**EFFECTS OF MALE INTERNATIONAL MIGRATION ON WIVES LEFT BEHIND IN NEPAL**

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**By**

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July 2015

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**DECLARATION**

I hereby declare that all the work referred to in this thesis, entitled “EFFECTS OF MALE INTERNATIONAL MIGRATION ON WIVES LEFT BEHIND IN NEPAL” is my own work and effort. The work has not been submitted in any previous application for a degree. All quotations have been distinguished by quotation marks and their sources acknowledged.

Yagya Murti Bhurtyal

July 2015

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LIST OF ABBREVIATIONS

ADB Asian Development Bank

BDI Beck Depression Inventory

BS Bikram Sambat

CBS Central Bureau of Statistics

CES-D Center for Epidemiological Studies-Depression

CI Confidence Interval

DAO District Administrative Office

df Degree of freedom

DHS Demographic Health Survey

DoFE Department of Foreign Employment

DoHS Department of Health Service

DSO District Statistical Office

FCHV Female Community Health Volunteer

GDP Gross Domestic Product

HA Health Assistant

HDR Human Development Report

HH Household

HGI Hungarian Gallup Institute

HIV Human Immunodeficiency Virus

IOM International Organisation for Migration

INGO International Non-governmental Organisation

MDI Major Depression Inventory

MERIP Middle East Research and Information Project

MoF Ministry of Finance

MoHP Ministry of Health and Population

N Total sample size

n.d. No Date

NDHS Nepal Demographic Health Survey

NHRC Nepal Health Research Council

NGO Non-governmental Organisation

NIDS Nepal Institute of Development Studies

NLFS Nepal Labour Force Survey

NLSS Nepal Living Standard Survey

NRB Nepal Rastra Bank

OR Odds Ratio

P Alpha level of significance

R Correlation coefficient

Rs Rupees

SAARC South Asian Association for Regional Cooperation

SD Standard Deviation

SLC School Leaving Certification

SPSS Statistical Package for Social Sciences

STD Sexually Transmitted Diseases

UNDP United Nations Development Programme

UNFPA United Nations Family Planning Association

UNICEF United Nations Children Emergency Fund

UNIFIM United Nations Development Funds for Women

US United States

USA United States of America

UK United Kingdom

VDC Village Development Committee

VIF Variance Inflation Factor

WHO World Health Organization

ABSTRACT

**Introduction:** Whilst there is much research on the economic aspects of international migration, less priority is given to the effects on wives left behind in social and health aspects. This study examines and explores the consequences of international migration on left-behind wives regarding depression, autonomy and health service utilisation.

**Methods:** A sequential mixed-methods study design was employed for the study. A total of 800 households were surveyed (400 migrants and 400 non-migrants) followed by 14 semi-structured interviews. Researcher administered questionnaires were used to collect data for depression, autonomy and health service utilisation and were analysed using multivariate logistic regression to identify significant associations. Semi-structured interviews were then conducted within the surveyed sample and analysed by thematic analysis.

**Results:** This study found that left-behind wives were depressed and 10.57 times greater odds for depression compared to the wives of non-migrants. Multivariate analysis identified that significant contributing factors for depression were caste, education, own named property, household head’s education and year of husband’s migration. Similarly, left-behind wives experienced greater autonomy compared to the wives of non-migrants. Women’s age, own named property, having children, husband’s age, household head’s gender, age, occupation, and education, family types, number of family members, household income are significantly associated with women’s autonomy in the absence of husbands. Moreover, no significant difference was observed between left-behind wives of migrants and wives of non-migrants for health service utilisation for minor illness. However, for any illnesses, left-behind wives were more likely to use private health facilities than the wives of non-migrants. The qualitative findings revealed how separation, added responsibilities, worry about the husband’s situation abroad and family type contribute to depression in left-behind wives. Other findings demonstrated how complexities of family structure, traditional culture and belief, having children and level of education influenced women’s autonomy. Similarly, availability of health facilities and specialists at one place, poor past experiences at government health centres and accessibility were reported as reasons for using private health facilities by left-behind wives.

**Conclusions:**

The increasing trend of male international migration has both positive and negative effects on left-behind wives regarding depression, autonomy and type of health service utilisation. The Government of Nepal should formulate clear planned policies to manage international migration so that its negative consequences can be minimised. No single strategy can be sufficient to cover all aspects of migration and its impacts on left-behind wives. Thus, multidisciplinary approach strategies should be developed to address the multiple effects of migration on left-behind wives.

Key words: International migration, depression, autonomy, health service utilisation, left-behind wives, Nepal.

# CHAPTER ONE: INTRODUCTION

## Introduction

International male migration is very common and has been increasing significantly in recent days in Nepal (NIDS, 2011). The economic impact on the migrants’ households and national Gross Domestic Product (GDP) have been acknowledged by many studies (Seddon *et al.*, 2002; Kollmair *et al.*, 2006; NRB, 2008; The World Bank, 2013) in the past. There have been only very limited studies on the effects of international male migration on wives left behind not only in Nepal but also in the entire world (UNICEF, 2007; Bojorquez *et al.*, 2009). A large number of migration studies have focused on the migrants, remittances and migrants’ health (Bhugra, 2004; Adams and Page, 2005; Kollmair et al., 2006) but only a few literature has covered the economy and well-being of left-behind wives. Past studies in India (Roy and Nangia, 2005), Mexico (Bojorquez *et al.*, 2009), Botswana (Brown, 1983), and Egypt (Brink, 1991) pointed out that left-behind wives are suffering from mental health problems and at the same time, they are also experiencing higher autonomy after the migration of their husbands. Apart from these issues, the use of the health service is also important for those left-behind wives in the absence of their husband. Much past literature (Simkhada *et al.*, 2006; NDHS, 2012) has highlighted the issue of the low utilisation of the health service by women in developing countries. To date, these issues on left-behind wives have not been investigated in Nepal. Furthermore, due to the migration of their husbands, developing depressive symptoms, experiencing autonomy and types of health service utilisation are interrelated issues for the left-behind wives. In this context, this study is a systematic investigation of the effects of international male migration on the wives left behind regarding depression, autonomy and health service utilisation.

This study focuses on the wives not the partners. The terms ‘partners’ and ‘wives’ have different meanings and understandings in Nepal. Husband and wife are the common words used for married men and women. The word ‘partner’ is not used for a married man or woman in Nepal. ‘Living together’ culture is not accepted socially or culturally. Before marriage, men and women do not commonly live together. All males and females live together after marriage. In common understanding, the word ‘partner’ is commonly used for friends and is not likely to have the same meaning as the term used for spouses in Western culture. Thus, in this study, the term ‘wives’ is used for married women which is appropriate and commonly understood in Nepal.

Women of reproductive age (15-49 years) were included in this study. Past literature suggests that women in the 15-49 year age group have major health problems in developing countries (Simkhada *et al.*, 2006; WHO, 2013) and mental health problems are also very high in this age group in Nepal (Pradhan *et al.*, 2011; Lamichhane *et al.*, 2012). A recent census (2011) in Nepal showed that husbands of women of this age usually migrated. The majority (about 88%) of male migrants are married and within the 15-49 year age group (CBS, 2012).

The following sections include a brief description of Nepal and international migration trends and patterns which help to understand the research context and the reasons for the focus on left-behind wives in Nepal. This chapter further highlights and explores the health system and facilities in Nepal; women’s health status and the types of service used; mental health and women’s status and position in Nepal. These issues are particularly important in order to articulate the effects of international migration on the various health and social issues of left-behind wives.

## Nepal: an overview

Nepal, now called, the Federal Democratic Republic of Nepal is a small landlocked country in between two giant countries, India and China. It is situated in South Asia and shares an open border to the south, east and west with India and in the north a more guarded the border with the People’s Republic of China. Kathmandu is the capital of Nepal. The northern part is decorated with the world’s eight highest mountains including the highest peak on earth, Mount Everest (MoCTCA, 2013). The southern part consists of green plain regions (Terai) which are covered with dense forest and cultivable lands. The climate varies with mostly cool winters in the mountainous and hilly regions and very hot summers in the plain regions. Another beautiful aspect of Nepal is that the multi-lingual, multi-cultural and multi-ethnic people live together in harmony and more than 123 languages are spoken within the 125 caste/ethnic groups (CBS, 2012). Nepal is populated by 28 million people (male: 12,849,041 and female: 13,645,463**)** with an annual population growth rate of 1.35 (CBS, 2012), thus there are 796, 422 more females than males. Furthermore, the life expectancy of women is 68 years whereas it is 65 years for men (The World Bank, 2013).

Nepal has been ranked as one of the poorest countries in the world having a per capita income of US$750 (The World Bank, 2014). Agriculture is considered the main occupation of more than 80 percent of Nepalese people. In recent years, with the restoration of multi-party democracy and the abolition of the monarchy in the country, Nepal has been experiencing several social, economic and political changes (Devkota, 2007).

## Background of the study

International migration has significantly increased within the last couple of decades in Nepal (NIDS, 2011). The visible contribution of international migration can be seen in the contribution of remittances to the national GDP of Nepal. Migrant worker remittances contribute about 25% to the national GDP (The World Bank, 2013). According to the World Bank report, Nepal is the 5th ranked country in the world for the contribution of worker remittances to national GDP (The World Bank, 2013). The country has benefited from the remittances sent by migrants but at the same time the country also suffers from the lack of working young people and the increasing number of an economically non-active population, such as left-behind wives, children and the elderly (Thapa, 2008). The increasing trend of international male migration has not only long term effects on the country’s economy but also has many effects on the left-behind families who stayed at home.

The decreasing agricultural productivity, fragmented agricultural land, few industries and the poor development of tourism limit employment opportunities for young people in Nepal. A government report also reveals that more than four hundred thousand people are added each year to those seeking employment in the labour market (MoF, 2009). Furthermore, Nepal has been facing a higher unemployment rate of over 30 percent and the government sector is the only large employer for Nepalese people within a country which cannot provide sufficient employment for these large numbers of people entering the labour market each year (MoF, 2009; NIDS, 2011). Due to the limited employment opportunities within the country, people are forced to go abroad for their employment and livelihood. Now, international migration is considered as a livelihood strategy for many poor Nepalese people and appears as a prime source of income (NIDS, 2011).

## International migration: Status and trend

### Global context

“*Migration, both within and beyond borders, has become an increasingly prominent theme in domestic and international debates*” (UNDP, Human Development Report 2009, n.d., para. 1). Since the beginning of human civilisation, migration has been recognized as a common, dynamic and developmental phenomenon (Durand and Massey, 1992). Throughout the world, people move from one place to another as migrants. Individuals generally move from their place of birth to seek better individual and family lives, to find better employment, to learn and acquire new experiences. Migration can be divided into internal and international migration. Migration is the process of the movement of people which is influenced by social, economic and political factors (Massey *et al.*, 1994). These factors are not only enforcing the individuals to move but affect in many ways those who move and those who stay behind at home. Massey *et al.* (1994) argue that the process of migration has impacts on both the sending and receiving communities and that the families are benefiting through the remittances which encourages others to migrate. The Human Development Report (2009) estimated that approximately 740 million people migrate internally whereas more than 200 million people migrate internationally, either from developing to developing countries or to developed countries. This report shows that more people migrate to gain a higher income, job availability, better health, education, security and social life.

### Nepalese Scenario: Migration pattern from past to present

There is a long history of international migration and history shows that migration in Nepal started as early as BS 623 when Lord Buddha was born in Lumbini, Nepal and migrated to India for an ascetic life (Mishra, 2004). The princess of Nepal in the Likshabi era ‘Brikuti’ married a Tibetan king Shang Chon Gumpo in 630 (Joshi, 2001). This indicates that the cross-border movement of people occurred in the early 600s. However, the mass flow of migration of people from Nepal started at the beginning of the 19th century (Graner and Gurung, 2003). In the early stages, people migrated internally from the hill region to the plains (Terai), searching for agricultural land and then settled permanently (Bishop, 1993) and some seasonal migration also occurred during the farming season (Seddon *et al.*, 2002). International migration started after the war with the British East India Company in 1814-16. The routes of international migration are: (i) military recruitment: a large number of ‘Gurkhas’ joined the British army in India and this still continues in the British Gurkha Regiments (Shrestha, 1985; Seddon *et al.*, 2002; Thieme and Wyss, 2005); (ii) agricultural and other economic activities: mostly in India, males migrated to India seeking jobs and many worked in agricultural farms, and industries (Shrestha, 1985; Seddon *et al.*, 2002; Thieme, 2007). (iii) Marriage migration (Subedi, 1991). However, the remarkable increase in international migration started in the 1990s (Gautam, 2008). In the mid-1990s, semi-skilled and unskilled people migrated to Japan (Yamanaka, 2000) and South Korea (Lim, 2003). Apart from this, Hong Kong, Singapore, Brunei, and the United Kingdom are the prime destination for the ‘Gurkhas’ in the army and more than 100,000 Nepalese have also worked in the Indian army (Aryal, 1991; Caplan, 1991; Pettigrew, 2000). The attraction of Nepalese people towards foreign army regiments and a lack of proper documentation, this figure is quite high at the present. The ex-British and Indian army, and the labour migrants when returning on leave, encourage other people to go abroad to seek better employment (Pettigrew, 2000).

The emerging labour market in East Asian countries like Korea and Malaysia, and Middle Eastern countries like United Arab Emirates, Bahrain, Kuwait, Qatar, Saudi Arabia (Gulf countries), have opened the door of their labour market to Nepal and more than 700,000 semi-skilled and unskilled Nepalese people find their destination of migration in these countries (Graner and Gurung, 2003; Seddon, 2005). Now, this migration figure has exceeded 1.9 million (CBS, 2011b) and more than four hundred thousand Nepalese migrants are found in a single country Qatar (DoFE, 2013). Yamanaka (2000) argues that labour migration from Nepal is now common and this trend of migration has changed the image of Nepalese migrants from ‘Global warriors to Global workers’ (Yamanaka, 2000).

There are inconsistencies in the facts and figures of international migrants. The Department of Foreign Employment report (2011) showed that about 2.5 million people are living abroad (DoFE, 2011a), whereas the Census (2011) reported that only 1.9 million Nepalese are currently living abroad (CBS, 2012). Similarly, the Nepal Labour Force Survey (2008) reported that about 29 percent of households have at least one member living abroad (CBS, 2009), whereas recent census data revealed that about 25.4 percent of households have at least one member currently living abroad i.e. one in every four households has migrants (CBS, 2012). Furthermore, the census (2011) also reported that the migration pattern is not equally distributed throughout the country. The open border with India, no proper migrant recording system in the government agencies and some illegal migration are the reasons for inconsistencies of data about the migrants (NIDS, 2011). The recent census (2011) reveals that among the 75 districts, 21 were identified as high migrant districts where over 42 percent of households have or have had at least one member of the family living abroad (CBS, 2012). Thus, almost every other household has international migrants (Figure 1.3).

Nepal has experienced a significant increase in international migration during the last couple of decades (Graner and Gurung, 2003; Thieme, 2007). People move from one country to another for work, study and a better life (Tiemoko, 2004). It is difficult to access the volume and rate of flow of international migrants, because skilled, semi-skilled and unskilled people migrate to different destinations mainly through informal routes and sometimes illegally. According to the Department of Foreign Employment annual report 2009/10 (DoFE, 2011b), about 0.3 million people obtained foreign employment permission within the fiscal year 2009/10 (DoFE, 2011b), an average of 20 thousand per month (DoFE, 2011b). According to the recent census (2011) report, 1.9 million people are living abroad. This figure was about 0.7 million in 2001 (CBS, 2002; CBS, 2012). There has been a 171.0 percent increase in the number of international migrants within the last 10 years. Moreover, the Nepal Government (2009) figure showed that 400,000 workers are added to the labour market each year to seek employment, and the government is the only large employment provider and cannot resist the huge pressure of unemployment. This figure reflects the vivid unemployment situation in Nepal which thus creates a strong attraction towards international migration for the employment of Nepalese youths (MoF, 2009).

It is mostly the skilled and students who migrate to developed countries such as the USA, UK, Australia, Japan, and Hong Kong (Thieme, 2007; NIDS, 2008). The student migration figure accounts for about 20,000 in Australia, followed by the USA and UK (NIDS, 2008). But, semi-skilled and unskilled people migrate to India, the Gulf-countries, Malaysia, South Korea and other Asian countries (Graner and Gurung, 2003; NIDS, 2008). The choice of the country of migration mainly depends upon the availability of employment opportunities, high wages or income, and the family and friendship chain which is already there in the destination country (Massey *et al.*, 1994).

Due to international migration, the migrant families at home are gaining economic benefits through remittances but at the same time, families are also missing the active members of their family. Researchers argue that there is a positive contribution of remittances to the country’s GDP and migration which helps to reduce poverty (Adams and Page, 2005). Due to the migration of young people, the country is also facing an increasing number of the inactive population such as the elderly and females in the demographic structure (Thapa, 2008). Furthermore, an inverse relationship was found between the development and economic growth of the country (Shrestha, 2009), arguing that there has been a significant increase in the number of unemployed educated people who tend to seek better job opportunities in the global market as a ‘brain drain’. As a result of this, the expenditure on education in Nepal creates a way of benefiting foreign countries by producing highly skilled and educated migrant workers and receiving remittances as a reward. The following sections describe the scenario of international migration of Nepalese people.

#### India

Nepal-India migration has a long history (Thieme, 2007; NIDS, 2008). Because of open borders and cultural similarity, lack of restrictions and a registration process for free movement such as a visa, it is difficult to give actual figures for migration to India. However, India is a huge recipient of more than 3 million Nepalese migrants who are engaged in manual jobs in the industrial, agricultural, construction and service sectors (Shrestha, 1985; Seddon *et al.*, 2002; Thieme and Wyss, 2005; Thieme, 2007). India migration accounts for about 77 percent of international migration (Thieme, 2007).

#### Other countries migration

The Gulf countries are the prime destination for Nepalese labour migrants after India (Graner and Gurung, 2003; Skeldon, 2008). The NIDS (2008) report showed that the total number of documented international migrants excluding India was 266,666 in 2008, and more than 100,000 unofficial migrants were added to the Gulf countries every year (Graner and Gurung, 2003). Among them, the Gulf countries comprise two-thirds of total international migration, mainly Qatar (44%), Saudi Arabia (24.3%) and the United Arab Emirates (23%). Malaysia also received 53,436 Nepali migrant workers. In 2009, about 112 thousand working visas were issued by the Qatar government alone in a single year (Gurung, 2010). However, given unemployment conditions within the country, people do not have any option for their employment so it has been commonly seen that Nepalese people migrate to Qatar and other Gulf countries on visitor visas and after finishing their visas, they remain there illegally (Thieme and Wyss, 2005; Amnesty International, 2011). Thus, it is difficult to determine the actual international migration figure due to the high rate of illegal migrants in many countries such as Malaysia, Qatar, and Saudi Arabia where many Nepalese stay illegally (Thieme and Wyss, 2005). In recent years, the Gulf and Middle East countries for example, Qatar, Saudi Arabia and the United Arab Emirates share about two-thirds of the total international migrants from Nepal (Gurung, 2010), although India is a huge recipient of Nepalese migrants (Thieme, 2007). International migration is generally related to job employment and it is believed that most migrants are men (Barham and Boucher, 1998; Adanu and Johnson, 2009). A similar pattern is also found in Nepal which constitutes more than 90 percent male migrants (NIDS, 2008; CBS, 2012).

Figure 1.1 International migration over 19 years from Nepal (Excluding India)

Source: Nepal Government, Ministry of Labour and Foreign Employment, Department of Foreign Employment, (2012)

MIGRANT WORKERS BY REGIONS IN 2008

29

101

140

364

538

2,117

3,066

53,739

206,572

1

100

10000

1000000

Central

America

Africa

Oceania

North

America

Europe

Asia

SAARC

Region

East Asia

Middle

East

Figure 1.2 Number of international migrant workers by destinations in 2008

Source: NIDS, 2008

Table 1.1 Labour Migration by Month from Dec/Jan 2009/10 to Dec/Jan 2011

|  |  |  |  |
| --- | --- | --- | --- |
| Month | Male | Female | Total |
| Dec 09/Jan 10 | 21,633 | 25 | 21,658 |
| Jan/Feb | 28,192 | 290 | 28,482 |
| Feb/Mar | 23,878 | 52 | 23,930 |
| Mar/Apr | 35,299 | 110 | 35,409 |
| Apr/May | 34,042 | 150 | 34,192 |
| May/Jun | 29,763 | 365 | 30,128 |
| Jun/Jul | 34,812 | 507 | 35,319 |
| Jul/Aug | 31,279 | 372 | 31,651 |
| Aug/Sep | 24,981 | 413 | 25,394 |
| Sep/Oct | 23,044 | 468 | 23,512 |
| Oct/Nov | 30,422 | 480 | 30,902 |
| Nov/Dec | 28,463 | 622 | 29,085 |
| Dec 10/Jan 11 | 25,809 | 359 | 26,168 |
| Total | 371,617 | 4,213 | 375,830 |

Source: Department of Foreign Employment’s annual report of fiscal year 2066-67 and 2067-68 (DoFE, 2011b)

The Government of Nepal has begun to keep a formal record of migrants by forcing them to get pre-approval if they want to migrate abroad. According to the recent monthly report (July-August 2013), the Department of Foreign Employment (2013) has issued 49448 pre-migration approvals for international migration. This figure was more than 40 percent higher during the same period of the previous year. However, due to lengthy delays and frustrating government procedures for obtaining pre-approval, migrants often use an informal way or an illegal route to migrate so that it is difficult to estimate the actual number of migrants. Not only those who are going abroad but the department also started to record the migrants who came on leave and returned to their destination countries. The government record shows 5243 Nepalese migrants leave the country in the month of July-August 2013 (DoFE, 2013).

The figure 1.3 shows the migration pattern from Nepal. The dark green shaded parts denote high international migrancy districts.



