Identifying the gaps in Nepalese migrant workers' health and well-being: A review of the literature

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Abstract:

The health and well-being of migrant workers from low-income countries is often neglected in travel medicine. This paper uses Nepal as a case study to highlight the key issues affecting this group of international travellers.Using a systematic literature search approach we identified 18 papers. The included papers were thematically analysed leading to four key themes or risk factors. Of the four key themes three relate directly to migrant workers; (1) sexual risk taking; (2) occupational health; and (3) lifestyles, and the fourth theme relates to partners and family left-behind in Nepal. Travel medicine should provide more emphasis to the health and well-being of migrant workers since this is a highly vulnerable group of travelers with additional impact on the health of those left behind. There needs to be increased awareness of health consequences of work-related migration and give it a high priority on both national and international agendas to bring about positive changes.

Key words: Migration, travel, sexual health, health risk, exploitation, South Asia, occupational health

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Background

Approximately 3.5 million Nepalese (14% of total population) are working abroad; primarily in Malaysia, the six countries of the Gulf Co-operation Council (GCC), and India.[1] Due to the limited employment opportunities within the country, international migration is considered as a livelihood strategy for many poor people and most Nepalese migrants are involved in semi/unskilled labour, mainly on building sites, in factories, and in domestic work.[2]

Migration for foreign employment has become a major source of income for the country as migrant workers send around US$4 billion home every year, comprising 28% of Nepal's gross domestic product.[3] However, this income can be at a great cost as newspapers estimate that there are more than 1000 deaths per year in the host countries (excluding India), and many hundreds of Nepalese migrant workers return home with mental and physical health problems.[4] Similarly, due to the migration of young people, the country faces an increasing proportion of the dependent population (elderly and children) in the demographic structure. Most migrant workers are male but there is growth in the number of women working abroad.

Migrant workers face a number of risks and challenges abroad[5-7], including: discrimination, gender inequality, sexual violence and exploitation, poor working and living conditions and lack of access to social/health care. For example, 1002 Nepalese migrant workers died in GCC countries and Malaysia last year, of which 36% were documented as cardiac related.[8] This figure represents only those whose

family applied for compensation and many deaths are not documented. The major causes of death were recorded as heart related (26.2%), natural causes (18.3%), traffic accident (13.6%), suicide (10.1%), workplace accident (7.8%), and murder (1.4%), and in 22.5% the cause was "unknown". [1] Official records of the destination countries tend to record these deaths as being "from natural causes", moreover often no postmortem examination is conducted of migrant workers unless related with crime. Information on underlying causes, such as heat stress on construction sites, is often not available. More than one third of the South Asian migrant workers in the Middle East work more than 50 hours per week, often continuously for months without a day off.[9]

Migrants are often at risk because of their low status, poor living conditions, inadequate health care and a lack of community cohesiveness. They may feel freed from the social norms that control their behaviour at home. All these factors may provoke people to engage in risk-taking behaviours. These are mirrored in the country's HIV surveillance data, e.g. in 2015, of the estimated adult population living with HIV, 40% were in perceived low-risk men and male labour migrants.[10] Therefore, both individual and contextual (situational) factors increase migrant workers' health risk. The vulnerability of migrants starts in the source community, where the decision to migrate is often based on very little or poor information coupled with a desperate need to leave. Many depart with unrealistic expectations and are ignorant about health and safety, infections and diseases.

This review article aims to identify the risk factors for migrant workers' health and well-being, using Nepal as a case study. It will help: a) increase awareness of the health consequences associated to migration; b) priorities migration as a national agenda; and c) develop comprehensive migration strategies.

Methods

A narrative review was conducted systematically with comprehensive literature search to identify relevant studies and background information on Nepal. Database searches were conducted in Medline via Ovid, EMBASE, Cochrane Database of Systematic Reviews, the Campbell Library, EPPI Centre Database of Promoting Health Effectiveness Reviews (DoPHER), Web of Science and CINAHL for published literature. Citation lists from included studies were searched to identify studies. Papers published in English between 1990 and December 2016 were included. Search terms included: migration, labour migration, left-behind, spouse of migrants, migrant workers, Nepal, Gulf, Malaysia and South Asia. All relevant study types were included apart from individual case studies.

