

Health and wellbeing of Nepalese migrant workers abroad.

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## Abstract

**Purpose-** Although South Asia is a growing supplier of migrant labour, there is a paucity of research on the health and wellbeing of male Nepalese migrant workers. This study assessed the health and mental wellbeing of Nepalese construction and factory workers employed in Malaysia, Qatar, and Saudi Arabia.

**Design-** A structured questionnaire administered, in and around Nepal's international airport, to 403 migrants who had worked for over six months in their host countries. Logistic regression was used to investigate factors associated with self-reported health status and mental health symptoms.

**Findings-** Over 13% reported poor or very poor health and nearly a quarter reported mental health issues. Whilst age and exercise were (only) significantly associated with health status, poor work environments and perceived health risks at work were associated with both mental health issues and health status.

**Research limitations/implications-** The study is limited to males only and those working in the factories and the construction industry. To improve migrant health and mental wellbeing, the Government of Nepal and host governments should consider mandatory health insurance and a range of pre-departure and arrival education around general literacy, mental health assessments and workplace health and safety.

**Originality/value-** There have been no known studies on the health and wellbeing of Nepalese migrant construction and factory workers in the Middle East and Malaysia. The strong association between self-reported poor health and perceived work environment is an important issue that policy makers in Nepal and destination countries should address.

**Key words-** Asia; host country; labour; mental health; South Asia, physical health; risk

## Introduction

Of an estimated 105.5 million migrant workers around the globe, one-third work in Europe, 29% in Asia and nearly a quarter in North America (ILO, 2010). Not all migration is permanent though - a proportion of migrants go to work in a different country with the aim of returning to their birth country in due course, referred to as 'seasonal migration' or 'temporary migrant work'. Migrant workers tend to be employed in risky job types, for example, in farming, construction or manufacturing and they have higher rates of occupational injury than native-born workers (Gürcanli *et al.*, 2008; Schenker, 2010). For example, Gardner (2009) reminds us that the majority of Bangladeshi migrants work as wage labourers, who have high-risk but lowly-paid jobs in the international labour market. However, Waddington (2003) highlights that prosperous households also migrate for work to further enhance themselves. Several migrant studies have identified migrants at risk of health problems in their host (e.g. Kuwait and the United States (US)) countries (Akhtar and Mohammad, 2008; Arcury and Quandt, 2007). Migrant workers are likely to experience a series of other challenges ranging from language and other cultural barriers, socio-economic problems and issues to do with their legal status, to a lack of health and safety training, difficulties in gaining access to health services, limited injury compensation and general social exclusion.

As migrants work away from their family, community and support networks (Gardner and Ahmed, 2006), the lack of social connection coupled with poor working and living conditions can also lead to mental illness (Adhikary *et al.*, 2011). Mental health issues, including stress and nervousness, can be common. For example, Indian immigrants in Australia have experienced psychological distress, including functional disability and high levels of functional impairment (Maheshwari and Steel, 2012). As a result, migrants' health and mental well-being has become a global public health issue (Gushulak *et al.*, 2009).

International labour migration from Nepal to the Middle East and Malaysia is a relatively new phenomenon and started three decades ago. Until 2001, most Nepalese migrants travelled to India. The main reason for the decrease in the proportion of Nepalese migrants to India has been the flow to other countries such as Saudi Arabia (8.9%), Qatar (3.2%), United Arab Emirates (1.7%) and China, particularly Hong Kong (1.6%) (CBS, 2002). The selection of destination countries is determined by income, education and the socio-economic status (SES) of Nepalese migrants as well as the types of work available in receiving countries (Adhikary *et al.*, 2011; Bhatta, 2006; Joshi *et al.*, 2011). For example, people of lower SES tend to migrate to India, the Middle East and Malaysia (Adhikary *et al.*, 2011; Joshi *et al.*, 2011) whereas people of higher SES status move towards Europe, Australia, Canada, and the US (Adhikary *et al.*, 2008; Sapkota *et al.*, 2014).

The number of Nepalese migrant workers travelling to Malaysia and the Middle East has increased in recent years. Indeed, Nepal is the second largest labour supplier to Malaysia. It is estimated 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 with most being male (see De Haan, 2002) and a substantial proportion employed in the construction and

manufacturing sectors (Baruah and Tuladhar, 2012). 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 \$2.93 billion US dollars (209 billion Nepalese Rupees (NRs)) in 2008 (Rauniyar, 2009). However, there has been no known study on the health and mental wellbeing of Nepali migrant construction and factory workers in the Middle East and Malaysia. This pattern of economic dependence and general migration gives credence to the focus of this research on Middle Eastern construction and Malaysian manufacturing sectors and the need to investigate the associated health and mental wellbeing implications for these migrant workers.