Figure 1.3 Map of Nepal showing absentee population of international migration

Source: CBS (2011b)

## Causes of migration

Nepal is one of the poorest countries and more than 25 percent of the population is living in poverty (ADB, 2013). Generally, people move for their livelihood and it cannot be ignored in the case of Nepal. There are several underlying causes that force people to move from one place to another. Existing literature highlights that low agricultural productivity, existing poverty and economic hardship, limited employment opportunities, armed civil war and political instability, increasing inflation and growing living costs are the main drivers of international migration in Nepal (KC, 2004; Thieme and Wyss, 2005; Kollmair *et al.*, 2006; Thieme, 2007; Shrestha, 2008). However, other factors such as demographic characteristics, socio-economic conditions, cultural, political and individual circumstances cannot be ignored (Zlotnik, 1999; Icduygu *et al.*, 2001; Carballo, 2005). Other natural factors such as floods, landslides, drought and crop failure make people migrate.

Most of the migration studies focus on describing why people tend to move from one place to another and linking them to the migration theories to explain international migration in terms of pull and push factors (Massey *et al.*, 1993). In the case of developing countries, existing poverty and economic hardship are outlined as the main causes for migration (Icduygu *et al.*, 2001) and most of the people move for employment reasons (Tiemoko, 2004). So, the reason for international migration is viewed as an economic phenomenon (Martin and Widgren, 2002). Most of the literature highlights the motive for migration as seeking employment, better income and improved living standards for families (Massey *et al.*, 1993; Datta and Mishra, 2011).

Thus, poverty and the economic crisis have generated migration and the mixed results (positive and negative) of migration can be found at different levels of poverty (Icduygu *et al.*, 2001). In ‘Development-migration nexus’: it is argued that ‘neither very rich nor very poor’ people are involved but it is found to be dominated by middle class people in the international migration process (Massey *et al.*, 1994; Icduygu *et al.*, 2001; Rigg, 2007). Furthermore, Lim (2003) argues that international migration also provides the opportunities to earn a surplus which can be saved and used to create a better life for themselves and their families in their home country at present and in the future. Not only this, Pettigrew (2000) also argues that the people in developing countries may see the lifestyle of migrant families and their comfortable material and luxurious life as a potential inspirational cause of migration for others in the country.

## Health facilities and system in Nepal

‘Health for all’ is the primary objective of the health system, the Government of Nepal has set up a 20 year long-term plan (1997-2017), aiming to address people’s needs for health care and services. The development of a health system was started in the 1950s and continued onwards to the 1960s. In this period, health services were provided by different kinds of herbalists, spiritualists, and folk healers (Marasini, 2003; Tamang and Broom, 2010). After that in 1965-1970, a third five-year development plan was launched to give priority to the promotive and preventive health care and gradual improvements in manpower and infrastructure were made in later years. After the fourth five-year plan (1970-1975), the government set up a 15 year long-term health plan (1975-1990) given the priorities of the primary health care system and strengthening the infrastructural and human resource development to provide health care by establishing hospitals and health posts in the rural areas (Marasini, 2003).

Furthermore, after the restoration of democracy in Nepal, rapid reforms were started in the 1990s. In 1991, Nepal’s Health Policy was launched for the first time emphasising the expansion of modern health services from the grass root level (VDC) to provide basic health services to all (Dixit, 1999). In this period, the government also lunched a 20 year long-term plan (1997-2017) setting up the objectives to improve the health status of the rural population, cost effective public health services, strengthening and management of the health organisation and its manpower, and promoting and encouraging the private sectors to provide effective health services to all (MoHP, 2010).

The Ministry of Health and Population is mainly responsible for providing health services in Nepal. According to the decentralisation policy, the organisational structure of the health system has a hierarchy of institutions from the central to sub-health post levels. To provide health services for all in Nepal, the Government of Nepal has allocated only 6.9 percent of the total budget in the health sector in 2013/14 (MoF, 2013). Most of the budget is disbursed to the salaries of employees and infrastructural development and a low budget is allocated for the development of health care services.

The Government of Nepal has established 8 specialised or central hospitals, 3 regional, 2 sub-regional, 11 zonal, 67 district hospitals, 711 health posts and 3179 sub-health posts and currently employs 1,259 doctors, 6,216 nurses, 5,295 health assistant/paramedics, 4,015 village health workers, 14,951 trained traditional birth attendants and 53,999 female community health workers to provide health services for people throughout the country to achieve the government targets. However, due to the lack of trained staff, inadequate funds, shortage of modern equipment and suppliers, the existing health facilities are not sufficient to provide health services for all (MoHP, 2010).

The government hospitals are located at the district headquarters and in urban areas. Health posts and sub-health posts are the main health service providers for the rural people. The distribution of these facilities is not uniform and more centralised in the urban areas. The political influences, poor infrastructure, security and the nature of trained professionals who tend to stay in the urban areas are some factors contributing to poor health facilities in the rural areas (Hotchkiss, 2001).

Both private and public sectors are involved in the health care system. After the restoration of democracy in Nepal, little emphasis was given to infrastructure development in the health sector. The government alone cannot fulfil all the health needs of the people, even the basic health services to the targeted population (NPC, 2012). Thus, the government’s plan for the development and expansion of health service facilities and its liberalisation policies for the entry of the private sector open the door for the establishment of private medical schools and nursing homes within the country which bring some changes in health service utilisation and health care. However, the majority of private health facilities are open in urban areas, only focusing in resource base areas and neglecting the large numbers of people who live in rural and remote areas where resources are scarce. Streefland (1985) argues that modern health services are commercialised in developing countries. The private sector is profit-oriented, urban-based, usually well-equipped and focused on a curative health service. The delivery of health services is more expensive in these private health centres and is run by qualified doctors, medical practitioners and nurses who have government jobs on the side. These facilities are far beyond the reach of poor and rural people and women as well. In light of this fact, faith healers (Regmi, 2001), unqualified medical practitioners and unlicensed drug sellers are the main health service providers in rural areas (Subedi, 2003). Thus, the quality of the health service is low in rural areas.

## Current health status of women in Nepal

The Government of Nepal and the Ministry of Health implemented a 20-year long-term (1997-2017) health policy to address disparities in healthcare, assuring the gender sensitive and equitable quality of the healthcare services for all throughout the country. It aims to improve the overall health status of the Nepalese population by utilising the available resources and co-ordinating public and private partners.

### Types of health seeking behaviours of women in Nepal

In general, health-seeking behaviour and utilisation depend upon the availability of different types of health care systems and facilities (Subedi, 1989). The formulation of these services is based on the people’s health, seeking behaviour and utilisation behaviour (Shaikh and Hatcher, 2004). In any community, the use of health facilities depends on the people’s knowledge and beliefs which are influenced by the social and cultural environment (Subedi, 1989).

In Nepal, like other developing countries, self-medication is common practice (Nsimba, 2007). Both traditional and modern forms of health care coexist in developing communities (Sharma and Ross, 1990; Tausig and Subedi, 1997). Poverty is coupled with illiteracy and cultural and social beliefs in rural areas, people depend on home remedies (traditional medicine) and faith healers at the beginning of their illness (Streefland, 1985; Subedi, 1989; Niraula, 1994; Shaikh and Hatcher, 2004). Streefland (1985) reported that ‘*faith-healing seems to be most strongly rooted in the mind of most Nepalese people*.’ The faith healers such as dhamis and jhankries are widely accepted and fulfil the health care needs of rural people either free of cost or with nominal fees (Subedi, 1989; Sharma and Ross, 1990; Tamang and Broom, 2010). In addition, the advice and knowledge of the older women in the family is very inspirational to the other women and cannot be ignored (Shaikh and Hatcher, 2004). Subedi (1989) argues that folk and traditional forms of health care are socially and culturally accepted in Nepal and commonly available and used by people rather than modern health care. However, Sharma and Ross (1990) found that people often used mixed types of health facilities, for example, modern health care with traditional medicines or ritual healing.

Pharmacies and drug vendors can be commonly found in all areas of Nepal either alone or with a combination of other grocery stores (Kafle *et al.*, 1992) selling medicines with or without prescriptions (Parker *et al.*, 1979). Drug vendors are either semi-trained or untrained persons (Kafle *et al.*, 1992) who give health advice free of cost and in return, they prescribe the medicine and sell the drugs. People’s faith in these drug vendors’ advice and the cheap health service are the motivational factors for the use of such facilities and if needed, they can provide service at home as well. Kafle *et al.* (1992) further argue that the reasons for using retail pharmacy are less waiting time, nearness, convenience, efficacy and reasonable cost. After seeking care from healers and drug vendors, if they are not cured, people only then come in contact with modern health facilities such as a health post or sub-health post for health services. Furthermore, the geographical distance to health posts and poor roads are also seen as typical barriers for people in the hill areas to receive health services (Simkhada *et al.*, 2006a; Baral *et al.*, 2012). If the problems cannot be cured or are not available in the local health-posts, they are referred to district hospitals followed by zonal, regional and central hospitals.

Streefland (1985) argued that modern health facilities and institutions are centralised in terms of the resource allocation and decision-making process of the health care system. It has been observed that the curative institutions require specialised facilities, trained personnel and large amounts of investment. So these types of institutes are found in the large urban cities.

Van der Stuyft *et al.* (1996) reported that there are mainly three types of health service providers commonly found in developing countries: (i) easily accessible drug vendors, who provide free advice and sell medicines; (ii) public health sector, either free consultation or nominal fees, but prescribed medicines have to be purchased; (iii) private sector such as a doctor’s clinic, nursing home, where consultation fees are charged and pharmaceuticals have to be purchased at a commercial rate. These types of practice are also common in Nepal.

While considering the use of health service utilisation by women, Subedi (1989) concluded in his study that older persons and women tend to depend upon home remedies and often delay to seeking modern health care than younger people and especially women take a longer time to come and use modern health facilities for their health problems.

### Limitations to use modern health care and services in Nepal

#### Existing poverty in the country

The human poverty index of Nepal was estimated to be about 35.4 percent in 2008. This index is higher in rural and mountainous regions, almost accounting for 50 percent of the population being below the poverty line (UNDP, 2009a).

It is argued that poverty, social and gender inequality generates direct and indirect impacts on the social, physical and mental well-being of women (Murali and Oyebode, 2004; Shaikh and Hatcher, 2004; UNDP, 2009b). Subedi (1989) reported that household income has some impact on health seeking behaviour and care utilisation. His finding suggests that high-income families tend to seek health services faster than low income families. Macran *et al.* (1996) reported that unemployed women or lone mothers with children living in low income households are found to have low access to health services. This result supports the pattern of health service utilisation by women in developing countries living in the poverty and illiteracy.

Many research findings suggest that household income is positively associated with health service utilisation (Pritchett and Summers, 1996; Matsumura and Gubhaju, 2001; Wagstaff, 2002; Lindstrom and Munoz-Franco, 2006). Migrant families who are benefitted through remittances can access and seek better health care and services (Zachariah *et al.*, 2001; Amuedo-Dorantes *et al.*, 2007; Drabo and Ebeke, 2010). Furthermore, women’s health service utilisation is also associated with the cultural, social and economic environment (Kawachi *et al.*, 1999). Kawachi and colleagues (1999) further argue that women’s health-seeking behaviour and utilisation depend upon control and access to resources and their decisions and power. In traditional patrilineal families, women are low in status in the family and they have no control over economic resources and decision-making power and the heavy burden of household chores are often seen as barriers to the under-utilisation of the health services (Simkhada *et al.*, 2006a; Simkhada *et al.*, 2007)

In this context, with migration as an economic phenomenon (Adams and Page, 2005), husbands’ migration has been shown, in some studies to increase the wives’ autonomy, decision-making power and give them more access to economic resources (Brink, 1991; Desai and Banerji, 2008; Anderson and Eswaran, 2009). Hence, wives left behind can use remittances to seek better health care and use private health facilities (Zachariah *et al.*, 2001; Amuedo-Dorantes *et al.*, 2007; Drabo and Ebeke, 2010)

#### Family system and women’s status in the household

The majority of Nepalese households have a patriarchal family system and only 25.73 percent of households are headed by females (CBS, 2012). Most of the decisions are taken by men, whatever the women’s economic status, caste and ethnicity (UNDP, 2009b). Women and girls seem to be less privileged in all aspects because of disparities in education, limited rights to own and inherit property, poor health, low access to income and resources, gender based violence and lack of participation in the decision-making process (Luintel, 2001; Luitel, 2001; Aiken, 2003). Migrants leave their wives either in the extended family or with male relatives. Then, the decisions in the household are taken by the male member of the family. In the female-headed household, in most cases, women consult with the male relatives for household decisions even if they are not living with them. The migration process increases family income and financial accessibility for the educated household headed women who have direct influence on health service utilisation (Van der Stuyft *et al.*, 1996).

#### Women’s education

The women’s literacy rate is 57.4 percent in Nepal (CBS, 2012) and only 29.3 percent of women have a secondary or higher level of education (NDHS, 2007). It is widely accepted that women’s education has a significant positive association with health seeking behaviour and health service utilisation in developing countries (Rajna *et al.*, 1998; Matsumura and Gubhaju, 2001; Furuta and Salway, 2006). Better educated women have a good understanding of health care and poor education and little health awareness creates difficulty in accessing health utilisation (Niraula, 1994; WHO, 2008a). A survey among 760 patients in Kathmandu, Nepal by Subedi (1989) reported that the women who never attended school and had a low household income delayed in seeking modern health care. He also argued that age, sex and education, household income and the nature of the health problems are significantly associated with the modern health service utilisation. This study was conducted in Kathmandu, capital of Nepal, where adequate modern health facilities are available and cannot be representative of those rural areas where resources are scarce and people have a low literacy rate and live in poverty. Women’s education increases health seeking behaviour, not only for their own health, but has a greater impact on childcare, nutrition and child health by utilising modern health facilities (Van der Stuyft *et al.*, 1996).

#### Social and cultural disparity in the community

Nepal is a multi-ethnic multi-lingual country. More than 123 languages are spoken and 125 ethnic groups inhabit the country (CBS, 2012). More than 80 percent are Hindu, followed by Buddhists, and Muslims. In these ethnic groups, there are huge disparities and some groups are called ‘untouchables’ such as Kami, Sarki and Damai. This social disparity greatly influences the use of health service and care. The upper castes such as the ‘Brahmans’ are socio-economically better off and use health care and services more than the lower castes or ethnic groups who have less education and a lower social status in society (Niraula, 1994). Cultural and social diversity within the country is a barrier to the use of modern health facilities. It is also found that the upper castes have priority over the lower castes when utilising health care facilities in rural areas. Niraula (1994) highlighted that socio-cultural factors also influence modern health care service usage.

The faith healers (traditional: dhami and jhankris) are the main health service providers in the rural areas (Streefland, 1985; Tamang and Broom, 2010). The easy access and availability of traditional healers (Regmi, 2001) and people’s faith in religion play a vital role in widening the gap in the utilisation of modern health facilities.

Scholars have argued that health seeking behaviour and health care utilisation depend upon the availability of different health care systems and facilities (Shaikh and Hatcher, 2004). However, people use these facilities depending on their knowledge and beliefs which are affected by their social and cultural environment (Niraula, 1994; Subedi, 2003).

In the rural areas, due to people’s belief in religion, culture and tradition, girls are married at an early age to fulfil the need of labour in the household and agriculture. Thus, adolescent pregnancy and motherhood is a burning social and health issue in Nepal. Early pregnancy and early age childbearing can create severe health problems for both mother and child (NDHS, 2007).

#### Availability of services

The accessibility and availability of health services motivate the people to use them. However, people living below the poverty line cannot utilise modern health services because of the high cost. Most of the modern services are expensive and only available in the urban and city areas. The majority of the people who are living in rural areas may bear the high cost of transportation and also travel long distance to reach the health facilities (Baral *et al.*, 2010). The cost of paying for health services and transport to reach the health centres are also barriers to health service utilisation in Nepal.

#### Physical limitations to use of health services

Poor road development, high topographical variation and limited transport facilities are the main restrictions to using modern health facilities in Nepal (Hotchkiss, 2001; Simkhada *et al.*, 2006a). Only 62 percent of households are covered by health posts within a 30 minute range and 20 percent of households take more than an hour to reach the nearest health facilities (CBS, 2004). The road and public transport facilities are very poor and mainly seasonal in most areas of the country. The terai region has better transport facilities than other parts of the country. Overall, 27 percent of households must travel 3 hours or more to reach transport (CBS, 2004). In the hilly regions, only the district headquarters have limited road facilities and horses and donkeys are the main transport in the hilly and mountainous regions of the country. As a result, women face difficulty in accessing modern health services (Simkhada *et al.*, 2006a) and must seek traditional faith healers, unskilled health providers, the nearest drug sellers and home remedies for their health care. A study by Hotchkiss (2001) in Nepal shows that physical access to health services within 60 minutes has a modest impact on the use of health facilities.

#### Lack of adequate health professionals and resources

In Nepal, most of the health facilities are situated in the district headquarters which have modern facilities, for example, roads, electricity, telephone, drinking water. Smith (1996) pointed out that the low salaries, inadequate resources, poor living conditions for families and children, and educational opportunities for the children are the main factors contributing to the shortage of health professionals in rural areas. He also argues that the government has failed to retain health professionals in the rural health institutions. Lack of trained and skilled manpower and resources in the rural areas are contributory factors to the poor health service and care. The migration of health workers has created a huge shortage of trained health professionals (Simkhada *et al.*, 2006a).

## Mental health in Nepal

Mental health problems have significantly increased over the past few decades and become one of the major contributors to the global burden of disease which has caused more than 1.5 percent of deaths worldwide (WHO, 2004). Many existing literature suggests that mental health is one of the major public health problems but a less prioritised health issue in developing countries (Khandelwal *et al.*, 2001; Ho-Yen *et al.*, 2006; Patel, 2007). In Nepal, very limited studies have been conducted on mental health issues (Ho-Yen *et al.*, 2006; Khattri *et al.*, 2013). In 1997, the Government of Nepal formulated Nepal’s mental health policy that highlighted the four major key components: i) availability and accessibility of minimum mental health service for all; ii) to develop human resources to deliver mental health services; iii) to protect the fundamental human rights of the mentally ill; and iv) to improve awareness about mental health (WHO, 2006). The government put the emphasis more on physical health than mental health (MoHP, 2010). According to the Government budget report (2013), about 6.9 percent of the total budget was allocated to the health sector. However, there was no budget allocation for mental health in the annual work plan and the budget allocation of the Ministry of Health and Population, Nepal by category for fiscal year 2013/14 (MoHP, 2013). Jha and Adhikari (2009) also argue that the nonexistence of a separate mental health section within the Department of Health, the lack of trained manpower and an inadequate budget indicated that the Government of Nepal has given a low priority to mental health and also it is not clear how much money was actually spent on mental health services (Regmi *et al.*, 2004; WHO, 2011). However, the Government of Nepal provides a treatment and health service for mentally ill patients from one mental hospital having 50 beds (0.18 beds per 100,000 population) and a further extension of mental health services in 7 out of 75 districts through the integration of mental health care in primary health care (WHO, 2005).

The low priority of the issue of mental illness, given the lack of morbidity data and research on mental illness, it is difficult to predict the prevalence of mental illness among the population in Nepal (Tausig *et al.*, 2003; Regmi *et al.*, 2004; Jha, 2007). However, according to WHO (2001), it was estimated that about 10 percent of the total population suffer from one or more mental illnesses (WHO, 2001). According to this figure, Nepal has about 2.8 million people suffering from mental illness. Moreover, most of the mental illnesses are under-estimated and under-reported due to the lack of awareness, stigma, and socio-cultural factors (Regmi *et al.*, 2004; Jack and Ommeren, 2007). There are different perceptions and misunderstandings about mental illness in Nepal. The majority of people believe that mental illness is a result of bad fortune and often seek treatment from faith healers before using modern health services (Tausig *et al.*, 2000; Regmi *et al.*, 2004; Jha, 2007).

Among those with mental illness, depression is one of the major leading mental illnesses in Nepal (Jha, 2007) and women suffer two times higher than men (WHO, 2004; Jack and Ommeren, 2007). Past literature also suggests that women are more likely to be depressed in Nepal (Upadhyaya and Pol, 2003). Evidence from past studies suggests that unemployment, financial difficulties and poverty, lack of help and support, cultural and social boundaries or norms, gender based discrimination, and conflicts in relationships are the common reasons for depression in women (Regmi *et al.*, 2004; Jack and Ommeren, 2007).

The literature on depression in women in Nepal is very scant (Jack and Ommeren, 2007). Most of the literature focuses on postpartum depression in women (Regmi *et al.*, 2002; Subba, 2013). The morbidity and mortality data for depression in women is very limited. A study by Kohrt and colleagues (2009) reported that the prevalence of depression in lower caste women and upper caste women was 75 percent and 40.4 percent respectively in the Jumla district of Nepal. Similarly, Lamichhane and colleagues (2012) reported a 42 percent prevalence of depression in women aged between 21-30 years. Likewise, Khattri and colleagues (2013) reported a 30.8 percent prevalence of mental illness in women aged over 30 years.

Given the high prevalence of depression in women, Jack and Ommeren (2007) argue that depression in women is often neglected in Nepal due to patriarchal dominance, social and cultural stigma and discrimination against women and misconceptions about depression among people.

In Nepal, modern and traditional forms of health service for mental illness coexist (Regmi *et al.*, 2004). The majority of people with mental illness tend to seek treatment from the traditional faith healers before using the modern health services (Regmi *et al.*, 2004; Shankar *et al.*, 2006; Tamang and Broom, 2010). This trend still exists due to the lack of knowledge and awareness about mental illness, belief in faith healers, limited modern mental health facilities and lack of professionals (for example: one mental hospital in the whole country) and expensive treatment for mental illnesses (Regmi *et al.*, 2004; Jha, 2007).