Papers were independently selected by two authors (PRR and NA) and consensus agreed for final inclusion according to the inclusion criteria. Included papers were not graded, since our main aim was to cover the range of issues in this narrative review. Data were synthesized using a thematic synthesis method and common themes were identified.

Results

Of 817 research papers initially identified using the search criteria, 706 papers proved irrelevant when the titles were examined. The abstracts of the 111 papers were then reviewed, resulting in 76 papers being examined in full. Of these, 58 were excluded after reading the full texts and 18 papers were included in this review. We identified four key risk factors/behaviours that put Nepalese migrant workers' and their left-behinds' health and well-being at risk. Naturally some of these themes are overlapping, of the 18 included papers, 11 papers discussed sexual risk taking and HIV; four included

work-related risk factors such as occupational injuries and mortality (Table 1). Few studies covered about lifestyle factors affecting migrant workers such as alcohol and drug use. The merging theme of impact on left-behinds and relationship within the family is reported in Table 2 (four papers).

Sexual risk taking

While migration has offered new opportunities for Nepalese migrant workers, it has evidently contributed to the spread of HIV infection in Nepal. In our review, 11 studies focused on sexual risk-taking behaviours and HIV and AIDS vulnerability. These studies were predominantly related to migrants from western Nepal. Most studies confirmed that male migrants in India had multiple sex partners,[11-13] used condom infrequently[12-15] and visited female sex workers (FSWs).[11-15] Peer pressures, lack of family restraints, low perceived vulnerability to HIV and STIs (sexually transmitted infections) were frequently reported as encouraging factors for their sexual risk taking behaviour.[13, 16] There is also evidence that lower socioeconomic status e.g. illiteracy and gender inequality increased the risk of HIV through unprotected sex.[17] Lack of awareness on HIV was common among migrants.[13, 15, 16] Interestingly, these studies were mainly conducted with Indian returnee migrants of western Nepal[12, 15, 17] and particularly, returnee migrants from Mumbai were considered more vulnerable than other returnee migrants. For example, HIV prevalence of migrant workers was 6-10% in men who had returned from Mumbai compared to 4% in all those returned from India.[18] There is evidence that female spouses of male migrant workers are at a higher risk of HIV and STIs.[19,20] These studies reported poor negotiation skills among migrants' wives around using condoms.

Occupational injuries and hazards

Four studies provided data on injuries, occupational hazard, and mortality of Nepalese migrant workers in Gulf Cooperation Council (GCC) and Malaysia.[5, 6, 21, 22] A retrospective analysis of South Asian migrant workers in Qatar showed that the Nepalese Workers had the highest rate of occupational injuries (28%) and the highest rate of fatal injuries (17.9%)[21]. Another study conducted on 408 Nepalese migrant workers who had worked in Qatar, Saudi Arabia, and the United Arab Emirates (UAE) reported that 25% had experienced work-related injuries in the past 12 months.[5] Cuts, fractures and dislocations were the most common types of injury. The vast majority of construction and agricultural workers (82.4%) reported injuries in the previous 12 months.[5] A systematic review on Nepalese migrant workers also suggested work-related accidents as a key health issue.[6] A study on greenhouse pesticide workers in Oman, most of them were Nepalese, found poor occupational health and safety practices with very poor use of personal protective equipment (PPE).[22] Another study among 501 migrant workers in Malaysia found the highest prevalence of toxoplasmosis (46.2%) of Nepalese workers.[23]

