowledge of the nature of their job and poor communication skills with

colleagues and members of senior staff. Workers were neither confident in English nor understood the language of the host country. A number of study participants in this study believed that communication difficulties with colleagues and supervisors might have increased the risk of accidents and injuries at the work place. One of the factory workers explained:

Workers also face accidents because of language problems. There are many supervisors and managers from different countries, for example, from China. So, it is difficult to understand their language and people work differently than is recommended, thereby increasing the risk of accidents at the work place.

(B/C, High edu. Poor health, Malaysia, Age 20, Participant 10)

An interviewee working in the Middle East specifically mentioned language and translation problems:

The main problem is communication between workers to workers and senior to junior workers; although, the employers provide information about health and safety at work, workable temperature etc, Nepalese workers do not understand the language of the host country.

(B/C, High edu. Fair health, Middle East, Age 28, Participant 3)

A migrant worker in Malaysia said something similar as he implied that Nepali migrant workers worked largely without clear instructions and communication as they did not understand the local language:

The work environment was not good. We didn't understand the language. We only worked.

(B/C, High edu. Poor health, Malaysia, Age 35, Participant 15)

6.7.10 Summary of working abroad

Overall, interviewees shared a number of work related issues including pressure at work, communication problems, underpayment, long working hours, high temperatures and poor health and safety standards. However, there were some positive experiences: some reported that they had learnt new skills and techniques, saved money, received compensation and had safe work environments.

The following section explains migrants' experiences of health and health services abroad.

6.8 Health and health services

This section presents the findings with regard to issues related to workers' general health and health services in the host countries. The sub-themes physical health, mental health, medical cost and experience of health services abroad emerged under this theme. The first sub-theme below relates to physical health.

6.8.1 Physical health

When workers were asked to describe their physical health in the host countries, several migrant workers in the in-depth interviews reported that they had experienced chest pain, indigestion, vomiting and gall stones. Others explained that they had experienced high blood pressure, severe pain, sore legs, back pain and abdominal pain. Workers who have had serious accidents told of their poor health abroad for obvious reasons. Two migrant workers, who had not experienced have accidents, considered their health deteriorated while working abroad compared to their health when they were in Nepal. One of the factory workers in Malaysia blamed his working conditions for the deterioration of his health:

I suffered from pain in the chest, hands, legs, joints and fingers. The work environment of the factory was not good. We didn't have a rest time. We

worked continuously. The employer did not pay attention to the workers' welfare. The polluted environment had a negative impact on our body.

(B/C, Low edu. Poor health, Malaysia, Age 25, Participant 11)

In contrast, two migrant workers experienced better health in the destination countries than when they lived in Nepal. In reply to the question about the probable reason for having better health abroad, a construction worker in Qatar said he had changed his lifestyle abroad:

In Nepal, I experienced indigestion, frequent passing of stools and vomiting. I was a heavy smoker and drank a lot of alcohol but I stopped these activities in Qatar as I judged myself that I was abroad and this was not a healthy lifestyle for me. I controlled myself and was then free from these problems. I had a good appetite and I had a good experience of a healthy life abroad.

(B/C, Low edu. Good health, Middle East, Age 29, Participant 19)

Thus, working abroad brought life-style changes and health benefits to a minority of migrant workers.

6.8.2 Mental health

Apart from physical health experiences, interviewees were also asked to share about their mental health experiences. In general interviewees considered that they did not have very serious mental health issues. However, a detailed analysis of their responses has identified some important mental health issues that they experienced. These include hopelessness, loneliness, tension, depression and stress. A common belief among the Nepalese migrants was that the mechanistic lifestyle in the host countries had adverse effects on their mental health status (Schor, 1991). Most of the participants believed that their busy lifestyle abroad, accidents at work, being away from family and insufficient leisure time had caused these problems. One migrant worker spoke about his mental health:

I had no experience of mental problems but I was nearly at the stage of depression because of an accident. I went abroad to earn money, instead I had an accident and had no earning.

(Limbu, High edu. Fair health, Malaysia, Age 42, Participant 8)

When asked about the situation of mental health among other Nepalese workers, he added:

Young age groups and unmarried are at high risk of depression. Even some Nepalese who were already married and had children in Nepal had affairs or got married in Malaysia. The foreign ladies often kept their passports, collected their salaries and the Nepalese workers fell into a trap; unable to return to Nepal and were depressed.

(Limbu, High edu. Fair health, Malaysia, Age 42, Participant 8)

The latter problem of relationships with local women is a future possible social research topic.

6.8.2.1 *Playing it down*

Some migrants did not want to be labelled as having mental health problems nor did they want to see themselves as mentally ill but they quoted having symptoms that equated to mental illness/distress. A number of workers said they experienced stress or homesickness at specific times, for example around important religious festivals in Nepal, thus a construction worker in Qatar expressed:

I did not have any major mental problems. I felt hopeless during a festive season in Nepal. I missed my friends and family.

(B/C, High edu. Good health, Middle East, Age 23, Participant 13)

6.8.3 Experience of health services abroad

On this sub-theme, migrants noted that they had mixed experiences of the use of health services. Many participants in this study stated that health care provision

was dependent on the nature of the companies they worked for. Most of the interviewees experienced that the larger companies were better than the smaller ones as they provide health insurance, health costs (many of them have their own clinics in the company and health services free of charge) and transportation facilities for any serious medical problems. The smaller companies did not provide these facilities for workers. A migrant worker in Qatar witnessed the accident of his friend and reported that the employer provided quality health services, as well as compensation for this worker. He reported:

One of my friends had an accident in building construction about two years ago. He stayed for two years in the 'Hamada hospital'. He was nearly dead but he got all health care from the host country and he became normal after two years. The company provided one hundred thousand Riyals (\$27,472.53) and he returned to Nepal, built a house and he is planning to start a business in Nepal.

(B/C, High Edu. good health, Middle East, Age 23, Participant 13)

Another older construction worker in Saudi Arabia expressed his view very positively. He said:

I am happy with the health services that I used last time abroad. The doctor and nurse came for regular check-ups. Sometimes, while hospitalized, medical personnel came every ten minutes to check on my health situation.

(Dalit, No Edu. Fair health, Middle East, Age 48, Participant 6)

Despite the above reports of good quality health care and health insurance abroad, some participants commented on a number of obstructions they faced regarding access to and use of health services. Participants' dissatisfaction was associated with financial problems as they were usually not covered by health insurance. They also highlighted that migrants who lacked health insurance or had low class insurance were less likely to obtain free health care services and a

number of migrant workers returned to Nepal for medical treatment. A factory worker in Malaysia highlighted that:

The employers provided 30-40 Malaysian Ringgit (\$8-\$11) per month for each worker for their medical problems. The money provided by the employer would cover minor health problems. The workers are responsible themselves for major health problems abroad. Many Nepalese cancelled their work permit and returned to Nepal for treatment during major health problems. If they suffered from kidney problems, jaundice etc. they had to sell land and property in order to pay for treatment in Nepal.

(Limbu, High edu. Fair health, Malaysia, Age 42, Participant 8)

Similarly, study participants indicated that many migrant workers were not comfortable speaking either in English or in the host language and expressed difficulties in communicating with a physician during their health check-up. Several participants noted that Nepalese were not getting quality treatment due to a communication gap with physicians. For example:

New workers experience more problems as they are less confident and struggle to communicate in the host language during medical check-ups.

(Dalit, Low edu. Poor health, Middle East, Age 40, Participant 18)

Others articulated that workers working mainly in the smaller companies did not often have access to transport to go to the governmental hospital for the use of health services. A young construction worker in Qatar explained:

I had health problems for a couple of days and I didn't go to work as I was unfit for work. I requested the company for treatment but the company refused as they had no vehicle to take me to the governmental hospital. Then I went to the private clinic which was very expensive. I spent 1000 to 2000 Qatari Riyals (\$275 to \$550).

(Ma, High edu. Good health, Middle East, Age 22, Participant 21)

In addition to this, a number of migrant workers experienced difficulty in getting timely treatment as the employer gave less priority to take them to hospital on religious grounds. One construction worker in Saudi Arabia reported that his employer had not taken him to the hospital swiftly when he had had a serious accident. For example:

I had a serious accident. I fainted and didn't know anything. I discovered from my friends that they took me to the hospital a little bit too late. The employer tried to sort out my religion first. Later I came to know that they give priority to Muslim people. In general Muslim people dominate Hindus. Similarly some people said that because he is a Hindu, he shouldn't be taken to the hospital.

(Limbu, Low edu. Poor health, Middle East, Age 21, Participant 14)

This is another incidence of discrimination yet holds a different context to the economic discrimination noted in Section 6.7.4

6.8.4 Summary of health and health services

Interviewees reported various health problems including chest pain, indigestion; gall stones, high blood pressure, and back pain. In addition, some also experienced discrimination and mental health problems including hopelessness, loneliness and stress. Some participants did not have medical insurance and faced problems with transportation, communication and delayed treatment. However, not all responses were negative. A number of migrant workers received free medical treatment as well as compensation for the health problems/accidents abroad. In addition to this, some men reported better health whilst working abroad. The possible reasons for this will be discussed in the following chapter.

6.9 Migrants' suggestions to improve health and well-being

All migrant workers in this study were asked for suggestions to improve the health and well-being of Nepalese workers abroad. Nearly half of them suggested that the workers, employers, host government and Nepalese government all had

roles to play to improve the health and well-being of workers. A number of workers highlighted the impact of long-working hours and unhealthy life-styles (i.e. food, diet, smoking and drinking) on health and well-being whereas others emphasized the lack of adherence to health and safety rules at work and inappropriate training to minimise accidents and injuries. A construction worker in Qatar perceived the solution to be very individualistic in his recommendation that workers should change their attitude:

To improve the health status of workers, workers should be responsible for themselves. Many workers were stressed as they worried too much about their family back home and their life abroad. So it is important to take positive thinking, to give priority to healthy food and fruits, not get involved in illegal drinking, smoking and gambling.

(B/C, Low Edu. Good Health, Middle East, Age 29, Participant 19)

A construction worker in Saudi Arabia suggested that governments (both Nepalese and host countries) should take greater responsibility to ensure the health safety of workers. He said:

It is important for the Nepalese government, host countries' government and recruitment agencies to take all responsibilities regarding the health issues of workers.

(B/C, No Edu. Poor health, Middle East, Age 40, Participant 12)

Another worker in Qatar also added the importance of employment agencies particularly in providing transparent information, and perhaps better government rules to protect them. He explained:

There are many things regarding this. Workers were selected for one job but they didn't get the promised job abroad. The recruitment agency gave false statements and the workers were in a trap and experienced problems. Similarly, Nepalese workers were underpaid compared to workers from other countries. So it is important to improve in these sectors.

(B/C, High Edu. Good health, Middle East, Age 27, Participants 20)

6.9.1 Summary of migrants' suggestions to improve health and well-being

Overall, nearly half of all interviewees suggested that workers, employers, the Nepalese government, recruitment agencies in Nepal and host governments need to take (more) action to promote the health and well-being of workers abroad.

6.10 Comparison between Middle East and Malaysia

There are a number of similarities and differences between working in the Middle East in construction and in Malaysia in factories. Some relate to the nature of the job (e.g. being outside in extreme temperatures), others to the way work is organised e.g. the size of the company and the culture of the host society. The table below highlights these similarities and differences.

Table 6.2: Similarities and differences between working in the Middle East and Malaysia

Similarities	Differences
<ul style="list-style-type: none">• Long working hours• Pressure on workers• Low wages• Communication issues• Insurance issues• Accommodation-sharing with Nepalese friends• Lessons learnt	<ul style="list-style-type: none">• Outdoor employment in the Middle East compared with indoor work in Malaysia• Accommodation in the Middle East is overcrowded compared to Malaysia• More serious accidents in the Middle East compared to Malaysia• A comparatively higher accident rate in the Middle East compared to Malaysia• High temperature in the Middle East compared to Malaysia• Workers get more facilities in bigger companies in the Middle East which is not a case in Malaysia• Workers in the Middle East take more risks• There is an evidence of delayed treatment in the Middle East compared with Malaysia.

6.11 Chapter summary

Overall, economic difficulty is a key driver (or push factor) of migration for Nepalese workers. Other reasons for going abroad include political instability and support from friends and relatives. The prospect of employment and earning higher wages attracted most Nepali workers abroad. These can all be classed as pull factors. In their host countries, many workers are not happy with their living and working conditions as they contend with poorly maintained housing, limited time for social activities, pressure at work, communication problems, long working hours, underpayment, poor health and safety standards and hot temperatures. Some mentioned experiencing more general discrimination. Nepalese migrants experienced various health problems including chest pain, back pain, indigestion, gall stones, stress, loneliness and hopelessness and delayed treatment. Almost half of the participants suggested that workers, employers, the Nepalese government, recruitment agencies in Nepal and host governments need to take action to improve the health and well-being of workers abroad. However, not all workers were negative about their experiences. Some migrant workers reported that they learnt new skills at work, saved money, received compensation and experienced safe working environments. Similarly, a number of migrant workers received free medical treatment as well as compensation for the health problems/accidents abroad. In addition to this, some experienced better health whilst working abroad.

CHAPTER 7 DISCUSSION

7.1 Introduction

In this chapter the quantitative findings are compared and contrasted with the qualitative findings and the wider literature. This discussion focuses on six key areas: (a) self-reported health status; (b) mental health; (c) work-related accidents; (d) perceived health risks; (e) doctor visits; and (f) reasons for migration. The chapter finishes with a more methodological reflection section on the strengths and weaknesses of this Ph.D. research. The first key area centres on health status.

7.2 Self-reported health status

Self-reported health status is a common health measurement tool in social science research (Frisbie *et al.*, 2001; Lim *et al.*, 2007; Manor *et al.*, 2000). The self-reported health status in this study has been dichotomized as poor (reported as very poor or poor) and good (reported as fair, good and very good) health for further analyses (Section 4.6.10.1). A high proportion (87%) of study participants reported their health status as good. However, compared to general populations, migrant workers are considered to have relatively more health problems (Akhtar & Mohammad, 2008; Al-Arrayed & Hamza, 1995; Eaton, 2004; Lee & Wrench, 1980; Reijneveld, 1998). Self-reported poor health among Nepalese workers in the Middle East and Malaysia is further discussed together with similar results reported in other studies. The survey results indicate that the prevalence of self-reported “poor health” among Nepalese migrants is 13% overall, 15% for those working in Malaysia and 12% for the Middle East. These percentages are comparable to that reported for immigrant studies in the USA (11% for Chinese, 12% for Filipino, 14% for Asian Indian and 17% for Korean migrants) (Frisbie *et al.*, 2001), Pakistan (14% for the general male population) (Ahmad, 2005) and Russia (17%) (Bobak *et al.*, 1998). Although the percentage of Nepalese migrants reporting “poor health” in this study is greater than that reported for many other immigrant studies. Thus the percentage of “poor health” reported in Vietnam was 6% (GSO, 2004), China (1% for rural to urban Chinese migrants,

7% for the rural Chinese population and 3% for the urban Chinese population), (Hesketh *et al.*, 2008), Hong Kong (5.5% for South Asian immigrants) (Yan, 2009), Singapore (1.5%) (Lim *et al.*, 2007), Syria (9%) (Asfar *et al.*, 2007). Further studies included seven percent reporting “poor health” for the general male population in Sweden (Molarius *et al.*, 2006) and again seven percent for the general population in England (Aresu *et al.*, 2010). Similar to this Ph.D. study Adhikary *et al.* (2008), Ahmad (2005), Bobak *et al.* (1998), Frisbie *et al.* (2001), Kennedy *et al.* (1998), Hesketh *et al.* (2008) and Yan (2009) have all used a five-point scale (very good, good, fair, poor and very poor) to measure the overall health of study participants (see Section 4.6).

The self-reported “poor health” status by Nepalese migrants in the Middle East and Malaysia in this study is lower than that reported in Nepalese migrant studies in the UK (Adhikary *et al.*, 2008) and the USA (Bhatta, 2006). Similarly, the prevalence of self-rated “poor health” status in this study is lower than that reported for other non-Nepalese migrants; for example 36% for Arabian migrants in Israel (Daoud *et al.*, 2009), Gypsies and Travellers (30%) in the UK (Parry *et al.*, 2006) or immigrants (22%) in Netherlands (Reijneveld, 1998). There are a number of possible explanations for the differences in the self-reported health status of migrants in these wide ranging studies. First, the self-rated health in this study has been dichotomised as poor or good, with those reporting poor and very poor health as “poor health” and those reporting fair, good or very good as “good health”. In contrast, some other studies (Borg & Kristensen *et al.*, 2000; Daoud *et al.*, 2009; Frisbie *et al.*, 2001; Kennedy *et al.*, 1998) categorise “fair health” with “poor health” i.e. “fair”, “poor” and “very poor” are included together. Also, the socio-economic characteristics of the study population in this study are different from those of other studies. For example, in Nepalese migrant studies in the UK (Adhikary *et al.*, 2008) and the USA (Bhatta, 2006), the study population consisted mainly of highly qualified (including post-secondary students) individuals from higher income groups (skilled or semi-skilled workers). Study participants in the present study are unskilled or semi-skilled labourers. This study indicates that those working in the Middle East and Malaysia mainly have low educational status. People with higher education may

be more interested in going to developed countries for skilled or technical jobs (Bohra-Mishra, 2011; Sapkota *et al.*, 2014). Most of the people in this study are from rural parts of Nepal where the literacy rate is comparatively low. In addition to this, people with lower educational status are more likely to fit and fulfill the labour needs of the Middle East and Malaysia. As was to be expected, the perception and rating of health status in these groups differ, since individuals with poor socio-economic status are more likely to experience poor health than those with higher socio-economic status. A similar difference in health status linked to socio-economic status has also been reported by Feinstein (1993) and House *et al.* (1990).

To gain further insight into the health status of migrant workers, the in-depth interviews explored questions related to their health experiences. Interviewees reporting “poor health” described various health problems, including chest pain, indigestion, gall stones, high blood pressure, sleep disturbance and back pain. A typical comment from an interviewee would be: *“I suffered from pain in the chest, hands, legs, joints and fingers. The work environment of the factory was not good. We didn’t have a rest time. The employer did not pay attention to the workers. The polluted environment had a negative impact on our body”*- (B/Cs, Low edu., Poor health, Malaysia, Age 25, Participant 11) (see Section 6.8.1). Similar health problems have also been reported for immigrant workers in other Nepalese studies (Adhikary *et al.*, 2011; Joshi *et al.*, 2011b; NIDS, 2006) and non-Nepalese studies (Ahonen *et al.*, 2009; Azaroff *et al.* 2004; Ratnasingam *et al.*, 2011), where immigrants report experiencing fatigue, chest pain, back pain, physical and mental stress and sleep issues. It is worth remembering that similar health problems are also found among non-migrants in various studies on health care professionals (Chowanadisai *et al.*, 2000; Ghalichi *et al.*, 2013; Yang *et al.*, 2008) and non-health care professionals (Chand, 2006; Deacon *et al.*, 2005; Park *et al.*, 2001). However, not all responses in this study were negative. Some men reported better health whilst working abroad (see Section 6.8.1). Possible reasons for this include life-style changes and subsequent health benefits for some migrant workers.

The next few pages (p: 128-131) outline the associations between self-reported health status with demographic, work-related characteristics and lifestyle factors. Overall, the self-reported “poor health” status in the current study among Nepalese migrants in the Middle East and Malaysia is significantly associated with age, satisfaction with their accommodation abroad, smoking status, perceived diet, perceived occupational health risks at work, work environment and working hours (per week) in the univariate analysis. The results of logistic regression also indicate that self-rated poor health status is significantly associated with age, work environment, perceived health risks at work and not taking regular exercise.

Demographic characteristics

In the study presented in this thesis, age is significantly associated with self-reported “poor health” status. People in the 30-39 and 40+ age group are ≥ 3 times more likely to report “poor health” than people in the 20-29 age group. Age has been reported as a factor consistently associated with poor-health outcome in multiple studies (Ahmad *et al.*, 2005; Asfar *et al.*, 2007; Borg & Kristensen, 2000; Franks *et al.*, 2003; GSO, 2004; Kelleher *et al.*, 2003; Lim *et al.*, 2007). A survey of migrant workers in Vietnam has revealed that older people are more likely to report “poor health” irrespective of whether they are migrants or not (GSO, 2004). Brenner & Ahern (2010), de Zwart *et al.*, (1999) and Niedhammer *et al.*, (2008) have also reported that non-migrant older workers experience poor health. Workplace studies in high-income countries have also clearly identified older workers to have more days off (long-term sickness absence) per year due to ill health (Brenner & Ahern, 2000; Niedhammer *et al.*, 2008). In addition, a study on senior workers in the Dutch construction industry highlights that workers experience more health problems with advancing age (de Zwart *et al.*, 1999). Therefore the reported “poor health” in the 30+ years age group in this study could be a universal phenomenon (biological factor) as the health of human beings appears to get worse as age increases (Deacon *et al.*, 2005; Lindle *et al.*, 1997).

The results of this survey indicate that some demographic variables, particularly marital status, education, income and ethnicity are not significantly associated with “poor health” outcomes. These findings are at odds with those from other studies e.g. (Daoud *et al.*, 2009; Farmer & Ferraro, 2005; Lindstrom *et al.*, 2001) who all reported significant associations between “poor health” and these demographic variables. One possible explanation as to why marital status is not associated with “poor health” is that so many Nepalese migrant workers are already married. Nepal is part of a culture where marriage is almost universal and where many people marry at a young age (Caltabiano & Castiglioni, 2008). Another explanation might be that other factors such as (a) marital status and (b) duration of stay abroad are age related, in other words, those variables interact. The older the migrant worker, the more likely he is to be married, and to have more experience of working abroad. Finally, there is always the possibility that the sample was too small to measure some of these influences. It would not have been possible to conduct a larger scale study without increasing study resources, in particular the time spent collecting data.