## Women’s status and position in society (Women’s autonomy)

Traditionally, Nepal has adopted a patriarchal family system. In this system, the father or male member rules the family hierarchically. They are kept at the top and women are kept in a low profile in the family (Luitel, 2001; UNICEF, 2006) and in the household women are treated as inferior to their husbands (Luitel, 2001). Gender discrimination starts at birth and remains for their whole life (Mahat, 2003). Thus, the women’s position and their autonomy is greatly influenced and determined by the male members such as husband, father, son or other family members. It is not only in the households their position within society is also affected by gender stratification, existing patriarchal descent, and traditional socio-cultural, religious values and norms (Bennett, 1983; Jejeebhoy and Sathar, 2001; Luitel, 2001; Pradhan, 2005; Bhushal, 2008). For example, Hindu philosophy has granted more power to men and given them control over a woman’s life (Bhushal, 2008). In this situation, most of the decisions are taken by men, whatever the woman’s economic status, caste and ethnicity (UNDP, 2009a). Women and girls experience less privilege in all aspects of their life because of the existing disparities in education, limited rights to own and inherit property, low access to income and household resources, gender based violence, poor health and lack of participation in the decision-making process (Mahat, 2003; Bhushal, 2008; Adhikari and Sawangdee, 2011; NDHS, 2012). While considering the woman’s position within the family, a newly married bride or women without any children are not able to gain power and have no role in any decision making in the households (Luitel, 2001). However, the position and status of women are established and more visible when they have children (Waldfogel, 1998).

The gender-based inequalities are still rooted in developing society (Mahat, 2003) which limits women’s rights to participate in economic, social and political activities either within or outside the household. Similarly, the low literacy rate of women (57.4%) compared to men (75.1%) is also considered a barrier to their participation in decision-making and gaining economic, social and political benefits (CBS, 2012; NDHS, 2012). Gender discrimination in education has been widely accepted in developing society (Edwards, 1996). The deep rooted cultural and social prejudice in education against girls has led to the poor literacy rate of women in the country so that women cannot gain their rights.

Nepal has been identified as a multi-cultural, multi-ethnic and multi-religious country (CBS, 2011b). The diversity in term of culture, caste/ethnicity and religion in society, women’s position and their autonomy may vary from one place to another. For example, women’s autonomy and their freedom are also affected by religion (Jejeebhoy and Sathar, 2001). Their study in India and Pakistan (2001) found that Hindu women experience more autonomy than Muslim women. Another study by Deshpande (2002) in India found that backward caste women have more freedom in their social mobility.

In Nepal, traditional gender roles are classified for men and women. Men are responsible for paid work outside the home and women are responsible to bear family responsibilities. Thus, Nepalese women take multiple responsibilities in the household as ‘housewives’. Such responsibilities involve domestic work (cleaning, cooking, washing clothes), care of the house, children and elderly parents, and even doing unpaid labour work on the farm (Luitel, 2001).

According to the Nepal Living Standard Survey (NLSS) (2011), there is a wide gender gap in the employment of men and women (CBS, 2011a) and it was found that there is a higher number of unemployed women in the country. Women usually work on their own farm. The involvement of women (25%) in the non-agriculture sector is far behind that of men (75%) (CBS, 2011a). Women’s representation in the bureaucracy and politics is also found to be very low. Only one woman was appointed as ambassador before 1991 and no women have been appointed since then (Pradhan, 2005). A similar situation is also found in politics. Only 12 percent of women occupied places on the executive committees in political parties (Pradhan, 2005; UNIFEM, 2009). Thus, women in Nepal are not experiencing autonomy socially, economically, or politically.

The autonomy of women is complex and multi-dimensional (Luitel, 2001; Furr and Das, 2006). Researchers argue that women’s autonomy is governed by many socio-demographic determinants, for example, religion (Jejeebhoy and Sathar, 2001); caste/ethnicity (Deshpande, 2002); family size (Eswaran, 2002) and women’s access to and control over financial resources, participation in household decision making, and mobility have been taken as indicators to measure women’s autonomy (Jejeebhoy and Sathar, 2001).

## Overview of thesis

This thesis outlines seven chapters plus appendices. The first chapter provides the introduction to and overview of the thesis. This chapter also describes the situation and pattern of international migration and its causes in Nepal, health system and women’s situation, mental health and health service utilisation in Nepal.

Chapter two details a review of the literature which provides the past and current evidence regarding depression, autonomy and health service utilisation by the left-behind wives in the world as well as in the Nepalese context to find out research gap in migration and the wives left behind. This chapter also describes the rationale, aim and objectives of the study. The objective of this study is to examine and explore the effects of husbands’ international migration on left-behind wives regarding depression, autonomy, type of health service utilisation and comparing the results with the wives of non-migrants.

Chapter three outlines the methodology of the study. This chapter describes the methods and designs used to conduct this study, description of the study area, sampling and sample size, development of tools and procedures of field study and data analysis in detail.

Chapters four and five present the findings of the study. The fourth chapter describes in detail the findings of the quantitative analysis and chapter five reveals the findings of the qualitative analysis.

Chapter six provides the discussion of the findings of this study with possible explanations and provides the evidence of previous findings. Furthermore, the strength and limitations of the study are also included in this chapter.

Chapter seven enlists the key conclusions drawn from this study and provide the recommendations to the study participants and the policy makers and planners regarding the consequences of international migration and develop the programme for the left-behind wives of migrants for the study issues.

The references and appendices are presented at the end.

## Definitions of key terms

The UN recommendation of statistics (UN, 1998: 18) states “***International migration*** is defined as any person who changes his or her country of usual residence” for at least one year, and “a ***migrant*** is defined as a person who moves to a country other than that of his or her usual residence for a period of at least a year (12 months)”. The reason for taking the time boundary of migration at one year is to allow for a comparison with international migration and non-migration and facilitate the measure of the migratory effects. Furthermore, this time frame also allows the exclusion of the seasonal, temporary migration across internal borders and internal migration within the country.

In this thesis, where the term migration is used alone, it denotes international migration and migrants means international migrants. This study focuses on the effects of migration on wives whose partner/husband has migrated abroad, so that in this study migrant represents the male member.

**Mental health**: For this study, the WHO definition of mental health was adopted. According to the WHO (2007) “*Mental health is defined as a state of well-being in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and able to make a contribution to her or his community*”

**Depression**: According to the WHO (2009), “*Depression is a common mental disorder characterised by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy and poor concentration*”

**Women’s autonomy**: This study utilises three dimensions of women’s autonomy with regard to women’s outside mobility and freedom for their personal purchases (personal autonomy), control of and access to economic resources (economic autonomy) and their participation in household decisions (decision-making autonomy). (adopted from Jejeebhoy, 2002)

**Minor illnesses**: Minor illnesses are health complaints which require no specific treatment (adopted from McCormick *et al.*, 2005). In this study, only coughs fevers and diarrhoea were included for types of health service utilisation.

## Summary

International migration is a global phenomenon and significantly increases day by day in Nepal. Many people migrate to different countries for employment purposes and their visible contribution to national and household economy has been clearly marked. This chapter further describes the health and mental health situation in Nepal, women’s health service utilisation and women’s position in the household. The Government of Nepal has set an objective ‘Health for all’ to provide equitable access of health care to all its population. However, urban based health facilities, gender bias, socio-cultural disparities, the position of women and their role in decision making could prevent them using health care and services. Despite these facts, there is a necessity to conduct this PhD research to examine and explore the effects of international male migration on the wives left behind, regarding depression, autonomy and types of health service utilisation and suggest for future improvements.

# CHAPTER TWO: LITERATURE REVIEW

## Introduction

This literature review entails and explores what was known in the past which helps to find the gaps in the study issues. It also focuses on the findings of past studies with regard to international migration, and the left-behind wives, especially concerning depression, autonomy and health service utilisation issues in Nepal and in the world.

## Literature Search Strategy

The literature search strategy was deployed to review the electronic databases, published peer reviewed and grey literature such as research articles, reviews, reports published in the peer reviewed and non-peer reviewed digital and print journals. At first, the systematic review of literature was planned and different search strategies were developed (Appendix 16) for searching and reviewing relevant published peer reviewed articles in the electronic databases. After searching in different databases, there were none of the studies which covered ‘international male migration’ and ‘depression’ and ‘autonomy’ and ‘health service utilisation’ and left-behind wives.

Due to the limited availability of peer reviewed research articles, it was decided to carry out a narrative review and include the grey articles, reports, case studies on study issues published by the concerned organisations for example: International Organisation of Migration (IOM).

A narrative review method has been adopted for the review of literature which is considered one of the most suitable methods for a review of literature, where the literature is very limited and diverse (Collins and Fauser, 2005). During the literature search process, Medical Subject Heading (MeSH) terms and the combinations of key words were identified from the relevant journal articles for international migration and the wives left behind. The following terms were used to search the relevant literature, either alone or in combination: international migration, male out-migration, male migration, male international migration, husband’s migration, husband’s international migration, partner’s international migration, migration, male labour migration, labour migration, labour out-migration, Gulf countries migration, emigration, immigration, left-behind, women left behind, wives left behind, females left behind, depression, mental health, autonomy, women’s autonomy, wives autonomy, female autonomy, women’s position, women’s status, women’s freedom, health service utilisation, health care, health service, developing countries, Nepal, South Asian countries. Ovid MEDLINE, CINAHL, PsycINFO, PsycARTICLES, JSTOR databases were used for searching the literature (Appendix 16). Other data bases Web of Knowledge, Science direct, and Scopus were also used for searching literature. Beside this, the other relevant journal websites, organisational websites were also visited to search the literature where documents and reports relating to migration, depression, autonomy, health service, women left behind were reviewed. For example, World Health Organisation (WHO), International Organisation for Migration (IOM), United Nations Population Fund (UNFPA), United Nations Development Programme (UNDP). The government websites such as Ministry of Finance, Nepal (MoF), Ministry of Health and Population, Nepal (MoHP), Department of Foreign Employment, Nepal (DoFE), Central Bureau of Statistics, Nepal (CBS), were also accessed to find the relevant data, reports, and policy documents related to the study issues. Furthermore, some daily newspapers, such as The Kathmandu Post, Kantipur, Himal Khabar Patrika, were also explored to find the evidence based publication regarding international migration and its consequences in Nepal. The possible relevant sources were also searched by using Google Scholar, Yahoo search engine, Academic, Linked-in, BBC, etc.

Nowadays, most of the journals are digitalised. However, most of the journals of Nepal are published in print copy even if they are not regular. Thus, it is essential to search them manually. For this, Nepal Health Research Council (NHRC), Tribhuvan University Central Library, Tribhuvan University Central Department of Population Studies, Kathmandu, Nepal were visited but the attempt to find the relevant migration literature in Nepal was not successful.

For each search, the outputs were imported into endnotes and literatures were screened according to i) original research, reviews including systematic review; ii) specific reference to international migration, left-behind wives, partners, depression, mental health, autonomy and health service utilisation; iii) key terms had to be in the title and abstract; iv) literature published only in English language; v) relevant reports from concern organisation, books and book reviews; vi) research relating to Nepal and developing countries.

The aim of this literature review was to find the existing literature that describes international migration and its effects on the women left behind.

Due to the very limited number of published articles, the search was extended to grey literature. The web pages of relevant organisations and journals were also visited for literature, for example, IOM, WHO, MERIP, International migration and International migration review journal, and psychiatric journals.

The literature on this study issues are very scant in Nepal. Therefore, the grey literature for example, study reports, case-studies, from the international and regional organisations and the relevant literature from the developing countries of the Asian, African and American continents were also included in the review.

The literature covering the issues of international migration, remittances and impact on left-behind women are included in this literature review (Figure 2.1).

Records identified through database search

MEDLINE (43)

CINAHL (10)

PsycINFO and PsycARTICLES (2)

JSTOR (5)

(Total: 60)

Records identified through journal/web /reference search

CBS, UNICEF, WHO, IOM, MERIP

NRB, NIDS, UNDP, UNESCO,

The World Bank

(Total: 45)

12 STD, HIV, Suicide and other disease related

6 Nurse and female migration

40 irrelevant (study on migrants, population distributions)

2 relevant

A total of 47 records were included in the review

Figure . Flow diagram of literature search

From the above search, the literature were categorised according to the issues covered and country setting which is shown in table below.

Table 2.1 Number of articles in Nepal, South Asian and other developing countries

|  |  |  |  |
| --- | --- | --- | --- |
| Theme | Nepal | South Asian countries | Other developing countries |
| Migration and economic impacts | 10 | 1 | 4 |
| Migration and depression/mental health | 1 | 2 | 4 |
| Migration and women’s autonomy | 2 | 3 | 8 |
| Migration and types of health service utilisation | 0 | 0 | 2 |
| Other studies related to women’s depression, or autonomy or health service utilisation | 4 | 1 | 8 |
| Total (50\*) | 17 | 7 | 26 |

Source: Based on figure 2.1. \* Some literature covered more than one issue.

The review of the literature was carried out on the basis of issues and reviewed under appropriate themes.

Due to less literature on male international migration and left-behind women and its consequences in Nepal and other developing countries, the synthesis of the relevant literature from Nepal and other developing countries was done on the basis of themes rather than country specific. The following sections describe the critical reflection on the methodological rigour of the reviewed literature and the impact of international migration on wives left behind in Nepal and other developing countries, for example, South-Asian, African and North American countries.

## Impacts of international migration on left-behind wives

There has been growing interest among researchers to study the impacts of international migration on the well-being of left-behind wives in recent years (Yabiku *et al.*, 2010). However, there is very limited research literature in the field of international migration and left-behind wives in the South Asian Region including Nepal and the findings of such studies on left-behind wives are also unpublished. Empirical evidence from available literature suggests that most international migration studies have focused on the consequences of migrants on the host countries and their direct economic impact on both the receiving and sending communities (Russell, 1984; Kollmair *et al.*, 2006; de Haas, 2007; Buch and Kuckulenz, 2010). Evidence from past studies of migration seems to be one-sided and focuses on migrant remittances and their direct impact on the household economy (Barham and Boucher, 1998; Seddon *et al.*, 2002; Kollmair *et al.*, 2006; Yang, 2008) and less attention was paid to the impact on the non-economic aspects (for example: physical and mental health, socio-cultural change etc.) of migration and left-behind families in the country of origin (Levitt, 1998; de Haas, 2007). In recent years, there has been a growing interest among research communities in the impacts of international migration on the non-economic aspects such as health, gender, social and cultural change, autonomy of left-behind families (de Haas, 2007; UNICEF, 2008a) and especially on women.

Nepal has been increasingly dependent on the significant remittances being provided by migrants (Kollmair *et al.*, 2006) and sees its overseas workers of major value to economic development (NRB, 2008; NRB, 2009). The overall impact of migration is not only economic but also has many effects on the family members left behind and on the migrants’ sending communities (UNICEF, 2008b).

### Migration as a source of income

The Nepal Institute of Development Studies (NIDS) revealed that the economy of families in Nepal depends on at least one of their family member’s earning from employment away from home (NIDS, 2008, 2010, 2011). According to the Nepal Living Standard Survey (2011), more than 56% of households are receiving remittances (CBS, 2011a). The migration and remittances study of Nepal by Seddon *et al.* (2002) and Kollmair and colleague (2006) argue that international migration is considered as a significant income source for the left-behind families in Nepal.

The study reports of Nepal Rastra Bank (2008 and 2009) described that in recent years, there has been a remarkable increase of remittances sent by migrant workers to their families which accounted for 142,682.7 million Rs (~1426.8 million US dollars) in 2007/8 and 209,689.9 million Rs (~2096.9 million US dollars) in 2008/9 (Figure 2.2). This figure showed that about 47% higher remittances flowed in the country than in the fiscal year 2007/8 (NRB, 2008; NRB, 2009). This report also claimed that Gurkha families received 7071.4 million Rs (~ 70.7 million US dollars) as remittances (NRB, 2008). On the other hand, Seddon *et al.* (2002) and Pant (2008) reported that more than 50% of remittances were flowing within the country through informal channels. Therefore, the flow of remittances in the country is much higher than the official estimate (Seddon *et al.*, 2002).

Pant (2006) in his report of remittance inflows to Nepal described that migrants’ families use large amounts of remittance money to fulfil basic needs and daily purchases such as food, clothing and health care which are often called ‘non-productive’ (non-income generating activities) and some money is also used to build or rebuild houses, buy land, and luxury goods such as televisions, computers and refrigerators. Pant (2006) further argued that a visible impact of the remittances sent by the migrant workers to their families can be seen in the receiving households and communities. Similar findings are reported in Turkey by a study of the welfare status of left-behind families among 1564 households (Koc and Onan (2004). The results of this study reported that migration has a positive impact on the income of migrant households and migrant households are found economically better off than non-migrant households. Almost 80% of migrant households in the study samples use remittances to improve their living standards.

Literature on migration, remittances and poverty reduction in Nepal by Gaudel (2006); Thieme (2007) and Sharma and Gurung (2009) further argue that international migration is a main source of household income which helps to reduce poverty and increases the living standards of migrants’ families (UNDP 2009b). The Nepal living standard survey (2003/4) also reveals that the poverty level decreased from 42 percent in 1995/96 to 31 percent in 2003/4. However, Jetley (1987), a study in India, reported that the migrants in developing countries have to take out a loan or borrow money to cover the migratory costs which they have to repay from their remit money. This study points out that migrant households not only benefit from remittances but equally the migration of male members from the poor or landless households increases the financial burden on the remaining family members at home which could further increase the poverty level. Thus, the migration of a male member of the family does not itself guarantee to reduce poverty (Jetley, 1987).

Migration and remittances studies from Mexico (Massey *et al*., 1994), Africa and other developing countries (Barham and Boucher, 1998; Adams and Page, 2005; Amuedo-Dorantes and Pozo, 2006) also reveal that international migration is a source of income for migrant households and migrant families are better off economically and increase their living standards through the use of remittances and it reduces the poverty level.

Figure 2.2 Remittances inflow in Nepal from Fiscal year 2001-2010 (in Rs. Billion)

Source: Pant (2011)

### Effects of male migration on women

Male out-migration is a common phonomenon in developing countries, leaving their wives in their birth country (Kanaiaupuni, 2000; Desai and Banerji, 2008). Skeldon (2008) described that migrants in the Gulf, East and Middle-East Asian countries where labour migration from Nepal is common (NIDS, 2011), are not allowed to bring their families with them. Thus, the wives of migrant workers are not able to join their husbands and are left at home.

Pettigrew (2000), in a study of Nepalese British and Indian army families further described that not only labour migrants but also the ‘Gurkhas’ working in the ‘British’ or ‘Indian’ army also leave their wives behind at home. She articulates the situation of the wives of the Gurkha army in her study. In some cases, they are allowed to bring their wives for a specific period of time as ‘family permission’ to gain a ‘normal life’. During their stay, wives are exposed to the new environments that have a high standard of living and more recreational facilities that are different from their country of origin. When the family permission finishes, the wives should return home. These returned wives aspire to similar conditions in their home country (Aryal, 1991). Under these circumstances, they can face many health and mental health problems. There are several types of ill-health in women left behind which are associated with male migration and poverty (Wagstaff, 2002).

Bishop (1993), in a study of circular migration and families in a Yolmo village of Nepal describes that migration has impacted on lifestyle change and improved the economy in migrant households in the hilly region of Nepal.

A case study of migration from Sainik Basti in the Western part of Nepal by Thieme and Wyss (2005) also pointed out that the impact of migration on remaining household members is both positive and negative. They described that the remittances are used to accumulate physical goods e.g., motorbikes, TVs, refrigerators, building houses and purchasing land for a better life. At the same time, they pointed out that the loss of an active family member may have a negative psychological effect on the remaining family members due to the long separation from each other.

The migration studies in other countries for example, Sadiqi and Ennaji (2004), an Egyptian study, also reported that the impact of male migration in women is both positive and negative depending upon social strata and household structure.

#### Positive effects of migration on women

Researchers argue that migration is an economic phenomenon which can generate remittances which have a positive and visible effect on the economy and wellbeing of their families left behind (Koc and Onan, 2004; Pant, 2006).

Pant (2006) describes that international migration has a positive impact on the migrant households in Nepal. He further mentions that remittances sent by the migrants to their families are used for higher living standards (health and luxury goods) and infrastructural development (rebuilding houses, land purchase). In addition, there is a significant increase in family consumption and spending. Migrants’ family members start to show their newly earned wealth, organising ceremonies and gatherings by which they can gain social status (Arnold and Shah, 1984). Similar findings were also reported in the study in Mexico (Durand and Massey, 1992; Amuedo-Dorantes and Pozo, 2006).

##### Change in the status and position of women and male migration

Research into male migration and women suggests that there have been both positive and negative effects of male migration on women’s status and position in the household and society (Brown, 1983; Arnold and Shah, 1984; Seddon *et al.*, 2002).

In Nepal, patrilineal extended family systems are more common and there has been a concern about the position of wives left behind which depends upon the types of family structure and patrilineal descent (Luitel, 2001). As per the kinship pattern, in the absence of husbands, there are two living arrangements for the left-behind wives who either live separately in a nuclear family or with in-laws in an extended family.

Gartaula and his colleagues (2012), in a study in Nepal described that the migrant wives as household heads gain status and more autonomy in decision making in the house when living separately from in-laws. Their study finding is based on the experience of four left-behind wives. As described in their qualitative samples, two women were living with in-laws who were economically better off while the other two women acting as household heads were economically poor. Their study found mixed results for the women’s autonomy when living with their in-laws. Furthermore, in Nepalese families, males are responsible as breadwinners and primary decision makers who take the overall responsibilities for the family. The males even though they are abroad, instruct their wives when living in a nuclear family about household decisions and the left-behind wives cannot gain their autonomy (Gartaula *et al.*, 2012).

Studies from South-Asian countries also reveal that male international migration has improved women’s position and their decision making power in the household or family (Hadi, 2001; Desai and Banerji, 2008).

A quantitative study in India by Desai and Banerji (2008), using the secondary data from the India Human Development Survey 2005, finds that the women residing in nuclear families have greater autonomy than the women living in extended families when their husbands have migrated. In their study, they included the women’s role in decision making, their mobility and participation in the paid and unpaid labour force. But, this study excluded the women’s control and access over financial resources in the household which is also considered one of the important determinants of women’s autonomy.