Left-behind family

Working abroad also affects the health and well-being of family members of migrant workers who remain at home. As a significant proportion of Nepalese youth leave the country for work, the elderly, women and children are left –behind, often in a socially and economically insecure environment. Four studies of female spouses of migrant workers focused on sexual behaviour and HIV risk.[17,19-20,24] These studies commonly reported that illiteracy and cultural context such as gender discrimination compromised safer sex practice of migrant wives. Younger migrant wives were more likely to have

knowledge on migration-related HIV risk[20] and felt more at ease negotiating safer sex with their husbands.[19] One study found that although migrant wives were knowledgeable about the risk of HIV/STIs from their husbands' sexual behavior abroad, almost half felt unable to ask about it even if they had a doubt.[20] A study of 900 women reported that their husbands had negative impacts on women's health and health-seeking behaviour. About 43% of women thought their health had worsened since migration began. Frequently reported reasons were having less money to pay for health care, having less food or poorer nutrition, and added work burden.[24]

Table 1 here please

Table 2 here please

Lifestyles

Our search found a few lifestyle-related publications among Nepalese migrant workers. Bhandari and Kim[25] studied lifestyles as a part of health promotion in South Korea. One systematic review[6] on lifestyles of Nepalese migrant workers identified excessive alcohol as a key health issue. These findings are in line with studies among India migrants which often reported alcohol and drug use during their stay aboard. Being away from home and feeling socially isolated might led migrants to engage in drugs and alcohol use. [12, 15] Similarly, Chattu and colleagues[26] highlighted that Nepalese migrant workers were among one of the high risk populations for TB (tuberculosis) in Saudi Arabia along with Indonesian and Indian workers. TB is a disease of poverty and can originate in the sending country and may exacerbate due to overcrowded living conditions in host countries.

Discussion

Our literature review has suggested four key themes/risk factors related to Nepalese working in a foreign country: (a) sexual health; (b) work (c) lifestyle, and (d) partners of migrant workers-a separate theme for those who stay behind. Sexual behaviour can be viewed from a perspective of loneliness and desire when being separated from sexual partners and thus taking more risk when away from own communities and families, so-called 'situational disinhibition'.[27] Some tourists are more likely to engage in sexual risk taking when being away from their family/social control. [28, 29] It appears that Nepalese male migrant workers are not different from these tourists in terms of patterns of sexual behaviour.

The occupational risk of migrant workers from low-income countries is not well researched. However, there are frequent worldwide media coverage around the South Asian construction workers building the football stadiums for the 2022 football world cup in Qatar.[30] Nepalese migrant workers often doing blue collar jobs (Dirty, Dangerous and Demeaning works) that local workers do not want to do. The inherent risks in these jobs puts migrant workers at risk of accidents at work and ill health. The health and well-being of migrant workers has had less attention than desirable. This is largely due to the difficulty of doing research in host countries who are, understandably, reluctant for outsider to study the poor working and living conditions.

International migration, both a cause and a consequence of globalization, increasingly affects health in migrants' source, transit, and recipient nations.[31] Despite this recognition, the health and well-being of migrant workers has been largely neglected in travel medicine. There are a number of possible explanations for such gap: (a) migrant workers are often from the poorer parts of low-income

countries with inadequate health care provision at home and abroad; (b) travellers from high-income countries have resources/money to pay for travel medicine; and (c) careers in travel medicine are often made in high income countries with wealthy travellers and research funding. Surely travel medicine suffers the same limitations as general medicine where more than 90% of the research funding is spent on diseases that concern less than 10% of the global population.[32]

Migrant workers, traditional tourists and business travellers serviced by travel medicine have a few characteristics in common. Both groups are generally healthier than their peer staying behind. Migrant workers are generally younger and healthier than the average worker in Nepal, otherwise they would not be selected by labour agencies (manpower recruiting agencies) and employers. Both groups are often away from their normal social environment with all its social norms and regulations. Migrant workers from Nepal are nearly always away from their regular sexual partners, similar to business travellers and many, but not all, tourists. Hence the volume of papers on sexual health issues should not come as a surprise. At the same time we must be careful not to take the volume of literature as a direct indication of the relative size of the problem. One reason why sexual risk-taking appears in so many papers is partly due to the funding available from bilateral donors for research into HIV of key populations (most at risk populations) including Nepalese migrants over the past two decades. [33, 34]