Work environment

This study also found a strong association between self-reported work environment and self-reported health status. People who reported their work environment as “poor or very poor” were seven times more likely to report “poor health” than those who reported their work environment as “very good, good or fair”. The association between work environment and “poor health” is also substantiated by the findings of the qualitative study. Interviewees raised the issues of lack of safety at work, high temperatures, general exploitation (e.g. working long hours without breaks), work-related accidents and pollution. A number of interviewees had experienced serious accidents leading to disabilities. As expected, migrants who had serious accidents at work were more likely to report “poor health”. Others reported experiencing indigestion, chest pain, high blood pressure and other severe pain. The findings of this study are consistent with Danish (Borg & Kristensen, 2000), Swedish (Molarius *et al.*, 2006), Mauritian (Suntoo & Chittoo, 2011) and Spanish workplace studies (Agudelo-Suárez *et al.*, 2009). The study of Chinese construction workers in Mauritius

reported that most was not satisfied with their working conditions, their main concerns being lack of workplace health and safety and long working hours (Suntoo & Chittoo, 2011).

The analyses of the in-depth interviews in this study identified work environments, exploitation (e.g. lack of regular breaks) from the employer and work-related accidents as reasons for poor-health among the study participants. This would support study participants suggestions that the health status of migrant workers could be improved if the Nepalese Government worked closely with host governments to implement work-related education and training programmes including refresher training and improving awareness on and/or adherence to workplace-related health and safety standards.

Similarly, this study has also identified the relationship between perceived health risks at work and self-reported health status. The findings conclude that people who perceived health risks at work were five times more likely to report “poor health” than those who did not perceive health risks at work. It is well known that long working hours and polluted work environments increase the risk of health problems including skin troubles (Kuruvila *et al.*, 2006). The strong association between self-reported “poor health” and perceived work environment is an important issue that policy makers in Nepal and destination countries are required to address in order to improve the workplace safety and health of Nepalese migrant workers. In spite of the negative experiences expressed by some study participants in their discourses, there is also positive feedback from some study participants. Some reported that they learnt new skills and techniques, saved money, received compensation and had safe work environments (see Section 6.7 for detail).

Lifestyle factors

The results of this study indicate that self-reported “poor health” is not associated with smoking status or alcohol consumption and is negatively associated with taking part in exercise most days. Both of these findings are unexpected. It is surprising given the fact that not taking part in exercise, smoking and alcohol

consumption are known risk factors for several diseases and health problems (Bobak *et al.*, 1998). It should be noted that only 29 study participants (7%) reported taking regular exercise. One plausible reason for this is that most workers had outdoor jobs in the building industry with long working hours and so did not have time or energy for further exercise. Another possible explanation is due to the small sample size. Owing to the relatively moderate number of study participants (n=403), the chance of finding statistically significant differences in rare events, i.e. with a relatively low prevalence is itself low. This is due to the so-called law of large numbers. A larger sample size implies that confidence intervals are narrower and that more reliable conclusions can be reached (de Winter, 2013). There is always the possibility of selection bias, for example, respondents who were healthy, smoked and consumed alcohol volunteered to take part while those perceiving their health to be poor might not have volunteered. This selection bias may reflect the study populations, so the findings may not be generalisable to all Nepalese migrants abroad and, therefore, should be interpreted with caution (Winship & Mare, 1992; Yan, 2009).

Overall, the health status of Nepalese migrants investigated in this thesis is fairly good compared to previous Nepalese studies (Adhikary *et al.*, 2008; Joshi *et al.*, 2011b; NIDS, 2006) but poor compared to several non-Nepalese studies (Asfar *et al.*, 2007; Hesketh *et al.*, 2008; Kennedy *et al.*, 1998; Lim *et al.*, 2007; Yan, 2009). Although various health problems including chest pain, indigestion, gall stones, back pain and sleep disturbance have been reported in the in-depth interviews, not all responses are negative. Some men reported better health whilst working abroad. This study found a strong association between work environments, perceived health risks at work, age group and self-rated poor health status. While the age group of the workers might be rather difficult to address in policies, policy makers could at least address the issues of work environment and health and safety standards at work to improve the health of their workforces.

7.3 Mental health

The survey results identified that the prevalence of mental health issues among Nepalese migrants is 23% overall, 18% for those working in Malaysia and 26% for Middle East. Due to a lack of sufficient research literature on mental health in Nepal, the findings of this study can only be compared with those of studies in countries other than Nepal. Moreover, there is a limitation regarding the mental health comparisons as this Ph.D. study only contains one basic self-report question about mental health in amongst a range of questions on other issues. Many studies quoted below focused solely on mental health issues and these studies often used a range of mental-health related questions and scales.

The prevalence of mental health problems reported in the recent study is comparable to the general population (20%) of Nepal (Staff Reporter, 2008), rural to urban migrant workers in China (24%) (Yang *et al.*, 2012), Australia (18%) (Australian Bureau of Statistics, 2007), the USA (20% overall, 23% for women & 17% for men) (Conley, 2012), Lebanon (20%), France (23%), Italy (25%) and Spain (19%) (Alonso *et al.*, 2008).

The prevalence of mental health issues in this study is slightly lower than those reported in a cross-sectional study on mental health among the general population in rural post-conflict Nepal (i.e. 28% for depression and 23% for anxiety) (Luitel *et al.*, 2012), and those reported in the World Mental Health Survey for Colombia (30%), Mexico (32%), New Zealand (28%) and USA (37%) (Alonso *et al.*, 2008). However, the level of mental health problems reported in this study is higher than an Indian immigrant study in Australia (15% reported high to very high levels of psychological distress) (Maheshwari & Steel, 2012) and those reported in the World Mental Health Survey for Nigeria (7.8%), Japan (11%) and Germany (14%) (Alonso *et al.*, 2008). Interestingly, the prevalence rate of mental health in this study is dramatically lower than that reported by Thapa and Hauff (2005) (80% for depression and 81% anxiety disorder) among displaced people during the conflict in Nepal. Although this study used different mental health measuring instruments than that of Thapa and Hauff (2005), their study was also conducted among populations exposed to

mass conflict and violence in contrast to this study where apparently healthy workers headed for work abroad participated.

The in-depth interviews tried to explore types of mental illness experienced among Nepalese migrant workers in the Middle East and Malaysia. Depression, hopelessness, nervousness, and stress are common issues among workers in destination countries. The qualitative part of the study also investigated the possible causes of mental problems in the study population. Most of the interviewees had busy life-styles in the host country, were away from families, had insufficient leisure time, experienced pressure at work and worked in poor work environments leading them to suffer with mental issues. As for example, a young construction worker in the Middle East (e.g. Qatar) experienced hopelessness, he said: *“I felt hopeless during a festive season in Nepal. I missed my friends and family”*- (B/C, High edu., Good health, Middle East, Age 23, Participant 13) (see Section 6.8.2.1). This indicates that Nepalese people give importance to their religious festivals (Subedi, 1991). Being away from family maturing to mental illness. Others experienced mental health difficulties owing to work-related accidents that caused disabilities. Similar findings have been reported by other investigators (e.g. Agudelo-Suárez *et al.*, 2009). Immigrant workers in Spain experienced mental health issues including nervousness, stress and emotional instability that affected their health and quality of life negatively (ibid). Mental health troubles in the Spanish study linked to migrants working and living conditions. It is known that discussing mental health issues is considered a taboo in many Asian cultures including Nepal (Devkota, 2011; Lamichhane, 2011; Nishi, 2013; Shakya, 2011). This may be a reason why Nepalese migrant workers may have perhaps under reported mental health issues.

The study presented in this thesis found a strong association between perceived health risks and mental health, and a weak association between work environment and mental health. People reporting their work environment as poor and those perceiving health risks at work are more likely to report mental health complications. The qualitative study identified a number of poor work environment related factors e.g. lack of safety, pressure at work, long work hours

etc.) that contributed to stress and mental health problems. These in-depth interviews also revealed that Nepalese workers in the Middle East and Malaysia are less educated and less confident in their communication with co-workers and senior staff members (see Section 6.7.9 for detail). Owing to this they are perhaps less likely to complain about risks in their workplace, which in turn may have created increased mental stress for them. Other Asian migrant workers who worked to the Middle Eastern countries have also reported to be at high risk of mental illness due to their living and working conditions (Arnold & Shah, 1984). Some previous studies also support the findings of this study that migrant workers experienced mental disorders because of poor living and working conditions (Adhikary *et al.*, 2011; Arndt *et al.*, 2005; Gurung *et al.*, 2004; Joshi *et al.*, 2011b; Keane & McGeeham, 2008; NIDS, 2006). Poor working environments include a factors such as low social support at work, long working hours and low wages all leading causes of mental illness reported in a series of non-migrant studies (Artazcoz *et al.*, 2009; Nettersøtrm *et al.*, 2008; Shields, 2006; Vail *et al.*, 2011; Yang *et al.*, 2006). Although this study did not collect information about suicidal deaths, recent news reports have announced over 160 suicides (100 in Saudi Arabia, 28 in Malaysia, 20 in Qatar and 12 in UAE) of Nepalese migrant workers in Middle Eastern countries and Malaysia (*The Himalayan Times*, 2011). Similarly, another source has noted that 120 Nepalese workers committed suicide and 100 have been murdered in host countries such as Malaysia, Qatar, Saudi Arabia and Kuwait in 2012 (Sedhai, 2012). Stress related to poor acculturation, relationship with advisor and being single (i.e. un-married) are leading causes of perceived stress for other Nepalese migrants (non-labour workers or student migrants) in South Korea (Bhandari, 2012). In the latter study an advisor is someone offering advice and support to international students. Bhugra (2003) found social vulnerability and culture changes may lead to a sense of isolation in the host country. He added that the perception of loss of family, home and social environment may contribute to depression. One immigrant study in the USA also found that having suicidal ideas, making plans to commit suicide and suicide attempts are associated with anxiety-related issues among Mexican migrants (Borges *et al.*, 2009). Although this study did not investigate the possible reasons for suicide, frustrations among workers (when they do not find

things as they expected), depression, isolation, and pre-existing mental health problems may contribute to such an outcome.

Overall, the mental health status of Nepalese migrants in this study is fairly similar to that reported for the general population of Nepal, Arabic countries e.g. Lebanon and some European countries (e.g. France, Italy and Spain) (Staff Reporter, 2008; Karam *et al.*, 2008; Alonso *et al.*, 2008). The in-depth interviews have identified that hopelessness, loneliness, tension, depression and stress are among mental health issues experienced by Nepalese migrant workers. Most participants viewed that their busy lifestyle abroad being away from family and having insufficient leisure time as causing these problems.

7.4 Work-related accidents

This study found that almost 17% of Nepalese migrant workers experience work-related accidents in the host countries. The prevalence of work-related accidents is higher among the migrant workers in the Middle East (19%) than in Malaysia (13%). A review article on Nepalese migrant workers in Middle Eastern countries has suggested that migrant workers experience higher levels of work-related accidents than local worker or than other migrants (Adhikary *et al.*, 2011). This is supported by the finding that around 21% of Nepalese workers report visiting accident and emergency departments in the past 12 months (see Section 5.2.6). The prevalence of work-related accidents in the current study is lower than that recorded in a previous study (25%) among Nepalese migrants working in Gulf-countries (Joshi *et al.*, 2011b) and among Nepalese workers in Nepal (Kumar *et al.*, 2003). The latter study (Kumar *et al.*, 2003) reported that an average 22% of factory workers experience accidents per year. However, the accident rate reported in this thesis is comparable to the findings of studies among construction workers in developed countries including 20% in the USA, 17% in Australia and 14% in New Zealand (Feyer *et al.*, 2001). Whilst a study of Mexican migrants in the USA reported that 18% had experienced job-related injuries (Gany *et al.*, 2011). The prevalence of work-related accidents in this Ph.D. thesis is higher than that recorded among manufacturing workers in

Australia (10%) and New Zealand (9%) (Feyer *et al.*, 2001). It is noted that Al-Arrayed and Hamza (1995) have reported a much higher (54-57%) rate of accidents among construction workers in Bahrain and of interest to this Ph.D. study that migrant workers are more likely to experience accidents than local workers.

The age of the workers, satisfaction with accommodation in the country of work, perceived work environment, country of work and registration with a doctor are also associated with work-related accidents. The results of this study indicate that older migrants (40+ years) are four times more likely to have work-place-related accidents than young age groups (20-29 years). Older age as a risk factor for work place accidents has also been identified by Feyer *et al.*, (2001), Jones *et al.*, (2011); Joshi *et al.* (2011b); Lowery *et al.*, (1998) and Salminen (2004). Findings to the contrary, i.e. that young age groups (<30 years) are more likely to experience work-related injuries have been reported by others (Chau *et al.*, 2002; Nij *et al.*, 2003; Tadesse & Kumie, 2007). Limited training and general inattentiveness may be the causing higher rates of accidents among these younger workers. However, most participants in this study are classed as unskilled or semi-skilled, and had been 'on the job' for relatively short periods of time, although all had been working more than six months in their jobs. It is therefore likely that older Nepalese migrant workers studied in this thesis had not been able to accumulate the necessary additional skills when compared to younger workers. This is counter intuitive, but the underlying explanations are: firstly that older workers abroad do not bring with them skills from Nepal that give them an advantage over younger migrant workers. Secondly, perhaps the jobs abroad are: (a) very different from what they have done in the past in Nepal; and (b) so low-skilled that there is little opportunity to learn new skills that may give a comparative advantage to gain more experience over younger workers. In contrast, they may have had physiological changes associated with aging. It is known that muscle strength starts to decline through increasing age (Frontera *et al.*, 1991; Lindle *et al.*, 1997). Therefore, the increased risk of having an accident in older migrants, especially among those aged 40+ could be due to physiological changes in the body associated with ageing. Further, older age groups might have

additional risk factors that make them more prone to accidents (Arndt *et al.*, 2005; Deacon *et al.*, 2005). In this study, as in the rest of Nepal most migrant workers in their forties and over are married and have greater family responsibilities and therefore could be experiencing more anxiety as a consequence. This could another reason for them to be more prone to work-related accidents than the younger age groups. The occurrence of work-related accidents is significantly related to satisfaction of accommodation in the country of work. Poor accommodation may lead to poorer sleep or rest and people may not be as alert at work compared to those who are well rested. Work-related accidents associated with sleep disturbance are well documented in the literature (Åkerstedt *et al.*, 2002; Lavie *et al.*, 1981; Martikainen *et al.*, 1998).

Similarly, people who perceive their work environment as “poor” or “very poor” may be more likely to report accidents than people who work in “very good/good” or “fair” work environments. Work-related accidents and injuries associated with a poor work environment are well documented in the media (Nepal news, 2008; Hadid, 2005). More importantly, a poor work environment is a well-recognised risk factor for work-related accidents in a number of Nepalese (Gurung & Adhikari, 2004; Joshi *et al.*, 2011b; NIDS, 2006) and non-Nepalese studies (Abdul-Aziz, 2001; Al-Arrayed & Hamza, 1995; Arnold & Shah, 1984; Murty *et al.*, 2006). Cheng and Wu (2013) also found that a poor work environment including an absence of safety measures and equipment, incorrect operating procedures, inadequate hazard awareness, and insufficient use of protective equipment results in more accidents and disability mainly in construction and manufacturing industries. Proper implementation of safety regulations at industrial sites and making work environments safer should therefore be a priority for employers and policy makers (Benach *et al.*, 2011; Giuffrida *et al.*, 2002). Additionally, workers should be trained adequately in their jobs as well as in the application of any safety measures.

In this study, another unexpected finding has been that doctor registration is negatively associated with accidents at work. Thus, people who are not registered with a doctor are less likely to report work-related accidents compared to those

who did register. The first possible explanation for this could be due to the insurance coverage policy of the company for they work for (Berdahl & Zodet, 2010; Mou *et al.*, 2009) e.g. migrant workers who are covered by health insurance are registered with a doctor and so have easier access to one. Thus workers who are not registered with the doctor may have used self medication and/or home treatment techniques in their host country (Naing *et al.*, 2012). This explanation would only explain some of the minor accidents that people may have ‘forgotten’ to report in the questionnaire so called under-reporting (Mock *et al.*, 1999; Parker *et al.*, 1994; Pransky *et al.*, 2010). Some of the perceived under-reporting might also be due to misconceptions and misunderstandings as to what constitutes an accident or workers hiding the fact that they were involved in an accident due to fear of losing their job (Pransky *et al.*, 2010). Some interviewees in this Ph.D. study noted that uninsured workers are less likely to seek advice from a doctor in the host country. In addition, the interviews included a small number of migrant workers with very serious accidents and who had no insurance and therefore had to return home to Nepal for treatment, never to return to the host country. Thus, the qualitative findings also help explain the survey findings i.e. uninsured workers are less likely to visit a doctor even in the case of an accident because they are not registered with one (Table 5.19).

A second explanation could be that uninsured workers are more aware of potential accidents because their company does not provide medical costs and compensation. Due to the lack of insurance coverage and doctor registration they may have been more careful to avoid accidents, because of the negative consequences; although this sounds unlikely and there is no known academic literature supporting to this possible explanation.

The work location or country of work is also associated with accidents at work. Migrant workers who worked in the Middle East are 3.6 times more likely to experience work-related accidents than those working in Malaysia. The possible explanation of high accident rates in the Middle East compared to Malaysia is undoubtedly due to the nature of the job, work environment and health and safety at work. Nepalese people in the Middle East worked in building and construction

whereas people in Malaysia worked in factories. The literature on migrant workers indicates that the construction industry is a very dangerous business nearly everywhere in the world, certainly compared to other industries (Gurcanli *et al.*, 2008; Murty *et al.*, 2006; Nij *et al.*, 2003; Shibani *et al.*, 2013). The second possible reason for high accidents in the Middle East could be due to heat exposure. Many migrant workers in the Middle East work outside where they experience very high day-time temperatures also documented in the literature as a risk factor (Al-Arrayed & Hamza, 1995; Joshi *et al.*, 2011b). Similarly, a third possible explanation for higher accident rates could also be the influence of a difference in health and safety standards in these two different locations (Habib, 2007). This would suggest that Malaysia has higher health and safety standards, but there is no available published evidence to back up this assertion.

The qualitative analysis identified the nature of accidents experienced and the injuries sustained by Nepalese migrant workers. Work-related accidents described ranged from minor with no long lasting impacts to serious injuries causing life-long disabilities. The main causes of reported accidents included poor work-related safety standards, poor communication skills (language problems) with co-workers and senior staff members, and workers taking risks (i.e. not following the recommended safety precautions). Another qualitative study among immigrants in Spain reported that immigrants experienced work-related accidents and injuries due to poor working conditions (Ahonen *et al.*, 2009), also confirming the findings from this study. It is also worth mentioning the views of workers regarding their employers' behaviour towards them. For example, in the interviews some stated their employers did not seem to care. One illustrative and shocking quote highlights this dilemma: *"I worked in a biscuit factory. My supervisor was Chinese and he put pressure on me at work. I didn't understand his language. During preparation of cream to make the biscuits I was trying to put sugar in the mixture. I always stopped the machine while putting items in it but that day my supervisor told me to put it in while the machine was still running. He was standing at my side. I poured the sugar in the running mixture, and it cut four of my fingers"* (Limbu, High edu., Fair health, Malaysia, Age 42, Participant 08) (see Section 6.7.6).

Chi (1985) and Lee *et al.* (2010) have also reported that immigrants in the USA experience delayed treatment because of a lack of employer care i.e. not having medical insurance, problems with transportation and communication. Again these findings confirm those from this study, however, not all responses in this study were negative. A number of migrant workers received free medical treatment as well as compensation (see Section 6.8.3) for the health problems/accidents that had arisen or occurred abroad.

As this study only interviewed participants returning to Nepal, it has not accounted for any work-related mortalities of Nepalese migrant workers abroad. Other reports have estimated that over 800 Nepalese workers died abroad in 2010 and around 600 in 2009 (*The Himalayan Times*, 2011). Most of the deaths occurred in Middle Eastern countries (323 in Saudi Arabia, 192 in Qatar and 84 in the United Arab Emirates) and in Malaysia (84) (*ibid*). It is reported that most deaths are due to work-related hazards, road accidents and frustration among workers leading to suicide. A more recent news report has highlighted that over 1300 Nepali migrants working abroad have died in the past three and half years due to work-related accidents, road accidents, suicides and murders (Sedhai, 2012), and most of the deaths i.e. over a thousand (1120) occurred in the Middle East i.e. 350 in Saudi Arabia, 306 in Qatar and 125 in UAE and 441 in Malaysia. It has been suggested that most deaths occurred due to a lack of cultural awareness (*ibid*), and that some fatalities could have been avoided or reduced by proper pre-departure orientation classes on workplace and road safety and on ways to deal with adverse climatic conditions.

Study participants who returned to Nepal with serious injuries complained (see Chapter 6.8.3 for detail) that they were not properly compensated. Whether lack of proper compensation for work-related accidents overseas was due to a lack of legal provision, exploitation by Nepali labour agencies and/or by the employers themselves, a lack of understanding by the employees regarding their rights, or some other factor is beyond the scope of this study. Published articles (e.g. Rauniyar, 2009a) suggest that there is a lack of awareness among workers or their kin who are not aware of their legal rights or processes. For instance, under

Malaysian law, the next of kin of those killed in industrial accidents is entitled to receive NRs 500,000 (\$5864), whereas injured individuals should receive about NRs. 220,000 (\$2346) in compensation. However, many are not compensated as their kin are not legally aware or do not know how to claim compensation (Rauniyar, 2009a). The low education level of the migrant workers reflects on the likely low education of their families. This helps us understand why the families do not claim compensation. They are unlikely to know about the existence of this kind of compensation and even if they did know about it they would be unlikely to know how to go about claiming for it abroad.

Overall, this study has identified a 17% occurrence of work-related accidents among Nepalese workers in the Middle East and Malaysia (Section 5.2.6). These accidents ranged from minor with no long lasting impacts to serious ones causing life-long disabilities. Poor work-related safety standards, poor communication skills (language problem) with co-workers and senior staff members and not following work place safety procedures are identified as major reasons for such accidents. Proper training and orientation of migrant workers both in safety precautions and communication, and better policies and implementation of work-place safety standards could reduce such injuries and should be considered a priority by policy makers and governments. Reducing the risks in the first place would require a more fundamental change and reducing the exploitation of migrant workers an even more basic change in global power relations.