A study of international migration and the change of women’s position among a 1030 sample of migrant and non-migrant households in rural Bangladesh by Hadi (2001) concluded that male migration is associated positively with the women’s position in the migrant households compared to non-migrant ones. This study did not mention how many in-depth interviews were conducted and included in the study to draw the conclusion.

Similarly, a large body of literature on male migration and the position and status of women in African countries (Brown, 1983; Brink, 1991; de Haas and van Rooij, 2010; Yabiku *et al.*, 2010) also reveals that left-behind women are experiencing greater autonomy as a result of the husbands’ migration. Many of the studies in this region also found that left-behind wives who are living in nuclear families are gaining greater autonomy compared to the wives living in the extended one.

A survey of 507 households and 43 qualitative interviews in six different villages in Morocco by de Haas and van Rooij (2010) describes that those wives who lived in extended families could not gain their status while living in such households. They further argue that in the extended family, remittances sent by migrants (husbands) are mostly received by their in-laws or a male member of the family and in such a situation, wives left behind cannot have control over or access to the remittances and conflict has arisen between the wives left behind and the in-laws over the expenditure and share of remittances. To avoid sharing the husbands’ remittances with the other family members, gaining status in the family and freedom, the wives left behind prefer to live separately as a household head in a nuclear family than in an extended one (Brown, 1983; de Haas and van Rooij, 2010).

Sadiqi and Ennaji (2004) in an article published in *Finisterra* describe the overall situation of the women left behind and the effects on them of male migration in Morocco. They mention that male migration has both positive and negative impacts on women left behind. They found women’s greater freedom in the management of household income and gaining the position as household heads is the positive impact of male migration whereas the negative impacts are family disintegration and deepening poverty often related to migrants’ joblessness or the low salary conditions in the host country.

Results of past studies in Botswana (Brown, 1983) also reveal that the high rate of male international migration increases the nuclear families with female-headed households and in such cases, the wives left behind can gain position and status in the house. Similar trends of the increasing number of nuclear families in Nepal also reported in the result of a recent census of Nepal (2011) and found that about one-quarter of the households are headed by women (CBS, 2012). With increasing male international migration over the last couple of decades from Nepal, there has been a noticeable increasing trend of female-headed households (CBS, 2012). Furthermore, a qualitative study of male migration and left-behind women by Menjivar and Agadjanian (2007) in Armenia and Guatemala argue that a household head is more autonomous and acts as a primary decision maker in the household. This indicates that women as household heads gain more autonomy and decision making power in the absence of their husbands. Similar findings were also reported by many scholars, for example, in Egypt (Brink, 1991); Morocco (de Haas and van Rooij, 2010); African countries (Agadjanian, 2008); Mozambique (Yabiku *et al.*, 2010) and India (Desai and Banerji, 2008).

These studies have reached the conclusion that male international migration has influenced a change in family structure (extended to nuclear) and could increase women’s responsibilities, autonomy and decision making power in the absence of their male counterparts.

During a couple of decades, left-behind families received significant amounts of remittance sent by Nepalese migrants working abroad. A survey of 509 migrant and non-migrant households from two districts in the mid-hills of Nepal by Maharjan and colleagues (2012) describes that the left-behind women who received large amounts of remittance have more decision-making roles than the left-behind women who received low amounts of remittance. Their findings were mainly based on the women’s role in farming activities.

Yabiku and colleagues (2010) further describe the results of a survey of 1680 married women from 56 rural villages in Mozambique that male migration is positively associated with women’s autonomy and still women can hold this autonomy after the return of the migrants. Their results were based on three factors, women’s employment outside the home, lower fertility and residential independence from extended family members. By contrast, Brink (1991) in Egypt and de Haas and van Rooij (2010) in Morocco reported that women can gain their autonomy temporarily and only for the period of the husbands’ absence.

Brink (1991) in Egypt studied the effect of husbands’ migration on the status of their wives in eight migrants’ wives using four indicators to measure the women’s status: the ability to allocate food money, the ability to allocate money for routine expenditure, the ability to decide on buying expensive purchases and the freedom to leave home without permission. This study revealed that husbands’ migration encourages their wives to form nuclear families from extended ones. The migrants’ wives who live in a nuclear family obtain more freedom to control food money, more decision making power and freedom of movement than the migrants’ wives living in extended families. However, wives left behind did not make decisions to purchase expensive items. This decision is made by their husbands who often give directions to their wives to make decisions. She also argues that husbands’ migration increases women’s autonomy. However, this autonomy may not last but returns to their husbands when they return. Similar findings were also reported by the study which was based on the research among the women in 507 households of six villages in Morocco by de Haas and van Rooij (2010). They argue that women left behind can gain their autonomy and position temporarily but their position and autonomy return to their men when they returned.

Another Egyptian study by Khafagy (1984) also reveals that women’s decision making power has improved in the absence of their husbands. She also observed that women receive and manage remittances from their husbands and interact with different individuals to carry out household work.

The majority of the studies in Nepal on women’s autonomy have been in the context of its determinant to influence maternal health service utilisation (Furuta and Salway, 2006; Allendorf, 2007), child mortality (Adhikari and Sawangdee, 2011), fertility and reproductive health (Morgan and Niraula, 1995; Niraula and Lawoti, 1998), family planning (Allendorf, 2007). Furthermore, many studies in a South-Asian setting also found that women’s autonomy has been linked to religion and region (Sathar and Kazi, 2000; Jejeebhoy and Sathar, 2001).

Researchers argue that there is the need for a broader understanding and consideration of the situation of the women left behind which arises from male international migration (Yabiku *et al.*, 2010).

##### Husband’s migration and wife’s responsibilities

The husband’s migration creates a situation in which women bear all the household responsibilites within or outside the home (Thomas and Adhikary, 2012), in most cases as a household head (Brink, 1991).

The position and status of women in the household determine their role and responsiblities. In the patriarchal system, women are in general doing household chores, caring for children, cooking and washing clothes (Luitel, 2001). After the migration of husbands, their role and responsibilities have increased in the household and evidence suggests that they have to bear extra responsibilities in the absence of their husbands (Roy and Nangia, 2005; Maharjan *et al.*, 2012). However, the women’s role and responsbilities are mainly determined by their family sturcture (Luitel, 2001; Gartaula *et al.*, 2012).

Gartaula *et al.* (2012) in their study samples of four left-behind women in Nepal reported that the household work is shared with other family members when left behind lives with in-laws but in the case of women who are de-facto household heads, they feel an increased workload and bear more responsibilities. In their samples, the formal ones were economically better off and the latter one economically poor. This study did not mention the situation of left-behind wives when living with in-laws in poor families and vice-versa.

Evidence from past studies in Asian and African countries suggests that the left-behind women living in nuclear families in poor economic conditions are facing an extra burden of workload in the absence of their husbands (Roy and Nangia, 2005; Desai and Banerji, 2008; de Haas and van Rooij, 2010). In these conditions, the wives left behind have to work in paid jobs to fulfil financial obligations. Similarly, studies from African countries, for example Egypt (Brown, 1983; Brink, 1991; Louhichi, 2007; de Haas and van Rooij, 2010) also reveal similar findings such as male international migration increases the workload and the role and responsibilities of women left behind.

A survey of 354 left-behind wives and the 192 wives of non-migrants in India by Roy and Nangia (2005) describe that wives left behind must carry extra work and responsibilities which is supposed to be done by their husbands when they are at home. The women who were not involved in that work done by their husbands before migration do not find the confidence to carry out the added responsibilities and this work is also demanding both physically and mentally. This study mainly focuses on the reproductive health of left-behind wives and finds that the left-behind wives were more likely to have a higher risk of reproductive symptoms than the wives of non-migrants.

Migration studies in Nepal by Gartaula and colleagues (2012), Egypt by Khafage (1984), Taylor (1984), Botswana by Brown (1983) and India by Roy and Nangia (2005), Desai and Banerji (2008) and Thomas and Adhikary (2012) concluded that husbands’ migration increases the work burden on women and creates a situation in which left-behind women must bear all the household responsibilities within or outside the home.

#### Negative effects of migration on women

Existing literature has suggested that there have been some negative effects of male international migration on the women left behind (Roy and Nangia, 2005; Bojorquez *et al.*, 2009; Archambault, 2010). These effects are mainly related to the physical and mental health of the wives left behind. Rigg (2007) argues in an article ‘migration and livelihoods in the Lao PDR’, that families left behind by migrants can benefit economically by receiving remittances but the loss of one active member of the family will have negative effects on the mental and physical health of those who are left behind (Roy and Nangia, 2005). The negative effects are reviewed below under themes.

##### Wives depression and husbands’ migration

Depression in women is a major public health problem (Paykel, 2006) and one of the leading causes of a disease burden worldwide (Murray and Lopez, 1996). Reports of the World Health Organisation (2001) suggest that women have a high risk of depression and the prevalence of depression in women is found to be double that of men. Empirical evidence suggests that depressive symptoms are associated with financial difficulties in life, low family and social support, separation and difficulties in relationships and the burden of work and responsibility (Roy and Nangia, 2005; NRCIM, 2009). These conditions are also described in the literature faced by the left-behind wives when their husbands are abroad.

There is a significant gap in the knowledge about migration and its effect on the mental health of the left-behind families in Nepal. None of the migration studies have covered the issues of mental health of women left behind in Nepal.

A study of migration and the problem of old aged people in Nepal among 22 old aged couples left behind by Gautam (2008) reported that anxiety, the extra burden of work, helplessness and loneliness are the major problems faced by old aged couples when their sons migrated. Similar problems were also reported in the migration studies on wives left behind in India (Roy and Nangia, 2005) and Egypt (Brink, 1991).

A number of studies have hypothesised why women are more susceptible to suffering from depression in general (Saunders, 2006). Bhugra (2004) reported that migrant women are more likely to have the risk of mental illness from migration, but it is still not clearly understood in those who are left behind in the country of origin. However, researchers argue that there has been a need for a broader understanding and consideration of the situation of the women left behind arising from male migration (Yabiku *et al.*, 2010). Thus, this has been essential to the redefining of women’s roles: such as, coping strategies to deal with existing poverty and separation, and their demanding multiple roles and position within the family in the absence of their male counterpart and its linkage to their depression (The World Bank, 1999).

The studies of poverty and women’s mental health reveal that the women who are living in poverty are more likely to be depressed (Belle, 1990; Da-Silva *et al.*, 1998; Cairney *et al.* 2003). Jetly (1987) in India, argues that families living in the home country cannot guarantee to economically benefit from migration but that may deepen their poverty and emotional deprivation and lead to an insecure future. Thus, the left-behind wives may have mental health problems.

A study in India by Roy and Nangia (2005) examined the social well-being, mental and physical health especially the reproductive health of the left-behind wives and compared their results with the wives of non-migrants. The results of this study based on the survey of 354 left-behind wives and 192 wives of non-migrants in India showed that left-behind wives were more likely to have a higher risk of reproductive symptoms and suffered more mental and physical health than the wives of non-migrants. They also reported that increased workloads, added responsibility and receiving poor social support are also the factors for the depression in left-behind wives. Indeed, this study mainly focused on the reproductive health of women and emphasis was placed on the sexually transmitted infections in the wives left behind.

Thomas and Adhikary (2012) in a study of 120 samples of migrant households in Kerala, India finds that the women left behind by migrants suffer from psychological problems when husbands and wives are living apart. They further report in their study that the psychological problems are because of the separation/absence of their husbands. They also describe the situation of the left-behind wives and how the psychological problems develop in the absence of their husbands. They argue that women living apart for a long period of time from their husbands, carry the added responsibilities and workload alone and suffer from psychological problems.

Similar findings were also reported in a Mexican study by Salgado de Snyder (1993), a study among the 202 women of migrants and non-migrants in Mexico found that the wives of migrants are faced with stressful situations when their husbands are abroad. The stresses of women left behind are related to fulfilling the obligations and responsibilities of the household alone.

Similarly, Bojorquez and colleagues (2009) have studied the partner’s international migration and autonomy and depressive symptoms among 142 migrants’ wives and 274 wives of non-migrants in Mexico and found that the women with migrant partners are more likely to have depressive symptoms than the women with non-migrant partners. Their results show that a 23.2% prevalence of depression was observed in their samples. They also found that decision making power was not associated with depressive symptoms but their emotional support and the socio-economic level are negatively related to depressive symptoms. Women with higher education are less likely to have depressive symptoms.

Wilkerson and colleagues (2009) examined the effects of husbands’ migration on the mental health of rural women among a total of 94 women in five villages in Mexico. They argue that there has been a change in the wife’s role due to the additional role and responsibility caused by the migration of their husband and the change of gender role leading to the decreased mental health of the left-behind wives. They also compared the results of sending groups (migrant) to non-sending groups (non-migrant) for mental health and found that wives left behind have poorer mental health as a result of separation from their husbands than the wives who stayed with their husbands.

Literature on depression in women (Chen *et al.*, 2005) also found that younger women with poor education and low household income are more likely to report more depressive symptoms. Migration and left-behind studies by Roy and Nangia (2005) in India and Bojorquez *et al.* (2009) in Mexico also found that wives left behind are quite young with low literacy in their study samples. Women left behind feel stress, nervousness, and worry about carrying out the new roles and added responsibility alone which they had never done in the past at a young age. The wives left behind who are taking more responsibility at a young age with low education could lead to their depression and other mental health problems (Salgado de Snyder, 1993; Roy and Nangia, 2005; Thomas and Adhikary, 2012).

The Human Development Report (2009: 72) stated that “*Despite the financial rewards, separation is typically a painful decision incurring high emotional costs for both the mover and those left behind*.” The WHO (2010) also pointed out the mental health of those left behind as a recent issue of great concern caused by separation from their husbands and social isolation. The UN-ESCAP report (2009) also states that family separation given the fact of international migration, leaves left-behind wives in a vulnerable situation and they have emotional and psychological stress as a consequence.

There has been scant literature examining the spousal separation due to migration and the mental health of left-behind wives in Nepal and elsewhere. Literature also suggests that husbands’ migration creates a situation for the wives to live separately at home, receiving little help and support, feeling loneliness and stress and worried about their husbands’ conditions abroad (Roy and Nangia, 2005; Bojorquez *et al.*, 2009; de Haas and van Rooij, 2010).

Gibb and colleagues (2011), in a study of separation and mental health problems in general revealed that the separation of family members increases depression and associated positively. This also applies in the same way to husband-wife separation. As mentioned earlier in section 1.4.2, male migration from Nepal is common (NIDS, 2011) and migrant husbands leave their wives behind at home and this separation from their husbands due to migration has increased the risk of depression (Gibb *et al.*, 2011). Furthermore, studies in India (Roy and Nangia, 2005) and Mexico (Bojorquez *et al.*, 2009) reveal that spousal separation for a long time and the circumstances that develop from the migration of their husbands are also considered to develop the depressive symptoms significantly. These studies describe that women left behind are suffering from stress and receiving little family help and support. Likewise, previous studies in general also suggest that there is increased life stress in women who are living alone and those who receive little family and social support are also found to be more depressed (Cairney *et al.*, 2003; Rivera *et al.*, 2008).

Similarly, Nagawa (1994), in a study of absent husbands, unsupportive in-laws and rural African mothers among 130 women in Swaziland and Kenya and Simkhada *et al.*, (2010) in Nepal reveal that the wives who are living in extended families also receive little help and support from in-laws and other family members in the absence of their husbands. These situations are common due to the incompatibility of the young women with their in-laws (Arnold and Shah, 1984) and also the conflict about sharing remittances (de Haas and van Rooij, 2010). Facing such difficult conditions in the absence of their husbands, wives left behind may suffer from loneliness and depression (Roy and Nangia, 2005; Thomas and Adhikary, 2012).

In Nepalese and South Asian culture, the wife is seriously devoted to taking care of her husband which strengthens the relationship while living together (Dyson and Moore, 1983). With this strong bond, the wives left behind are always worried about their husbands’ situation and their adaptation to the new environment, difficult living and working conditions and their jobs in the destination countries (Sadiqi and Ennaji, 2004; Amnesty International, 2011; Joshi *et al.*, 2011). These factors can have adverse effects on the mental health of wives left behind. Thus, they are more vulnerable to suffer from mental illness such as depression due to the migration of their husbands.

According to the Human Development Report (2009) most migrants have faced multiple problems in the country of destination by being non-citizens (HDR, 2009). The major issues concerning depression in the left-behind wives are separation from their husbands, unemployment or under-payment and poor living conditions, risky occupations and increased work place accidents in the host country (HDR, 2009). For example, the majority of the migrants from Nepal are unskilled and semi-skilled who seek work in industries such as construction, textiles, mining and other factories which require more physical work and such industries have poor working and living conditions (HDR, 2009). In such cases, accidents and even the death of migrant workers is more likely (Adhikary *et al.*, 2011). A report published in the national daily newspaper ‘*Kantipur*’ explained that about 70 migrant workers’ dead bodies are waiting in various Gulf countries and in Malaysia (Kantipur, 2012a) and there have been more than 1850 deaths of Nepalese migrant workers just in Malaysia since 2003 (Kantipur, 2012b). The high number of casualties of Nepalese migrant workers abroad appears to be a major factor in the depression of the wives left behind. Keane and McGeehan (2008: 88) highlighted a vivid picture of migrant workers in Gulf countries as they explained *“……the men’s employer has confiscated their passports and labour cards, leaving them with no money and no means of even proving who they are.*” This situation puts the migrants out of contact with their wives for a long period of time. The wives who face such miserable conditions are found to be more stressed, tense and depressed due to the unknown situation and lack of regular communication with their migrant husbands.

##### Migration and family disintegration

As a consequence of migration, there has been an increasing trend in family disintegration in Nepal (Budhathoki, 2010) and many studies have also reported that family disintegration is a major problem seen in the migrant households (UN-ESCAP, 2009). As discussed earlier, male migration is also considered a factor in the changes in family structure and the increase in the number of female headed nuclear families (Brown, 1983; UN-ESCAP, 2009). de Haas and van Rooij (2010), in a Moroccan study describe that gaining the position of household head, women left behind experience greater autonomy and want to live freely without the control of other family members. Gaining greater autonomy and physical separation from their husbands provide the wives left behind an opportunity to play with different resources such as money and sometimes lead to the courage to end the marriage (UN-ESCSP, 2008)

A report of UN-ESCAP (2009) also mentioned that international migration creates a situation of the separation of husbands and wives. Long-term separation places the wives left behind in a vulnerable state which may result in emotional and psychological stress and ultimately marriage instability as one of the consequences of migration.

Many findings disclose the negative consequences of husbands’ migration on wives left behind. A study in Albania and Bulgaria (van Boeschoten, 2007) reveals a significant increase in the divorce rate among migrant families. Furthermore, a report published by Budhathoki (2010) in a quarterly Nepali magazine *‘Himal Khabarpatrika’* highlighted the increasing trend of divorce and family disintegration because of the husbands’ international migration in Nepal.

#### Women’s health service utilisation and husbands’ migration

As discussed in an earlier section (2.3.2.2), the women left behind have been suffering from both physical and mental health problems due to the migration of their husbands, thus, husbands’ migration has a negative effect on the physical and mental health of left-behind wives. To date, none of the studies have covered the health service utilisation by left-behind wives in Nepal and elsewhere. There has been a rising interest and concern about the health and well-being of women left behind in the world, especially in developing countries. Scholars point out the under-development of health and health care facilities (Ojanuga and Gilbert, 1992; Regmi, 2001), the inaccessibility of modern health facilities and their under-utilisation (Amin *et al.*, 1989; Shaikh and Hatcher, 2004) and traditional health beliefs and behaviour (Regmi, 2001) being the major determinants for the poor health of the women in general. Besides these barriers, Subedi (1989) also describes that the effectiveness and use of modern health care services cannot be assured simply by increasing availability. These conditions are also equally applied to the left-behind wives who are living within the same territory.

The analysis of demographic health survey data in Nepal by Furuta and Salway (2006) reported that the deep-rooted gender disparity in the access to and utilisation of health care and services between the women and men is a common barrier in Nepal. Similarly, Ojanuga and Gilbert (1992) in the study of women’s access to health care in developing countries describe that women’s control and involvement in economic matters has greatly influenced their health care utilisation. Gaining position and status by women left behind as a result of their husbands’ migration, they are able to make decisions for their own health care.

Majumder (2006), in a study in India, suggests that the health seeking behaviour and its utilisation depend on the individual and family characteristics (age, gender, household size, and marital status), social structure (education, employment and ethnicity) and assets (income and land). These factors may have improved due to the husbands’ migration. Migration studies reveal that migrant families are better off economically and can spend remit money on using the health service. Evidence from past studies also suggests that the use of health care facilities is highly determined by the women’s individual behaviour and their characteristics as well as the household characteristics in developing countries like Nepal (Rahman *et al.*, 1997; Nayab, 2005). Similarly, the use of the health services is not only dependent on needs but also influenced by the awareness of their health status (HGI, 2001).

The result of the analysis of data from the Demographic and Health Survey 1996 of Nepal by Matsumura and Gubhaju (2001) suggests that women’s education has a significant positive influence on the utilisation of maternal health. Similar findings were also reported by Furuta and Salway (2006) when analysing the data from the Nepal Demographic Health Survey 2006. Studies in general found that women with a higher level of education have a positive association with utilisation of health services (Kavitha and Audinarayana, 1997; Khan *et al.*, 1997).

It is not only women’s education, Dhakal and colleagues (2007) argue that the employment status of women and their ethnicity also have a significant influence on health service utilisation in Nepal.

In developing countries like Nepal, international migration is considered a source of household income and migrant families have benefited from remittances. With the increased income, Frank and colleagues (2009) in a study of the relationship between remittances and health care among two communities in Mexico suggest that there is evidence of more spending on health care by migrants’ families. Evidence also suggests that left-behind wives have been receiving a significant amount of financial support from remittances sent by their migrant husbands. However, a report of UN-ESCAP (2008) argues that these remittances are not sufficient to guarantee women’s access to the health service. Furthermore, a study of migrants’ remittances and the welfare status of left-behind families in Turkey by Koc and Onan (2004) suggest that a large amount of remittance money is spent to fulfil their daily needs, i.e. food and clothes rather than health care. A Ukrainian study by Tolstokorova (2009) shows that remittances can provide an opportunity for using the quality of health care and service by left-behind families as distinct from the non-migrants’ families.