Gaps in health policy and research on migrant workers in Nepal

Despite being a nationally[35, 36] and internationally recognized issue[37], migration in Nepal has been predominantly seen as income generation occupation and from a demographic perspective to regulate internal migration. Whilst the 'India-centric' approach of research on sexual health and HIV

prevalence into Nepalese migrant workers could still be relevant, more research around risk taking behaviours of Nepalese migrants work in countries other than India is needed. For example, HIV prevalence among Female Sex Workers (FSWs) in Malaysia is high i.e. Kuala Lumpur (17.1%) and Pahang (14.5%).[38] This has a huge implication as Malaysia is a popular destination for Nepali migrants and our review shows that sexual risk taking including visiting FSWs are not uncommon among them. Similarly, the recent health policy of Nepal[35] has confined migrant issues around communicable diseases and cross-board issues. To ensure human rights as well as the health and wellbeing of Nepalese migrant, we need to promote effective labour diplomacy between Nepal and destination countries. Moreover, we support the provision of travel medicine for migrants and their family's health, wellbeing and lifestyles.

Based on this review, we would suggest to following framework to understand the health risks and vulnerability among Nepalese migrant workers.

(Figure 1 about here please)

Strengths and weaknesses of this review

This is the first review to focus on the gap in travel health among Nepalese migrant workers. Nepal is a special case because remittances make up such a large proportion of the national income which makes it a politically sensitive issue in Nepal. It is also the first paper to take on sending country as case study, rather than the host country. The results search strategy is another strength which highlighted the lack of peer-reviewed research on the health and well-being of Nepalese migrant workers in the GCC and Malaysia which are the major destination countries workers.

One of the weaknesses is that we included only published peer-reviewed papers thus may have missed issues reported in reports and book chapters. We might have missed peer reviewed publications in local journals that are not indexed in the data base we included in our search. Specific limitations of focusing on one country are that we excluded all publications on migrant workers from other (similar) countries. First, Nepalese migrant workers in Middle East and Malaysia often work side by side with migrant workers from other countries of South Asia or South East Asia, working and living under similar conditions. Secondly, we have not included (occupational) health studies conducted in receiving countries where the population includes migrant workers from Nepal, but is listed as workers from South Asia or the Indian sub-continent.

Conclusion

The key risk factors identified in migrant workers from Nepal are: (a) sexual risk taking behaviour; (b) occupational injuries and hazards and (c) lifestyle changes and the fourth important risk is the negative impact on health of those left behind. Although the latter is an important issue one could argue it is not the focus of travel medicine but of local primary health care. More research is required on Nepalese migrant workers in the Gulf countries and Malaysia in the various health topics mainly sudden deaths, occupational injuries and safety practices, sexual behavior, mental health issues, lifestyle practices, cardiometabolic risk factors, or musculoskeletal problems.

Author's Contribution

PS was responsible for designing and coordinating the review. PS and EvT conceived the idea. PR and NA were responsible for data collection, screening the search results, screening retrieved papers against inclusion criteria, abstracting data from papers and interpretation of data. All authors wrote the paper, critically reviewed, modified the manuscript and accepted the final version of this manuscript.

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Conflict of Interest/Disclosure

All authors have declared no conflicts of interest.

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Table 1: Characteristics of studies among migrant workers