7.5 Perceived health risks at work

In the multivariate analysis, perceived health risk at work in this study is associated with marital status and work environment, alongside satisfaction with accommodation, current occupation, country of work, and diet in the univariable analysis. A higher proportion (48%) of married people is more likely to perceive that they had health risk at work compared with unmarried individuals (see Section 5.3.3). Unmarried migrant workers may simply perceive fewer risks because they have fewer social and responsibilities if something goes wrong.

Similarly, workers rating their work environment as poor are three times more likely to perceive health risks at work than those who rate their work environment as good. People who had to work long hours with no safety training and communication difficulties either in the host language or in English at work could experience health risks at work. Associations between working conditions (i.e. long working hours, language problems, lack of safety training) and health problems including accidents at work are well documented in the literature (Dembe *et al.*, 2005; Orrenius & Zavodny, 2009; Virtanen *et al.*, 2012; Wong, 1994). In-depth interviews in this thesis identified perceived health risk factors due to working under pressure, working long hours in high temperatures, and with poor health and safety regulations (Section 6.7). It is not surprising then that the work environment is a significant factor associated with perceived health risks. It is save to conclude that the poorer the work environment, the greater the perceived risks. As a reminder, the first quote below illustrates the pressure put on Nepali worker by local employers:

There is a strict work environment. The employer puts a great deal of pressure on us. The manager or owner has threatened us that they will reduce our salary if we are unable to complete a task within a fixed time.

(Dalit, No edu. Fair health, Middle East, Age 48, Participant 6)

The next quote highlights the poor environment of working in extreme temperatures; often too difficult for some Nepali workers to cope with:

The work environment was very hot. We sweated all the time because of high temperatures. Sometimes we wanted to leave the job and return to Nepal.

(Chaudhary, High edu. Poor health, Middle East, Age 49, Participant 7)

This last quote refers to the very long hours some migrant workers are forced to work:

We worked from 5am in the morning to 5 pm in the evening. We only got our lunch at 2pm in the afternoon. All the other time, we only drank water and worked without any snacks.

(Tamang, No edu. Poor health, Middle East, Age 41, Participant 9)

An exploratory study in Spain found that migrant workers, mainly working in the construction and agriculture sectors, considered potential accidents and injuries caused by falls, cuts, falling objects and carrying heavy objects as key health risks at work (Ahonen *et al.*, 2009). In addition some of workers were exposed to dust and chemicals (ibid). Findings of this study are to some extent consistent with previous studies (e.g. Adhikary *et al.*, 2011; Agudelo-Suárez *et al.*, 2009; Gany *et al.*, 2011; Joshi *et al.*, 2011b) in terms of perceived health risks, though previous studies have not directly investigated perceived health risks at work.

7.6 Doctor visits

The survey results reveals that almost two thirds (64%) of respondents had a medical check-up in the last 12 months. The percentage of migrant workers visiting a doctor in this study is comparable to that of Burmese immigrants in the UK where almost 57% immigrants went to their doctors' clinic during the last episode of illness (Aung *et al.*, 2010). These figures are higher though than that reported for Nepalese migrants in Gulf countries (47%) and the UK (45%) (Adhikary, 2007; Joshi *et al.*, 2011b). From the qualitative findings it is clear there have been a number of positive responses from interviewees regarding access to medical care. Many study participants received free medical treatment as well as compensation for health problems abroad. Workers are more likely to see a doctor if they worked in larger companies, when they were insured and when treatments are offered by employers (see Section 6.8.3). These findings are also consistent with the findings of other migrant studies (Lee *et al.*, 2010; Mou *et al.*, 2009). Despite a reasonable percentage of study participants reporting a doctor's visit, the qualitative study found that some participants did not have medical insurance and faced problems with transportation, communication, delayed treatment, lack of financial resources, not having health insurance or

experiencing expensive health care costs as also reported by Lee *et al.* (2010). The following quote, used in Section 6.8.3 highlighted that some workers did not get easy access to a doctor or health care:

“I had health problems for a couple of days and I didn’t go to work as I was unfit for work. I requested the company for treatment but the company refused as they had no vehicle to take me to the governmental hospital. Then I went to the private clinic which was very expensive. I spent 1000 to 2000 Qatari Riyals (\$275 to \$550)”- (Ma, High edu. Good health, Middle East, Age 22, Participant 21).

There is a strong association between a doctor not being visited abroad, health insurance status and country of work. Migrants not having any health insurance are five times less likely to visit a doctor than those with health insurance. This is not surprising given the low paid (unskilled) jobs most study participants had which may not cover the cost of medical treatment in the absence of medical insurance. The qualitative analysis highlighted that some workers are not getting full treatment due to their host country insurance status. As one interviewee stated (see Section 6.8.3):

“The employers provided 30-40 Malaysian Ringgit (\$8-\$11) per month for each worker for their medical problems. The money provided by the employer would cover minor health problems. The workers are responsible themselves for major health problems abroad. Many Nepalese cancelled their work permit and returned to Nepal for treatment during major health problems. If they suffered from kidney problems, jaundice etc. they had to sell land and property in order to pay for treatment in Nepal”- (Limbu, high edu. Fair health, Malaysia, Age 42, Participant 8).

Other studies have also reported that uninsured factory workers are less likely to visit a doctor when sick and use the health care system (Mou *et al.*, 2009).

Compared to migrant workers in the Middle East, those in Malaysia are less likely to visit a doctor. Possible reasons for this could include the nature of work they completed and the policy of companies employing them. The majority of study participants in the Middle East were construction workers, perhaps employed by larger companies. In-depth interviews frequently reported a difference in health insurance between workers in larger and smaller companies; the former being more likely to be insured than the latter (see Section 6.8.3). Whether the limited or no health insurance provided by the Malaysian companies is due to their smaller size or the differences in labour laws in Malaysia and the Middle East could not be confirmed, although these are possible reasons for such differences.

Overall, participants in this study have reasonable access to doctors abroad. In fact, they appear to have better medical access than those in other previous studies (Adhikary *et al.*, 2008; Aung *et al.*, 2010; Joshi *et al.*, 2011b). However, the qualitative part of the study found mixed responses on access to treatment. Some workers reported poor access to treatment (e.g. delayed treatment) or no treatment whilst a number of workers received free treatment with fairly good compensation. It is interesting to note that workers were more likely to see a doctor if they worked in larger companies, when they were insured and when health facilities and help with travel to a clinic were offered by employers.

7.7 Reasons for migration

The quantitative part of the study did not collect any information regarding the reason for migration; however, the qualitative part of the study identified some reasons for work-related migration. On the one hand, economic hardship and perceptions of a poor economy are the major reasons (push factors) for Nepalese workers seeking work abroad. They experienced difficulties in Nepal providing financial support to their family and for their children's schooling. On the other hand, the prospect of employment and earning higher wages acted as pull factors attracting most Nepali migrant workers overseas. For example, the exchange

rates of host countries have been very advantageous for Nepalese workers rupees during the data collection period (see Section 6.5.2)

Economic factors have been consistently identified in previous studies as key reasons for migration. Studies of Bangladeshi migrants (illegal migrants) in India (Datta, 2004), Indian migrant workers in the Gulf, Singapore and Malaysia (Boere, 2010), Nepalese labour migrants in India (Müller-Böker & Thieme, 2004; Subedi, 1991; Thieme, 2007; Thieme *et al.*, 2005; Thime & Wyss, 2005) and Nepalese migrants in the USA (Bohra-Mishra, 2011; Sijapati, 2009-2010) have all suggested an underlying economic cause as the main reason for migration. Additionally, newspaper articles complain that the Nepalese Government's failure to create employment opportunities has resulted in a huge migration of the youth workforce. For example, more than four hundred thousand Nepalese youths left the country in a ten-month period in 2012 in search of jobs; most to the Middle East and Malaysia (*The Himalayan Times*, 2012). Another article highlights the main rationale for migration for most Nepali migrant labourers to India as economic pressure (Shrestha, 2011). A qualitative study with Spanish migrants also concludes that people are motivated to migrate because of economic necessity (Ahonen *et al.*, 2009). The quote below highlights that how low income in Nepal is the main reason for migration: *"I worked as a labourer in Nepal. My average income was about NRs 50 (US\$0.55) per day which was not sufficient for our livelihood. I had no money to fulfil the demands of my son, wife and mother which made me unhappy in Nepal. Hence I decided to go abroad for work"*-(B/C, Low edu. Good health, Middle East, Age 29, Participant 04) (see Section 6.4.1). Possible ways in which these workers receiving low incomes in Nepal have been enabled to go abroad include borrowing money from friends or family and/or selling property.

In the present study, most participants are unskilled or semi-skilled workers. Studies of skilled health professionals suggest that the main reason for migration of skilled people is also socio-economic. For them, quality of life, better opportunities, higher salaries and training opportunities are some of the key driving factors behind migration (Awases *et al.*, 2004; Dodani & LaPorte, 2005;

Sapkota *et al.*, 2014). Thus reasons for migration for skilled health professionals are fairly similar to those semi-skilled and unskilled Nepalese migrant workers in this study. This indicates that migrants whether they are skilled or semi-skilled or unskilled take part in migration to improve their economic status.

Other reasons for moving to the Middle East and Malaysia for work in this study include the political instability in Nepal and support from friends and relatives. A number of migrant workers did experience insecurity in their lives due to the political uncertainty in Nepal. The following quote helps the reader understand how political instability in Nepal can force potential migrants to work abroad: *“I was involved in local politics in Nepal as I had a good reputation in the community. Later, the political situation of the country deteriorated and life was not safe. Then I decided to go abroad”* - (Limbu, High edu., Fair health, Malaysia, Age 42, Participant 8) (see Section 6.4.2). The findings of this study are supported by other studies; for example, a study in South Asia by Datta (2004) highlighting that political instability in Bangladesh, perceptions of insecurity life and political threats are key reasons causing migration to India. Several other studies on migrants (Bohra-Mishra, 2011; Dodani & LaPorte, 2005; Müller-Böker & Thieme, 2004; Sijapati, 2009-2010; Stilwell *et al.*, 2004; Thieme, 2007; Thieme *et al.*, 2005) also reveal that political instability in the home country is a reason for migration. Also, this finding is consistent with that of Williams and Pradhan (2009) who report that emigration in Nepal has increased during periods of violence and political instability. In addition, Nepalese people have been subject to threats, kidnapping and killings during the 10 years of Maoist political insurgency (rebellion) (Adhikari, 2012; Do & Iyer, 2010). New jobs were not created during this time and even people who had jobs would not have had a regular income because of the frequent political strikes (ibid).

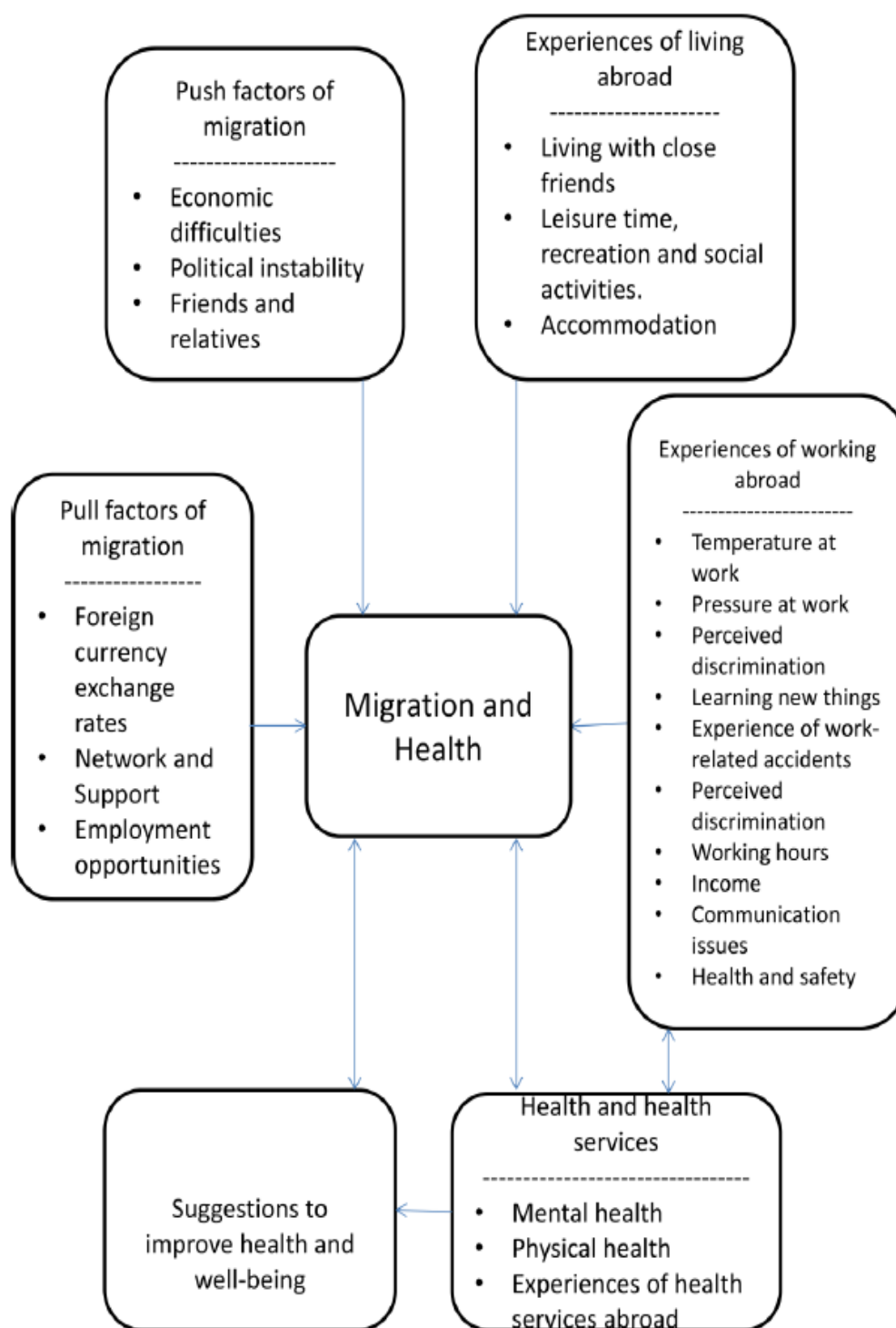
Families and friends have also played a role in migration decisions. On the one hand, a minority of workers received moral encouragement and financial support from friends and relatives to explore a better job abroad. On the other hand, existing circles of friends and their networks abroad have further attracted

Nepalese migrants to go overseas. The quote below refers to the support from friends and family as the reason for going abroad: *“I received moral and financial support from my friends. Then I went abroad for work”* - (B/C, Low edu., Good health, Middle East, Age 29, Participant 4) (see Section 6.4.3). The role of friends and families in migration has been consistently highlighted as a common theme by Boere (2010), Boyd (1989), Müller-Böcker & Thieme (2004), Sijapati (2009-2010), Subedi (1991) and Thieme *et al.* (2005). In the absence of a state sponsored welfare system for the elderly and other vulnerable people, working aged men, such as the migrant workers in this Ph.D. study, are often the sole breadwinners for an extended family (Robins, 2011; Wang *et.al.*, 2008).

Overall, economic hardship (Graner & Gurung, 2003; Seddon *et al.*, 2002) is the major factor motivating Nepalese workers to seek work abroad. Employment opportunities and high wage levels of foreign currencies are the centre of economic attraction. Political instability in Nepal and support from friends and relatives played additional roles in attracting Nepalese migrants to the Middle East and Malaysia. Knowing why people seek relative ‘3 D’job abroad (Fernández & Ortega, 2008) gives us some insight into why migrant workers are willing to accept a possibly lower health status and associated risks whilst abroad.

Figure 7.1 ‘Schematic overview of key issues in analysis’ provides a schematic overview of the key factors identified in the analysis of this thesis on the topic of male migrant workers from Nepal in Malaysia and the Middle East.

Figure 7.1: Schematic overview of key issues in analysis



7.8 Theoretical explanations

The following section discusses some of the theoretical explanations that help understand the substantive topic of this Ph.D. research project. There are a number of theories that attempt to explain issues of migration. The question for this thesis is whether and how theories of labour migration can help us understand the Nepalese migrants' experience better. Four major approaches to studying international labour migration will now be discussed: (I) neoclassical economics; (II) dual-labour market theory; (III) social capital and network theory; and (IV) theories of migration and mental health (e.g. social isolation theory). Each approach contributes something to our understanding of how labour migration to the Middle East and Malaysia affects Nepali people or why Nepali people seek work abroad.

Neoclassical economic theory simply views international labour migration as a matter of supply and demand, or “push and pull” factors. According to Lee (1966), migrants are pushed out from underdeveloped areas by low wages, high population density, and economic fluctuations and are then attracted to developed areas by higher wages and better job opportunities. Todaro's more sophisticated model (1969) is based on the same notions although draws on the concept of expected income or the mathematical product of the wage difference and the probability of finding a job in the host country. Migration will occur when the expected income is higher in the host country, i.e. when the prevailing wage multiplied by the employment rate in the destination area is greater than the prevailing wage in the sending area, where employment is supposedly certain.

Having outlined this theory, the next few paragraphs show some of the key factors among Nepalese migrant workers that resonate with the push-pull factors. Regarding the Middle East and Malaysia, since the oil boom and rapid economic growth (pull factors) in the 1970s and 1980s millions of workers arrived due to high unemployment in their home country (push factor). Host countries offered higher wages, something that has definitely been important in attracting migrant workers to the Middle East and Malaysia. Indeed, higher wages would have no

doubt been important in attracting many Asian immigrants to the Middle East and Malaysia, especially from South-Asian countries including India, Bangladesh, Sri Lanka and Pakistan. Similar to migrants from other countries, Nepalese migrants migrated to the Middle East and Malaysia due to job opportunities, higher wages and being able to save their earnings as highlighted in Section 6.5 (pull factors of migration). Hence, the tools of neoclassical theory thus help us to understand the movement of Nepalese workers to the Middle East and Malaysia; but these theories seem to be of less use when trying to explain some of the health experiences and status of Nepalese workers in their host countries. The next section briefly outlines dual labour market theory.

Drawing on the dual labour market theory of labour migration, Piore (1979) argues that native or local workers reject jobs at the bottom of the local status hierarchy, often preferring unemployment over “degrading” work in production or processing firms where employment is unstable, low-paid, and often unpleasant. Employers who cannot find native workers start seeking migrant workers who are willing to accept low-status jobs because they do not see themselves as part of the local status hierarchy. They are motivated solely by wages, which are higher than what they could earn in their country of origin. Natives’ desires to avoid low-status jobs are reinforced when certain occupations become dominated by migrants, further lowering the status of those jobs (Alexe *et al.*, 2003; Bollini & Siem, 1995; Salminen, 2011). The basic point of dual labour market theory, then, is that migration is driven by a demand for low-level labour that local citizens are unwilling to satisfy. The dual labour market approach has much to offer in the Middle East and Malaysia. For example, many Nepalese migrants have worked in low-status jobs (i.e. semi-skilled or unskilled jobs) that are poorly paid and experience pressure at work as highlighted in Section 6.7 (experience of working abroad). This theory helps us to understand some of the work experience of Nepalese migrants in the Middle East and Malaysia; but the theory is still not sufficient to explain the health experiences and status of Nepalese workers in their host countries.

Social capital and network theorists (Fawcett, 1989; Lee, 1966; Massey *et al.*, 1993; Palloni *et al.*, 2001) suggest that migration happens due to sets of interpersonal ties i.e. bonds of kinship, friendship, and shared community origin that connect migrants, former migrants, and non-migrants to both places of origin and destination. These interpersonal ties or networks among migrants not only lower the costs and risks of migration but also offer support for employment in the destination countries (Massey *et al.*, 1993). Migrant workers' theory also reveals that social networks and connections result in exchanges, obligations and shared identities that in turn provide potential support and access to resources (Bourdieu, 1986) for each individual.

Regarding Nepalese migrants, social capital and network theory might be helpful in explaining the reason behind migration to the Middle East and Malaysia. Many Nepalese workers have made migration decisions in order to or indeed because of the support of family and friends as highlighted in Chapter 6 (i.e. Section 6.5.3 networks and support). This support includes information about jobs, country of work, financial support and motivation. Hence, social capital and network theory is useful to some extent to understand labour migration from Nepal to the Middle East and Malaysia; but less useful to explain the health experiences of Nepalese workers in the host country. Also as detailed in Table 5.4 only 8.6% of respondents to the questionnaire mention lack of social support/fear of losing job/no future as a main concern or worry related to working abroad. The final section of this discussion chapter focuses on social isolation and dual market labour theory.

Social isolation theorists (e.g. Kuo, 1976) start with the assumption that the process of settling in a new society is stressful and that tension may manifest immediately upon the immigrant's arrival. As migrants work away from their local community and social network, the lack of social networks and connections coupled with poor working conditions can lead to poor physical health, mental illness, unemployment, family conflicts (Aranda *et al.*, 2000; Caplan, 2007, Finch & Vega, 2003; Stewart *et al.*, 2008). In the absence of mutual rights, obligations and networks of social interaction, migrants can experience the most

antisocial and negative experiences in their host country. Concerning Nepalese workers, social isolation theory could be helpful in explaining mental health problems. Many Nepalese migrant workers experienced mental health problems and problems including stress, loneliness, hopelessness and frustration in the Middle East and Malaysia as highlighted in Chapter 6 (particularly Section 6.8.2). As mentioned above only 8.6% of questionnaire respondents worried about working abroad because of the lack of social support/fear of losing job/no future (Section 5.2.5).