Therefore, this paper investigates the demographic, socio-economic and health and lifestyle characteristics associated with self-reported health and mental health status in male Nepalese migrant construction/factory workers. The key research questions in this paper are: What are the working and living conditions of male Nepalese migrant workers in the Middle East and Malaysia and how do these relate to their health and mental well-being?

## **Methods**

This study assessed the health and mental wellbeing of Nepalese construction and factory workers employed in Qatar, Saudi Arabia and Malaysia using a questionnaire with migrants who had worked for over six months in their host countries. The six-month period was chosen to ensure migrants had a minimum length of time at work and therefore experience to relate to. A quantitative questionnaire, using questions validated on other studies (Adhikary *et al.*, 2008; GSO, 2004; Larin, 2009), was chosen to be able to collect a large amount of consistent data in a short timescale. The questionnaire was interviewer-administered in Nepali by the first author as a proportion of migrant workers were poorly educated. Since there is no formal record of Nepalese migrant workers in the Middle East and Malaysia, we had no clear sampling frame. Hence, the sample was determined using a standard sample size calculation formula (Machin *et al.*, 2008), from an estimation of answers to key questions, and a balance between workers in the Middle East and Malaysia. This came to a minimum of 380 respondents i.e. approximately 130 per country. The first author approached 423 study participants in 2011 in Kathmandu, Nepal. Four hundred and three (403) participants completed the survey questionnaire. The twenty people who declined to participate were generally too busy to undertake the survey. Male migrant workers aged 18 and over were selected using a convenience sampling method (Mathers *et al.* 2009) and approached at Kathmandu International Airport, and subsequently in nearby hotels, lodges and guesthouses in the capital. The questionnaire solicited generic demographic, socioeconomic, health and lifestyle related information from respondents, as well as focusing on their working and living conditions and health services utilisation. No incentives were offered and ethical approval was obtained from the Nepal Health Research Council (Ref no: 462 and Ref no: 1190). Participants consented in writing or verbally, if migrant workers had poor literacy skills. Confidentiality was guaranteed as names, exact locations or the companies they worked for were not included in the analysis.

Data were entered using SPSS Inc. version 18.0 for data management and analysis. Self-reported health and mental health status were the two main outcomes of interest and were categorised into binary variables. Self-reported health status was coded as fair/good versus poor/very poor. With regards to reporting mental health issues, respondents were asked how often in the last month they felt ‘nervous’, ‘hopeless’, ‘restless’, ‘depressed’, ‘worthless’ or ‘everything was an effort’. These variables were combined into a single variable indicating whether they reported any of the symptoms versus none of the symptoms. The explanatory variables of interest were also collapsed into fewer and more meaningful categories that included demographic characteristics, socio-economic characteristics, and health and lifestyle characteristics. Frequencies and percentages were calculated to describe the sample and logistic regression was used to investigate the associations between the demographic, socio-economic, and health and lifestyle characteristics with the two binary outcomes of interest.

## **Results**

### *Characteristics of Nepalese male migrant worker respondents*

Over 13% of respondents reported their health status as poor or very poor (15% for those working in Malaysia and 12% for the Middle East – not shown in Table 1) and nearly a quarter reported a mental health symptom in the last month (18% for those working in Malaysia and 26% for the Middle East – not shown in Table 1). Respondents' age ranged from 20-58; nearly half were aged 20-29 years. Please note that there were no 18-19 year olds in the study. Typically, young migrant workers would be abroad for at least two years i.e. 20 when they returned. Regarding the caste/ethnic origin of respondents, the higher caste Brahmins/Chhetris comprised just over a quarter of the respondents. The majority of respondents were married, and nearly two thirds of survey respondents were satisfied with their accommodation abroad. Almost a quarter of respondents had no formal education and just under half had received primary education.