Health service utilisation, mental and physical health and the well-being of the wives left behind have rarely been studied in the past in developing countries (Roy and Nangia, 2005). Furthermore, many past studies have included several factors associated with the poor health service utilisation by women in developing countries (Streefland, 1985; Subedi, 1989; Niraula, 1994; Tausig and Subedi, 1997; Ahmed *et al.*, 2000; Shaikh and Hatcher, 2004; Majumder, 2006; Simkhada *et al.*, 2006a; Sanjel *et al.*, 2012). In general, women’s access and decisions to health service utilisation depend upon socio-economic, demographic factors and their role within the family and family structure (Nayab, 2005).

#### Types of health service utilisation

Women are often neglected or do not act in time about minor illnesses and mostly depend upon self-care and home remedies (Develay *et al.*, 1996; Porteous *et al.*, 2006). Self-care and self-medication for any illnesses are also common in developing countries (Subedi, 1989; Banks, 2010). They have the attitude that it is not a major disease and that they will be cured after some time without any medication. Nazareth (2010) argues that self-care for minor illnesses could lead to delay in the diagnosis of more serious illness. Furthermore, coughs, fevers are considered primary symptoms of different chronic diseases like laryngitis, bronchitis, tuberculosis, pneumonia, malaria, meningitis in the early stages of illness (WHO, 2013). The WHO (2013) also highlighted the need for the use of a health service for minor illnesses and diarrhoea; coughs and fevers may be dangerous if not treated in time.

As discussed earlier (Section 1.7.2), there are a number of different factors associated (such as age, education, culture, decisions, family structure) preventing the women seeking health and the use of the health services. Not only these factors but equally the high cost of health care and the knowledge of minor illness also seem to be barriers to their use of health care. Evidence from past studies in developing countries suggests that women tend to ignore their illnesses and visit health facilities only when they are seriously affected (Subedi, 1989) and self-care is the most frequently used kind of care by women in developing countries. Develay *et al.* (1996) in a survey of 547 households in Burkina Faso, also reveal that self-care is the more frequently used health care in their samples and the use of modern health care increases when the illness became more serious or longer in duration. Furthermore, Puentes-Markides (1992) suggests that women’s health service utilisation depends upon the position and status in the house they belong to. Similarly, Tamang and Broom (2010) also argue that religion and culture also play a vital role in women’s health service utilisation in Nepal and these factors could prevent women from using a modern health service so they must depend upon home remedies and traditional healers and could delay seeking the modern health service (Subedi, 1989).

To date, none of the studies have reported the types of health service utilised by women for minor illness. However, there are very limited researches on health service utilisation by women for minor illnesses in developed countries and the findings show that women’s rates of utilisation for minor illnesses are better than for men (Corney, 1990; Wyke *et al.*, 1998).

The research in developing countries like Nepal mainly focuses on the use of modern health facilities and not the types of health facilities for example, private, public or traditional healers. A large amount of literature suggests that private health centres have modern health facilities and are better than the public ones although they are expensive.

There has been less information available on the use of remittances for health care and the pattern of health service utilisation by left-behind wives. Researchers argue that remittance is the major source of income in migrants’ households (Gaudel, 2006; Kollmair *et al.*, 2006). As a result of this, there is evidence of a positive association between migration and the use of modern health facilities by migrants’ families (Zachariah *et al.*, 2001; Lindstrom and Munoz-Franco, 2006).

Lindstrom and Munoz-Franco (2006), a study of migration and maternal health service utilisation among 1838 women in 60 communities in Guatemala describe that with the increased household income by migration, there has been an increasing trend to access and use private health facilities rather than the public health service by the migrants’ families.

Drabo and Ebeke (2010) use demographic and health survey data from 56 countries to determine the effects on access to public and private health care which reveals that remittances from abroad encourage the migrants’ families to shift from public to private health facilities for health service utilisation. In their analysis, they find a positive and significant association between remittances and the use of private health services.

## Reflection of methodological rigour of the reviewed literature

The issues of left-behind women is under-researched and only very limited research has been conducted to cover the consequences of male international migration on left-behind women. In this context, there are a number of issues which situate the researcher in a difficult position to judge the conclusion drawn from the studies on migration and left-behind issues.

A very limited literature on male migration and women left behind is found in the African (e.g. Egypt, Morocco) and Latin American continents (especially Mexico) and even low in the Asian context. The majority of the literature is also characterised by a poor understanding of the context, low sample size to reach the conclusions, published in low impact journals or report form, perhaps with a poor quality of research and context specific.

The majority of the literature in the field of migration and its consequences on left-behind families is also characterised by over-exaggeration of the issues, poorly set out and applied research methods, poor data and inadequate analysis. For example, given the reason of male migration, there is an increase in the number of female headed households in the country. Not only male migration contributes to increase the numbers of household heads. The other factors such as culture or ethnic background are seldom reported in drawing a conclusion. For example, in Gurung and Magar communities, most of the women, even though they are living with their husbands are household heads.

In developing countries like Nepal, press releases and news stories are commonly seen as a source of data. Due to the lack of reliable and consistence data on migrants, newspaper columnists and researchers often exaggerate or manipulate the figures to illustrate and amplify the seriousness of the problems. For example, the numbers of migrant workers in India are highly exaggerated, given the reasons of freedom of movement and no visa requirements. Dahal (1997) mentioned Nepalese migrants in India as between 1.8 to 3 million in his article ‘Lies, Damn Lies and Numbers’, cited according to the Gorkhaland Movement Report, 1985/86. Likewise, the recent census (2011) revealed that only 1.9 million Nepalese people are living abroad. There is always a danger of using unrealistic figures and over amplification of the problems of the study issues by the researcher citing these figures for their suitability and data are often pulled from other contexts to illustrate and exaggerate the issues.

Similarly, lack of male migration and left-behind data in developing countries, the authors published articles based on reports and individual stories without any supportive statistical background. This trend of publishing reports by the INGO workers and academicians in developing countries gives the vague or general conclusions based on data collected in a haphazard or inappropriate manner. For example, Seddon (1995), a study of foreign labour migration, cited that 200,000 Nepali sex workers might be working in India, given the reference of the ‘*figure made available by ABC, an NGO working to stop the trafficking of girls*’. Later on, the same author with other co-authors published two articles in same title: “Foreign labour migration and the remittance economy of Nepal” (Seddon *et al.*, 1998; 2002) in two journals: *Himalaya, the Journal of the Association for Nepal and Himalaya Studies*, vol. 18, No. 2 and *Critical Asian Studies*, vol. 34, No 1, and cited the estimated numbers of Nepalese female commercial sex workers in India as 100,000 to 150,000 only in their later article.

Apart from the data, most of the literature on the left behind was qualitative in nature and in these studies the conclusions or claims are based on weak evidence that helps the reproduction of erratic information within the literature. Thus, it is worth to mention the common shortfalls of research methods and analysis. For example: Gartaula *et al.* (2012: 405):

“*The paper particularly draws upon the experience of four women, whose husbands were working abroad during the time of fieldwork. We have selected two women who are living with in-laws and two others who are acting as de-facto heads of the household.”*

In their samples, the two women who were living with in-laws are better off economically while the other two women who were de facto household heads are economically poor or less well off. There might be the further danger of under-estimation of the women household heads being economically better off and the women left behind who are economically poor and living with in-laws. They further mentioned that *“Subjective wellbeing is presented as the subjective experience of the four women left behind by migrant workers in different household arrangements.”*

The conclusions drawn from this study is mainly based on the living arrangements and is prone to sampling bias. There are other combinations of living arrangement for women left behind, for example, living with siblings or parents. The conclusions of this study may be interpreted inappropriately within the literature.

Furthermore, one of their conclusions is “*women living with in-laws can share their work with other household members and the households are managed by their parents-in law.”* (Gartaula *et al.*, (2012: 417). This conclusion particularly creates confusion and the authors drew conclusion by using the word ‘can’ and not an absolute claim.

To find the latest information relating to migration in developing countries is very difficult. The governmental websites and the information are not regularly updated. Very limited numbers of journals are published either in digital or print form. Publishing the research work is also not common and generally researchers produce their reports and these reports appear in their organisational web pages and the government also releases most of their reports through a press release. The researchers must rely on a secondary source. For example, the Government of Nepal released the number of deaths of migrant workers abroad through a press release. This press release was published in a newspaper.

Many authors cited the news article for the total number of deaths of migrant workers. For example, Simkhada (2011) mentioned that 1,357 migrant workers died in 3-and-a-half years cited as an internal report published in *The Kathmandu Post*, dated January 12, 2012. Many other authors also relied on that data and cited this data as a round figure rather than quoting actual one. Similarly, most of the literature on male migration and left behind was published 15-20 years ago (for example, Brown, 1983; Brink, 1991; Salgado de Snyder, 1993) and due to the course of time, change in the pattern of migration and lack of recent research and publications, the conclusions drawn from these studies may not be relevant or represent for the population in the present world.

The published literature on migration and the left behind are region specific. The majority of the literature came from African (Egypt, Morocco and Mozambique), Mexican and South Asian regions (Nepal, India, Bangladesh and Pakistan), for example, de Haas and van Rooij (2010) Morocco; Bojorquez *et al*., (2009) Mexico; Roy and Nangia (2005) India and Gartaula *et al.*, (2012) Nepal. Due to the low volume of the research, diverse contexts and settings of male migration and the women left behind make it difficult to review the literature based on pre-defined inclusion criteria. The literature of male migration in the African context is more varied and method bias seems to be more common. The majority of the reviewed studies in the African context evaluated male migration and its effects on left-behind women and their autonomy at household level. These studies used qualitative methods, for example, Brown (1983), Brink (1991). Within these studies, there were no details of how many women left behind were interviewed and also a lack of the details on the nature of the interview guide and the analytical approach used by which the conclusions were drawn (e.g. Brown 1983).

Peat and colleagues (2002) argue that the synthesis of literature requires good critical appraisal so that the evidence is judged based on the quality and scientific merit of the study and the critical appraisal tools mainly relate to the quality of evidence based on the method of the research study. For example, scholars also argue that the conclusions drawn from quantitative methods or large number of samples are considered as the highest and reliable quality of evidence (Evans, 2003). However, it is not always feasible and practical to use quantitative methodology to generate evidence to reach conclusions in social and health service research. Thus, this literature review comprises the literature which used diverse methodology, including qualitative study. Scholars also argue that qualitative studies are based on a low sample and often criticised to a lack of precise and robust techniques of data collection and analysis to reach the conclusion (Dixon-Woods *et al*., 2001).

As mentioned earlier, due to the limited literature in the field of male international migration and left-behind women in this study’s issues, there is scant information and there have been a number of limitations which cannot be omitted, for example, the variation of migration data and its over-estimation, regional, cultural and religious variations in different regions (for example, the majority of the population in Nepal is Hindu, in Pakistan Muslim and African countries Muslim and Christian). Thus, this literature review includes the research articles published in the journals, grey literature and reports which covered the issues of male migration on left-behind wives in developing countries regardless of the impact factors of the journals, settings and methods of study and the literatures are reviewed on the basis of theme and issues covered rather than analysing and criticizing one by one.

## Rationale of the study

A review of the relevant literature on the impact of international migration on women has indicated that there is a gap in the information and research about the impact of husbands’ migration on the wives left behind in the context of Nepal regarding the non-economic aspects such as depression, autonomy and health service utilisation. The increasing trend of male international migration has affected many aspects of the whole community and individuals who are either migrants or are left behind in the country of origin. Existing literature on international migration shows a positive effect on the national as well as the household economy and the well-being of the families left behind at home in Nepal (Yamanaka, 2000; Seddon *et al.*, 2002; Garner and Gurung, 2003; Thieme and Wyss, 2005; Kollmair *et al.*, 2006; Pant, 2008; Pant, 2011). However, the migration impact on the socio-cultural dimension is neglected (Sharma, 2008). The review of literature also showed that only limited studies have been conducted to examine the impacts of migration on those left behind.

Almost all international migrants from Nepal are male and they leave their wives at home. The effects of husbands’ international migration on the wives left behind are scantily recorded in the literature in Nepal and elsewhere. Most of the past studies concentrate on the migrants’ health (Carballo *et al.*, 1998; Bobak and Gjonca, 2007), the economic impact (Seddon *et al.*, 2002; Kollmair *et al.*, 2006) and the household is taken into consideration as a basic unit for the study and the health and social aspect concerning the wives left behind remains in the shadows (Toyota *et al.*, 2007).

The effect of international migration on the health of those left behind is still little known in the context of Nepal. Scholars also argue that there has been little attention given to research on the effects of international migration on wives in the past (Battistella and Coanco, 1998; Burazeri *et al.*, 2007) and researchers have also pointed out the need of a rigorous and better understanding of the effects of international migration on the health and wellbeing of those left behind in the country of origin (Carballo *et al.*, 1998; IOM, 2005; UN, 2006). The migration studies in some Asian and African countries pointed out that wives left behind are suffering from many physical and mental health problems such as depression, anxiety, loneliness and fatigue in the absence of their husbands (Roy and Nangia, 2005; IOM, 2008; Farooq and Javed, 2009). In this context, it is important to know about the health and wellbeing of the women left behind. Due to the lack of studies of the effects of international migration on women left behind, there is little information about the use of remittances for health care and health service utilisation by wives left behind in Nepal.

Due to the patriarchal family system and the dominance of Hindu ideology in the country, women are suffering in many ways and are placed at the bottom of the family profile and confined to their traditional roles of doing household chores, caring for children, preparing food and working in farmyards (Bennett, 1983; Luitel, 2001). Men are supposed to take overall household responsibility and the authority to control household resources and to exercise this power, women lag behind the men. The migration studies in the Asian and African continents indicate that the wives left behind have to take all household responsibility to manage their family and can experience more autonomy and decision making power in the home in the absence of their husbands (Brown, 1983; Taylor, 1984; Brink, 1991; Louchichi, 1997; Desai and Banerji, 2008; de Haas and van Rooij, 2010). It is not known what the left-behind women’s situation is in the absence of their men in the male dominated Nepalese context. Therefore, this study also aims to examine and explore the wives left behind’s overall autonomy in the absence of their husbands.

In recent years, there has been growing interest and concern over the health and wellbeing of left-behind wives by male migration in the world (Biao, 2007; UNICEF, 2007; Elbadawy and Roushdy, 2009; Knodel *et al.*, 2010; Antman, 2012). Only very few studies have investigated the mental health issue in left-behind wives and highlighted that they are suffering mental health problems, for example, depression due to separation from their husbands (Roy and Nangia, 2005; Bojorquez *et al.*, 2009).

The issues of international migration on women left behind are largely unexplored. The health impact on wives left behind in Nepal, their position and situation in the family and their health service utilisation due to the husbands’ migration have not been assessed yet. Therefore, this study aims to fulfil the gap highlighted in the literature by examining and exploring the effects of husbands’ international migration on wives left behind regarding depression, autonomy and types of health service utilisation in the absence of their husbands in the Nepalese context.

Depression is one of the major leading mental illnesses in Nepal (Jha, 2007). Due to the low priority of mental illness, there has been little evidence available of depression in women. However, evidence from past literature suggests that women are more likely than men to be depressed in Nepal (Upadhyaya and Pol, 2003). Despite these facts, when I was working in Nepal as a government officer in different parts of the country, I have seen many men leaving their home for employment and leaving their wives at home who are involved in agricultural activities in the absence of their male counterparts. While working with the women left behind, I found them to be poor in mental health and many of them depressed but still physically active in managing their home and making decisions in the absence of their husbands while living in a patriarchally dominant society. They also reported that when they suffered from minor illnesses such as coughs and fevers they have problems in managing their homes and caring for their children in the absence of their husbands. These factors were motivated to include depression, autonomy and health service utilisation in this research study.

## Aims and Objectives of the study

### General objective

This study aims to investigate the effects of husbands’ international migration on the wives left behind regarding depression, autonomy and the type of health service utilisation in Nepal

### The specific objectives

* To find out the prevalence of depression in the left-behind wives and explore the reasons for their depression
* To examine the overall autonomy of the left-behind wives
* To explore the type of health service utilisation by left-behind wives
* To compare the results of the left-behind wives and the wives of non-migrants

## Summary

This chapter presents the past and present situation of male international migration from Nepal and a review of the literature on international migration and its effects on the wives left behind. The literature and empirical evidence indicated the lack of research in the past concerning the issues of those left behind. There has been a significantly increasing amount of male migration from day to day in Nepal. Furthermore, migration data reveals that a significant number of Nepalese males have migrated to the Gulf countries and the left-behind families benefit from the remittances provided by the migrants. This chapter also reveals the positive and negative effects on the wives left behind due to their husbands’ migration. Increased household income, the changing role and position of the women in the households are the positive attributes of migration whereas increased workload and responsibility, long-term separation from husbands can have negative effects on the physical and mental health of the wives left behind. Furthermore, this chapter also discussed health service utilisation by wives left behind which indicates that with the increasing income, the wives left behind tend to use more health services for their health problems.

This chapter also fills the information and knowledge gap in the existing literature on the left-behind wives for the study issues, and the aims and objectives of the study.

# CHAPTER THREE: METHODOLOGY

## Introduction

This chapter describes the methodology and methods used in this study. This chapter outlines the philosophical issues of research methodology, research designs and the rationale of the study design. It further describes the study area, study population, sample size and sampling procedures, data collection and analysis, piloting and discussions of the research validity and reliability, ethical considerations, reflectivity and positionality.

## Research paradigm

A research paradigm is a set of beliefs (Guba and Lincoln, 1994). Indeed, every research study is guided by a selected research paradigm to satisfy the research questions and methods selected for the study. There are philosophical paradigm debates or ‘wars’ (Datta, 1994; Tashakkori and Teddlie, 1998) on methodological issues in the basic components of beliefs used in social science research (Tashakkori and Teddlie, 1998; Creswell, 2003; Greene, 2008; Castles, 2012a). Scholars have argued that there is an on-going debate about the fundamental assumptions, beliefs and the nature of reality of research paradigms and have advocated the superiority of one paradigm over another (for example positivist vs interpretivist and vice versa) in social science (Neuman, 1997; Tashakkori and Teddlie, 1998; Snape and Spencer, 2003; Johnson and Onwuegbuzie, 2004). By these paradigms, the researchers’ beliefs guide their actions (Creswell, 1998) in research. These philosophical assumptions/beliefs about paradigms are called ontology, epistemology and axiology (Creswell, 2003; Hanson *et al.*, 2005)

Ontology refers to the researcher’s perceptions about the form and the nature of reality in the social world (Guba and Lincoln, 1994; Creswell, 1998; Tashakkori and Teddlie, 1998; Greene, 2008), and what is known about the world (Snape and Spencer, 2003). There are two distinct ontological stances, ‘*Realism’* believes that external reality is independent of people’s beliefs and understanding whereas ‘*Idealism’* believes that external reality is to be known through the human mind and socially constructed meanings (Snape and Spencer, 2003). Similarly, epistemology describes ‘how we know and what we know’ about the reality of the social world (Tashakkori and Teddlie, 1998; Snape and Spencer, 2003; Hanson *et al.*, 2005) and the place or role of values in research is known as axiology (Tashakkori and Teddlie, 1998; Hanson *et al.*, 2005). These three philosophical beliefs and assumptions guide a research methodology.

The research paradigm begins with two epistemological assumptions, i.e. positivism and interpretivism (O’Cathain and Thomas, 2006). Positivism is linked to the quantitative approach which deals with the empirical observations and measurements to theory verification (Teddlie and Tashakkori, 2003; Bryman, 2008) and believes that observed empirical facts only guide towards the truth (Neuman, 1997; Newman and Benz, 1998; Tashakkori and Teddlie, 1998; Snape and Spencer, 2003; Yates, 2004; O’Cathain and Thomas, 2006). While, the interpretive is linked to the qualitative approach which deals with the understanding and exploration of social and historical phenomena that lead to theory generation (Teddlie and Tashakkori, 2003) and believes that ideas and thoughts are guided to the truth (Neuman, 1997; Snape and Spencer, 2003; Yates, 2004; O’Cathain and Thomas, 2006).

These two paradigms have their own distinct ontological and epistemological assumptions which guide the research methodology and methods. Quantitative methodology deals with the measurements and quantification of the data related to the study objects. It begins with the assumption of hypotheses or theories about the cause and effect relationship, and utilises standard techniques to identify facts and empirical observations and tests them through statistical procedures of numerical data (Newman and Benz, 1998; Creswell, 2003). This approach further believes that the social world exists externally (Easterby-Smith *et al.*, 1991; Neuman, 1997). Collection of data through valid and reliable tools, their statistical analysis, interpretation and presentation of numerical measurements are the central theme of this approach (Newman and Benz, 1998).

The qualitative approach refers to the set of beliefs that seek to understand social life or phenomena through interpretative explanations about the social world (Neuman, 1997; Snape and Spencer, 2003). It also believes that there is the existence of multiple realities and multiple interpretations of the phenomena of the study from different individuals in the social world (Newman and Benz, 1998; Doyle *et al.*, 2009).