Dual labour market theory is less useful to understand the health experience of Nepalese workers but useful to help understand work experiences. Neo-classical and social capital and network theory helps to understand reasons for migration (push/pull factors); but again is less useful to understand the health experiences and status of Nepalese migrants in their host countries. Perhaps applying social isolation theory to migrant workers is more helpful to understand the mental health experience of Nepalese migrants in the host countries; but still less useful to explain physical health status and experience. Stress, loneliness, hopelessness and frustration are some of the mental health issues reported by Nepalese migrants. Perhaps social isolation theory is more able to explain these issues.

7.9 Reflections on the study

It is important for any researcher to reflect on the strengths and limitations of their work (Grbich, 1999). In general, in qualitative research this involves reflecting on the role and influence the researcher will have played in the research process (Denscombe, 2010; Dingwall *et al.*, 1998; Watt, 2007) itself, i.e. from the process of data collection, to decisions taken about methods and analytical approaches used, through to interpretation and conclusion-drawing. In doing so, the researcher enables others to understand and make sense of the work and draw their own conclusions about its findings and validity (Pope *et al.*, 2000).

7.9.1 Strengths and limitations of the research

This study is based on a cross-sectional survey of Nepalese migrants working in factories or construction sectors in the Middle East (Qatar and Saudi Arabia) and Malaysia. Participants were interviewed upon their return (either on vacation or for good) to Nepal. This thesis investigated the health and lifestyle of migrant workers while abroad. This section highlights the key strengths and weaknesses of this study.

7.9.1.1 Strengths

A major strength of this study is that it used a mixed-method approach combining both quantitative and qualitative methods to explore the health status (including mental health) of and health risks to male Nepalese workers in the Middle East and Malaysia. The particular strength of mixed-methods in this thesis is to broaden an understanding of the research problem. This study surveyed a large number of migrant workers for the quantitative analyses. This study is still the only one of its kind on the target population of Nepali migrant workers. Since the major trends in the flow of migrant workers and working conditions in both the Middle East and/or Malaysia have not changed over the past five years the findings are still highly relevant.

For the qualitative part of the study, interviewees had been identified based on certain pre-selected criteria (such as host country, age, accidents, health status and working conditions) to explore and develop a deeper understanding of the living and working conditions of Nepalese migrants in their host countries. While the quantitative analyses explored associations between various risk factors and the outcome, the qualitative analyses investigated in detail the reasons behind the migration, risk factors associated with working in construction or factory sectors and the reasons that made Nepalese workers more vulnerable to these risks. Consequently, this study has been able to identify significant risk factors impacting on the health of migrant workers, qualitatively describe them and identify issues for governments and policy makers to address.

Although study participants have not been selected based on a random sampling basis (see Section 7.9.1.2 weaknesses section below), this study does have considerable methodological strengths. A structured questionnaire has been used to collect the data. Questions relating to health status (physical and mental health), perceived health risks and working and living conditions of migrant workers have been developed to suit Nepalese migrants based on a survey of current literature. The questionnaire had been developed by adapting questions from similar conducted surveys, e.g. health and lifestyle survey of Nepalese migrants in UK, 2007 (Adhikary *et al.*, 2008), social survey on Chinese migrants: their views on the work education and living conditions in Russia 2007 (Larin, 2009), the Vietnam migration survey, 2004 (GSO, 2004) and the European working condition survey, 2010 (EWCS, 2010) to allow international comparisons. The bilingual questionnaire included statements in English and Nepali to allow for effective communication. Perhaps more importantly, the questionnaire had been tested in a pilot study and revised in the process to make it suitable for its purpose (see Chapter 4, Section 4.6.8).

A further strength of the study is that the researcher is bi-lingual, thereby improving the rigour of language-based inquiry (Larkin *et al.*, 2007) i.e. the findings are more likely to represent the meaning of participants' experience. Moreover, the researcher holds experience from his MSc in conducting a large-scale study with Nepali migrants albeit in the UK (Adhikary *et al.*, 2008). This Ph.D. study also involved the implementation of quality control as regards questionnaire translation; a second bi-lingual Nepalese with a research background in Public Health translated back into Nepali some of the transcripts translated to English by the researcher. Such a quality-control mechanism, so-called back-translation, has been shown to strengthen the quality control of research by ensuring the accuracy of the translation by the researcher (Sechrest *et al.*, 1972). This approach has been very useful because the second translator came up with very similar results verifying the translations thereby giving assurance of the quality of the original translations.

As attempts to conduct the study in host countries were unsuccessful and a true sampling frame of returning workers to Nepal was impossible, this study has been based on a convenience sampling frame. The lack of access for this research in the Middle East is regrettable but understandable as it does not show the receiving countries in a good light. For example, the recent (late 2013-early 2014) media attention on the working conditions of Nepali migrant workers in Qatar in the build up to the 2022 Football World Cup suggested that in 2013 alone 185 Nepalese workers had died in Qatar (Gibson & Pattisson 2014). Moreover, the study results (completed in 2011) are still relevant because of ongoing trends in migration in the Middle East and Malaysia (Shrestha, 2014) and the experience of work-related accidents or injuries by these groups of migrant workers (Booth, 2013; Shrestha, 2014). The issue of high-risk jobs, demonstrated by the high mortality rate among the workforce (Section 2.3.1) and recently in the news of the building of stadiums in Qatar as part of the 2022 Football World Cup (Booth, 2013) highlight another key issue in the study of work-related migration namely the deliberate under-reporting of accidents and deaths by host countries (and companies).

However, in conducting the research in Nepal, several efforts had been made to ensure a representative study sample, including participants working in different environments, countries, age groups, ethnicity and length of stay (see Chapter 4, Section 4.4). These included identification of study subjects by the researcher at Tribhuvan International Airport in Kathmandu (the researcher had permission from the airport authority to access the arrival and departure lounge of the international airport) and at hotels/lodges frequented by the returning migrant workers. Additional participants were identified through referrals by the enrolled participants. The use of multiple sites for interview (airport or hotels/lodges) helped to improve the response rate (see Chapter 4, Section 4.4).

The achievement of a 95% response rate among the participants contacted should be considered a success; the literature suggests that a high response rate for surveys using a face to face approach for subject recruitment is around 76.7% (Sitzia & Wood, 1998). The higher response rate can be partly explained by the

location i.e. where migrant workers were simply hanging around waiting for flights or luggage and had time on their hands and particularly by the fact that many of these migrant workers would never before have been asked for their views or opinions by any researchers anywhere. Hence, it was probably also a novelty.

As the respondents participating in this study represented different age groups, castes/ethnic groups and educational backgrounds the internal validity of these findings is considered acceptable and reliable. Although traditionally India has been for centuries, and still remains, the major destination for Nepalese migrant workers, the Middle East and Malaysia have been the fastest growing destinations for Nepalese migrant workers in recent years. However, there are limited studies on the risk factors to health and the well-being of Nepalese workers there.

This study therefore can be considered timely from the perspective of both the host countries as well as Nepal. Another particular strength of this study is that both survey and in-depth interviews have been conducted by the researcher, himself a native speaker. Therefore, participants could be put at ease and encouraged to share their experiences in their mother tongue.

7.9.1.2 Weaknesses of the study

Apart from the strengths highlighted above, there are number of limitations to this study which are worth mentioning. First, this is a cross-sectional study and it is impossible to establish cause-effect relationships between health status and health risks and the various socio-economic factors. Thus, a longitudinal study is needed to ascertain any future causal relationships such a study is likely to be outside the scope and time frame of a Ph.D. study.

Secondly, the questionnaire as with any research tool has its own strengths (Section 7.9.1.1.) and weaknesses. One weakness as mentioned in the thesis (Section 7.3) is that mental health was only assessed by one question. In

conducting an overview survey of this kind, each health aspect could have ever only been addressed by a limited number of questions. Furthermore, as highlighted in Section 4.6.10 there were so few answers provided to the open-ended question on the questionnaire, that it became impossible to analyse these data meaningfully. The decision was made to use the qualitative interviews to get the more in-depth information that would help explain some of the quantitative statistics.

Thirdly, this study was carried out in Nepal rather than in the host countries. The researcher approached a number of Universities in the host countries (e.g. Qatar and Malaysia) for research support and ethical approvals of this study (see Chapter 4, Section 4.4). However, there were no responses from these host countries. As a result, the study was therefore, conducted in Nepal. Further, due to the time and resource constraints and the lack of a complete list of Nepalese migrants in the destination countries, it would have been difficult to conduct a longitudinal or randomised study.

The study population available comprised those coming to or returning from Nepal during the survey time frame. Also, due to the transient nature of the study population visiting Nepal, a complete database of the returning workers could not be created. Hence, the participants in this study were selected based on convenience sampling rather than a random sampling procedure. Therefore, selection bias could be a potential limitation of this study.

This study population was composed only of males and restricted to those people who worked in factories and building construction. Although this could be argued as potential selection bias, this is unlikely to affect the validity of the research findings. Nepal only allows women older than 30 to work in the Middle East (*BBC News*, 2012). Further, it is very uncommon for Nepalese women to work abroad in the construction industry. In addition to this, the Nepalese Government has banned females from working as labourers in the Middle East (*The Daily Star*, 2010); they are only allowed to work as domestic employees. Therefore, Nepalese women, if any, would represent a very small proportion of

the target study population. Hence, the fact that the study population is comprised solely of males is not considered to have had any major impact on the validity of the research findings. Additionally, as study participants worked in factories and construction, the results may not represent the situation of workers in other sectors. However, as the work in factory and construction industries is considered to be more risky in terms of health and welfare of the workers, such a population would be more likely to reveal major health and safety related risks than other industries. This approach may have been more useful to policy makers and governments.

A general extension of these findings to migrant workers or to construction and factory workers in other countries has to be completed with caution as the work environment in different countries varies greatly (Barss *et al.*, 2009; Human Rights Watch, 2014; Salleh *et al.*, 2012). These workplace variations could include the physical workplace as well as legislation and adherence to health and safety rules. Also, the socio-economic status of migrant workers including their level of education and training might vary greatly. These external factors could potentially limit the external validity of these research findings.

One of the limitations of this mixed-method approach is that the researcher's time and effort is divided between two methods (Johnson & Onwuegbuzie, 2004). If there had only been a quantitative element, the study could have included more participants and some of the statistical analyses may have shown stronger associations with a larger sample. Similarly, if there had only been a qualitative element, the study could have included more interviews, perhaps from other sectors or female migrant workers as mentioned above. This would, however, have made it a different study and arguably a less robust one.

Focus group discussions (Gill *et al.*, 2008; Perilla *et al.*, 1998) and observational studies (Bowling, 2002) are other means of identifying issues associated with migrant populations. Whilst an observational study was not feasible for the current study population (without approval from a host country), focus group discussions were also ruled out. This is mainly because personal health, and in

particular mental health, issues are very difficult topics for Nepalese men to discuss in public (Devkota, 2011).

Recall bias is also considered a potential bias in this study. This is because the question regarding work-related accidents covered a period of the last 12 months abroad. Considering a longer duration of time than that in which the data was collected, it is possible that participants under-reported accidents (Harel *et al.*, 1994; Landen & Hendricks, 1995; Mock *et al.*, 1999). Additionally, some people, especially those who have had negative experiences abroad, are likely to over-report and mis-report some of the events (Epel *et al.*, 2010). Similarly, the health status in this survey was self-reported, rather than substantiated via medical records. Hence, there could be validity constraints of self-reported health status (Benyamini, 2008; Prinja *et al.*, 2012).

This survey interviewed mainly unskilled or semi-skilled migrant workers with low levels of education. Whether highly educated migrants in skilled jobs also face similar health issues or health-related risks could not be ascertained by this study's findings. Hence, the results are less likely to be applicable to educated, skilled, Nepalese migrant workers in these countries or in other parts of the world.

7.10 Key discussion points

This chapter has provided a summary of the findings of this thesis and has then discussed them in relation to the wider literature on health status including mental health, health risks and access to health care. The physical and mental health issues, risk and access to health care of migrants investigated in this thesis are fairly similar compared to other studies based in Nepal but also elsewhere. Again, the in-depth interviews have identified that Nepalese migrant workers have experienced problems with physical pain as well as with sleeping. Similarly, most interviewees explained that the busy lifestyle at their country of work and being away from family and society caused mental stresses. It is interesting to note that some migrant workers do have positive experiences in

terms of better salaries compared to workers in Nepal increased savings and better self-reported health status.

This study found that older workers, workers who have a poor work environment or who perceive their diet as poor or their health is at risk are more likely to experience poor health (physical health). Similarly, mental health issues are more common for workers who perceive their health is at risk. Again, work-related accidents are more common to older workers, workers who are not satisfied with accommodation in their host country, who perceive a poor work environment and who are not registered with a doctor. In addition, the in-depth interview part of this study identified that poor work-related safety standards, poor communication skills with co-workers and senior workers and not following work place safety procedures are the key reasons for accidents at work. The fact that people without health insurance are less likely to visit doctor in the host country has also been identified by this study as a potential issue.

This study has also explored and discussed some of the theoretical explanations that may relate to these findings. Although several theories (see Section 7.8) have been applied to understand the health experiences and health status of Nepalese migrants abroad these are generally less useful. Of all the theories, social isolation theory seems to be the most useful in helping understand mental health issues and the experience of Nepalese migrants including stress, loneliness, hopelessness and frustration.

This chapter has ended with personal reflections in terms of the strengths and weaknesses of the study. The key strengths of this study are: (a) this study has used a mixed-methods approach to explore health status and health risks with male Nepalese workers; and (b) a bi-lingual researcher with previous research experience has strengthened the quality of the research. The main weakness of this study are: (a) not being able to establish cause-effect relationships between health status and health risks and the various socio-economic factors; (b) an observational study was not possible without the approval from host countries; and (c) the study only included male workers and was restricted to those

migrants who worked in factories and in the building construction industry. The overall conclusions of this thesis are presented in Chapter 8.

CHAPTER 8 CONCLUSION

8.1 Introduction

This chapter concludes the thesis under six key research headings:

- Self-reported health status
- Mental health
- Accidents at work
- Perceived health risks
- Doctor visits
- Reasons for migration

8.2 Self-reported health status

This thesis reports the results of a study on the health status of and health risks to Nepali migrant workers working in the Middle East and Malaysia. Overall, the proportion of respondents reporting their health as “very good/good” or “fair” is very high (87%), higher than that reported for other Nepalese migrant studies in the UK and USA and lower than that reported for other non-Nepalese studies e.g. Adhikary *et al.*, 2008; Bhatta, 2006; Daoud *et al.*, 2009; Pary *et al.*, 2006) (see Section 7.2). Only a small proportion of respondents rated their health as “poor/very poor” in this thesis. The qualitative interviewees provided useful explanations as participants reported “poor health” in terms of a variety of health problems, including chest pain, indigestion, gall stones, high blood pressure, sleep disturbance and back pain. It is concluded that such health problems are fairly common as they have also been reported for immigrant workers in other Nepalese studies e.g. Adhikary *et al.*, 2011; Joshi *et al.*, 2011b; NIDS, 2006) and non-Nepalese studies (Ahonen *et al.*, 2009; Azaroff *et al.*, 2004; Ratnasingame *et al.*, 2011) (see Section 7.2).

Some migrants report better health whilst working abroad. This leads to the conclusion that not all migrant workers have negative health experiences whilst abroad. The possible reasons for this could be due to life-style changes and health benefits to some migrant workers as outlined in Section 7.2. The findings

also suggest that not all work conducted by Nepalese migrant workers is negative associated with working abroad. This may in itself help explain why some migrants decide to cope with generally poor/low status work and relatively high risk jobs.

Associations between factors

The results of logistic regression indicate that self-rated poor health status is significantly associated with age, work environment, perceived health risks at work and not taking regular exercise. People with increasing age, who perceive their work environment as poor and who perceive health risks at work are more likely to experience poor health. Age has been reported as a factor consistently associated with poor-health outcome in multiple studies (e.g. Ahmad *et al.*, 2005; Asfar *et al.*, 2007; Borg & Kristensen, 2000; Franks *et al.*, 2003; GSO, 2004; Kelleher *et al.*, 2003; Lim *et al.*, 2007) (see Section 7.2). Analyses from the in-depth interviews reported in this study identified work environments, exploitation from the employer, and work-related accidents as reasons for poor-health among study participants. In spite of the negative experiences expressed by some study participants in their discourses, there was some positive feedback from these Nepalese migrants. Some report that they have learnt new skills and techniques, saved money, received compensation and had a safe work environment. The latter comment needs to be seen in the light of the fairly high-risk work environment these workers will be familiar with in Nepal (see Section 2.5.1). The author has been careful not to assess the risk of working in Malaysia and the Middle East by European health and safety standards.

8.3 Mental health

There is a difference in the level of reported mental health problems between Malaysia (18%) and the Middle East (26%), it is unclear why this might be the case. The prevalence of mental health problems reported in the recent study is comparable to previous studies (Alonso *et al.*, 2008; Conley, 2012; Yang *et al.*, 2012) (see Section 7.3).

The qualitative analysis found that depression, hopelessness, and stress are common issues among workers in the destination countries. This study also found that busy life-styles in the host country, being away from families, insufficient leisure time and poor work environments are the main reasons for mental health issues.

Associations between factors

The research presented in this thesis found a strong association between perceived health risks and mental health. The study concludes that people who report a poor work environment are more likely to report mental health problems. The qualitative study highlights a number of poor work environment related factors (e.g. lack of safety, pressure at work, long work hours, etc.) that contribute to stress and mental health problems. Moreover, analysis of the in-depth interviews reveals that low levels of education, lack of confidence and language difficulties are the leading causes of mental problems for Nepalese workers.

8.4 Accidents at work

This study found that almost one in six (17%) Nepalese migrant workers experience work-related accidents in the host countries (see Section 5.2.6). The prevalence of work-related accidents is higher among the migrant workers in the Middle East (19%) than in Malaysia (13%). The prevalence of work-related accidents in this Ph.D. study is lower than that recorded in a previous study among Nepalese migrants working in Gulf-countries (Joshi *et al.*, 2011b) and a non-Nepalese study in the Middle East (Al-Arrayed & Hamza, 1995). However, it is comparable to findings of studies in the developed countries (e.g. Feyer *et al.*, 2001) (see Section 7.4). Analysis of the interviews found that Nepalese migrant workers experience work-related accidents that range from minor with no long lasting impacts to serious injury causing life-long disability. Not all accidents happened due to the poor work-related safety standards of the employers: some study participants noted that they experienced accidents due to communication difficulties with friends and senior staff members, and by taking risks themselves (see Section 6.7.6). This study also concludes that other possible

reasons for accidents include long working hours, insufficient break time and high temperatures.

Associations between factors

The results of logistic regression indicate that the age group of the workers, satisfaction with accommodation in the country of work, perceived work environment, work location or country of work and registration with a doctor are associated with work-related accidents. This study concludes that older people (40+ years) are much more likely to have work-place related accidents than younger ones, a finding supported by the literature e.g. Jones *et al.*, 2011; Lowery *et al.*, 1998; Salminen, 2004 (see Section 7.4)

The study also found that migrant workers who are not satisfied with their accommodation are more likely to experience work-related accidents. Poor accommodation as mentioned in the interviews may lead to poor sleep or rest and people might not be as alert at work as those who are well rested (see Section 6.6.3). The relationship between work-related accidents and sleep disturbance is well documented in the literature (Lavie *et al.*, 1981; Martikainen *et al.*, 1998) (see Section 7.4).

Again, this study found that accidents and injuries are comparatively high among those Nepalese migrants who perceived their work environment as “poor” or “very poor”. The media have picked up on this relationship and have highlighted the association between work-related accidents and injuries and having poor working conditions (Hadid, 2005; *Nepal news*, 2008). More importantly, studies in both Nepal and elsewhere have recognised a poor work environment as a risk factor for work-related accidents (Gurung & Adhikari, 2004; Murty *et al.*, 2006; NIDS, 2006) (Section 7.4).

This study found an unexpected negative association between doctor registration and accidents at work. Thus, people who are not registered with a doctor are less likely to report having had experience of work-related accidents compared to

people who are registered. There is some qualitative evidence (see Section 6.8.3) that several uninsured workers were less likely to visit a doctor in the host country. In addition, in the in-depth interviews a number of migrant workers with very serious accidents had no insurance and returned home to Nepal for treatment never to return to the host country. Thus, the qualitative findings also suggest that uninsured workers appear less likely to visit a doctor even in the case of an accident.

Also, migrant workers in the Middle East are more likely to experience work-related accidents than those working in Malaysia. The higher accident rate in the Middle East compared to Malaysia could be due to the nature of the job, work environment and health and safety at work. Nepalese people in the Middle East work in the construction industry whereas people in Malaysia work in a factory. The literature, not just on migrant workers, reinforces that the construction industry is a dangerous globally (Bergdahl *et al.*, 2004; Gurcanli *et al.*, 2008). (see Section 2.2.1.4). The second reason for a high accident rate in the Middle East could be due to heat at work, as many migrants in the Middle East work during very high day time temperatures. This consideration is also documented in the literature (see Section 2.3). The qualitative evidence from this study also suggests that there are more accidents in the small companies compared with larger companies. This may be because smaller companies pay less regard to health and safety factors at work. This could also explain the reason for the increased number of accidents in the Middle East as compared with those in Malaysia (see Section 7.4).

8.5 Perceived health risks

The survey results indicate that nearly half of the migrant workers have a perception of health risks at work in their host countries. The analysis of face-to-face interviews provides more in-depth information regarding the perception of health risks at work as participants identified working long hours under pressure, in high temperatures and working with poor health and safety regulations as causal.

Associations between factors

The results of logistic regression indicate that perceived health risk at work is significantly associated with marital status and work environment. It is concluded that married people are more likely to perceive health risks at work. One possible explanation for this is that married workers are more stressed as they have increased demands from family back home and may feel more responsible for their children and other dependants.

Similarly, workers who report their work environment as “poor” are more likely to perceive health risks at work. Long working hours, no safety training and communication difficulties either in the host language or in English at work might lead to a perception of increased health risk at work. This link between poor work environment and perceived health risks has been corroborated by some of the interviewees as highlighted in Section 7.5.