The majority held semi-skilled jobs (e.g. factory workers, carpenters and electricians) and the remainder worked in unskilled jobs abroad. Just over a fifth reported that their work environment was poor or very poor. A third of respondents worked in Malaysia. Over 40% had been abroad for at least four years. Nearly two-thirds of respondents were covered by health insurance and most had registered with a doctor abroad. With regards to health and lifestyle characteristics, a quarter considered their diet poor or very poor. Two thirds of respondents smoked and about half the sample consumed alcohol. Nearly all respondents reported that they did not take exercise most days.

**Table 1. Characteristics of male migrant workers, working in Middle East & Malaysia (2011)**

Variables	n	%
<i>Health outcomes</i>		
Health status		
Good/fair	350	86.8
Poor/very poor	53	13.2
Mental health symptom in the last month = <b>no</b>	310	77.0
Yes	93	23.0
<i>Demographic characteristics</i>		
Age		
20-29 years	185	45.9
30-39 years	158	39.2
40 + years	60	14.9
Ethnicity		
Brahmins/Chhetri	108	26.8
Others	295	73.2
<b>Married</b>	368	91.3
Satisfaction with the accommodation abroad		
Satisfied	263	65.3
Not satisfied	140	34.7
Education		
Sec/SLC/HS (RC)	118	29.3
Primary	186	46.2
None	99	24.6
<i>Occupation and socio-economic characteristics</i>		
Current occupation in host countries		
Semi-skilled job	279	69.2
Unskilled job	124	30.8
Work environment		
Very good/good/fair	317	78.7
Poor/very poor	86	21.3
Country of work = Malaysia	134	33.3
Middle East	266	66.6
Duration of stay abroad		
<4 years (RC)	241	59.8
≥4 years	162	40.2
Work hours (average per week)		
≤70 hours (RC)	249	61.8
>70 hours	154	38.2
Income in Nepalese Rupees (per annum)		
>150000 (\$1701) (RC)	162	40.2
≤150000 (\$1701)	241	59.8
Health insurance	251	62.3
Doctor registration	284	70.5
Perceived health risks at work	216	53.6
<i>Health and lifestyle characteristics</i>		
Diet		
Good/fair	296	73.4
Very poor/poor	107	26.6
Current smoking status = <b>non-smoker</b>	137	34.0
Smoker	266	66.0
Current alcohol consumption status		
Non-alcoholic	201	49.9
Alcoholic	202	50.1
Take part in exercise most days	29	7.2

Notes: HS- Higher Secondary (include College & Univ.); RC- Reference Category; Sec- Secondary; SLC- School Leaving Certificate

Semi-skilled- with certain level of skills e.g. factory worker, plumber, carpenter, painter, bricklayer, electrician, supervisor .

### *Factors associated with health and mental wellbeing*

Multivariate logistic regression analysis indicated that there were four key statistically significant variables associated with physical health status (Table 2). Overall, age was highly significantly associated with self-reported health status ( $p=0.007$ ). Interestingly, those in older age groups (i.e. 30-39 years and  $\geq 40$  years) were significantly more likely to self-report having poor or very poor health compared to those aged 20-29 years. Respondents who rated a poor or very poor work environment were nearly seven times more likely to perceive poor or very poor health than respondents who rated a very good, good or fair work environment. Similarly, respondents who perceived having health risks at work were nearly five times more likely to experience poor or very poor health compared to the respondents who did not perceive health risks at work. Finally, respondents who reported not taking exercise most days were significantly less likely to perceive poor or very poor health.

In contrast, there were just two key statistically significant variables associated with mental health status. Similarly, respondents who rated their work environment as poor or very poor were nearly twice as likely to experience mental health symptoms as respondents who rated their work environment as very good, good or fair. Again, similar to physical health status, respondents who perceived health risks at work were three times more likely to experience mental health problems than those respondents who did not perceive any health risks.

Table 2. Logistic regression models of self-reported health & mental health problems  
Nepalese male migrant workers in the Middle East and Malaysia (2011)