There is a debate between the quantitative and qualitative approaches regarding the choice of research approach in the study (Greene, 2005). Scholars argue that these approaches are linked to distinct paradigms which have their own ontological and epistemological assumptions and guide the research according to their underpinning philosophy to view the reality and its measurability (Neuman, 1997; Newman and Benz, 1998; Teddlie and Tashakkori, 2003; Johnson and Onwuegbuzie, 2004). However, the scholars who advocate the interpretative approach argue that it is a flexible and open method which allows an exploration of the complexity of reality and the phenomena of study (Neuman, 1997; Newman and Benz, 1998; Flick, 2002; Liamputtong and Ezzy, 2005; Kumar, 2011). In contrast, the scholars who are aligned to positivism believe that only the structured and predetermined method can be used to explain or quantify social life (Neuman, 1997; Kumar, 2011). Furthermore, they assume that causal laws and the specific facts are observed in social life with deductive logic and precise measurements (Neuman, 1997). So, critics of qualitative approaches claim that qualitative methodology is ‘unscientific’ and ‘subjective’ (Denzin and Lincoln, 2003; Silverman, 2006) while interpretivists argue that quantitative is ‘objective’ and ‘hard’ (Silverman, 2006). Interpretivists argue that mere statistical inferences are not sufficient to make conclusions because they often neglect the ideas or views of people’s behaviours in the socio-cultural context which are equally important for understanding the social norms, values and human interaction in terms of the contextual meaning in the research (Silverman, 2006).

This PhD study uses both the positivist and interpretivist paradigms. This combination of approaches is referred to by different terminology in the literature, for example, ‘third wave’ (Collins *et al.*, 2007); ‘third path’ (Gorard and Taylor, 2004); ‘third research paradigm’ (Johnson and Onwuegbuzie, 2004); ‘third methodology movement’ (Tashakkori and Teddlie, 2003; Doyle *et al.*, 2009); or ‘multi-method research’; ‘mixed-model method’ (Tashakkori and Teddlie, 1998). Whatever the terminologies used by different scholars, it is now popularly known as ‘mixed-methods’.

Mixed-methods research is philosophically associated with the Pragmatic paradigm (Tashakkori and Teddlie, 1998; Johnson and Onwuegbuzie, 2004). This paradigm deals with the real world practical situation. It emphasises that the problem is more important than the methods implemented in the research (Creswell, 2003). It does not claim any one ontology or epistemology and believes that truth is out there and researchers are free to select methods, technique and procedures to answer their research questions by using multi-methods in a single study such as including qualitative and quantitative methodology within a research study (Morgan, 2007; Teddlie and Tashakkori, 2009). Johnson and Onwuegbuzie (2004: 18) state that mixed-methods ‘*recognises the existence and importance of the natural or physical world as well as the emergent social and psychological world.*’ Thus, mixed-methods is not relying on any one system of philosophy and reality (Creswell, 2009). Therefore, it has a multi-level ontology (nature of reality) (Teddlie and Tashakkori, 2003). Hence, the reality is viewed in both the objective and subjective perspectives.

However, scholars argue that each methodology has distinct philosophical assumptions (Newman and Benz, 1998; McEvoy and Richards, 2006) so that combining methodologies may ‘widen’ or ‘deepen’ the research problems rather than healing them when combined. In recent years, this argument has been challenged by many researchers aligned as pragmatists (Tashakkori and Teddlie, 1998; Creswell, 2003; Creswell and Plano Clark, 2007), arguing that the choice of methodologies and methods is based on the situation and the research questions, not on the philosophical paradigms (Newman and Benz, 1998; Tashakkori and Teddlie, 1998; Gorard and Taylor, 2004). Thus, researchers are free to select the suitable methods to answer the research questions in the research study (Johnson and Onwuegbuzie, 2004; Doyle *et al.*, 2009). Furthermore, researchers can take the benefits of using mixed-methods to overcome the shortfalls of using a single method in isolation (Gorard and Taylor, 2004). Doyle and colleagues (2009) suggest that researchers should move ahead, rather than arguing that one approach is preferable to another (quantitative vs qualitative), but focus should be given to identifying strengths and minimising weaknesses so that the researcher can use these two approaches more effectively in a single study.

Mixed-methods is now become a distinct discipline of research approach and has gained recognition as a ‘third methodology’ (Tashakkori and Teddlie, 1998, 2003; Johnson and Onweugbuzie, 2004). There has been increasing interest among scholars in mixed methods (O’Cathain *et al.*, 2007a). This can be seen in the growth of International Journals about Mixed Methods Research (for example: Journal of Mixed Methods Research; International Journal of Mixed Methods in Applied Business and Policy Research) and handbooks published by some authors (Tashakkori and Teddlie, 1998; Creswell, 2003; Tashakkori and Teddlie, 2003; Creswell and Plano Clark, 2007) about mixed methods within the last decade.

International migration is a complex phenomenon (Castles, 2012a) which has multiple effects on the wives left behind. For example, the prevalence of depression in the wives left behind, no one can predict accurately how many wives left behind will be depressed due to the migration of their husbands without obtaining quantitative or objective information. Similarly, other numerical information regarding the women’s autonomy and types of health service can be required to measure these issues accurately. Therefore, to obtain quantitative information, a positivist paradigm was employed. While, an interpretive paradigm used to collect qualitative information from the subjective experiences of the respondents of the external world (Johnson and Onwuegbuzie, 2004). Therefore, the quantitative approach is used to quantify or measure the phenomena of depression in wives left behind and women’s autonomy and then the qualitative approach is engaged to explore the reasons why women are depressed due to the migration of their husbands and look at women’s experiences in the absence of their husbands. Hence, the quantitative approach was used to determine the facts and the statistical associations between the measured variables and study issues whereas the qualitative approach was used to determine the women’s experience of depression, autonomy and health service utilisation during the period of the husband’s migration. Hence, these paradigms guide the research study to answer the research questions that are investigated through planning a research design and utilising methods by which data is collected, analysed and interpreted (Creswell and Plano Clark, 2007).

This PhD study was conducted by using explanatory sequential mixed-methods in which the quantitative approach is predominant and used in the first phase of the study while the qualitative approach was used in the second phase (Creswell, 2009).

## Research design and method

Research design is a set of systematic plans/procedures of research (Newman and Benz, 1998). It is always difficult to find a common definition of research design and researchers define it according to their own perspective. For example, Silverman (2006: 9) argued that “*Research design should involve careful thought rather than seeking the most immediately attractive option*”. Similarly, Miller and Crabtree (2005: 621) described a research design as “*the particular combinations of data gathering, analysis, and interpretation approach being driven by the research question*”. In other words, Denzin and Lincoln (2005: 25) defined a research design as “*a flexible set of guidelines that connect theoretical paradigms first to strategies of inquiry and second to methods for collecting empirical materials*”. Thus, in summary, a research design stands as a bridge between the theory or paradigm and methods of inquiry in a research and provides a framework for data collection and analysis.

A research method is a technique for data collection (Bryman, 2008). Furthermore, Silverman (2006: 8) explained that “*………..there is no ‘right’ method to proceed. Everything depends on what you are trying to achieve*”. In these arguments, Gilbert (2008: 34) affirms that “*There are no hard and fast rules: as we shall see, it depends on the research question, the availability of data, and the researcher’s own skills and preferences*”. However, the choice of the research methods (for example, quantitative or qualitative methods) is always a debatable issue in the research continuum. Scholars generally agree that research questions are vital in research (Silverman, 2006) so that researchers can choose any methods to answer the research questions. This research study utilises both quantitative and qualitative study design. A quantitative design is used in the first phase followed by qualitative design sequentially; giving priority to the quantitative method and these two methods (quantitative and qualitative) are integrated during the interpretation phase. The combination of these two methods in a single study enables to answer ‘what’ ‘how’ and ‘why’ questions related to the study issues (Creswell, 2007). This combination also allows the researcher to quantify the cause-effect relationship between the husband’s international migration and depression in women, women’s autonomy and explore the reasons behind the resultant relationship, for example, how and why the husband’s migration is a factor in the depression in the wives left behind? (Creswell, 2007).

International migration is a complex process and multi-dimensional in nature (Findlay and Li, 1999). Migration also has multiple-effects on migrants and their family members on sending and receiving countries and societies. Therefore, both quantitative and qualitative methods can lead to a better understanding of the quantitative aspects of migration and its effects on the wives left behind as well as giving insight into the left-behind wives in terms of their depression, autonomy and health service utilisation.

Sample Selection

Survey

Study sample non-migrant’s households (n =400)

Other households (Excluded from the study)

Study Sample migrant’s households (n = 400)

Semi-structured interviews- Women (Sub-sample) (n = 8)

Semi-structured interviews Women (Sub-sample) (n =6)

Screening of households

Study Community

(Districts, Village Development Committees)

International migrant’s households (All eligible households)

Non-migrants households (All eligible, households)

1st round

2nd round

First phase- Survey

Second phase- In-depth

Figure . Flow diagram of research approach

### Quantitative research design

Quantitative study design is generally considered one of the best methods (Berg, 2004) of capturing numerical information, for example: “how many?”, “how much?”, “how frequently?” so that it can be permitted to make further statistical analysis. The central theme of using the quantitative research design is to measure and quantify the numerical data of the study objects to answer the research questions. It is generally seen that survey and experimental methods are commonly used for data collection in quantitative study (Creswell, 2009). Experimental methods are considered a strong tool to test the impact of an intervention on an outcome, controlling the other influential factors in an outcome so that researchers can randomly assign participants into intervention or control groups (Creswell, 2003; 2009; Bryman, 2008). However, the experimental design is quite unusual in social research (Bryman, 2008).

A survey design is a common and widely used method of data collection (Neuman, 1997; Kelley *et al.*, 2003), because of its wider applicability in population and health research when there is more than one case (Bryman, 2008) in the study. Survey design involves collecting data on more than one case at a single point of time which allows the researchers to quantify the association between the cause and effect by statistical procedures (Bryman, 2008). Postal questionnaire, questionnaire survey, and telephone interview are the common survey methods used in research (Kelley *et al.*, 2003). Among them, a researcher administered questionnaire survey (face-to-face interview) was considered an appropriate and relevant method of data collection for this study. This is because Nepal has a poor female literacy rate (57.4%), and this rate included females aged 5 and above (CBS, 2012) so that the rate for adult females who can understand the questionnaire themselves might be lower. Researchers argue that the face-to-face interview is considered the best and appropriate method where the literacy rate is low or poor (de Leeuw, 2005). The major advantage of using the survey method is that it is quick and covers large samples (McColl *et al.*, 2001; Gilbert, 2008). However, it is often criticised as more costly and time consuming than other survey methods (Gilbert, 2008), but its high response rate is widely accepted (Neuman, 1997; McColl *et al.*, 2001; Kelley *et al.*, 2003). Telephone and mail survey are more common in developed countries (for example: UK, USA) where the postal system is well developed and the telephone is more common in every household but it is generally difficult to conduct such methods in developing countries like Nepal (Barber *et al.*, 1997). The majority of the population does not have telephones and according to the census report (2011), only 7.4 percent of total households have telephone facilities at home (CBS, 2012). The postal system is also not adequately managed and addresses often represent a large area where more or less about 400 houses are located within one boundary (Barber *et al.*, 1997). Apart from this, the geography of the country (Section 3.6) and large numbers of people may also have the same names (for example: Ram, Shyam are common names which represent the name of gods and in our household listing, 20 individuals have the same name and caste) and live within the same boundaries which make it difficult to identify them if using the postal system.

Literature suggests that the relationships between migration and health are complex and multiple (Jatrana *et al.*, 2005). The questionnaire survey thus enables the researcher to uncover and provide a better explanation of the relationship between migration, health and the autonomy of the left-behind wives. The survey design also helps a better understanding, explaining and justifying the association between the husbands’ migration and depression in the wives left behind, women’s autonomy and types of health service utilisation along with other factors such as demographic and socio-economic, and provide a good foundation to compare the outputs with non-migrants’ wives. Similar types of methods were used elsewhere in male migration and wives left behind studies (Salgado de Snyder, 1993; Kuhn, 2005; Roy and Nangia, 2005; Desai and Banerji, 2008; Bojorquez *et al.*, 2009). These scholars used a questionnaire survey to find the impacts of international migration on wives left behind in their studies, for example, Roy and Nangia (2005) used a structured questionnaire to study the impacts of male out migration and sexually transmitted infections (STIs) in wives left behind in India and they reported that male out migration increases the risk of STIs in wives left behind.

Bojorquez and colleagues in Mexico (2009) used a survey questionnaire for the study of partners’ international migration on autonomy and depression among the wives left behind and found that they were more likely to be depressed due to the migration of their husbands, and their financial autonomy was also related to depressive symptoms. Likewise, Kuhn (2005) used a survey questionnaire in his study of international migration and health of the left behind in Bangladesh and found a positive significant association. Thus, a quantitative survey can examine the associations between the husbands’ migration on wives left behind regarding autonomy, depression and types of health service utilisation.

A questionnaire survey can yield a rich and fascinating source of research data (Bryman, 2008) by utilising random sampling techniques so that every case has an equal chance of being selected (Creswell, 2009). Thus, this method enables the provision of a quantitative or numeric measurement of views, attitudes, knowledge, perceptions and experiences (Creswell, 2003) on the effects of international migration on left-behind wives in Nepal. Such measurements have great importance in population health research (Black, 1999) and help to quantify the relationships of the migration-health nexus. Hence, the quantitative method can yield a comprehensive snapshot of research problems, for example: using the survey questionnaire, the variables related to the outputs were measured in numbers and frequency so that objective explanations of the study issues can be made to answer the research questions. Thus, the effects of husbands’ migration and depression on left-behind wives and their autonomy can be predicted and quantified (in result chapter 4).

### Qualitative research design

The qualitative research design is considered the best suited method to explore and understand the experiences of the complex issues, for example, migration and health. Therefore, this design is thought to be a powerful tool for answering humanistic “Why?” and “How?” questions and life experiences in a natural setting (Neuman, 1997; Pope and Mays, 2006). Qualitative research design places a researcher in the centre to view a world (Denzin and Lincoln, 2000) so that a researcher can develop an environment to understand behaviours, attitudes, perceptions of study problems in a natural setting (Denzin and Lincoln, 2000; Holloway, 2005). Qualitative research design is also considered a mode of inquiry that generates textual or non-numerical data and analyses it in a verbal perspective (Holloway, 2005). There is a long history of using qualitative research design in population and health research (Smith, 1998; Sofaer, 1999; Flick, 2006). For example, Gartaula and colleagues (2012) conducted a qualitative research on the wellbeing of women left behind in Nepal; de Haas and van Rooij (2010) also conducted a qualitative study on impacts of international migration on wives left behind in Morocco.

Figure 3.2 Key features of qualitative research

Adapted from Creswell (1998) and Patton (2002)

Researchers argue that the migration pattern and its dynamics are complex, context-specific and varied (Collinson, 2009). The migration process is associated with social, political and economic factors. However, it has multiple consequences (for example: positive: autonomy; negative: depression) on the family left behind. It is argued that qualitative design is appropriate to explore the complexity of migratory phenomena, and its effects on wives left behind in different aspects (for example: depression, autonomy and health) and its deeper understanding in the specific context has always been crucial in research (Iosifides, 2011). Collinson (2009) argues that qualitative research methods are a powerful means of investigating the effects of husbands’ migration on wives left behind in depth and in detail for its complex causal process and associated mechanisms within different social contexts. Using the qualitative method for this study enables the researcher to describe how and why left-behind wives are depressed, feel autonomy in the absence of the husbands, and utilise their health care in subjective views.

Migration studies in the past have been dominated by quantitative approaches (Castles, 2012b). However, in recent years, there has been an increasing interest and use of qualitative methods in migration studies (for example: Gartaula *et al.*, (2012) in Nepal; de Haas and Van Rooij (2010) in Morocco) which are highlighted in the literature (Iosifides, 2011). Thus, the qualitative approach helps to explore the interaction of different aspects related to the migration phenomenon (Castles, 2012b). These different aspects are social, political and economic by which both migrants and their family members are influenced.

Castles and Miller (2003: 28) state “*No single cause is ever sufficient to explain why people decide to leave their country and settle to another.*” In this migratory process, the decision of the migration of close family members has seen multiple effects on the left-behind families. Thus, this study aims to provide exhaustive insight and explore the international migration of husbands and how it affects the mental health, autonomy and health service utilisation of the wives left behind in the long-term absence of their husband in Nepal? Are migrants’ wives more depressed and do they have more autonomy than non-migrants’ wives? In particular, the qualitative method can help a subjective explanation of the study issues which can be achieved by asking open questions to the wives of migrants and wives of non-migrants about their real life experiences, feelings, attitudes and perceptions related to their mental health conditions, autonomy and health service utilisation in the condition of living without a husband and with a husband. Similar types of methods have been used in migration and left behind studies elsewhere (Brown, 1983; Menjivar and Agadjanian, 2007; Gautam, 2008).

Castles (2012b) suggests that there is a need for better understanding and to explore the migratory phenomena and the processes rather than merely describing and counting superficial indicators (Castles, 2012b). Thus, qualitative methods enable a comprehensive picture of migration on the individual and community levels, social action and its consequences in the sending communities.

Interviews have been used extensively for data collection in social and health science research (Berry, 1999). There has been considerable growth and development of using interviews as a method for collecting information in population and health research in Nepal and elsewhere, which was dominated by quantitative methods in the past (van Teijlingen *et al.*, 2011), and agreed as a popular method of inquiry. The authors agreed that it was expedient especially in developing countries for exploring new and complex issues where no previous questionnaire was used and tested (van Teijlingen *et al.*, 2011). Castles (2012b) argues that demographers in developing countries must depend upon the censuses and other official data collections (for example: Nepal Living Standard Survey; Nepal Labour Force Survey) which might be irregular or unreliable and reliance on such data can be problematic in migration research. He further argues that the importance of understanding the social phenomena and processes can be greatly enhanced by the use of the qualitative approach (Castles, 2012b).

Literature suggests that there were mainly three types of qualitative methods used in past studies. They are observation, interviews and focus groups (van Teijlingen and Forrest, 2004). Among them, interviews are frequently used and are a popular method in qualitative health research (Bryman, 2006). Interviews are further classified into three categories: structured, semi-structured and unstructured (van Teijlingen and Forrest, 2004; Gill *et al.*, 2008). Interviews are seen as the more preferred method of inquiry to explore the views, experiences, beliefs and motivations of research participants on particular issues (Gill *et al.*, 2008).

This study was conducted by using a semi - structured interview which is often called an ‘in-depth’ interview. Semi-structured interviews with key questions allow the researcher to explore an idea or response in more detail. In this context, interviewer bias can be minimised by understanding the research objectives as well as appreciating the tendency for participants towards negative or inaccurate or incomplete information. Researchers argue that interviews can offer a better understanding of social phenomena than that obtained from quantitative methods, for example, a questionnaire (Silverman, 2000; 2006).

Migration and its effects on the left-behind wives in Nepal has been an unexplored phenomenon till now. Therefore, the semi-structured interview method is thought to be more appropriate because of its flexibility rather than structured interviews, where detailed insights are required from research participants (Britten, 1995). It is generally agreed that the in-depth interview creates a more relaxed atmosphere to collect in-depth information and the researcher can be flexible and interact with the respondent for further clarification of their answers (Boyce and Neale, 2006). In-depth interviews allow the collection of exhaustive information, opinions and past experiences related to research problems by asking open questions. For example, how are left-behind women affected by the migration of their husbands; why are left-behind wives depressed? and how do they feel any degree of freedom?

### Mixed-Methods design or pragmatism

The mixed-methods approach is now popular and commonly used in the health and social sciences (Tashakkori and Teddlie, 2003; Moffatt *et al.*, 2006; Creswell, 2007; Tashakkori and Creswell, 2007; O’Cathain, 2009; Teddlie and Tashakkori, 2009). Creswell and Plano Clark (2007: 8-9) defined mixed methods research as “*the combination of quantitative and qualitative approaches provides a better understanding of research problems than either approach alone*”. Thus, mixed methods designs combine elements (for example research techniques, methods) of both quantitative and qualitative research approaches (Johnson and Onwuegbuzie, 2004; Teddlie and Tashakkori, 2009), which enable the collection of both the quantitative and qualitative information in a single study. After a long debate on the philosophical assumptions of paradigms, researchers now accept that mixed methods research is a separate research design (Creswell *et al.*, 2003). As such, it provides a continuum for collecting information in numerical and verbal form, analysing and reporting in order to answer the research question in a single study. Although, all data collection methods have some limitations and weaknesses which can be minimised by using multiple methods (Creswell *et al.*, 2003), for example: the quantitative method helps to identify the factors associated with depression in the wives left behind so this helps to make checklists for qualitative methods and minimises the time for qualitative interviews. Therefore, researchers believe that the combination of quantitative and qualitative methods in a single study can emphasise using the strengths and minimise the weaknesses experienced when used in single method studies (Creswell *et al.*, 2003; Johnson and Onwuegbuzie, 2004). Some benefits and shortfalls of using quantitative and qualitative approaches were discussed above in Section 3.2.

Both quantitative and qualitative research can be combined at different levels in one study (Sandelowski, 2000). However, most of the research studies are combined either at the design level for complementary (one phase assists to the development of another phase) or at the interpretation level for integration of findings.

When methods were combined for the complementary, the researcher argued that the dominance of the quantitative in a sequence over the qualitative offers the researcher a better understanding of the meanings of the underlying analytical associations in the quantitative first phase. It further allows a greater chance of exploring and obtaining an in-depth insight into cases in the qualitative phase later so that qualitative findings help to further clarify the findings of quantitative data (Brannen, 2005). For example, the survey conducted in the first phase determined a sampling frame for the second phase of qualitative studies. This approach has been extensively used and is ‘popular’ in mixed methods research (Ivankova *et al.*, 2006; Creswell and Plano Clark, 2007), and is also used in this study as data was collected through quantitative (questionnaire survey) and qualitative (in-depth interview) in the two phases at different times. The complementary method (the dominance of qualitative over quantitative approach) has been argued as being a more complex design than the former, for example, no formal instrument or framework is available, variables are unknown and are thought to be suitable to develop and test an instrument (Creswell and Plano Clark, 2007).