8.6 Doctor visits

Participants of the studies presented in this thesis had reasonable access to doctors while abroad. However, the qualitative part of the study found mixed responses to treatment access. Some workers reported slower access to treatment (e.g. delayed treatment) or no treatment at all, whilst a number of workers received free treatment with fairly good compensation. It is interesting to note that workers are more likely to see a doctor if they work in larger companies, when they are insured and when ancillary facilities e.g. transport to medical centres are offered by their employers (see Section 7.6).

Associations between factors

This study found a strong association between a doctor not being visited abroad and health insurance status and the country of work. People who do not have health insurance and who worked in Malaysia are less likely to visit a doctor. All Nepali migrant workers in Malaysia are factory workers. This study concludes that access to health care and issues of health insurance are fairly common as issues of health insurance and doctor visits have also been reported in the study

of factory workers (see Section 7.6). The possible reasons for this could be due to the difference in labour migration policy in the Middle East and Malaysia.

Similarly, other possible reasons could be due to the nature of work they do and the companies employing them. The majority of study participants in the Middle East consists construction workers, perhaps employed by larger companies. The qualitative analysis reported the difference in health insurance status between workers in larger and smaller companies; the former being more likely to be insured than the latter. Whether the limited or no health insurance provided by the Malaysian companies is due to their smaller sizes or the differences in labour laws in Malaysia and the Middle East could not be confirmed, although these are possible reasons for such differences.

8.7 Reasons for migration

The quantitative part of the study did not collect any information regarding the reason for migration; however, the qualitative part of the study identified some reasons for migration supported by the literature. The qualitative analysis concludes that economic hardship and a poor Nepali economy are the major reasons for Nepalese workers seeking to migrate for work abroad. The study found that migrant workers experienced difficulties at home in providing financial support to their family and for schooling their children and these factors encouraged them to work abroad.

Other reasons for migration for Nepali workers include political instability in Nepal and support from friends and relatives. These are of course, not mutually exclusive. One migrant worker may experience various push and pull factors. This study concludes that reasons for migration of Nepali workers are fairly similar to those mentioned in the previous studies (Dodani & LaPorte, 2005; Stilwell *et al.*, 2004; Thieme, 2007) (see Section 7.7). As there was no quantitative data on reasons for migration, statistical associations cannot be calculated. It is important to understand why people migrate for work in order to

understand what they perceive to be risky work situations and what risks they might take at work.

8.8 Chapter summary

This study concludes that a significant minority of Nepalese migrant workers working in the Middle East and Malaysia experience a variety of health problems, work-related risks, unsafe and stressful working and living environments and delayed medical treatment. In other words, too many migrant workers experience poor health and/or working and living conditions. The living and working conditions in both the Middle East and Malaysia appear harsh, but we need to bear in mind that these are not necessarily much worse than those that the migrant workers have left behind in Nepal. In other words, these migrant workers often have experience of working and living under similar risk situations at home. Interestingly, many Nepalese male migrant workers do have a ‘positive’ experience e.g. with their health, health insurance and access to health services, of living and working abroad. The latter partly helps explain the appeal to new migrant workers of starting work to abroad. Some of the theories applied to the analyses in this thesis help to understand perhaps why Nepali migrant workers take the risks they do and accept the working conditions they find.

I hope my analyses will contribute new knowledge to the international migrant worker literature. As part of my further efforts I aim to produce a series of articles, book chapters and conference papers based on this analysis in order to disseminate the knowledge on the topic. These will focus on number of selected health issues of migrant workers from Nepal to the Middle East and Malaysia as analysed in this thesis.

CHAPTER 9 RECOMMENDATIONS

9.1 Introduction

The recommendations resulting from this Ph.D. study focus on four key areas:

- Recommendations for research
- Recommendations for policy-makers
- Recommendations for migrant workers and employers
- Recommendations for training and/or education

9.2 Recommendations for research

This Ph.D. thesis has focused on the health status of and health risks to male Nepalese migrant workers who immigrated for work to the Middle East and Malaysia. International labour recruitment and labour migration is of prime importance because it changes socio-economic status in both migrants' sending countries and receiving countries. It is therefore recommended that further research should be carried out to investigate the following:

First, there is a need to study the perception of employers in host countries towards the recruitment of Nepali migrants and their experiences of working with Nepali workers. Such in-depth studies may be able to establish causes of bitterness, perceived discrimination at work and suggest ways of managing it.

Secondly, a study is required to investigate the attitudes of managers and senior members of staff towards migrant workers to identify how their attitudes influence the implementation of anti-discrimination practices. This would help to identify whether institutional racism is a cause of negative experiences reported by Nepalese migrants.

Thirdly, supervisors and managers could be interviewed regarding their experiences to establish what can be done to improve working relationships with migrant workers.

Fourthly, we often study problems by focusing on people with certain issues (e.g. being a migrant worker abroad) but it is worthwhile to establish those factors that are associated with improved health abroad as in the minority of Nepali migrant workers (Section 8.2). Hence it is worthwhile studying migrant workers who have experienced a change in their health status abroad in order to learn from them.

Fifthly, more research is needed to cover all migrant workers, i.e. female migrant workers and illegal workers, not just male legal migrant workers in the host countries (see Sections 1.2.1 and 2.4.2). Moreover, there is a need for research into the day-to-day living and working conditions of migrant workers with fieldwork in the host country (something which may be difficult to achieve considering the way some host countries appear to treat their migrant workers).

Finally, this thesis found some mental health issues among Nepalese workers. Therefore, further research is needed using longitudinal field-work, utilising depression and anxiety scales with large sample sizes.

9.3 Recommendations for policy makers

Some of the recommendations below are aimed at the governments of sending countries (not only Nepal) and others are more relevant to the governments of receiving countries. The findings of this research suggest a number of key areas that need to be focused on by policy makers to improve the existing situation of migrant workers.

First, the strong association between perceived work environment and perceived health risks with health status including mental health and accidents at work suggests that this is one area for action in terms of improving the working environment in host countries. Thus, one main recommendation is to review the conditions of contract workers regarding their health and safety at work. The host country should take the responsibility of ensuring that any existing or new

policies devised are translated into effective actions for the benefit of foreign workers (see Section 7.5).

Secondly, the findings of this study conclude that many employers are not providing health insurance; a number of workers are not getting appropriate treatment in their country of work and some workers are not getting compensation during cases of serious accidents. Thus, employers in host countries need to take action to develop policies to protect migrants' health and offer easy access to healthcare for all workers. There is a further recommendation to host governments to ensure legislation covers compulsory health insurance for foreign workers and that a system of fair compensation is in place.

Thirdly, although the Nepalese government has implemented government-mandated pre-departure programmes for migrant workers, they are poorly implemented in practice. Thus the Nepalese government needs to take effective action to implement them for the benefits of all migrant workers.

9.4 Recommendations for migrant workers and employers

The quantitative study concludes that a proportion of migrant workers experienced work-related issues (Section 5.2.6) and many more talked about it in the qualitative interviews (Section 6.7). Such issues included pressure at work, communication problems and poor health and safety standards that increased the risks of accident. Not all accidents happened due to the poor work safety standards of the employers: some noted that they experienced accidents due to communication issues with friends and senior staff. Therefore, there are a number of key recommendations for migrant workers and those working with them.

Firstly, Nepali migrant workers often worked without clear instructions as they did not understand the local language. Thus employers in the host country should be required to provide very clear instructions (with the provision of a translator

or where possible employ a Nepali speaking foreman) to minimise future accidents.

Secondly, employers in the host country need to follow up the implementation of health and safety standards at work to maintain the health and well-being of workers. Proper implementation of safety regulations at the factory and/or construction sites and improving the work environment should therefore be a priority for employers.

Thirdly, workers should be trained adequately in their jobs as well as in the application of safety measures.

Fourthly, as migration is likely to continue and increase in the future, there seems to be a necessity for the host government and employers to revisit their strategies regarding contracts of employment in relation to the working and living conditions of foreign workers with a view to improving them and making provision for the effective social integration of the migrants into the host society.

Finally, this study also identified that employers are not providing health insurance for many Nepalese workers which indicates that there is a lack of protection for migrant workers; thus employers in the host country need to take action to protect them.

9.5 Recommendations for training/ education

This study found that majority of migrant workers had either no education or only a primary level of education. Workers may be less confident to communicate in the host language or in English. In addition to this, many workers leave their home country without any proper knowledge of their work and work environment. This causes them frustration and increases the risks of work-related health problems including mental health issues and accidents (older workers are more likely to experience accidents at work). Similarly, a number of workers taking risks by themselves have also experienced health problems as a

result. The findings of this study suggest a number of key areas that need to be focused on by employers and governments of the host countries and the Government of Nepal.

Firstly, migrants should be better informed about the health consequences undue taking risks at work. Therefore, a health promotion programme for employees (that includes a health and safety training package) is required to train them in being culturally sensitive to large ethnic minority communities in host countries. The health and safety training programme could be implemented by the Government of Nepal before leaving and/or by the host government before starting work. Implementation of this educational training would help to protect workers from accidents and disability (see Section 7.4). Perhaps recruitment agencies in Nepal should bear responsibility for such culturally appropriate training.

Secondly, the Government of Nepal should provide better age-appropriate training and support for this older workforce when they do decide to go abroad.

Thirdly, educational programmes designed to educate migrant workers and their managers about different cultures could be implemented and evaluated to assess its effect on the relationship between migrant workers, their supervisors and managers.

Finally, public awareness programmes should be implemented through the media (i.e. audio, visual and print media) to provide information regarding foreign employment and health and safety at work for potential migrant workers.

9.6 Chapter summary

The findings of this study have provided comprehensive evidence to academics, policy makers, trainers/educationalists, workers and employers. This Ph.D. research adds to our understanding of the experiences of Nepalese migrants

concerning their health status, as well as their living and working conditions in the host countries.

More research is needed covering employers (mainly their experiences of working with Nepali workers) and all migrant workers including female and illegal workers in their host countries. This thesis has revealed some mental health issues among Nepalese workers. Further research is required using longitudinal field work and validated depression and anxiety scales with larger sample sizes.

In host countries, many employers are not providing health insurance; a number of workers are not getting treatment in their country of work, while some workers are not getting compensation during cases of serious accidents. Therefore, recommendations need to make to host governments to ensure legislation covers compulsory health insurance for foreign workers and that a system of fair compensation is in place.

A number of interviewees spoke about Nepali migrant workers often working without clear instructions and poor communication as they did not understand the local language. Thus employers in host countries need to provide very clear instructions to minimise future accidents. Health and safety training programmes need to be implemented by the Nepalese government before migrant workers leave their home country and by host government before they start work. Public awareness programmes should be implemented through the media to provide information regarding foreign employment and health and safety at work.

This Ph.D. study employed a mixed-methods approach to explore the health status of and health risks to male Nepalese migrant workers in the Middle East and Malaysia. The Ph.D. study raises the following interesting key issues about the health and wellbeing of Nepalese migrants working in the host country:

- A significant minority of Nepalese migrant workers whilst working in the destination countries experienced work-related risks, unsafe and stressful working and living environments and delayed medical treatment.
- Health and safety at work, especially for the Nepalese migrants, should focus on encouraging employers to make safe work environments by providing health and safety training and potential harm reduction.
- Perhaps a more unexpected key finding of this study is that the majority of Nepalese male migrant workers do report a fairly positive experience of their health and wellbeing as well as living and working in their countries of work.

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Appendices

Appendix 1-Search Strategy

Search strategy:

A balanced review of existing literature is needed for determining the evidence for practice and for designing research that will fulfill the potential of cumulative knowledge and that broaden the scope of research (Vicki *et al.*, 2003). A well-designed search strategy is essential to find relevant literature that is as close as possible to any research topic (Creswell, 2009). Thus, a number of preliminary searches were carried out on migration and health to give an insight into types of literature available and to help refine the searching strategy. Tailored Boolean searches were carried out within electronic databases using the following search terms in numerous combinations and a graduated approach. The main purpose of using this literature search strategy is to successfully identify existing studies on the proposed topic that have provided a framework for this study as well as a benchmark for comparing the results with other people's work. In addition, the bibliographies of retrieved studies have been scanned for further relevant articles. Articles, reports, conference papers, and books judged to be of relevance to the review were retrieved.

In the searching for this thesis, I have also used a number of key/text words (see below) based on the experience of previous studies on similar topics (Gurcanli *et al.*; 2008; Murty *et al.*; 2006). The text was not searched for key words such as 'Nepal', 'Nepalese', 'Middle East', etc. as these words combined with the key words listed below found very few or no articles.

Sources:

Databases searched:
EBSCO including: Global Health Medline Embase Sage Journals Online ERIC CINAHL
Blackwell Synergy
Electronic Thesis Online Services (EThOs)

Key Search Strings:

Immigration OR Migration OR Emigration OR Migra* OR Emigra* OR Immigra* OR Construction worker* OR Builder	And	Health Risks OR Vulner* OR Working condition OR Living condition OR Health Status OR Health and well-being OR Health Insurance
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Websites monitored regularly:

International Labour Organisation

<http://www.ilo.org/home>

World migration report

<http://www.iom.int/home>

World Health Organisation (WHO).

<http://www.who.int/home>

Human Rights Watch

www.hrw.org/home

Inclusion criteria:

Male migrant workers and work-related risks;

Health and Wellbeing;

Exclusion criteria:

Female migrant workers and child migration;

Non-English language publications;

Economic and financial factors;

Migrant workers from developed countries;

Appendix 2 – Survey Questionnaire



Bournemouth University, School of
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Bournemouth, BH1 3LT

Survey on Health Status of and Health Risks among Nepalese Migrants in the Middle East and Malaysia

मध्यपूर्व र मलेसियामा कार्यरत नेपाली पुरुषहरूको स्वास्थ्य अवस्था र स्वास्थ्यका खतरा सम्बन्धि सर्वेक्षण

आजको मिति (Today's date): गते(Day):/ महिना(Month)/ (2011)

अन्तरबार्ता दिनेको मापदण्ड (Criteria of Interviewee):

- i) तल उल्लेखित देशहरूमा कम्तिमा पनि ६ महिना निर्माण क्षेत्रमा कामको अनुभव भएको (At least six months work experience in the construction sector in any of the following four countries)
कतार, (Qatar) ☐ साउदीअरेबिया (Saudi Arabia) ☐ बहरैन (Bahrain) ☐ मलेसिया (Malaysia) ☐
- ii) उमेर १८ वर्ष भन्दा माथि (Age above 18)
- iii) निर्माण क्षेत्रको कामछोडेको तिन महिना भन्दा कम समय अबधि (Left construction sector's job less than three months).

परिचय र अनुमति पत्र (Introduction and Consent):

मेरो नाम प्रतिक अधिकारी हो, म बोर्नमाउथ विश्वविद्यालय, यू.के. मा अध्ययन गर्ने बिद्यार्थी हुँ। मैले मध्यपूर्व र मलेसियामा कार्यरत नेपाली पुरुषहरूको स्वास्थ्य अवस्था र स्वास्थ्यका खतरा सम्बन्धि अध्ययन गर्दैछु। यस सर्वेक्षणमा तपाईंको उपस्थितिको हार्दिक अनुरोध गर्दैछु। तपाईंले उपलब्ध गराएका जानकारीहरू सरकारी निकायलाई बिशेषगरि बिदेशमा कार्यरत नेपालीहरूको स्वास्थ्य सम्बन्धि समस्या बिषयमा योजना बिस्तार गर्न सहयोग गर्नेछ। यदि तपाईं यसमा सहभागी हुन चाहनुहुन्छ भने यो करिब ३०-४० मिनेट जतिको हुनेछ। म तपाईंले बताएका प्रश्नका जवाफहरूको टिपोट गर्नेछु। जवाफ बेनामी हुनेछन् र यसमा भएका सम्पूर्ण जानकारी अति गोप्य रहनेछन्। तपाईंको सहभागितामा स्वतन्त्रता छ। यदि तपाईंलाई कुनै प्रश्नको जवाफ दिन मन नलागेमा, कृपया मलाई थाहा दिनुहोस् र म पुन अर्को प्रश्न सोधनेछु अर्थात तपाईंले अन्तरबार्ता रोक्न सक्नु हुनेछ तर यस अध्ययनमा तपाईंको बिचारहरू महत्वपूर्ण भएको हुनाले, तपाईंको सहभागिताको आशा राखेको छु। यदि यस बिसयमा बिस्तृत जानकारी लिन चाहनुहुन्छ भने, कृपया 9841500302 मा सम्पर्क राखनुहोला। (My name is

Pratik Adhikary, a Nepalese student at Bournemouth University, UK. I am conducting a research study to ask migrant male workers health issues at their work place in the Middle East and Malaysia. I would very much appreciate your participation in this survey. This information will help the government to make further plans on the health issues of migrants working abroad. If you agree to take part, it will probably take about 30-40 minutes. I will be writing down your answers but the information you provide will be kept strictly confidential and will not be shown to other persons. Participation in this study is voluntary, and if I ask you any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, I hope that you will participate in this study since your views are very important. If you would like more information about this study, please contact on 009779841500302)

के तपाईं यस अध्ययनमा भाग लिन चाहनुहुन्छ (Would you like to take part in the study?)

अन्तरबार्ता दिने ब्यक्ति (Interviewee): ☐ मंजूर (Agree) ☐ मंजूर नभएको (Disagree)

अन्तरबार्ता लिनेको नाम (Name of the interviewer): अन्तरबार्ताको माध्यम (Language of Interview):

जनसाङ्ख्यिक बिषेशताहरु (Demographic characteristics):

1. तपाईं Are you (please tick one): पुरुष(Male): ☐ 1

महिला(Female): ☐ 2

2. तपाईं कति बर्षको हुनु भयो (What is your age)? _____ (बर्षमा, completed years)

3. के तपाईं नेपालमा जन्मनु भएको हो? (were you born in Nepal?)

हो (yes): ☐ 1

होइन (No): ☐ 2,

होइन

भने ३b मा जानुहोस्, (If no, go to 3b).

(3a) यदि हो भने कुन जिल्लामा? (If yes, please specify the district name)

(3b) यदि नेपाल बाहिर हो भने, जन्म देशको नाम उल्लेख गर्नुहोस् (If outside Nepal, please specify the name of the country) _____

4. तपाईं बिदेशमा कुन देशमा काम गर्नुहुन्छ (एउटा छान्नुहोस्) (Where do you work abroad?, please tick one)

कतार (Qatar)

☐ 1

बहरैन (Bahrain)

☐ 3

साउदीअरेबिया (Saudi Arabia)

☐ 2

मलेसिया (Malaysia)

☐ 4

5. जातियताको आधारमा तपाईं कुनमा पर्नुहुन्छ? (एउटा छान्नुहोस्) (What is your ethnic background?, please tick one)

बाहुन / क्षत्री ☐1 नेवार (Newar) ☐5
(Bramin/Chhetri)

गुरुङ (Gurung) ☐2 मगर (Magar) ☐6

तामाङ (Tamang) ☐3 शेर्पा (Sherpa) ☐7

राई (Rai) ☐4 लिम्बु (Limbu) ☐8

अन्य (खुलाउनुहोस्) Other (specify): _____

6. तपाईंको वैवाहिक अवस्था (एउटा छान्नुहोस्) (What is your marital status?)
(please tick one)

अविवाहित (Unmarried) ☐1 बिधुर/बिधवा (Widowed) ☐3

विवाहित (Married/Civil partner) ☐2 संबन्ध बिच्छेद /छुट्टै बसेको (Divorced/separated) ☐4

7. तपाईंका आफैले लालन पालन गर्नुपर्ने बालबच्चा छन्? (Do you have dependent children?)

छन् (Yes) ☐1 छैनन् (No) ☐2

यदि छन् भने कति छन्? (If yes, how many?)

8. तपाईं बिदेशमा बस्नुभएको जम्माजम्मी कति बर्ष भयो? (In total, how long have you been abroad? number years & months) _____ (बर्ष, years) & _____ (महिना, months)

9. तपाईं आफ्नो देश नेपाल, भेटघाट अथवा बिदाको समय पारि कतिको आउनुहुन्छ? (एउटा छान्नुहोस्)

(How often do you come to your home country Nepal for a holiday or visit?)

बर्षमा दुईपटक (Twice a year) ☐1 हरेक चार बर्षमा एकपटक (Once every four year) ☐5

बर्षमा एकपटक (Once a year) ☐2 हरेक चार वर्षा भन्दा बढीमा एकपटक (Once every more than four year) ☐6

हरेक दुई बर्षमा एकपटक (Once every two year) ☐3 कहिल्यै पनि (Never) ☐7

हरेक तीन बर्षमा एकपटक (Once every three year) ☐4 अन्य (खुलाउनुहोस्) Other (specify): _____

10. तपाईंले कति पढाइ पुरा गर्नु भएको छ? (एउटा छान्नुहोस्) (Please indicate the highest level of formal

education you have completed, tick one only)

- | | | | |
|---------------------------------|----------------------------|-------------------------------|----------------------------|
| अशिक्षित (None) | <input type="checkbox"/> 1 | कलेज तह (I.A/I.Ed/ ISc /10+2) | <input type="checkbox"/> 4 |
| प्राथमिक तह (Primary) | <input type="checkbox"/> 2 | विश्वविद्यालय तह (University) | <input type="checkbox"/> 5 |
| माध्यमिकतह (Secondary/SLC pass) | <input type="checkbox"/> 3 | | |

11. तपाईं बिदेश आउनुभन्दा पहिले नेपालको रोजगारको अबस्था के थियो? (एउटा छान्नुहोस्) (What was your

employment status in Nepal, before coming abroad?) (please tick one).