Author	Study theme/ methods	Study type/setting	Study population characteristics	Key findings
Al-Thani et al. 2015	Injury and mortality/ registered data on occupational injuries of migrant workers (2010-2013)	Secondary data analysis / Qatar	Total fatal or non-fatal occupational injuries: 2015 (migrant workers including Nepalese), both men and women	- Nepalese workers had the highest rate of occupational injuries (28%), and of fatal injuries (18%); 52% injuries due to falls from heights, others were falls of heavy objects, vehicle and machinery accidents. -Lack of work experience, involvement in high risk field, language problem, lack of safety training and protective equipment were reported as injury cause.
Awasti et al. 2015	Effect of male migration on HIV infections	Review	Mobility and left-behinds	-Unprotected sex with multiple partners and FSW the risk of HIV infection. -Drug use, isolation from family, peer pressure, long working hours and poor living conditions promote unsafe sex. -Low literacy, low awareness HIV and SRH exacerbated the transmission of HIV.
Bhandari & Kim 2015	Health promotion/ interview questionnaire	Cross-sectional / South Korea	169 Nepalese migrant workers (men)	- Spiritual activity was highest reported health-promoting behaviour, & physical activity least practised; self-efficacy only predictor of health-promoting behaviour.
Joshi et al. 2014	Sexual risk taking and HIV / interview questionnaire	Cross-sectional / Nepal	408 Nepalese migrant workers (men & women) in Qatar, Saudi Arabia, UAE for at least six mths, aged 18-53	-Majority had knowledge on HIV and its transmission routes. -The most common misconception is that mosquito bite can transmit HIV infection. -One quarter perceived that they were not at risk of HIV due to their sexual activities.
Bam et al. 2013	Sexual risk taking and HIV/ 10 in-depth interviews and	Qualitative/ Nepal (Achham, Doti, and Kanchanpur	Male Nepalese Dalit migrant workers, aged 15+, worked in	-Commonly: unmarried, peer influence, alcohol use, sex with FSW and unwilling to use condom. -Lack of awareness HIV was also common.

Author	Study theme/ methods	Study type/setting	Study population characteristics	Key findings
	four focus group discussions	districts)	India for at least six months in past two years	-HIV awareness and faithful sexual relationship with partner influenced safer sex behaviour.
Chattu et al. 2013	Tuberculosis / patient registry regional Tuberculosis centre Qassim (2005-2009)	Secondary data analysis / Saudi Arabia	165 tuberculosis cases migrant workers (incl. Nepalese)	-Nepalese migrant workers were identified as high risk populations for TB. Nepalese migrant workers had third highest prevalence of TB (12.7%) behind Indonesian (72.4%) and Indian (38.2%).
Dahal et al. 2013	Sexual risk taking and HIV / interview questionnaire	Cross-sectional / Nepal	110 returnee male migrant workers aged 20-53 who worked at least six months abroad	- 93.6% returned from Gulf & Malaysia - 42.6% had sex with unpaid partner (female co-worker); 50% with paid partner. -40% sexually active did not use condoms consistently. Difficulty in finding condom was the main cause.
Adhikary et al. 2011	Overall health issues	Systematic review (1984 to 2010)	Nepalese migrant workers in the Gulf countries and Malaysia	-Work related risk including accidents and injuries, mental health issues (work and migration related stress), and lifestyle related issues (excessive drinking of home-made alcohol) are key health issues in Nepalese migrant workers.
Esechie et al. 2011	Occupational hazard (pesticide use practices) / interview questionnaire	Cross-sectional / Oman	74 greenhouse workers (mostly migrant workers including 11 Nepalese)	-Occupational & phytosanitary practices of pesticide workers in greenhouse was poor. -Pesticide exposure led to skin irritation (70.3%), burning sensation (39.2%), headache (33.8%), vomiting (29.7%), and coughing (29.7%).
Joshi et al. 2011	Occupational injury and overall health issues / interview questionnaire	Cross-sectional/ Nepal	408 Nepalese migrant workers (men and women) who had worked in Qatar, Saudi Arabia, and the UAE for at least six months, aged 18-53	-56.6% had health problems in past year. Common problems: fever or headache, respiratory or musculoskeletal problems, gastrointestinal illness and injuries. -25% experienced injuries at work: mainly cuts, fractures or dislocations. -Only 36.5% had health insurance in host countries. -82.4% working in construction or