Variable	Poor/very poor physical health status		Mental health problem		
	Odds ratio	(95% confidence interval)	p-value	Odds ratio (95% confidence interval)	p-value
<i>Demographic characteristics</i>					
Age			<b>0.007</b>		
20-29 years (RC)	1.0			1.0	
30-39 years	4.0	(1.7-9.6)	<b>0.002</b>	0.6	(0.3-1.0) 0.062
40 + years	3.0	(1.0-9.0)	<b>0.047</b>	0.6	(0.3-1.5) 0.294
Ethnicity					
Brahmins/Chhetri (RC)	1.0			1.0	
Others	2.3	(0.9-6.1)	0.091	0.7	(0.4-1.3) 0.281
Marital status					
Married (RC)	1.0			1.0	
Unmarried	1.1	(0.2-6.3)	0.906	1.4	(0.6-3.5) 0.430
Satisfaction with the accommodation abroad					
Satisfied (RC)	1.0			1.0	
Not satisfied	2.0	(1.0-4.1)	0.060	1.0	(0.6-1.8) 0.886
Education			0.741		
Sec/SLC/HS (RC)	1.0			1.0	
Primary	0.8	(0.3-2.0)	0.652	1.1	(0.6-2.0) 0.787
None	1.1	(0.4-3.4)	0.832	1.0	(0.5-2.4) 0.912
<i>Occupation &amp; socio-economic characteristics</i>					
<b>Job in host countries</b>					
Semi-skilled job (RC)	1.0			1.0	
Unskilled job	1.4	(0.6-3.3)	0.509	0.9	(0.5-1.7) 0.807
Work environment					
Very good/good/fair	1.0			1.0	
Poor/very poor	6.8	(3.2-14.6)	<b>&lt;0.001</b>	1.8	(1.0-3.4) <b>0.0498</b>
Country of work/					
Malaysia (RC)	1.0			1.0	
Middle East	0.7	(0.2-1.8)	0.411	1.6	(0.8-3.2) 0.195
Duration of stay abroad					
<4 years (RC)	1.0			1.0	
≥4 years	1.3	(0.6-2.7)	0.514	1.2	(0.7-2.0) 0.592
Work hours (average per week)					
≤70 hours (RC)	1.0			1.0	
>70 hours	1.3	(0.6-3.0)	0.549	1.2	(0.7-2.1) 0.553
Income Nepalese Rupees (per annum)					
>150000 (\$1701) (RC)	1.0			1.0	
≤150000 (\$1701)	1.6	(0.7-3.7)	0.257	0.8	(0.5-1.5) 0.540
Health insurance Yes (	1.0			1.0	
No	1.0	(0.4-2.2)	0.953	0.9	(0.5-1.7) 0.781
Doctor registration Yes	1.0			1.0	
No	1.2	(0.5-2.9)	0.632	1.5	(0.8-2.8) 0.184
Health risks work No	1.0			1.0	
Yes	4.7	(2.1-10.5)	<b>&lt;0.001</b>	3.3	(1.9-5.6) <b>&lt;0.001</b>
<i>Health and lifestyle characteristics</i>					
Diet Good/fair (RC)	1.0			1.0	
Very poor/poor	2.0	(1.0-4.3)	0.064	0.6	(0.3-1.1) 0.089
Current non-smoker (RC)	1.0			1.0	
Smoker	0.5	(0.2-1.2)	0.111	1.0	(0.5-1.8) 0.928
Current alcohol consumption status					
Non-alcoholic (RC)	1.0			1.0	
Alcoholic	0.8	(0.4-1.8)	0.646	1.5	(0.9-2.7) 0.145
Take part in exercise most days					
Yes (RC)	1.0			1.0	
No	0.1	(0.04-0.5)	<b>0.004</b>	0.8	(0.3-2.0) 0.582
Nagelkerke R Square	0.375		0.160		

HS- Higher Secondary (including College/University); RC- Reference Category; Sec- Secondary; SLC- School Leaving Certificate

Semi-skilled =Jobs with certain level of skills e.g. factory worker, plumber, carpenter, painter, bricklayer, electrician, supervisor etc.

## Discussion

### *Self-reported health status*

In this study, 87% reported their health status as good or fair. The survey indicates that the prevalence of self-reported poor health among Nepalese migrants is 13% overall. This ‘poor health’ percentage is comparable to those reported for immigrant studies in the US (11% for Chinese, 12% for Filipino, 14% for Asian Indian and 17% for Korean migrants) (Frisbie *et al.*, 2001). However, the percentage of Nepalese migrants reporting poor health in this study was greater than that reported in many other immigrant studies e.g. in Vietnam (6%) (GSO, 2004), Singapore (1.5%) (Lim *et al.*, 2007) or Syria (9%) (Asfar *et al.*, 2007) yet lower than that reported in Nepalese migrant studies in the UK (Adhikary *et al.*, 2008) and the US (Bhatta, 2006). Similarly, the prevalence of self-rated poor health status in this study was lower than that reported for other non-Nepalese migrants e.g. 36% for Arabic migrants in Israel (Daoud *et al.*, 2009).