- | | | | |
|---|----------------------------|-------------------------------------|----------------------------|
| स्थायी जागीर (Permanent job) | <input type="checkbox"/> 1 | पारिवारिक सहयोगी (Family helper) | <input type="checkbox"/> 5 |
| रोजगार छोटो समयको लागि (Employed on short-term basis) | <input type="checkbox"/> 2 | बिधार्थी (Full time Student) | <input type="checkbox"/> 6 |
| अर्ध रोजगार (Employed on part-time basis) | <input type="checkbox"/> 3 | बेरोजगार (Unemployed) | <input type="checkbox"/> 7 |
| मौसमी कार्य (Seasonal worker) | <input type="checkbox"/> 4 | अन्य (खुलाउनुहोस्) Other (specify): | |

12. बिदेशमा तपाईं अहिले के काम गर्नुहुन्छ? कामको नाम खुलाउनुहोस् (What is your current job abroad?,

Job title.....)

- | | | | |
|------------------------------|----------------------------|-------------------------------------|----------------------------|
| प्लमवर को काम (Plumbers) | <input type="checkbox"/> 1 | इट्टाको चांग लगाउने (Bricklayers) | <input type="checkbox"/> 5 |
| सिकर्मी को काम (Carpenters) | <input type="checkbox"/> 2 | लेबोर को काम (Labourers) | <input type="checkbox"/> 6 |
| रंग रोगन को काम (Painters) | <input type="checkbox"/> 3 | अन्य (खुलाउनुहोस्) Other (specify): | |
| प्लास्टर को काम (Plasterers) | <input type="checkbox"/> 4 | | |

13. बिदेशमा तपाईं एक हप्तामा सरदर कति घण्टा काम गर्नुहुन्छ? (How many hours a week on average do you work abroad?) घण्टा संख्यामा उल्लेख गर्नुहोस्? (Number of hours per week).....

14. बिदेशमा तपाईं प्रत्येक दिन कति बेला सुत्नुहुन्छ र कति बेला उठ्नुहुन्छ? (While abroad, what time do you go to bed, and what time do you get off?) सुत्ने समय (Bed time)..... उठ्ने समय (Wake up time)

सामान्य स्वास्थ्य, बसाई र कामको अवस्था र स्वास्थ्यका खतरा

(General Health Status, Living and Working Conditions and Health Risks):

15. सामान्यतया, बिदेशमा कार्यरत हुदा तपाईंले आफ्नो स्वास्थ्य कस्तो छ भन्ने ठान्नुहुन्छ? (एउटा छान्नुहोस्) (In general, how would you rate your health abroad? Please tick one)

अति राम्रो (Very good)	<input type="checkbox"/> 1	नराम्रो (Poor)	<input type="checkbox"/> 4
राम्रो (Good)	<input type="checkbox"/> 2	धेरै नराम्रो (Very Poor)	<input type="checkbox"/> 5
ठिकै (Fair)	<input type="checkbox"/> 3	थाहा छैन (Not sure):	<input type="checkbox"/> 9

16. सामान्यतया, तपाईंले आफ्नो हालसालको स्वास्थ्यलाई बिदेश जानु भन्दा अगाडी (नेपालमा हुदा) तुलना गर्दा कसरी गर्नुहुन्छ? (एउटा छान्नुहोस्) (In general, how would you rate your health now compared to that before going abroad?, please tick one)

पहिलाको भन्दा राम्रो (Much better)	<input type="checkbox"/> 1
पहिलाको जस्तै (About the same)	<input type="checkbox"/> 2
पहिलाको भन्दा नराम्रो (Worse)	<input type="checkbox"/> 3
केहि भन्न सकिदैन (Can't say)	<input type="checkbox"/> 4

17. सामान्यतया, तपाईंले बिदेशको खानपीन कत्तिको स्वस्थकर छ भन्ने ठान्नुहुन्छ? (एउटा छान्नुहोस्) (In general, how healthy would you consider your diet abroad?, please tick one).

अति स्वस्थ (Very good)	<input type="checkbox"/> 1	अस्वस्थ (Poor)	<input type="checkbox"/> 4
स्वस्थ (Good)	<input type="checkbox"/> 2	धेरै अस्वस्थ (Very Poor)	<input type="checkbox"/> 5
ठिकै (Fair)	<input type="checkbox"/> 3	थाहा छैन (Not sure):	<input type="checkbox"/> 9

18. के तपाईं बिदेशमा धुम्रपान गर्नुहुन्छ (Do you smoke cigarette or tobacco abroad?)

गर्छु (Yes): ☐ 1 गर्दिन (No): ☐ 2 नगर्ने भए, २० मा जानुस् (If no, go to 20)

यदि गर्ने भए, तपाईंले आफ्नो धुम्रपान कस्तो छ भन्ने ठान्नुहुन्छ? (If yes, how would you rate your smoking: heavy, normal or weak?)

अत्यधिक (Heavy)	<input type="checkbox"/> 1
सामान्य (Normal)	<input type="checkbox"/> 2
न्यून (Weak)	<input type="checkbox"/> 3
थाहा छैन (Don't know)	<input type="checkbox"/> 9

19. तपाईंको बिचारमा, बिदेशमा तपाईंले गर्ने धुम्रपानको मात्रा तपाईंको स्वास्थ्यको लागि हानिकारक हुन्छहोला? (Do you think your present level of tobacco consumption is harmful to your health abroad?)

हानिकारक छ (Yes): ☐ 1 हानिकारक छैन (No): ☐ 2

थाहा छैन (Not sure): ☐ 9

20. के तपाईंसंग बिदेशमा काम गर्ने साथिहरु धुम्रपान गर्नुहुन्छ? (Do people you work with smoke cigarettes or tobacco?)

गर्छन (Yes): ☐ 1 गर्दैनन् (No): ☐ 2 थाहा छैन (Not sure): ☐ 9

21. के तपाईं बिदेशमा पेयपदार्थ (रक्सी, बियर आदि) सेवन गर्नुहुन्छ? (Do you drink alcohol abroad?)

गर्छु (Yes): ☐ 1 गर्दिन (No): ☐ 2 नगर्ने भए, २५ मा जानुस् (If no go to 25).

22. के तपाईंले बिदेशमा कहिल्यै पेयपदार्थ सेवन गरेपछि लागेको अनुभव गर्नुभएको छ (Have you ever felt drunk whilst drinking alcohol abroad?)

अनुभव छ (Yes): ☐ 1 अनुभव छैन (No): ☐ 2 थाहा छैन (Not sure): ☐ 9

23. तपाईं बिदेशमा पेयपदार्थ कतिको सेवन गर्नुहुन्छ ? (एउटा छान्नुहोस्) (How often do you drink alcohol abroad? Please tick one)

दिनहु (Daily)	<input type="checkbox"/> 1	हप्तामा एकपटक (Once a week)	<input type="checkbox"/> 4
दिनहु जस्तै (Almost daily)	<input type="checkbox"/> 2	कहिलेकाही (Occasionally/Only in the function)	<input type="checkbox"/> 5
हप्तामा २-३ पटक (2-3 times per week)	<input type="checkbox"/> 3		

24. तपाईंको बिचारमा, बिदेशमा तपाईंले पिउने पेयपदार्थको मात्रा स्वास्थ्यको लागि हानिकारक हुन्छ होला? (Do you think your present level of alcohol consumption is harmful to your health abroad?)

हुन्छ (Yes): ☐ 1 हुंदैन (No): ☐ 2 थाहा छैन (Not sure):

☐ 9

25. बिदेशमा तपाईंसँग काम गर्ने साथिहरु पेयपदार्थ (रक्सी, बियर आदि) सेवन गर्नुहुन्छ? (Do people you work with drink alcohol abroad?)
 गर्छन (Yes): ☐1 गर्दैनन् (No): ☐2 थाहा छैन
 (Not sure): ☐9

26. बिदेशमा तपाईं फलफूल र सागसब्जी कति खानुहुन्छ? (फलफूल र सागसब्जीको लागि छुट्टा छुट्टै उत्तर दिनु होस्) (How often do you eat fruit and vegetable/salad (include vegetables in curry) abroad? Please tick one box for vegetables AND one box for fruit)

सागसब्जी (Vegetables and salad)

दिनको १ पटक भन्दा बढी ☐1

(More than once a day)

दिनको १ पटक (One time a day) ☐2

दिनको १ पटक भन्दा कम (Less ☐3

than once a day)

हप्ताको २-३ पटक ☐4

हप्ताको १ पटक भन्दा कम ☐5

(Less than once a week)

फलफूल (Fruits)

दिनको १ गोटा भन्दा बढी ☐1

(More than once a day)

दिनको १ गोटा (One time a ☐2

day)

दिनको १ गोटा भन्दा कम ☐3

(Less than once a day)

हप्ताको २-३ गोटा ☐4

हप्ताको १ गोटा भन्दा कम ☐5

(Less than once a week)

27. बिदेशमा तपाईं फुर्सदको समय कसरी बिताउनु हुन्छ? (सबै भन्दा पहिले गर्ने कुरालाई १, दोश्रो गर्नेलाई २, गर्दै नंबर दिनुहोस् (How do you spend your leisure time abroad?; prioritize: 1 for the thing that you will do first, 2 for the second option,)

टेलिभिजन/भिडियो हेर्छु (Watch ☐

TV/ videos)

नेपाली साथिहरुसँग बसेर, ☐

रेस्टुरेन्ट मा गएर (Spend time with

Nepalese friends, go to

restaurants)

धार्मिक सामुदायिक मीटिंग मा ☐

गएर

(Go to the religious community

meetings)

हीड डुल गर्न जान्छु, कीनमेल ☐

गर्न जान्छु

(Go for a walk, go shopping)

खेल खेल्छु (Play sports) ☐

म सँग ज्यादै कम मात्र ☐

फुर्सदको समय हुन्छ,

ब्यबहारिक रुपमा आराम गर्ने

समयनै छैन (I have very little

leisure time, practically no time

to relax)

अन्य (खुलाउनुहोस्) Other ☐

(specify):

—

28. बिदेशमा तपाईं प्रायजसो पिउने पानी कसरी शुद्ध बनाउनु हुन्छ? (How do you usually make your drinking water clean abroad?)
- उमालेर (Boil) ☐1 केहि समय पानिलाई स्थिर राखेर ☐5
(Let it stand and settle)
- क्लोरीन राखेर (Add chlorine) ☐2 अन्य (Other) ☐6
- फिल्टर प्रयोग गरेर (Use water filter) ☐3 थाहा छैन (Don't know) ☐9
- धाराको सफा पानी (सफा गर्नु पर्दैन) (Clean tap water (not necessary to clean) ☐4
29. बिदेशमा तपाईं बस्ने स्थानमा कुन किसिमको सौचालय सुबिधा छ? (What kind of toilet facility do you have abroad?)
- फ्लश अथवा पानी राखेर फ्लश गर्ने सौचालय (Flush or pour flush toilet) ☐1 अन्य (Other) ☐4
- खाल्टो (पिट) सौचालय (Pit latrine) ☐2 थाहा छैन (Don't know) ☐9
- बालटिनमा पानी राखेर प्रयोग गरिने सौचालय (Bucket toilet) ☐3
30. बिदेशमा तपाईंले प्रयोग गर्ने सौचालय अरु मानिसहरुले पनि प्रयोग गर्छन्? (Do other people also use this toilet abroad?)
- गर्छन् (Yes): ☐1 गर्दैनन् (No): ☐2
- यदि गर्छन् भने, कति मानिसहरुले यो सौचालय प्रयोग गर्छन् If yes, how many people use this toilet?
- _____ मानिसहरुको संख्या (Number of people).
31. तपाईं बिदेशको आफ्नो बासस्थानप्रति कत्तिको संतोषजनक हुनुहुन्छ? (एउटा छान्नुहोस्) (How satisfied are you with your accommodation abroad?, please tick one)
- संतोषजनक छ (Satisfied) ☐1 जवाफ दिन कठिनाई (Difficult to answer) ☐4
- तेती संतोषजनक छैन (Not quite satisfied) ☐2 अन्य (खुलाउनुहोस्) Other (specify): ☐5

- पूर्ण असंतुष्ट छु (Absolutely unsatisfied) ☐3 थाहा छैन (Don't know) ☐9

32. सामान्यतया, बिदेशमा स्थानीय मानिसहरूले तपाईंप्रति कस्तो ब्यबहार गर्छन्?
(In general, how do local people in your host country behave towards you?)
- | | | | |
|--|----------------------------|--|----------------------------|
| साथी जस्तै (Friendly) | <input type="checkbox"/> 1 | जवाफ दिन कठिनाई (Difficult to answer) | <input type="checkbox"/> 5 |
| तटस्थ (Neutral) | <input type="checkbox"/> 2 | अन्य (खुलाउनुहोस), Other (please specify.....) | <input type="checkbox"/> 6 |
| साथीको ब्यबहार गर्दैनन् (Not friendly) | <input type="checkbox"/> 3 | थाहा छैन (Don't know) | <input type="checkbox"/> 9 |
| मन पराउदैनन् (Hostile) | <input type="checkbox"/> 4 | | |
33. तपाईंको बिचारमा बिदेशमा बसेर काम गर्नेहरू आफ्नो जीवन संग कतिको संतुष्ट छन् (स्वास्थ्य र सुरक्षा, बासस्थान, खाना इत्यादी.....)? (एउटा छान्नुहोस)
(In general, how satisfied do you think, migrants are with their lives abroad? Eg. Health and safety, accommodation, meals, etc..)
- | | | | |
|---|----------------------------|--|----------------------------|
| संतोषजनक छन् (Satisfied) | <input type="checkbox"/> 1 | जवाफ दिन कठिनाई (Difficult to answer) | <input type="checkbox"/> 4 |
| तेती संतोषजनक छैनन् (Not quite satisfied) | <input type="checkbox"/> 2 | अन्य (खुलाउनुहोस), Other (please specify.....) | <input type="checkbox"/> 5 |
| पूर्ण असंतुष्ट छन् (Absolutely unsatisfied) | <input type="checkbox"/> 3 | थाहा छैन (Don't know) | <input type="checkbox"/> 9 |
34. तपाईं बिदेशमा कति पटक नुवाउनुहुन्छ? (एउटा छान्नुहोस) (How often do you have a bath abroad?)
- | | | | |
|--------------------------------------|----------------------------|--|----------------------------|
| दिनहु (Daily) | <input type="checkbox"/> 1 | प्रत्येक दुई हप्तामा एक पटक (Once in a two weeks time) | <input type="checkbox"/> 4 |
| हप्तामा २-३ पटक (2-3 times per week) | <input type="checkbox"/> 2 | महिनामा एकपटक (Once a month) | <input type="checkbox"/> 5 |
| हप्तामा एक पटक (Once a week) | <input type="checkbox"/> 3 | कहिलेकाही (Occasionally) | <input type="checkbox"/> 6 |
35. के तपाईं बिदेशमा प्रत्येकदिनजसो शारीरिक व्यायाम गर्नुहुन्छ? (Do you exercise most days abroad?)
- गर्छु (Yes): ☐1 गर्दिन (No): ☐2
- गर्ने भए के- के गर्नु हुन्छ? (If yes, what exercise you do?)
- हिड्छु (Walk): ☐1 जीम जान्छु (Go to the gym): ☐3
- खेल खेल्छु (Play sports): ☐2 आफै कसरथ गर्छु (Self exercise): ☐4
- काम गर्ने ठाउँमा कसरथ गर्छु (Exercise at work) ☐5

36. के तपाईंले बिदेशमा गत १२ महिनामा आफ्नो काम गर्ने ठाउँमा तल उल्लेखित भनाईहरु भोग्नु भएको छ? (Over the past 12 months abroad, have you personally been subjected at work to....?)

SN	भनाई (Statements)	Yes (1)	No (2)
a	शारीरीक हिंसाको धम्की (Threats of physical violence)	<input type="checkbox"/>	<input type="checkbox"/>
b	आफ्नो काम गर्ने ठाउँका मानिसहरुबाट शारीरीक हिंसा (Physical violence from people from your work place)	<input type="checkbox"/>	<input type="checkbox"/>
c	अन्य मानिसहरुबाट शारीरीक हिंसा (Physical violence from other people)	<input type="checkbox"/>	<input type="checkbox"/>
d	राष्ट्रियता संबन्धि भेदभाव (Discrimination linked to nationality)	<input type="checkbox"/>	<input type="checkbox"/>
e	धर्म संबन्धि भेदभाव (Discrimination linked to religion)	<input type="checkbox"/>	<input type="checkbox"/>
f	अन्य (Other, specify).....	<input type="checkbox"/>	<input type="checkbox"/>

37. के तपाईं बिदेशमा आफ्नो कामको कारणले स्वास्थ्य खतरामा छ, भन्ने ठान्नुहुन्छ? (Do you think your health is at risk because of your work abroad?)

छ (Yes): ☐ 1 छैन (No): ☐ 2 थाहा छैन (Don't know): ☐ 9

38. तपाईंलाई बिदेशमा गरिरहेको कामले आफ्नो स्वास्थ्य सम्बन्धी तलका कुराहरुमा कस्तो असर पारेको छ? (Of the following statements, which of those affected your health due to your work abroad?)

SN	भनाई (Statements)	Yes (1)	No (2)
a	सुन्नमा समस्या (Hearing problems)	<input type="checkbox"/>	<input type="checkbox"/>
b	दृष्टीमा समस्या/ दृष्टीमा कमी (Problems with vision)	<input type="checkbox"/>	<input type="checkbox"/>
c	छालामा समस्या (Skin problems)	<input type="checkbox"/>	<input type="checkbox"/>
d	ढाड दुख्ने (Backache)	<input type="checkbox"/>	<input type="checkbox"/>
e	गर्दन र घाटीका मांसपेशीहरुमा दुखाई (Muscular pains in shoulders and neck)	<input type="checkbox"/>	<input type="checkbox"/>
f	स्वाशप्रश्वाशमा कठिनाई (Respiratory difficulties)	<input type="checkbox"/>	<input type="checkbox"/>
g	मुटु सम्बन्धि रोग (Heart disease)	<input type="checkbox"/>	<input type="checkbox"/>
h	चोटपटक (Injury (ies))	<input type="checkbox"/>	<input type="checkbox"/>
I	टाउको दुख्ने (Headaches)	<input type="checkbox"/>	<input type="checkbox"/>
J	तनाबको महसुस (Feeling tense)	<input type="checkbox"/>	<input type="checkbox"/>
k	निद्रा बिथोलिनु (Sleep disturbance)	<input type="checkbox"/>	<input type="checkbox"/>
l	ध्यान केन्द्रित हुन नसक्नु (Poor concentration)	<input type="checkbox"/>	<input type="checkbox"/>
m	अन्य (Other, specify).....	<input type="checkbox"/>	<input type="checkbox"/>

39. बिदेशमा कार्यरत हुंदाको अंतिम महिनामा तल उल्लेखित प्रश्नहरूमा तपाईंको अनुभव कस्तो भयो? (In the last month that you worked abroad, how often did you feel (see the following questions)?; please tick that apply most to you)

बिचार (Opinion)							
प्रश्नहरू (Questions)	सधै (All of the time)	प्राय समयमा (Most of the time)	जसो कुनै समयमा (Some of the time)	कुनै कुनै समयमा (A little of the time)	कहिलेकाही (None of the time)	कहिल्यै भएन (Don't know)	थाहा छैन (Don't know)
नर्भस (Nervous?)		<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 9 <input type="checkbox"/> 10	<input type="checkbox"/> 11 <input type="checkbox"/> 12
निराशा (Hopeless?)		<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 9 <input type="checkbox"/> 10	<input type="checkbox"/> 11 <input type="checkbox"/> 12
चकचक/चंचल, (Restless/fidgety?)		<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 9 <input type="checkbox"/> 10	<input type="checkbox"/> 11 <input type="checkbox"/> 12
डिप्रेसन (Depressed?)		<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 9 <input type="checkbox"/> 10	<input type="checkbox"/> 11 <input type="checkbox"/> 12
सबै कुरा गार्हो लाग्ने (Everything was an effort?)		<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 9 <input type="checkbox"/> 10	<input type="checkbox"/> 11 <input type="checkbox"/> 12
बिनाकामको (Worthless?)		<input type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> 5 <input type="checkbox"/> 6	<input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 9 <input type="checkbox"/> 10	<input type="checkbox"/> 11 <input type="checkbox"/> 12

40. के तपाईं बिदेशमा काम सम्बन्धि कुनै दुर्घटनामा पर्नु भएको छ? (Have you experienced a work-related accident abroad?)

छ (Yes): ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10 ☐11 ☐12
 छैन (No): ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10 ☐11 ☐12
 थाहा छैन (Don't know): ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10 ☐11 ☐12

यदि छ भने, कुन-कुन दुर्घटनामा पर्नु भएको छ (If yes, what kind of work-related accident?)

सडक दुर्घटना (Road accident)	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12	पोलिनु, (Burn)	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12
काम गर्दा खसेको (Fall)	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12	चोटपटक लाग्नु (Cut)	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12
बिजुलीको झड्का लागेको, (Electric shock)	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12	भाचिनु (Fracture)	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12
ऋदयघात (Heart attack)	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12	अन्य (Others).....	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12
आत्महत्याको प्रयास (Attempted suicide)	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12		

41. (a) तपाईं बिदेशमा कार्यरत हुंदाको पछिल्लो १२ महिनामा कति दिन बिरामी हुनुभयो? (Over the past 12 months working abroad, how many sick days in total have you taken?)
 _____ बिरामी दिन संख्यामा, यदि नभए, प्रश्न नं ४३ मा जानुहोस (Number of sick days..... if no, go to Q.no. 43).

(b) बिरामी हुनाका मुख्य कारणहरु के के हुन र कुन कारणहरुले कति दिन बिरामी हुनुभयो? (What were the main reasons of sickness and how many sick days have you taken?)

कारणहरु (Reasons)	Number of days
काममा दुर्घटना परी (Accident at work)
कामको कारणले स्वास्थ्यमा समस्या देखापरेकोले (Health problems caused by your work)
अन्य कारण (Other reasons)

42. तपाईं बिदेशमा गत १२ महिनामा कति पटक अस्पतालको दुर्घटना तथा आकस्मिक विभागमा जानु पर्यो? (How many times in the last 12 months have you visited an Accident & Emergency Department abroad?)
 _____ पटक (times)

43. बिदेशमा गत १२ महिनामा आफ्नो काम गर्ने ठाउँमा, तपाईंका साथीहरु काम सम्बन्धी कुनै दुर्घटनामा पर्नु भएको छ? (Over the last 12 months, have your friends experienced any work-related accidents abroad?)