In the quantitative and qualitative dilemma, demographers have traditionally emphasised the quantitative approach, for example, the availability of census and labour-force statistics, while the humanistic tend to stick with qualitative methods (Creswell, 2003; Castles, 2012a; Castles, 2012b). In these double stands, researchers have been arguing for a middle way, for example, ‘mixed methods’ to bring them together so that either data or findings from different methods can be interpreted in meaningful ways by means of integration (Caracelli and Greene, 1993; Teddlie and Tashakkori, 2003; Moran-Ellis *et al.*, 2006). This process is known as *triangulation*. Mays and Pope (2006) also argue that triangulation makes a study more comprehensive and reflective rather than using a single test for validity. The word triangulation refers to the combinations and comparisons of a) findings from different theories to the same data (Tashakkori and Teddlie, 1998); b) interpretation of the same data by different analysts; or c) integration of data collected at different time points by either the same or different methods (Tashakkori and Teddlie, 1998; Sandelowski, 2000; Risjord *et al.*, 2001; Moran-Ellis *et al.*, 2006; Teddlie and Tashakkori, 2009).

Both complementary and integrative approaches can be widely seen in health research (Sandelowski, 2000; Johnstone, 2004; Rutherford *et al.*, 2010), utilising their advantages as described above. And, these concepts are extensively utilised in this thesis.

This PhD thesis has planned to meet all the five obligations of mixed-methods as suggested by Greene and scholars (1989): a) triangulation: (convergence and corroboration of results from different methods); b) complementarities: (elaboration, illustration and clarification of the results of one method with the use of another method; c) development (results from one method proceed to build the other method; d) initiation (intervening paradoxes and contradictions seeking to reframe the research question; and e) expansion (seeking to extend the breadth and range of enquiry by using different methods for different inquiry components (Greene *et al.*, 1989; Johnson *et al.*, 2007).

In conclusion, mixed methods is linked with a pragmatic philosophy and enables answering the complex nature of study phenomena and human behaviour, perceptions, experiences by utilising the qualitative and quantitative methods in a single study. Therefore, this study utilised a mixed methods approach, which is believed to unearth the effects of the husband’s migration on the wives left behind in Nepal.

## Rationale for using a mixed methods approach in migration and health studies

Migration studies in the Asian region, demographers have mainly relied on census data, labour force surveys and secondary sources to describe the patterns, trends and nature of international migration quantitatively and its economic impact on the household and national economy (Castles, 2012b). For example, Hugo (2004) examines migration trends and patterns in South Asia; Adams and Page (2005) investigate the economic impacts of migration.

As described, considering the complex nature of migration and its effects within the social and cultural beliefs, it becomes more important to adopt research methods that are suitable for the study issues and its objectives (Silverman, 2006). Singleton (1999) argues that many complicated and inter-related social processes are involved in migration and such processes are governed by a combination of economic and social reforms.

McKendrick (1999: 42) argues why multi-methods are important in population studies, ‘*the breadth of understanding that is provided by multi-method research is consistent*’. Furthermore, Mendlinger and Cwikel (2008: 283) stated that “*The combination of the two methods (quantitative and qualitative) provides researchers with multiple ways of looking at a complex problem*” (Mendlinger and Cwikel, 2008). Others, for example, Castles (2012b) argues that using only a single method cannot describe and explore complex social phenomena like migration and health. Therefore, researchers are now advocating the significance of using mixed methods in migration research (McKendrick, 1999; Singleton, 1999; Castles, 2012a). Furthermore, Findlay and Li (1999: 51) stated that:

‘*Methodological challenge is not only to experiment with new ways of representing the diverse meaning of migration, but also to seriously consider the view that mixing methods is a highly desirable research strategy, rather than an optional extra.*’

Castles (2012b: 17) further describes the need of the mixed-methods approach in migration research as “In recent years, the rise of ‘mixed methods’ approaches within disciplines and the call for interdisciplinarity in addressing complex real-world issues (such as migration or development)”.

Their review of migration studies shows that there has been a long history of using diverse research methods, for example: the Mexican migration research project used a mix of large surveys and qualitative studies in migration research to describe and explore the migration patterns from Mexico to the USA (Massey *et al.*, 2003), and the need to use mixed methods in migration studies. The growing interest of using mixed methods and the need to use such methods in migration studies are clearly highlighted in the literature (Singleton, 1999; Castles, 2012a; Castles, 2012b). Only the purpose and significance of using mixed methods in population research studies have changed in recent years (Findlay and Li, 1999).

Hence, this study has employed the mixed methods approach to study the effects of husbands’ international migration on the wives left behind.

## Study area

This study was conducted in the Chitwan district of Nepal. The Chitwan district is situated in the central part of Nepal. Administratively, it is allocated to the Central Development Region, and further grouped in the Narayani zone. Bharatpur is the district headquarters which is about 150 kilometres from the capital Kathmandu. Chitwan occupies an area of 2,238 square kilometres with a population of 534,497 (CBS, 2012; DDCC, 2013a). The Chitwan district is further sub-divided into 36 Village Development Committees (VDCs) and two municipalities.

This district is facilitated with one government hospital (equipped with 45 doctors and 245 beds), two medical colleges (equipped with 263 doctors and 1563 beds), one cancer hospital (with 40 doctors and 160 beds), 3 primary health centres, 6 health posts and 32 sub-health posts (DDCC, 2013b). Four nursing homes are also established privately. The district has 405 female community health volunteers and 292 trained birth attendants, who are working at the grass-root level in the communities. This district has 256 primary schools, 38 lower secondary schools, 60 higher secondary schools and 8 colleges (DSO, 2006). This district also has more basic facilities compared to other districts. But, due to the diverse topography, some VDCs of Chitwan district still lack some basic facilities such as roads and transportation, communication, drinking water, electricity, health and sanitation facilities.

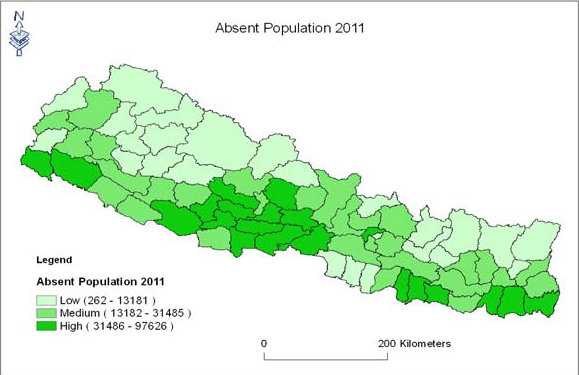
According to the 2001 census, the population growth rate and the number of family members per household in Nepal were 3.08 percent and 5.04 respectively (CBS, 2002). The population growth rate and number of family members were found to be less over the last 10 year period which is now 4.7 and 1.4 in the 2011 census (CBS, 2012). The official figures of the total international migrant population of the Chitwan district were 14280 in 2001 and 50421 in 2011 (CBS, 2002; CBS, 2012). There has been more than a 250 percent increase in international migrants from the Chitwan district over the last 10 years. The data from the 2011 census shows that in every 2.5 households there is at least one international migrant.

## Selection of study area

The selection of the study site depends upon the availability of sufficient study samples within the study area so as to achieve the study objectives. This study aimed to examine the impact of international migration on left-behind wives so the study area should have a high level of international migration. Thus, a feasibility study was conducted in some high migrancy areas of Nepal for example: Chitwan, Kaski and Morang. Among the high migrancy districts, Chitwan district was selected.

Chitwan district was chosen for the study on the basis of following reasons.

1. High migration: According to the Census report of 2011, Chitwan district is one of the high international migrancy districts (Figure 3.3). NDHS (2006) reported that there are more than 37 percent of households claiming that they have at least one family member away for at least 12 months (NDHS, 2007). In the report of the Nepal labour force survey (2008), it was identified that about 44 percent of households have at least one migrant (CBS, 2009). These reports also suggest that there is an increasing trend of international migration from Nepal every year. The NDHS (2006) report also suggested that men are three times more likely to migrate than females. On average, about 67 percent of people migrated for more than six months (NDHS, 2007), among them, more than 42 percent of people migrated either to India or other countries. The researchers argued that this official figure could be very high. A report by Kok (2003) also suggested that more than 120 thousand people left Nepal for India in a single year.
2. Easy accessibility to the field: This district has a better network of road and transportation facilities than other districts of Nepal. Drivable roads are connected to almost all VDCs of this district.
3. Time and cost: The time and cost involved in the research is the primary concern for the success of the research. It also depends upon the types of research and methods of data collection and access to the research sites. This research is a part of PhD study, thus, it has its own time limit. The cost involved during the data collection process was borne by the researcher himself. Therefore, time and cost were also taken into consideration in the selection of this district.



Chitwan

Figure 3.3 Map of Nepal showing pattern of international migration

Source: Central Bureau of Statistics: Preliminary Findings of Census 2011.

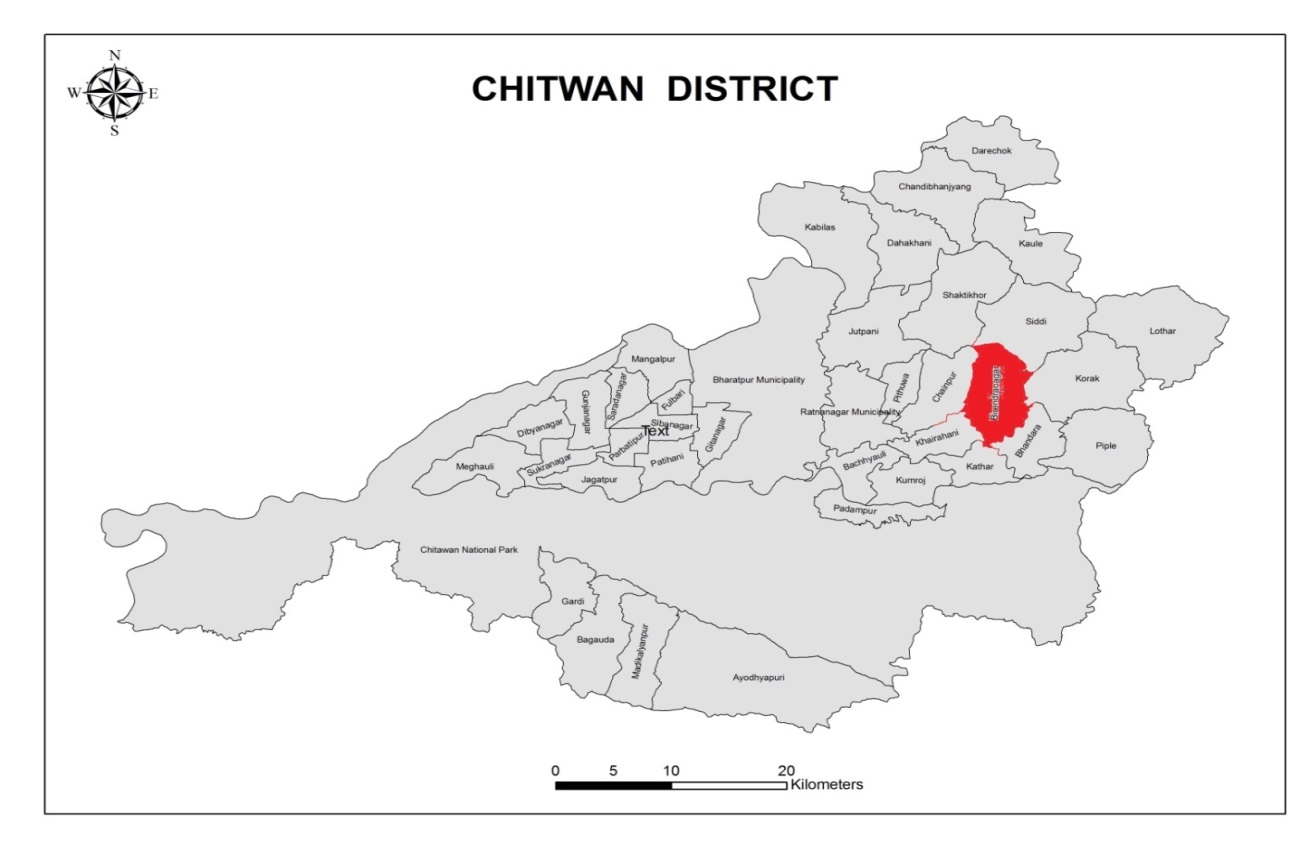


Figure 3.4 Map of Chitwan district (Red shaded area is the study VDC)

Figure 3.5 International migration pattern from Nepal by geographical region

Source: CBS (2011b), Preliminary Findings of Census 2011.

Among the 36 VDCs of Chitwan district, Birendranagar VDC was found to have high international migration and thus selected for this study based on personal conversation with staff of the District Statistical Office (DSO), Chitwan; past VDC wide migration data available from the District Statistical Office, Chitwan, local leaders, women’s groups and preliminary visits to a few VDCs in Chitwan.

### Description of Birendranagar VDC

1. Geography: Birendranagar VDC (Figure 3.6) is situated in the eastern part of the Chitwan district, and is surrounded by six VDCs: Siddi VDC in the north, Korak and Bhandara in the east, Khairahani and Kathar in the south and Chainpur in the west. This VDC is 21 kilometres far from the district headquarters Bharatpur. The major part of this village is on a plain and the northern part is covered by forest and has some hills. The majority of land is covered by forest and the rest is used for cultivation. Agriculture is the main occupation of the majority of the residents. A small river, called Pumpha Khola emerges from the foothills of this VDC and runs along the eastern border of this VDC. The area of this VDC is 17.26 km2.
2. Population

According to the National Census (2011), this VDC was populated by 14937 individuals, among them 6909 males and 8025 females (CBS, 2012). This figure shows that the female population is almost 8 percent more than the male and the sex ratio is 86 males per 100 females. This VDC has more diversity with more than 30 ethnic groups and among them, more than 35 languages are spoken (CBS, 2012). Out of 2741 households, 1287 consist of at least one migrant living away from home (Table 3.2). Among the migrant households, 1100 households had international migrants and only 187 households had internal migrants. This VDC had 47.0 percent migration.

Table 3.1 Distribution of population within the VDC

|  |  |  |  |
| --- | --- | --- | --- |
| Ward | Total | Male | Female |
| 1 | 2,850 | 1,308 | 1,542 |
| 2 | 2,636 | 1,280 | 1,356 |
| 3 | 1,673 | 816 | 857 |
| 4 | 1,261 | 583 | 678 |
| 5 | 1,233 | 553 | 680 |
| 6 | 787 | 365 | 422 |
| 7 | 715 | 314 | 401 |
| 8 | 1,982 | 885 | 1,097 |
| 9 | 1,797 | 805 | 992 |
| Total | 14,934 | 6,909 | 8025 |

Source: CBS (2012), (National Population Census 2011, Household and population by sex ward level.)

Table 3.2 Number of households having a migrant household member

|  |  |  |  |
| --- | --- | --- | --- |
| Ward | Total | Internal | International |
| 1 | 540 | 16 | 215 |
| 2 | 440 | 22 | 187 |
| 3 | 272 | 20 | 92 |
| 4 | 194 | 15 | 80 |
| 5 | 270 | 24 | 120 |
| 6 | 142 | 9 | 49 |
| 7 | 140 | 19 | 65 |
| 8 | 402 | 17 | 179 |
| 9 | 341 | 45 | 113 |
| Total | 2741 | 187 | 1100 |

Source: Author’s field survey

1. Facilities

This VDC consists of four primary schools, two high schools, one college, one sub-health post and one private nursing home. The sub-health post is situated in ward 7 and the other two health posts are in the adjacent VDCs Khairahani and Bhandara. The sub-health post is not convenient for the inhabitants of wards 1, 2, 3, 4, 5. This is due to the distance and lack of transport facilities to reach the sub-health post. The government hospital is 21 km from this VDC. The VDC has a good road network almost covering all wards. The national highway also stretches across this VDC which runs through wards 2 and 3. Almost all households are covered by electricity supply. Only a few households have a telephone facility (DSO, 2006).

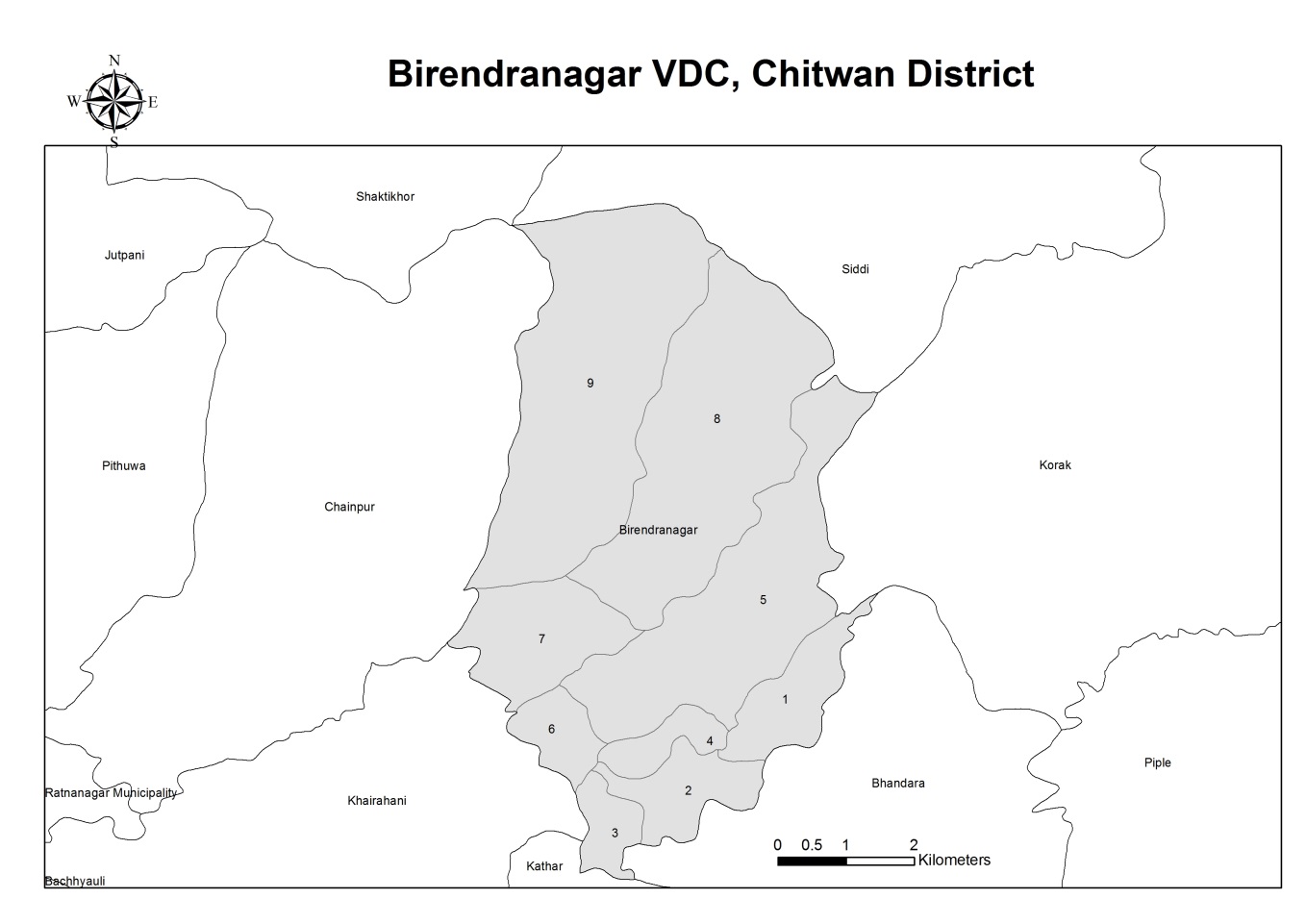


Figure 3.6 Map of Birendranagar VDC by ward numbers

Source: CBS (2012)

Due to the lack of a proper data record system kept by the government health institutions and lack of research, it was difficult to establish the prevalence of minor illnesses among the women. Thus, it was decided to visit a few health posts and sub-health posts to see the records of women’s visits for minor illnesses. It was found that the District Statistical Office also collected information about disease prevalence and produced a district report for Chitwan (2006) which reported that diarrhoea, fever and coughs are ranked as the 2nd, 4th and 8th most common diseases in the district respectively (DSO, 2006).

## Study population

This study aimed to gain a deeper understanding of international migration and its impact on the left-behind wives regarding depression, autonomy and health service. The main respondents of this study were the wives left behind by the migrants and the wives of non-migrants aged 15-49 years and a household is considered as a basic unit for this study.

## Selection criteria for migrants’ and non-migrants’ households

### Inclusion criteria for migrant households

Those households or women who meet all the following criteria were included in the study:

1. Households which have married women aged between 15-49 years whose husbands had migrated abroad for at least one year; and are currently living abroad. However, if migrants have a short visit (a month or less in a year) to see their families this is also included in the study.

### Inclusion criteria for non-migrant households

1. Households or married women aged between 15-49 years whose husbands had not migrated and were currently living there and had been there for at least one year.

### Exclusion

1. The households/families that could not meet the above criteria.
2. The participant who refused to agree with informed consent.

If the household has more than one eligible woman who satisfied the above selection criteria, only one was selected, based on the longer duration of the husband’s migration for the migrant’s wife and the longer duration of marriage for the non-migrant’s wife.

## Definitions of Key terms:

**Left-behind wives**: The “left-behind” wives are those whose husbands had migrated for at least one year to a country other than their country of origin.

**Wife of non-migrant:** A married woman whose husband has never migrated.

**A household or family**: In this study a household or family refers to “*a single person living alone or a group of persons, who may or may not be related, usually living in a particular housing unit and sharing meals with common resources*” (Central Bureau of Statistics of Nepal, 2003).

**Migrant’s household or family**: It is defined as a household where at least one male family member migrated at least one year for any reason.

**Non-migrant’s household or family**: It is a household where none of the family members have migrated.

**Women**: Married women of an age between 15-49 years. For this study, the reproductive age of women was taken.

**Household head**: A person either male or female, who has primary authority and responsibility for the household activities and is acknowledged as the head by the other members.

**Nuclear family:** A family consists of a co-residing married couple with or without their own children.

**Extended family:** A family is called extended which consists of a co-residing couple with or without children and including other family members.

**Separation:** The term ‘Separation’ is in this study used for the husband and wives who are currently living apart by migration.

**Village Development Committee (VDC):** A lower administrative unit formed according to the local self-governance act 1999 under Para 12. A VDC consists of nine wards.