There are a number of possible explanations for the differences in the self-reported health status of migrants. First, the self-rated health variable in this current study was dichotomised, 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 studies (e.g. Daoud *et al.*, 2009; Frisbie *et al.*, 2001) combined “fair health” with “poor health” i.e. include “fair”, “poor” and “very poor” descriptors together.

In this current study, age was significantly associated with self-reported poor health status. Older people were at least three times more likely to report poor health than migrants in the 20-29 year age group. Age has been consistently associated with poor-health outcomes (Asfar *et al.*, 2007; GSO, 2004; Lim *et al.*, 2007). A survey of migrant workers in Vietnam revealed that older people are more likely to report poor health irrespective of whether they are migrants or not (GSO, 2004).

This current study also found a strong association between migrant perceptions of their work environment and self-reported health status. People who perceived their work environment as poor or very poor were nearly seven times more likely to report poor health than those who reported their work environment as very good, good or fair. These findings are consistent with two Swedish studies, both highlighted that adverse working conditions influenced the excess risk of poor self-rated health (Molarius *et al.*, 2006; Dunlavy & Rostila, 2013). Similarly, migrants 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 irritations (Kuruwila *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 should address i.e. by improving the workplace health and safety of migrant workers.



The study indicated that self-reported poor health was not associated with smoking status or alcohol consumption and was negatively associated with taking part in exercise most days. Both of these findings were unexpected. It was surprising given the fact that not taking part in exercise, smoking and alcohol consumption are known risk factors for several diseases and health problems (Detels *et al.*, 2015). However, only 29 study participants (7%) reported taking regular exercise. One plausible reason is that most workers had outdoor manual jobs in the building industry with long working hours and so were already physically fit and did not have time or energy for further exercise. Another possible explanation is 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.

### *Mental health status*

The survey results identified that the prevalence of mental health issues among Nepalese migrants was 23% overall. This prevalence of mental health symptoms is comparable to rural and urban migrant workers in China (24%) (Yang *et al.*, 2012), Lebanon (20%), France (23%), Italy (25%) and Spain (19%) (Alonso *et al.*, 2008).

The prevalence of mental health issues in this study was 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 was higher than an Indian immigrant study in Australia (15% reported high to very high levels of psychological distress) (Maheshwari and Steel, 2012) and those reported in the World Mental Health Survey for Nigeria (7.8%), Japan (11%) and Germany (14%) (Alonso *et al.*, 2008).

The study found a strong association between perceived health risks and mental health status, and a weak association between work environment and mental health. People reporting their work environment as poor and those perceiving health risks at work were more likely to report mental health complications. Previous studies corroborate these findings that migrant workers are likely to experience mental disorders because of poor living and working conditions (Adhikary *et al.*, 2011; Joshi *et al.*, 2011; Keane and McGeehan, 2008). Poor working environments include 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; Vail *et al.*, 2011). In addition, migrants from low-income countries working in other low or middle income countries have to depend on largely on informal networks as a way of minimizing risks (Avato *et al.*, 2010).

### **Conclusion/Recommendations**

Nepali migrant workers are perhaps willing to accept higher workplace risks in host countries as their working conditions in Nepal are equally risky and lower paid. One explanation for the thousands of volunteers going to the various destination countries each year to work in

jobs that are both demanding and risky is simply that similar work is either not available in Nepal or carries equally high risks but lower remuneration. Many workers report unexpectedly positive experiences including proper living accommodation, and for some, regular cleaners, something they are unlikely to have experienced at home in Nepal.

We recommend that migrant workers have at least some mental health and well-being assessment whilst abroad. Moreover, more research is needed on the mental health of the migrant workers as recently suggested by Simkhada et al. (2017). Since a large proportion of migrant workers are illiterate, we also recommend literacy training pre-departure and in the host country. In addition, to improve migrants' health and well-being whilst working abroad, host countries should legislate employers in their countries to offer safe and healthy working and living conditions for their workforce. Host countries and the Nepalese Government should consider offering mandatory health insurance and pre-departure and arrival training related to workplace health and safety. The inability of migrants to access and benefit from social protection programmes in both host countries and countries of origin (Sabates-Wheeler and Koetll, 2010) is precisely why this type of educational policy is required.

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