छ (Yes): ☐ 1 छैन (No): ☐ 2 थाहा छैन (Don't know): ☐ 9

यदि छ भने, वहाहरु कुन-कुन दुर्घटनामा पर्नु भएको थियो ? (If yes, what kind of work related accidents did they experience?)

सडक दुर्घटना (Road accident)	<input type="checkbox"/> 1	पोलिनु , (Burn)	<input type="checkbox"/> 6
काम गर्दा खसेको (Fall)	<input type="checkbox"/> 2	चोटपटक लाग्नु (Cut)	<input type="checkbox"/> 7
बिजुलीको झड्का लागेको, (Electric shock)	<input type="checkbox"/> 3	भाचिनु (Fracture)	<input type="checkbox"/> 8
ऋदयघात (Heart attack)	<input type="checkbox"/> 4	अन्य (Others).....	
आत्महत्याको प्रयास (Attempted suicide)	<input type="checkbox"/> 5		

44. बिदेशमा गत १२ महिनामा आफ्नो काम गर्ने ठाउँमा, तपाईंको आफ्नो साथीहरु कुनै दुर्घटनामा परी मरे? (Over the last 12 months, have any of your friends died in a work-related accident abroad?)

छ (Yes): ☐ 1 छैन (No): ☐ 2 थाहा छैन (Don't know): ☐ 9

यदि छ भने, साथीहरु कुन-कुन दुर्घटनामा परे? (If yes, what kind of work related accidents did they have?)

सडक दुर्घटना (Road accident)	<input type="checkbox"/> 1	पोलिनु , (Burn)	<input type="checkbox"/> 6
काम गर्दा खसेको (Fall)	<input type="checkbox"/> 2	चोटपटक लाग्नु (Cut)	<input type="checkbox"/> 7
बिजुलीको झड्का लागेको, (Electric shock)	<input type="checkbox"/> 3	भाचिनु (Fracture)	<input type="checkbox"/> 8
ऋदयघात (Heart attack)	<input type="checkbox"/> 4	अन्य (Others).....	
आत्महत्या(Suicide)	<input type="checkbox"/> 5		

45. सामान्यतया, तपाईं बिदेशमा आफ्नो काम गर्ने बातावरण कस्तो छ भन्ने ठान्नुहुन्छ? (एउटा छान्नुहोस्) (In general, how would you rate your working environment abroad? Please tick one).

अति राम्रो (Very good)	<input type="checkbox"/> 1	नराम्रो (Poor)	<input type="checkbox"/> 4
राम्रो (Good)	<input type="checkbox"/> 2	धेरै नराम्रो (Very Poor)	<input type="checkbox"/> 5
ठिकै (Fair)	<input type="checkbox"/> 3		

46. सन् २०१० मा, तपाईंले बिदेशमा जम्मा बार्षिक आम्दानी कति गर्नुभयो? (In 2010, how much did you earn abroad? Indicate your income in Nepalese Rupees). NRs. _____

47. के तपाईं संग जीवन बिमा छ? (Do you have life insurance?)

छ (Yes): ☐1 छैन (No): ☐2 थाहा छैन (Don't know): ☐9

48. बिदेशमा तपाईं संग स्वास्थ्य बिमा छ? (Do you have health insurance abroad?)

छ (Yes): ☐1 छैन (No): ☐2 थाहा छैन (Don't know): ☐9

49. बिदेशमा तपाईं संग स्वास्थ्य (कार्ड/) परिचय पत्र छ? (Do you have health/medical cards abroad?)

छ (Yes): ☐1 छैन (No): ☐2 थाहा छैन (Don't know): ☐9

50. बिदेशमा तपाईं चिकित्सक/ स्वास्थ्य केन्द्रमा दर्ता हुनु भएको छ? (Are you registered with a doctor/health centre in your host country?)

छ (Yes): ☐1 यदि छ भने प्रस्न नं ५१ मा जानुहोस्, (If yes, please go to Q.no.51)

छैन (No): ☐2 यदि छैन भने प्रस्न नं ५२ मा जानुहोस् (If No, go to Q.no. 52)

थाहा छैन (Not sure): ☐9

51. तपाईं गत वर्ष कति पटक चिकित्सक/ स्वास्थ्य केन्द्रमा जानु भयो? (Approximately how many times in the last 12 months have you visited a doctor in your host country?) _____ (पटक) times.

52. चिकित्सक/ केन्द्रमा दर्ता नभएको भए, किन दर्ता नगर्नु भएको हो? (If no, why were not you registered with a doctor/health centre? (Specify reason.....))

53. के तपाईं दीर्घ रोग बाट पिडित हुनुहुन्छ? (मिल्ने जति सवैमा रेजा लगाउनुहोस्)
(Do you have any chronic health problems or conditions? Please tick all that apply):

- A. मधुमेह (Diabetes) Yes: ☐ 1 No ☐ 2
- B. उच्च रक्तचाप (High blood pressure) Yes: ☐ 1 No ☐ 2
- C. उच्च कोलेस्टेरोल (High cholesterol) Yes: ☐ 1 No ☐ 2
- D. दम (Asthma) Yes: ☐ 1 No ☐ 2
- E. अन्य (Others, specify): _____

54. बिरामी हुनुभयो भने, तपाईं पहिले के गर्नुहुन्छ? (सबै भन्दा पहिले गर्ने कुरालाई १, दोश्रो गर्नेलाई २, गर्दै नंबर दिनुहोस् (If you get ill abroad, what would you do first?, please prioritize: 1 for the thing that you will do first, 2 for the second option,))

प्राथमिकता Priority (1-5)

- साथी वा परिवारको मान्छेसंग उपचारको सल्लाह माग्छु (Ask a friend or family for medical advice) _____
- आँफै औषधी (डाक्टरी दवाई) खान्छु (Self medication) _____
- कंपनीको नर्स संग सल्लाह लिन्छु (See a company nurse) _____
- सरकारी अस्पतालमा जान्छु (Go to government hospital) _____
- औषधी पसले (फार्मासिस्ट) संग सल्लाह लिन्छु (See a pharmacist) _____
- अन्य (खुलाउनुस्) (Others, please specify:)

55. तपाईंलाई बिदेशमा लाग्ने मुख्य समस्या/चिन्ताको विषय के हो? एउटामा मात्र चिन्ह लगाउनुहोस् (What is your main concern or worry about working abroad? Tick the most important one only).

- सामाजिक सहयोगको अभाव (Lack of social support) ☐ 1
- आर्थिक समस्या/कठिनाई (Economic hardship) ☐ 2
- मेसिन जस्तो काम गर्नु पर्ने, (Mechanistic lifestyle) ☐ 3
- मौसम (Climate) ☐ 4
- काम गुम्छकी भन्ने डर (Fear of losing job) ☐ 5
- अनिश्चित भबिस्य (No future) ☐ 6
- अन्य (खुलाउनुस्) (Others, please specify:)

56. के तपाईं बिदेशमा नेपाली समाज, संगठन, सांस्कृतिक समूह आदिसंग संबन्धित

हुनुहुन्छ? (Are you associated with any social communities (social organisation/cultural associations/etc.) abroad made up by people from your country?)

छु (Yes): ☐ 1 छैन (No): ☐ 2

यदि छ भने, खुलाउनुस् (If yes, please specify.....)

तपाईंको अमूल्य सहयोगका लागि धेरै धेरै धन्यवाद। यो अध्यनको पहिलो भाग हो। मैले अध्यनको दोश्रो भागमा सोही मुलुकहरुमा कार्यरत नेपाली पुरुषहरुको केही बिस्तृत अध्यन गर्नेछु। यदि तपाईं बिस्तृत अध्यनको लागि उत्सुक हुनुहुन्छ भने कृपया नाम र फोन नंबर दिनुहोला। जवाफ बेनामी हुनेछन् र यसमा भएका संपूर्ण जानकारी अति गोप्य रहनेछन्। (Thank you very much for your help. This is a first part of this study, In the second part of the study, I will go further depth into some of the issues that we have talked in the first part of the study. Please if you are interested in further interview, could you confirm your name and phone number? This information will be kept always confidential and your name will not appear in any report).

अन्तरबार्ता दिने ब्यक्तिको नाम (Name of interviewee):.....

फोन नंबर (Phone no):.....

सम्पर्क ठेगान (Contact address):

Pratik Adhikary

Bournemouth University, UK

Phone No: 44 1202962704 (office), 4407846753082 (cell) – UK, 9841500302 (cell)

Kathmandu, Nepal.

Email: padhikary@bournemouth.ac.uk or adpratik@hotmail.com

Appendix 3 – Final Ethical Approval Letter



Nepal Health Research Council

Estd. 1991



NHRC

Ref. No. 462

Executive Committee

Executive Chairman

Dr. Chop Lal Bhusal

Vice - Chairman

Dr. Rishi Ram Koirala

Member-Secretary

Dr. Shanker Pratap Singh

Members

Dr. Narendra Kumar Singh

Dr. Meeta Singh

Dr. Suman Rijal

Dr. Samjhana Dhakal

Dr. Devi Gurung

Representative

Ministry of Finance

National Planning Commission

Ministry of Health & Population

Chief, Research Committee, IOM

Chairman, Nepal Medical Council

30 November 2010

Mr. Pratik Adhikary

Principal Investigator

Bournemouth University

School of Health and Social care, UK

Ref: Approval of Research Proposal entitled **Health status of and risks to Nepalese male migrant workers in the Middle East and Malaysia**

Dear Mr. Adhikary,

It is my pleasure to inform you that the above-mentioned proposal submitted on dated 24 Oct 2010 has been approved by NHRC Ethical Review Board on 28 November 2010 (2067-08-12).

As per NHRC rule and regulation, the investigator has to strictly follow the protocol stipulated in the proposal. Any change in objective(s), problem statement, research question or hypothesis, methodology, implementation procedure, data management and budget that may be necessary in course of the implementation of the research proposal can only be made so and implemented after prior approval from this council. Thus, it is compulsory to submit the detail of such changes intended or desired with justification prior to actual change in the protocol.

Further, the researchers are directed to strictly abide by the National Ethical Guidelines published by NHRC during the implementation of your research proposal.

As per your research proposal, your research is self-funded and NHRC processing fee is US\$ 100.

If you have any questions, please contact our research section.

Thanking you.

Sincerely Yours,

Dr. Shanker Pratap Singh
Member Secretary



Nepal Health Research Council

Estd. 1991

NHRC

Ref No. 1150

Executive Committee

Executive Chairman
Prof. Dr. Chop Lal Bhusal

Vice - Chairman
Dr. Rishi Ram Koirala

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Members
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Dr. Sanjhana Dhakal
Dr. Eevi Gurung

Representative
Ministry of Finance
National Planning Commission
Ministry of Health & Population
Chief, Research Committee, IOM
Chairman, Nepal Medical Council

14 May 2012

Mr. Pratik Adhikary
Principal Investigator
Bournemouth University
School of Health and social care
Bournemouth, UK

Subject: Amendment of the research proposal entitled Health Status of and Health Risks among Nepalese Migrants in the Middle East and Malaysia

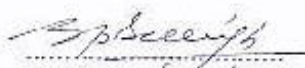
Dear Mr. Adhikary,

In reference to your letter, dated 23 March 2012 the meeting of the Ethical Review Board of Nepal Health Research Council held on 9 May 2012 (2069-01-27) has decided to approve the requested amendment of above-mentioned research project.

If you have any questions, please contact the research section of NHRC.

Thanking You

Yours Sincerely,


Dr. Shanker Pratap Singh
Member-Secretary

Appendix 4: Codebook (Table 4.4-4.6)

Table 4.4: Codebook indicating the original variables and coding in the questionnaire administered to Nepalese migrant workers, Nepal 2011 and how they were re-coded as explanatory variables for analysis

Explanatory Variables	Original coding used in questionnaire	Re-coding for analysis
<i>Demographic variables</i>		
Age	Open ended responses	0=20-29 years 1=30-39 years 2=40+ years
Ethnicity	1= Brahmins/Chhetri 2= Gurung 3= Tamang 4= Rai 5= Newar 6= Magar 7= Sherpa 8= Limbu 9= Others	0= Brahmins/Chhetri 1=Others (Gurung, Tamang, Rai, Newar, Magar Sherpa, Limbu, Terai caste, Chaudhary)
Marital Status	1= Married 2= Unmarried 3= Widowed 4= Divorced/separated	0= Married 1= Unmarried (no cases reported 'widowed' and 'divorced/separated')
Satisfaction with accommodation abroad	1= Satisfied 2= Not quite satisfied 3= Absolutely unsatisfied 4= Difficult to answer 5=Other 9=Don't know	0= Satisfied 1=Not quite satisfied/absolutely unsatisfied/difficult to answer (no cases reported 'other' and 'don't know')
Education	1= None 2= Primary 3= Sec/SLC pass* 4= I.A/I.Ed/ISc/10+2* 5= University	0= Sec/SLC/HS* (no cases reported 'University') 1= Primary 2= No

Table 4.4: Continued.

<i>Occupation and socio-economic characteristics</i>		
Occupation	1= Plumbers 2= Carpenters 3= Painters 4= Plasters 5= Bricklayers 6= Labourers 7= Others (Electrician, crane operator, team leader, supervisor, steel fixer etc.)	0= Semi-skilled job (plumbers, carpenters, painters, bricklayers, factory workers, electrician, crane operator, team leader, supervisor, steel fixer) 1= Unskilled job (labourers)
Self-rated Work environment	1= Very good 2= Good 3= Fair 4= Poor 5= Very poor	0= Very good/good/fair 1= Poor/very poor
Country of work	1= Qatar 2= Saudi Arabia 3= Bahrain 4= Malaysia	0= Malaysia 1= Middle East* (Qatar, Saudi Arabia; no cases reported 'Bahrain')
Duration of stay abroad in years	Open ended responses	0=<4 years 1= \geq 4 years
Work hours (average per week)	Open ended responses	0= \leq 70 hours 1=>70 hours
Income in Nepalese Rupees (per annum)	Open ended responses	0=>150000 1= \leq 150000
Health Insurance	1= Yes 2= No 9= Don't know	0= Yes 1= No/Don't know
Doctor Registration	1= Yes 2= No 9= Don't know	0= Yes 1= No/Don't know

Table 4.4: Continued.

Perceived Health Risks at work	1= Yes 2= No 9= Don't know	0= No/Don't know 1= Yes
<i>Health and Lifestyle Characteristics</i>		
Self-reported perception of quality of diet	1= Very good 2= Good 3= Fair 4= Poor 5= Very poor	0= Good/fair (no cases reported 'Very good') 1= Very poor/poor
Current smoking status abroad	2= Non-smoker 1= Smoker	0= Non-smoker 1= Smoker
Current drinking status abroad	2= Non-alcoholic 1= Alcoholic	0= Non-alcoholic 1= Alcoholic
Take part in exercise most days	1= Yes 2= No	0= Yes 1= No

*Sec=Secondary; SLC=School Leaving Certificate; HS=Higher secondary including Intermediate in Arts (I.A), Intermediate in Education (I.Ed), Intermediate in Science (ISc)/10+2.

Table 4.5: Codebook indicating the original variables and coding in the questionnaire administered to Nepalese migrant works, Nepal 2011 and how they were recoded as outcome variables for analysis

Outcome variable	Original coding used in questionnaire	Re-coding for analysis
Self-reported health status	1 = Very good 2 = Good 3 = Fair 4 = Poor 5 = Very poor	0 = Good/fair (no cases reported 'very good') 1 = Very poor/poor
Perceived health risks at work	1= No 2 =Yes 9 =Don't know	0 = No/Don't know 1 = Yes
Accident ever happened at work	1 = No 2 = Yes	0 = No 1 = Yes
Health care utilisation (visited doctor in previous 12 months)	1 = No 2 = Yes	0 = Yes 1 = No

Table 4.6: Codebook indicating the original variable and coding in the questionnaire administered to Nepalese migrant works, Nepal 2011 and how they were recoded as outcome variable (i.e. mental health) for analysis

Outcome variable	Original coding used in questionnaire							Re-coding for analysis
In the last month abroad, how often did you feel?		All of the time	Most of the time	Some of the time	A little of the time	None of the time	Don't know	0=No* 1=Yes*
	Nervous	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	
	Hopeless	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	
	Restless	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	
	Depressed	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	
	Everything was an effort	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	
	Worthless	<input type="checkbox"/> 1	<input type="checkbox"/> 2		<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	

*Yes included the response of any mental health problems with multiple choice e.g. all of the time, most of the time, some of the time, a little of the time; No included none of the time

Appendix 6 – Interview Guide

Background of the study **mins**

10-

a) Respondent Introduction

Tell me a little about yourself.....

- Home life in Nepal, life style (Before going to abroad)
 Prompt: Who did you live with/family?, Food/fruits/smoking/drinking, Living condition (good/bad), Job status (employed/unemployed), Health condition (healthy/unhealthy)
- Overall, how happy were you in Nepal before going to work abroad?
 - What do you understand by “happy/unhappy”?
 - Please explain in detail.

b) Host country /experience

Tell me a little bit about your experience related to host country.....

- How would you describe your experience of working in (= country)?
 (Prompt: good/bad experience, very difficult, busy life/long working hours, senior staff/local people are not friendly).
 - What do you mean by.....?
 - Would you explain that further?
 - Why do you work in?
 (Prompt: money, unemployment in Nepal, better than elsewhere, gain experience)
- How do our fellow Nepalese workers describe their lives abroad?
 (Prompt: very difficult, risky job, working in high temperature, most of them are unhappy, senior staff/local people are not friendly)

 Why do you think so?
 - Can you elaborate a little more?
- What would improve your life abroad as a Nepali citizen?
 - Could you please give me some examples?

- How do you spend your leisure time abroad?
(Prompt: walking, watching TV, cinema, meeting friends, restaurant)
- What do you mean?
- Why do you do this?

2.Research Topics

45

A. Working condition

Tell me about your experience of working abroad.....

- What do you think about your working environment abroad?

If the respondent can't say anything, say... (some people have said the working environment is not very good, difficult to work, dangerous, long working hours, working in high temperature - is that your opinion)?
- What do you mean by....?

• Could you please explain in detail?
- What are the main risks in your work place abroad?

• What do you mean ?

• Can you tell me more?
- What do you think your health is at risk because of your work abroad?
Could you please give me some examples?
- I notice you have had a number of accidents at work, could you please describe what happened in one for me?

• Tell me the story.
(Prompt: when did it happen?, who else was involved?, where did it happen?, how did it happen?, how did you feel about this situation/accidents?)

• Please elaborate in detail.
- What do you think about the main reasons of that accidents abroad?
(Prompt: Your negligence, poor safety, lack of training, other reasons)

• Please describe in detail.

- Do you know who has assisted you during that time?
- Some people have said, migrant workers are facing work-related accident on their work-place, what is the situation of our fellow Nepalese workers?
 - Tell me the story of experience of accidents among Nepalese workers?
 - Please describe in detail.
- Do you have any suggestions on how to improve working environment to minimize these accidents in the future abroad?

C. Living condition

Tell me about your experience to your living condition.....

- How would you describe your accommodation in your host country?
 - What do you mean by?
 - Could you say some more about that?
 - How could this be improved?
- How easy or difficult do you find it to live in host country?

D. Health status/health experience

Tell me about your general health status/experience.....

- How is your general health abroad?
 - What do you mean?
 - Can you tell me more?
- What would most improve health of migrant workers abroad? (include all Nepalese migrant workers)

E. Access & Use of Health Services

Tell me about access & use of health services abroad.....

- How would you describe the health services abroad?

- What do you mean?
- Can you tell me a little bit more?
- How could it be improved?
- How would you describe the health services that have you used over the last 12 months abroad?
 - Why do you think so?
 - Please tell me in detail.
- I notice that you have been in accident & emergency department in your host country, so, could you please tell me why did you go accident & emergency department? (if they have gone)
 - Can you please elaborate?
- How easy or difficult do you find it to access and use health services in your host country?

3.Summary

5 mins

Summarise conversation

- Is there anything else related to working abroad?
- Do you want to ask me anything?

Thanks and close

Appendix 7 - General Risk Assessment Form

57. *Bournemouth University General Risk Assessment Form Your Reference No:*

58. *Notes:*

Before completing this form, please read the associated guidance on 'I: Health & Safety/Public/Risk Assessment/[Guidance](#)'.

9. Use this form for all risks except from hazardous substances, manual handling & Display Screen Equipment (specific forms are available for these).

If the risk is deemed to be 'trivial' there is no need to formally risk assess.

All completed forms must give details of the person completing the assessment.

Risk assess the activity with its present controls (if any) -then re-assess if action is to be taken and after further controls are put in place.

The completed form should be kept within the School/Service/Department.

1. Describe the Activity being Risk Assessed:

The study involves face-to-face interviews and questionnaires administered to Nepalese migrant workers as they go out to work in the Middle East and Malaysia or as they return to the International Airport in Kathmandu, at hotels and lodges nearby the airport. The Ph.D. student will be living in Kathmandu for periods of two to three months for data collection. The student will stay with relatives in Kathmandu at a secure place.

2. Location(s): Research sites are: at Kathmandu International Airport, and in hotels and lodges near airport in Nepal.

3. Persons at potential Risk (e.g. Specific Staff only, General Staff, Students, Public etc.):

Student: Pratik Adhikary

4. Potential Hazards i.e. What Could Happen? (NB: List hazards without considering any existing controls):

Nepal has experienced a political crisis for many decades, but now has reached a new level of intensity. Although some events are happening on the southern and western part of the country, there is a good security in Kathmandu city. However, there are infrequent strikes, political rallies and demonstrations that can't be violent and cause widespread disruption.

Potential Hazards to researcher include:

- Political tensions (shutdowns, rallies and demonstrations).

- Health problems, these are the general ones related to a developing country in Asia, such headache and coughs (due to pollution in the city) and diarrhoea (due to contaminated food and drink).