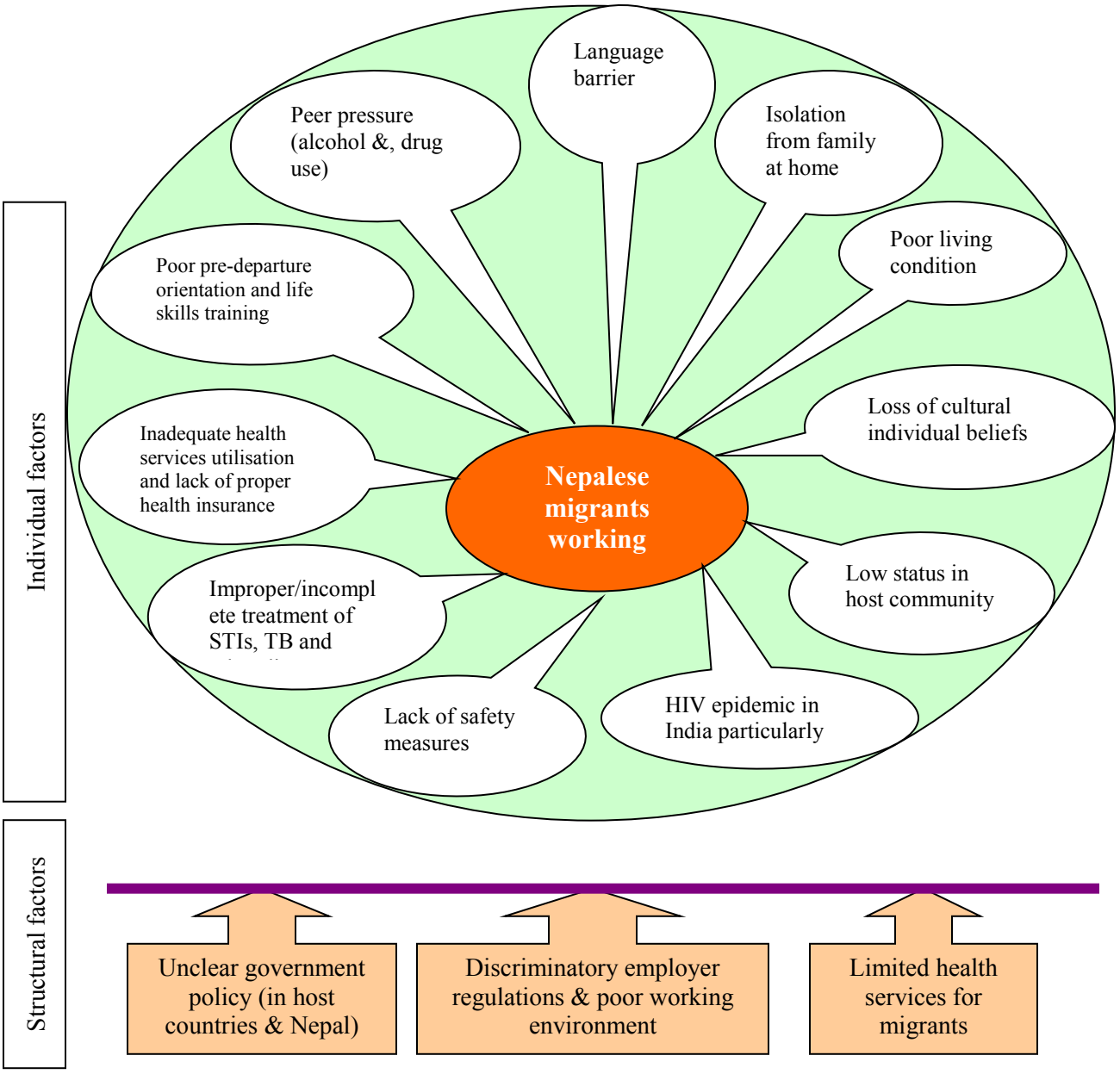
Author	Study theme/ methods	Study type/setting	Study population characteristics	Key findings
				agriculture sector had workplace injuries. -Lack of sick leave, cost, and fear of loss of job key barriers to accessing health care.
Chan et al. 2008	Infection of toxoplasma / blood sample for toxoplasma antibodies	Serologic study/ Malaysia	501 migrant workers (incl, 26 Nepalese) and 198 local Malaysian workers	- Nepalese had highest prevalence of toxoplasmosis (46.2%) among migrant workers and local Malaysian, but not significant difference between agricultural and non-agricultural workers.
Poudel et al. 2007	Sexual risk taking and HIV / intervention through letters and interviews	Interventional / Qualitative/Nepal (Doti district)	73 in-depth interview migrants who worked in India	-Letters stimulated migrants to learn more about HIV/AIDS and STIs. Letter encouraged them to seek information in India. Letters also promoted safe sex behaviours among migrants.
Poudel et al. 2004	Sexual risk taking and HIV / six focus group discussions	Qualitative / Nepal (Doti district)	53 men returnee migrant workers from India, 92% had worked in Mumbai.	- Commonly multiple sexual partners, used condoms infrequently in India & Nepal. -In India, peer norms/pressures, sex with FSW, lack of family restraint, alcohol, low perceived vulnerability to HIV/STIs influenced their sexual behaviours. -In Nepal, migrants' new status, local festivals, and low perceived vulnerability to HIV/STIs affected their sexual activity. -Poor knowledge of HIV/STIs.
Poudel et al. 2003	Seroprevalence HIV & syphilis. Biological & behavioural survey	Cross-sectional /Nepal	97 male migrant-returnees & 40 non-migrants Doti	-8% men were HIV+ & 22% had syphilis. -Mumbai returnee migrants had high-risk sexual behaviours such as pre/ extramarital sex, multiple sex partners including FSW.

Table 2: Characteristics of studies among migrants' family

Author	Study theme/ methods	Study type/setting	Study characteristics	Key findings regarding health and status of left-behind (spouse)
Aryal et al. 2016	Sexual risk taking and HIV/interview questionnaire	Cross-sectional / Nepal (Chitwan district)	182 migrant wives, aged 15-45, husbands had worked in India for at least three months	-94% had good knowledge of HIV and two-thirds aware of HIV risk in their husbands and themselves. - Almost half unable to ask husbands about HIV/STIs when in doubt. -Knowledge of HIV risk associated with migration was higher in younger, literate migrant wives, and whose husbands migrated for longer period.
Thapa et al. 2016a	Sexual risk taking and HIV/ questionnaire survey and two focus group discussions	Mixed-method / Nepal (Acchham)	Survey: 224 migrant wives (112 HIV+ & 112 negative), aged 18+, husbands worked in India at least six months	- HIV positive wives were more likely to be illiterate, lower caste and low economic status, & less knowledgeable on HIV risks. - Gender inequality increased risk of HIV through unprotected sex. - Fear social stigma prevented HIV test.
Thapa et al. 2016b	Sexual risk taking and HIV/ interview questionnaire	Cross-sectional / Nepal (Bajura district)	266 migrant wives, aged 18+ whose husbands had worked in India for at least six months	-39% used of condoms with husbands; of these only 3.7% used it always - Having husbands under 36 was associated with higher condom use. - women under 36, school educated, prior knowledge HIV, HIV conversation with peers, & ability to have sexual negotiation associated with higher condom use.

Author	Study theme/ methods	Study type/setting	Study characteristics	Key findings regarding health and status of left-behind (spouse)
Smith-Estelle & Gruskin 2003	Impact migration, health status, Discrimination, access to education on HIV /STI vulnerability	Review and secondary data analysis	900 women from two rural communities	-Women with migrating husbands reported negative impacts on their health status/ health-seeking behaviour. -43% worse health since migration. Having less money for health care & food and heavier workload = reasons for poor health.

Figure 1: Vulnerability among Nepalese migrants in Middle East and Asia



(Migrants can be more vulnerable to exposure because of their low status, poor living conditions, inadequate health care and lacks strong community cohesiveness. They may also feel freed from the social norms that guided their behaviour in their home, community and culture. It is the situations encountered and the behaviours possibly engaged in during mobility or migration that increase vulnerability and health risk)