- Difficulty to find specific venues especially hotels and lodges to meet participants as there

is no proper street name system in Kathmandu.

- Risks inherent in the travel from UK to Nepal (visa problem, travel insurance)
- Injured in road traffic accident during field work (accommodation to research site).

5. Control Measures Already In Place:

Prior relevant experience:

The Ph.D. student (researcher) is a native Nepali speaker who is familiar with the local environment. Furthermore, he has also been involved in similar survey research in Kathmandu city.

Research activities:

Research activities will involve meeting with study participants at the International Airport, nearby hotels and lodges. An approach will be developed with a member staff of the Airport, hotel and lodge to develop and maintain a good relationships and a friendly working environment. Conducting interviews in unfamiliar place will be avoided.

The Ph.D. student has an informal network of friends who will share informal security information about Kathmandu city. Phone and SMS communication will be maintained with the friends and family in Kathmandu throughout the day reporting arrival at interview spot and each movement to a different location/arrival home. Mobile phone with charged battery will be carried all times.

The Ph.D. student will have a regular weekly communication with his supervisory team via email on a pre-specified day. If there is no communication then the supervisory team will have a list of contacts and instructions as to the course of action to take.

Minimising risk in travel:

Shutdowns, rallies and demonstrations are normally well advertised as political parties want the publicity that comes with it, and therefore they can usually be avoided.

Congested areas of the city will be avoided as much as possible.

Travelling alone after midnight across the city will be avoided.

Minimising health risks:

Immunisations are kept up to date

Avoid junk food and consume only home-made food and food from familiar restaurants.

Drink boiled or bottle water

Call for immediate medical assistance, provision of communication for example, telephone, mobile phone etc to contact friends and family.

There is no health insurance in Nepal, but care is free for check-ups, but individuals pay for blood test, drugs, etc. and the research student travel insurance will cover these costs.

Minimising general risks:

The Ph.D. student is familiar with the political situation of country, can judge local condition, take advice and support from local people, friend and family.

The Ph.D. student has a number of relatives and friends living in areas with good security in Kathmandu city. He will share a house with a relative.

Find out the venue in advance by asking participants or by using maps.

The Ph.D. student has a Nepali passport, does not require a visa to travel Nepal, provisions of travel insurance.

6. Standards to be Achieved: (if necessary, refer to Guidance on Risk Assessment)

Nepal Health Research Council guidelines.

Additional comment:

Although there are significant risks involved in data collection in Kathmandu, the Ph.D. student has been familiar with the local environment for more than 10 years. He has family and friends in Kathmandu who share information and support and care each other. Furthermore, minimizing factors mentioned above will also help to minimize potential risks.

7. Are the risks adequately controlled (bearing in mind 4. & 5.)? **Write ‘Yes’ or ‘No’:**
Yes.

If **Yes**, Step 8: Ensure that those affected are informed of the Risks and Controls:

Confirm how you have done this (e.g. written instructions): Did my own assessment, hence I am informed.

Then, complete boxes below and the assessment is finished until the review date(s):

9. Person(s) Who did Assessment:	10. Pratik Adhikary	10. Date:	09/11/2010	11. Review Date:	
12. Checked By: (as necessary)	Steve Keen	13. Date:	13/12/2010	14. Review Date:	

If **No** to Qu 7, go to next section and estimate ‘Residual Risk’.

Estimating the Residual Risk:

15. Choose a category that best describes the degree of harm which could result from the hazard, then choose a category indicating what the likelihood is that a person(s) could be harmed.

Check only **ONE** box within the table which matches both of your choices.

11. Degree of harm 12. 13. likelihood	59. Slightly Harmful 60. (e.g. minor injuries such as minor cuts/bruises not always requiring first aid)	61. Harmful 62. (e.g. serious but short-term injuries such as broken bones or curable disease)	63. Extremely Harmful 64. (e.g. would cause fatality, major long-term injuries or incurable disease)
Highly Unlikely	Trivial Risk <input type="checkbox"/>	Tolerable Risk <input type="checkbox"/>	Moderate Risk <input type="checkbox"/>
Unlikely	Tolerable Risk x <input type="checkbox"/>	Moderate Risk <input type="checkbox"/>	Substantial Risk <input type="checkbox"/>
Likely	Moderate Risk <input type="checkbox"/>	Substantial Risk <input type="checkbox"/>	Intolerable Risk <input type="checkbox"/>

14.	16. Then note the advice below on suggested action and timescale	
Residual Risk Level	Risk	Action and Timescale
Trivial <input type="checkbox"/>	Risk	No action is required and no documentary records need to be kept.
Tolerable X	Risk	No additional controls are required. Consideration may be given to a more cost-effective solution or improvement that imposes no additional cost burden. Monitoring is required to ensure that the controls are maintained
Moderate <input type="checkbox"/>	Risk	Efforts should be made to reduce the risk, but the costs of prevention should be carefully measured and limited. Risks reduction measures should be implemented within a defined period. Where the moderate risk is associated with extremely harmful consequences, further assessment may be necessary to establish more precisely the likelihood of harm as a basis for determining the need for improved control measures.
Substantial <input type="checkbox"/>	Risk	Work should not be started until the risk has been reduced. Considerable resources may have to be allocated to reduce the risk. Where the risk involves work in progress, urgent action should be taken.
15. Intolerable Risk <input type="checkbox"/>		Work should not be started or continued until the risk has been reduced. If it is not possible to reduce the risk even with unlimited resources, work has to remain prohibited.

17. If 'Moderate' 'Substantial' or 'Intolerable': What New Control Measures are to be Considered to reduce risk?	18. Referred to:	19. On Date:
20. <u>Ensure those affected are informed of the Risks & Controls</u> Confirm how you have done this e.g. written instructions: The Ph.D. student is aware of the risks and controls having completed the assessment and		

the assessment has been discussed with supervisors.					
21. Person(s) Who did Assessment:	Steve Keen & Edwin van Teijlingen	22. Date:	28/3/2011	23. Review Date:	
24. Checked By: (as necessary)		25. Date:		26. Review Date:	

Appendix 8 – Participant Information Sheet



Participant Information Sheet (To be translated in Nepali)

Title of Research:

The Health of Nepalese Migrant Construction Workers in the Middle East and Malaysia

Invitation paragraph:

You are being invited to take part in my study. Here is some information that helps to decide whether or not you to take part. Please take a time to read the following information carefully. Please ask me if there is anything that is not clear or you would like more information. Thank you for reading this.

Researcher: Pratik Adhikary, Bournemouth University, England.

The main purpose of this study is to explore and examine the general health status of and health risks to male Nepalese migrant construction workers in the Middle East and Malaysia.

Why have I been chosen?

You have been requested to take part in this study because you have been worked in the construction sector for at least six months in the Middle East and Malaysia.

Do I have to take part?

Participation is completely voluntary. It is up to you to decide whether or not to take part. If you decide to take part you are still free to withdraw at any time and without giving a reason.

Will my taking part in the study be kept confidential?

All details will be kept completely confidential. No one else other than the research team will have access to your details. The study results will be presented in such a way that all individuals will be completely anonymous.

What will the study involve?

A structured questionnaire was designed and will be given to male Nepalese migrant construction workers to explore their experiences and expectations of working abroad.

What do I have to do?

You are invited to complete the questions on the questionnaire. This information is confidential. Should you be willing to do so I would like to ask some more questions in-depth in the future. I will ask you separately for this further study.

What are the possible risks and disadvantages of taking part?

There are not any sensitive, difficult to answer or upsetting questions in the set of questionnaire. Both the questionnaires and the interviews are kept confidential; no recognisable details of you will be reported in this study.

What are the possible benefits of taking part?

There are no direct benefits for you. In the long term, the finding of the study may feed into policies related to migration and health and healthy working environment for both migrants sending and receiving countries that ultimately beneficial for existing migrant workers or future migrant workers.

What will happen to the results of the research study?

The results of this study will be a robust presentation of information for the Nepalese government and policy makers concerned with migration worldwide. Policy makers and planners will utilize the research findings to formulate national and international plans and policies for the welfare of Nepalese migrant workers working abroad, particularly in the Middle East and Malaysia. In addition to this, the findings of this study will be disseminated in the form of articles, papers and at conferences to share knowledge on the topic.

Who is funding the research?

Self-funding

Who has reviewed the study?

The study has been reviewed by Bournemouth University, School of Health and Social Care and the study has also obtained ethical approval from Nepal Health Research Council (NHRC).

For additional information please contact:

Pratik Adhikary, Research student, Bournemouth University.

Email: padhikary@bournemouth.ac.uk Local Nepal mobile number: 009771984150302

You can also approach my Ph.D. supervisor in England by email: @
vanteijlingen@bournemouth.ac.uk
skeen@bournemouth.ac.uk

Appendix 9 – Informed Consent

INFORMED CONSENT

I am Pratik Adhikary, a Nepalese student at Bournemouth University, UK. I am conducting a research study to ask migrant male workers about health issues at their work place in the Middle East and Malaysia. I would very much appreciate your participation in this survey. I would like to know more about your working and living experiences in abroad. This information will help the government to make further plans on the health issues of migrants working abroad. If you agree to take part, it will probably take about 30-40 minutes. I have a number of questions I would like to ask you but I would also like to hear about anything else you feel is relevant. I will be writing down your answers but the information you provide will be kept strictly confidential and will not be shown to other persons. Participation in this study is voluntary, and if I ask you any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, I hope that you will participate in this study since your views are very important. If you would like more information about this study, please contact on (0097714364942) (Note: You can only take part if you are aged 18 or over).

At this time, would you like to ask me anything about this study?

Would you like to take part in the study?

Signature of interviewer:

Date:

Language of Interview:

RESPONDENT AGREES TO BE INTERVIEWED:

Start the interview

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED

End the interview.

Appendix 10: Academic publication based on Ph.D. study

Health Issues among Nepalese migrant workers in the Middle East

Pratik Adhikary ¹, Steven Keen ², Edwin van Teijlingen ³

1. MSc, MA, PhD Student, School of Health & Social Care, Bournemouth University, UK
2. PhD, MA, BA (Hons), Senior Lecturer in Research, Centre for Social Work & Social Policy, Bournemouth University, UK
3. PhD, MEd, MA (Hons), Professor, Maternal & Perinatal Health, School of Health & Social Care, Bournemouth University, UK

Abstract

Background: There is little specific published research which examines the health issues among Nepalese migrant workers in the Middle Eastern countries. In particular, it examines the nature and quality of health care situation, work-related health risks, working condition and living condition in host countries.

Aim: This study reviewed the literature about work-related health risks, access to health care, working and living condition of Nepalese migrant workers in the Middle East.

Method: The published literature was searched through electronic databases such as CINAHL and Medline using a number of key words and their combinations, and the searching of published books and reports from number of UN agencies. Bibliographies of published articles retrieved from electronic database searches were searched in turn, and relevant articles retrieved for further review.

Results: This review of the literature suggested that being a migrant worker involves number of specific risks, including anxiety, depression, tuberculosis and eye injury. In addition to this, work-related accidents and injury, headache, suicide attempts, cardiac arrests, mental illness and high death rates are further evidence of health risks among Asian migrant workers working in the Middle East. Furthermore, these workforces generally have poor working and living conditions.

Conclusion: Migrant workers mainly from Nepal and other Asian countries, working in the Middle East face various work-related risks including accidents at work; stress and mental health issues and lifestyle related factors such as illegal drinking. Thus, future research needs to focus attention on minority ethnic groups in the Middle Eastern countries.

Key words: immigrants, emigrants, migration, health risks, Nepal, Middle East, construction, agriculture, mining

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Background

An estimated three percent of the global population moves outside their country of birth, often for economic reasons¹. International mobility has more than doubled over the past four decades, increasing from about 82 million in 1970 to 200 million in 2005². Migrants move to both developed and developing countries. Nevertheless, a majority (60%) settles in developed countries. The largest single majority of migrant has settled in Europe, followed by Asia and North America; in 2000, Europe received 56.1 million migrants, Asia 49.9 million, North America 40.8 million, Africa 16.3 million, Middle East around 16.00 million³, Latin America 5.9 million and Australia 5.8 million migrants².

Looking at individual host countries, it is clear to see that the majority appear to settle in the USA (United States of America) (20%) followed by the Russian Federation (7.6%), Germany (4.2%), Ukraine (4%) and India (3.6%)². Approximately one-third of all migrants live in only seven developed countries. Although the vast majority of migrants have moved legally, some migrate illegally. For example, approximately 200,000 unskilled migrants entered Japan illegally during the 1980s and 1990s⁴. It is interesting that there are nearly as many female migrants (48.6%) as males⁵. The proportion of female emigrants is higher than men from Latin America, North America, Oceania, Europe and the former Soviet Union². Considering the countries from where migrants originate from, in 2000 some 35 million people migrated from China, followed by India (20 million) and the Philippines (7 million)². It is estimated that nearly half (100 million) of the 200 million people living outside their country of birth, are economically active and engaged in the workforce. The foreign-born workforce in western European countries appear to be lower (e.g. 15% in Ireland, 25% in Switzerland and 40% Luxembourg)⁶ than the foreign-born workforce in some Middle Eastern countries (e.g. 90% in UAE and Qatar and 60% in

Bahrain and Saudi Arabia)⁷. The paper reviews academic literature around migrant labour in the Middle East, focusing in particular on the health status and risks of Nepalese migrant workers.

Materials and methods

Electronic databases, for example, Medline, Global Health, CINAHL and Google Scholar were accessed to search for electronic journals and reports using keywords such as immigrants, migration, health risks, Nepal, Middle East, construction, agriculture and mining. Likewise, relevant reports and papers published on websites pages from the World Health Organization (WHO), the Human Development Report (HDR), the International Labour Organisation (ILO), the United Nations Population Fund (UNFPA), and the United Nations Development Programme (UNDP) were also accessed for relevant reports and papers. Published and unpublished organisational reports and other relevant articles have also been included in this review paper. The review covers the period 1984-2010.

Reasons for migration

Prospects of better opportunities and earning a guaranteed income to support one's family are key reasons for migration, especially for emigration from the developing countries⁸. The Middle East is one of the major migrant receiving regions of the world. Millions of Asian migrants immigrated to the Middle East due to the oil boom in the early 1970s. By the 1980s, the majority of temporary workers (over 80%) in the Middle East had come from Asia (20% from India) compared with just 13% from elsewhere in the world^{9,10}. Similarly, in 2004, almost 7 out of ten of the workforce in the Gulf States: Saudi Arabia, Kuwait, Bahrain, Qatar, the United Arab Emirates (UAE) were foreigners - taking Qatar and UAE by themselves, 90% of their workforce are foreigners⁵. The participation of women in the workforce in Gulf countries is far less than that of men. In 2004, between 10-25% of foreign women

were part of the expatriate workforce, whereas only 2-10% of women nationals were part of the workforce in these countries⁵. Host countries often perceive migrants as exploitable, cheap and flexible labour and employ them in 3-D jobs - Dirty, Dangerous and Degrading⁶. Underpaid and without workplace safety and health protections, migrants are easily hired and fired; put another way, there are vulnerable⁶.

Migrants' Health status and risk

Migrants are also vulnerable in terms of their health status. Migration has created health care challenges in both countries of origin and destination. Migrants can face serious health problems due to discrimination, language and cultural barriers, their legal position, and their low socio-economic status¹¹. Their previous medical history, nature and quality of health care and the social and health characteristics of re-settlement can also determine the health status of migrants¹². Migrants' health status is also a function of the policies and practices that surround migration¹². One New Zealand study has revealed that the increased anxiety and depression among immigrants can be due to feelings of discrimination, lack of close friends, unemployment and spending most of their time with their own ethnic group¹³. A recent study concerning the health and lifestyle of Nepalese migrants in the United Kingdom (UK) has found that migrants with low levels of education and poor immigration status (e.g. refugee/asylum seeker) are more likely to lack good dental hygiene and regular exercise¹⁴. A study about Nepalese migrants in India has suggested that migrants (male labour migrants and female sex workers) who have returned from India are highly vulnerable to HIV and AIDS¹⁵.

Research in India has highlighted that an increasing prevalence of skin diseases among migrant construction workers, who work in a hot and humid climate and in over crowded and unhygienic working conditions¹⁶. Asian migrant construction workers working also face a higher risk of

occupational accidents compared with the general population¹⁷. Several studies in the USA have revealed that migrant farm workers confront high risks of tuberculosis, eye injury and pain^{18,19}. Migrant workers working in mining industries also face adverse health conditions. Indian gypsum mine workers face a high risk lung function impairment, pulmonary restrictive impairment, musculoskeletal symptoms, hypertension and diabetes²⁰. And a study of men from Botswana working in South African's mining industry has highlighted revealed that the majority of workers have had tuberculosis and a disabling occupational injuries²¹.

Migrant workers in the Middle East

Similar to other countries receiving large number of immigrants, migrants in the Middle-East also face difficulties in adjusting to their new society including adopting safe and healthy lifestyles. A study of Middle Eastern immigrants from Asia has found that migrants from poorer groups are at a higher risk of mental illness due to their living and working conditions²². Moreover, female migrant workers are at a high risk of physical, sexual and verbal abuse^{22,23}. A review on occupational injuries in Bahrain has revealed that immigrants work with high risks of having accidents than national workers and that this risk is high still for immigrant construction workers¹⁷. Research carried out among Filipino home-care workers in Israel has concluded that workers are at a high risk of workplace injuries, verbal abuse and hunger²⁴. A further study with Israeli Arabs has shown that HIV prevalence is lower in Arab Israelis than it is in non-Arab Israelis and Arabs residing in neighbouring countries²⁵. Similarly, the proportion of the prevalence of pulmonary tuberculosis among migrant workers in Kuwait is higher than the general population²⁶.

Prevalence of mental health symptoms and higher levels of anxiety, depression and posttraumatic stress have been found in Iraqi refugees, more so than in the general USA population²⁷. The prevalence

of tuberculosis among Asian migrants (mainly from India, Pakistan and Nepal) working in Qatar's garment industry is high²⁸. Similarly, lower urinary tract symptoms, especially storage symptoms, are common in young male immigrants (mostly of Indian origin) in Qatar²⁹. In addition, a study of immigrants in food handling occupations has revealed that those immigrants from the Indian sub-continent and the Philippines are more likely to carry hookworms³⁰. A recent study about Nepalese migrants in the Middle East has shown that migrants working in agricultural and construction industries are at a higher risk of accident and injury³¹. Likewise, another observational study among Nepalese workers in Qatar has found that Nepalese are importers of Hepatitis E in Qatar³². News from the popular press based on the case histories and experiences of female migrants returning from Gulf countries highlight that they can be physically, mentally and sexually exploited by employers and suffer from mental disorders, such as psychoses, severe depression and schizophrenia; most women do not have a limit on their working hours and are often not paid the salary agreed with the recruitment agency prior to their departure³³.

Nepalese migrant workers

There are an estimated 2.2 million Nepalese migrant workers, many of whom work in India, however, a large number work in the Middle Eastern oil industry³⁴. There are several serious cases of the situation of Nepalese migrants working in unauthorized countries without any legal or social protection by the host countries, for example, the massacre of twelve Nepalese workers by an Iraqi extremist group in 2004³⁵. Moreover, more than five hundred Nepalese migrant workers have died in the Gulf region owing to workplace-related accidents and mental illness (including suicide), poor labour conditions (e.g., a lack of safety standards and formal labour relations). These may have contributed to higher mortality rates for Nepalese migrants in this region³⁶. More recently, 24 Nepalese workers died in Qatar in a five week period

due to cardiac arrests, respiratory diseases, kidney failure, heart attack, road accidents and committed suicide³⁷. Media coverage about migrant workers in Qatar has included the death of 12 Nepalese and 11 Indian cleaners on a capsized ship also in 2009³⁸.

Work-related accidents, deaths and suicides are common in the Gulf countries. It is estimated that two Asians die per day on the Dubai construction sites and one case of suicide occurs every four days³⁹. There were 67 Indian suicides in Dubai and the northern emirates in 2004 where as in UAE 100 Indians died in a twelve month period between 2005 and 2006³⁹. Independent research has found that 880 migrant construction workers (India - 460; Pakistan - 375; and Bangladesh - 45) died in UAE in 2004, yet the Dubai Municipality recorded only 34 deaths in the same period⁴⁰. During the same period, the total number of deaths of Nepalese migrants in UAE was 30, but in 2005 just one construction-related death was reported. Again, during 2005, the Embassy of Nepal in UAE reported the deaths (cardiac arrests) of 13 immigrants, seven suicides, seven fatal road accidents and two deaths of unknown causes³⁹.

Anecdotal evidence has suggested that the reason for the high mortality rates of Nepalese workers is because of excessive intake of home made alcohol and the risky nature of many jobs. The most recent study about Nepalese migrants in the Middle East has found that many Nepalese have been working in risky occupations (e.g. agricultural and construction work) and about one in four migrants face accidents and injuries during their work³¹. Likewise, very few migrants have been provided with safety training and most of them do not have private health insurance³¹. In other words, the rates of accidents, deaths and suicides among migrant workers are high and far too high in the Gulf countries. This background literature give credence to the focus of research related to the health of immigrants in the Middle Eastern countries.

Being away from family and social control

The nature of migrant work generally increases the chances of immigrants engaging in risky sexual practices, as they are separated from regular sexual partners for long periods. As migrant workers are away from their local community and its social control; they can experience what has been termed 'situational disinhibition'⁴¹. The exploits of migrant workers⁴² can be compared to those of long-distance lorry drivers⁴³, whilst migrants working in the tourism industry meet both tourists and locals⁴⁴ which can lead to sexual contacts.

Conclusion

Although the health risks and vulnerability of migrants have been well documented throughout most of the world, few studies have been conducted among minority ethnic groups in the Middle East countries. The issues of migration as well as policies to address them are complex. Lack of legal protection by the migrants sending countries government or the host countries' government may have adversely affected migrants' health and wellbeing. Future research needs to focus attention on minority ethnic groups in the Middle Eastern countries.

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