**Private health facilities**: These are run by either non-governmental organisations or any non-public providers where different health facilities are available. Private clinics and hospitals, nursing homes, private medical colleges are generally known as private health facilities.

**Government or public health facilities**: Health institutions run by government. Hospitals, health posts, sub-health posts and primary health centres are known as government health facilities.

**Traditional healers**: Traditional healers are the people who believe that they have some power to cure some kind of illnesses by ritual power. There are different kinds of traditional healers found in various religions and communities. For example: Brahman/Chhetri: Jyotish; Newar: Gubhaju; Gurung/Tamang: Dhami and Jhakri etc.

**Pharmacy**: A shop where medicines are sold with or without a doctor’s clinic.

## Sampling

Selection of a sample for social science is always a complex task in developing countries, having many pitfalls (Barber *et al.*, 1997), compared to developed countries. For example, households in Nepal do not have any unique identification such as house number or post code as found in developed countries like the United Kingdom (UK). Another challenge for the selection of samples is that more people have the same name living within the same boundaries. Therefore, a complete household listing was made for this PhD study before the main survey and was used as a sampling frame in this study. This study utilised a two-phase sequential sampling to select the respondents from the migrant and non-migrant households. Probability and purposive sampling methods were employed for the quantitative and qualitative study.

### Sampling Methods

#### Sample size and sampling procedure

A report of the Nepal Labour Force Survey (NLFS) (2008) also found that about 44 percent of the population were not residing in their current place of residence (CBS, 2009). The recent survey of the Nepal Living Standard Survey (2010/11) found that more than 56 percent of total households were receiving remittances and two in every three households in Terai and one in every two households in the hilly regions have migrants (CBS, 2011a). In this context, when there is no previous data available to calculate the sample size, it was estimated by assuming that 50 percent of left-behind wives were affected by the migration of their husbands.

##### Selection of survey sample and procedure

Too large a sample size increases the cost and time and too small a sample size cannot produce a precise estimate. Thus, an appropriate sample size will be required for the study. In Nepal, none of the studies reported the prevalence of depression on left-behind wives. Thus, as suggested in the literature, if no previous data exists, a figure of 50% can be used for the estimate as a ‘safest’ choice (Lwanga and Lemeshow, 1991). To calculate the sample, a 50% of the estimated prevalence of depression in left-behind wives in the population and a 5% of desired level of precision were used.

For this survey, a sample size was calculated by using the following formula (Lwanga and Lemeshow, 1991; Dahiru *et al.*, 2006).

Where:

N = Required Sample size

t = Confidence level at 95% (Standard value of 1.96)

p = estimated prevalence of depression on left-behind wives (50%)

d = desired level of precision (5%)

= 384

This calculation gave the value of a 384 sample size with a confidence level at 95 percent.

Similarly, for women’s autonomy and types of health service utilisation of wives left behind, there is no previously reported percentage of women’s autonomy and health service utilisation so that the number of samples required for this outcome of interest was calculated as above. Thus, the number of samples required for each outcome of interests is the same e.g. 384. All three outcomes were measured in the same group of respondents.

About five percent of households were over sampled which accounts for non-response or recording error. Thus, four hundred migrants and the same number of non-migrant households were taken for this research survey.

To detect the effect, based on the guideline for the number of samples per outcome, a sample size of 5 to 15 is suggested for each explanatory variable to be used for logistic regression to detect the effect (Hosmer and Lameshow, 2000; Stevens, 2009). Considering there would be a maximum of 20 variables likely to be used in the regression analysis. A minimum of 200 samples would be needed. This study has 400 samples and there are 20 cases per variable.

This study was conducted in two phases. In the first phase of the study, all the households within the VDC were listed with some baseline information by using a household screening questionnaire (Appendix 1). After that, the households were further categorised as migrant households, non-migrant households and other households based on the eligible characteristics set for the study. A systematic random sampling procedure was used for the selection of survey samples from the eligible households.

##### Selection of sample for semi-structured interview

Sampling in qualitative study is not straightforward and rigidly prescribed as in quantitative study (Coyne, 1997; Pope *et al.*, 2000). However, the sample size depends upon the purpose and aim of the study. In this study, a purposive sampling method was used to select the sample for a semi-structured interview for qualitative study. This sampling approach is normally used to select the participants according to the predefined conditions and aims of the study (Luborsky and Rubinstein, 1995). Similarly, Bowling (2002) argued that this approach is easy for recruiting participants and selected participants can actively participate in the interview when selected purposefully. Moreover, Guest and colleagues (2006: 1) state that “*Purposive samples are the most commonly used form of non-probabilistic sampling and their size typically relies on the concept of ‘saturation’ or the point at which no new information or themes are observed in the data*”. Therefore, qualitative research has a small sample size which is based on the information given by the respondents after the point that no further new information is obtained (Patton, 2002).

The qualitative study was carried out in the second phase of the study. The sample size for the qualitative study was based on the findings of the quantitative study and selected purposively from the survey sample. Altogether 14 semi-structured interviews were taken purposively, among them eight left-behind wives were interviewed from migrant households and another six wives of non-migrants from non-migrant households. These respondents were selected on the basis of a depression score (depressed and not-depressed), autonomy scores (no or low and higher autonomy), types of health service utilisation (private and government health facilities). This sample size of the qualitative interview is based on the concept of the saturation of the data. While conducting the interviews, repeated information was obtained from the participants and no new information was added. Therefore, no further interviews were carried out after the saturation of information.

## Study Instruments

This study utilised the researcher administered tools for data collection. Before selecting the samples, it was essential to identify the eligible samples from the population. Thus, a household screening questionnaire was developed based on the eligible criteria (Section 3.8). Depression, autonomy and types of health service utilisation were accessed through the structured survey questionnaire. The descriptions of each tool are described below (for detail see Section 3.14)

1. Household screening questionnaire: This questionnaire was used for listing all households in the study area to identify migrant and non-migrant households. (Appendix: 1)
2. Survey Questionnaire: This questionnaire contained following headings/sections
3. Respondent’s socio-economic characteristics: The first section of the survey questionnaire contained the questions related to the personal information of the respondents.
4. The Center for Epidemiological Studies-Depression scale (CES-D) (Radloff, 1977) was used to measure depression in women both in migrant and non-migrant households (Appendix: 2). This tool consists of a 20 item scale which was used to ask participants to measure the weekly frequency of depressive symptoms. This scale has a response range from 0 (none of the time/less than 1 day) to 3 (all of the time/5-7 days). On the scale, the four items are reversely coded. The overall score ranges from 0 to 60. The higher scores indicate a higher level of depression. This CES-D scale is a widely used standard tool for measuring depression in general populations (Radloff, 1977). This tool has been previously used in Nepal among different populations for example, in adolescents (Yamaguchi *et al.*, 2010); women (Tausig *et al.*, 2003) and female sex workers (Eller and Mahat, 2003) and has good internal validity and reliability for use in Nepal (Tausig *et al.*, 2003).
5. Household-related questions: For the collection of household information from the sample population of migrant and non-migrant household, the Nepal Demographic Health Survey (2006) questionnaire and Nepal Census (2001) questionnaire were used with some modification according to the study’s aim and objectives (Appendix: 2).
6. Women’s health and autonomy related questions: To collect information about women’s health and autonomy, the Nepal Demographic Health Survey (2006) questionnaire was used with some modifications according to the study objectives (Appendix: 2).
7. Semi-structured interview checklist: This checklist was used to explore the views and beliefs about the study issues (Appendix: 3).

Figure 3.7 Flow diagram for designing a survey questionnaire

## Pilot Study

Pilot study is considered a mini-version of a full-scale study (van Teijlingen and Hundley, 2001). Conducting a pilot study helps to identify possible problems that may arise during the actual field study and the pre-testing and refining of the research instruments which are planned to be used in the main study. Piloting also helps to check the questionnaire for its relevancy and presentation. The questionnaire and checklists are a means of data collection. Thus, good questions and appropriate checklists are considered the backbone of the research study which helps the respondents to better understand the research questions, to give an answer and for the researchers to collect robust data (Kelley *et al.*, 2003). Pilot study can be very useful particularly in developing countries like Nepal, where one term used in the questionnaire may have multiple meanings, for example, ‘don’t know’ means between ‘yes’ or ‘no’. However, it is mostly used for ‘no’ in the Nepalese context (Simkhada *et al.*, 2006b). Another problem is that, some English words do not have an exact meaning in Nepali and if used, which can deliver the wrong meaning and message. Thus, suggestions from the researchers in developing countries give more emphasis to doing piloting before the main study.

Pilot work can be costly, but it saves time and money. Conducting pilot study provides valuable information and guidance for the main study so that the potential problems can be identified before the actual field study. Pilot study also helps to explore whether the proposed method is appropriate or not for the target groups (van Teijlingen and Hundley, 2001).

As the research topic is new for Nepal and none of the past studies have examined or explored depression, wives’ autonomy and health service utilisation, there were no pre-tested survey tools and checklists for a semi-structured interview in the Nepalese context. For this study, the survey questionnaire and checklists for the semi-structured interviews were prepared based on the literature review.

A pilot study was conducted from September to October 2010 prior to the main field study. This study followed all the stages which were planned to be carried out in the main field study. At the first stage, a complete household listing was carried out in a small village of Chainpur VDC near Birendranagar VDC where the international migration rate was high. Households were categorised according to the selection criteria. In the pilot study, among the eligible households, 20 households (10 migrants and 10 non-migrants households) were selected by using a simple random sampling for survey. In the pilot survey, the questionnaires in Nepali asked the respondents to ensure that the questions were clear and easily understood by the respondents. After the survey, four semi-structured interviews were carried out by the principal investigator as a pre-test study. Based on the findings of the pilot study, necessary modifications were made to the survey questionnaires. Comments and feedback arose and were incorporated in the final survey and interview guidelines.

## Feedback from the pilot study

This study received some feedback from the piloting. It has been observed that some left-behind women felt uncomfortable while answering the question “who received remittances”. This may be due to the fear of being overheard by other family members and the left-behind wives not wanting to share this information with other household members. Because of the poor infrastructure and partition material of the rooms in the house, it was decided to conduct the interviews with the women in more secure places where they would feel more comfortable while giving responses (for example, school rooms).

It is worthwhile to mention here that some left-behind women were afraid to give interviews at first, but after the research objectives were explained, they were happy to participate in the interview. It might be the case that in an interview they would be afraid of being asked about their extra relationship with other men (sexual relation) in the absence of their husbands. In semi-structured interviews, the women in the first instance when asked the indirect questions, did not answer properly and lost direction. They felt more comfortable to answer the direct questions and leading to further probing questions. This might be due to poor literacy and not having faced such interviews in the past.

## Data collection and processing

Both quantitative and qualitative data were collected by using a survey questionnaire and semi-structured interview with the women respondents.

### Survey (quantitative data collection)

The choice of method depends upon the issues to be measured (Bowling, 2002) and practical considerations, for example, availability of personnel and resources involved in the study (Abramson, 1990). As discussed earlier in Section 3.3.1, the use of a self-administered questionnaire in the population with a low literacy rate would have a significant limitation on the response rate (McColl *et al.*, 2001). Thus, a face-to-face interview was considered a method of data collection for respondents with low literacy rate (de Leeuw, 2005). This study employed face-to-face interviews using structured questionnaires as a tool of data collection from the women respondents, because face-to-face interviews have the following advantages i) more structured and easy to administer; ii) uniform responses; iii) collection of larger amounts of information; iv) high response rate; v) obtains answers from people with reading and writing difficulties vi) gives a convincing explanation of the purpose of the study and good rapport; vii) data can be collected from a larger population within a short time (McColl *et al.*, 2001: 22; Bowling 2002: 263; de Leeuw, 2005).

The survey was conducted by trained researchers (See training and recruitment of researchers in Section 3.15) including principal investigator (Yagya Murti Bhurtyal, PhD student) and the semi-structured interviews were carried out by the PhD student.

#### Development of measurement tools for survey

Household Listing

Figure 3.8 Flow diagram of data collection process

##### Household screening questionnaire

A complete listing of the households was essential to identify the eligible households (see eligibility in Section 3.8) for the study. For this purpose, a screening questionnaire was developed according to the eligible criteria. This questionnaire asked every household in the VDC containing 10 questions that were related to information about international migration and its duration and the country of migration, internal migration and non-migration, frequency of the migrant returning home within a year, the migrant’s wife and non-migrant’s wife (age of 15-49 years) in the household so that the list of the migrant and non-migrant households were prepared and eligible households were identified based on the set criteria. The listing of households was then used as a sampling frame for the quantitative method. The sample questionnaire is found in Appendix 1.

##### Survey questionnaire

A nine-page-long survey questionnaire was designed to collect information on the socio-demographic characteristics of the respondents, husband’s characteristics, household information, depression, autonomy, health service and migration. Depression was measured by using the 20 items Center for Epidemiological Studies Depression Scale tool (Radloff, 1977) originally developed in the United States and used in a wide range of populations worldwide (Simpson *et al.*, 1996; Da-Silva *et al.*, 1998; Wolf *et al.*, 2002; Stahl *et al.*, 2008). Women’s autonomy and health service utilisation were measured by adopting the questions from the Nepal Demographic Health Survey (2006). The other questions related to socio-demographic, household information and migration were adopted from the Nepal census (2001), NDHS (2006), literature review and discussion with the supervisors. The census and demographic health survey questionnaires were used for the large population which were already validated and pre-tested to collect information regarding socio-demographic characteristics, household characteristics, migration, autonomy and the health service in the general population in Nepal. Adopting such questionnaires reduced the burden of validation of the questionnaires in Nepal and also produced accurate and consistent data.

A questionnaire used in the survey contained 91 questions which were further divided into nine sections. The first section consists of 23 questions related to the respondent’s socio-demographic information. The second, third and fourth sections with four, nine and seven questions respectively related to the household dwelling and facilities, access to facilities and household income and expenditure respectively. The fifth section consists of nine questions related to health service utilisation. The sixth section also had nine items related to measure autonomy. The seventh section related to depression which was made up of 20 items. Eight questions relating to household heads were included in section eight. The last section with 10 questions was used to gather information about migration. The depression questions asked about depressive symptoms experienced within the last four weeks (Radloff, 1977) and the last section was asked only in migrant households. The survey questionnaire is found in Appendix 2.

The questionnaire was translated from English into Nepali by the researcher and the lecturer in the English Department of Tribhuvan University, who is a native speaker of Nepalese language and is fluent in English. The main purpose of translation was to translate the English questionnaire precisely into Nepali so that the questions in the Nepali version could be understood easily by the respondents.

### Qualitative data collection

In qualitative research, direct observations, interviews, analysis of texts or written documents and audio-video tapes are the different techniques of data collection (Patton, 2002; Pope and Mays, 2006; Silverman, 2006). Data collected by interviews is presented in the form of verbatim quotations with contextual interpretation from respondents about their experiences, opinions, feelings and knowledge (Patton, 2002). Similarly, observations include detailed fieldwork descriptions of activities, behaviours, actions, conversations, interactions of human experiences which are observable (Patton, 2002) where data is in the form of field notes, and descriptions of observations. Likewise, personal diaries, letters, artistic work, photographs and written materials are different forms of data which are collected as documents while digital materials or audio-video tapes are collected by an audio-video data collection method (Patton, 2002).

Among these methods, semi-structured face-to-face interviews along with checklists and probes were used to collect qualitative data for this study.

#### Semi-structured interview

For the qualitative data collection, this study employed the semi-structured face-to-face interview with the respondent on the study issues. The semi-structured interview approach is a flexible and powerful tool to explore many new aspects and dimensions of the study issues (Britten, 2006). Britten (2006: 13) further explained “*the semi-structured interviews are conducted on the basis of loose structure consisting of open-ended questions that define the area to be explored*”. This method provides an opportunity for the respondents to express their views, feelings, experiences, and perceptions in their own words. Patton (2002) argues that good checklists and probes can yield in-depth responses about people’s experiences, perceptions, feelings and knowledge (Patton, 2002) and the interviewer can have enough time to ask the respondents for further explanations and clarification of the issues (van Teijlingen and Forrest, 2004). The interview with comprehensive checklists and probes allow exploration of the complex issues and answers can be clarified (Bowling, 2002; Patton, 2002; Bryman, 2004; Britten, 2006). However, this method is often criticised for being time consuming, and having interviewer bias (Patton, 2002; van Teijlingen and Forrest, 2004; Britten, 2006). Good interviewer skill, following the checklists and probes and presenting in a non-leading way and appreciating the respondents if provided with incomplete information, can minimise interviewer bias (Bowling, 2002; Gregson *et al.*, 2002; Patton, 2002). Van Teijlingen and Forrest (2004) argue that semi-structured face-to-face interview is useful where the information is scant and study issues are complex. For this study, checklists were prepared which cover the open questions, for example, How do you feel depression? What are the causes of depression? How and when did it start? Is it related to your husband’s migration? What were women’s experiences and feelings about autonomy, living with a husband or without a husband? Situation of autonomy? How left-behind wives use health service utilisation? (Appendix 3 for checklists and probe questions). Due to the low literacy of women in the study area, the checklists and probes were modified based on the experience of the pilot study. The semi-structured interview is more suitable where the respondents have low literacy or illiterate. This method allows the respondents to bond within the themes and also make easy to understand the questions and give the responses. Experiences from the pilot study show that women with low literacy are not able to answer indirect and open questions. For example, women were asked, how is the decision made in your households and what is your role? in the pilot study. Many women said ‘I don’t know’ and did not understand how to answer. The interviewee can be guided by the checklists and probes so that the interviewee can express their views and experiences about the issues. In the case of open-ended interviews, the interviews are loose and non-directive. The respondents with low literacy may not be able to express their views and also lose direction without any guidance and probes. In developing countries like Nepal, due to the patriarchal family system and religious and cultural barriers, women’s exposure to the outer environment is limited and they cannot express their experiences and opinions in a sequential way.

#### Preparation of interview checklists

The aim of the preparation of the interview checklists is to gather rich information of the key issues from the interviewee’s perspective. Thus, the interview checklists and probes were designed in such a way that the researcher asked the key questions to elicit and explore with an in-depth insight and understanding of the study issues (Morse and Field, 1996; Legard *et al.*, 2003). Comprehensive checklists are helpful for an interviewer to guide an interview in a meaningful way within the question frame and follow-up questions so that the interviewee can concentrate on the predetermined subjects. Likewise, using checklists in an interview also helped to maintain the uniformity of the interviewing topics by asking identical questions. Probes were used to amplify and further clarify the key issues for an in-depth understanding (Sommer and Sommer, 1997). Clear and understandable probes were used which bind the respondents to the topics. It is also argued that interviewer skill plays a vital role in obtaining the quality of information and how an interviewer probes to make further explanation of the issues in depth (Patton, 2002). The principal investigator also used such probing skill so that the respondents can give clear responses to what is to be asked them. For this study, checklists were prepared to cover the key issues of the study, for example: international migration, depression, autonomy and health service utilisation by the left-behind wives and the wives of non-migrants. Checklists and probes can be found in Appendix 3.

## Recruitment and training to the research team

### Recruitment

It has been observed that gender disparities are more common in developing countries. Researchers argue that collecting information on women’s issues in developing countries by male interviewers is a more challenging task, especially on sensitive issues, for example, sexual and reproductive health (Axinn, 1991). Thus, Axinn (1991) further argued that interviewer gender plays a significant role while collecting information from female respondents. Similarly, Williams and Heikes (1993) argued that respondents and the interviewer should belong to the same sex so that rapport can be built easily and respondents also feel more comfortable to respond (Williams and Heikes, 1993). Some scholars argue that gender issues for collecting information is not a major problem but importance should be given to the interviewer’s skill and knowledge in conducting an interview and collecting information (Britten, 1995).

The issues of this research study are less sensitive than the studies on sexual issues and the main respondents were women. Thus, more attention has to be paid to recruit female researchers to collect information from female respondents. All together there were three female researchers, two of them had a master’s degree in population studies with experience in data collection and the other had a bachelor degree in health science, employed to collect survey data. The semi-structured interviews with respondents were carried out by the principal investigator myself (Yagya Murti Bhurtyal, PhD student).

### Training of the research team

A one-day training was organised for the three female researchers by the principal investigator. In this training, researchers gained the background information and the aim and objectives of this study. Furthermore, this training also covered topics, methods of data collection and practical issues. The researchers were also trained to collect data by using the survey questionnaire. All the sections of the survey questionnaire were thoroughly discussed. The questionnaires were printed in both English and Nepali which were used during the training. Dummy interviews were also carried out with proxy respondents so that researchers could gain practical experience and overcome the difficulties while conducting the main survey. The researchers also were informed about the ethical issues including the confidentiality of the data. All the necessary stationery and survey questionnaires were supplied to the researchers. The first few surveyed questionnaires from each researcher were monitored by the principal investigator (Yagya Murti Bhurtyal, PhD student) and regular meetings were also organised for feedback and suggestions which if found were incorporated to improve the quality of the data. Regular monitoring and supervision were conducted to avoid missing information.

## Data collection process

### Listing of households

At the initial stage of the study, a complete listing of households within Birendranagar VDC was carried out from September-October 2010. Then, the households were categorised into migrant households, non-migrant households and non-eligible or other households presented in table 3.3 based on the inclusion and exclusion criteria (see Section 3.8).

There was no secondary information regarding migration. It was important to select the required number of study samples. The listing of households also provides the information about the samples. After listing of the households within this VDC, there were enough samples available for the study. This VDC is also one of the largest VDCs of Chitwan district population wise, household wise and also has the highest absentee (migrant) population. This VDC consists of nine wards and more than 40 villages. It was found to have a good mixture of both migrant and non-migrant populations. It also has socio-cultural diversity. People in this VDC speak more than 14 languages within 35 inhabited ethnic groups. This VDC has almost two and half times more households than the average (1365) per VDC in Nepal. Eight hundred (400 migrant and 400 non-migrant) samples were selected randomly for the survey. Thus, this VDC can be representative and the findings of this study can be generalised to the other similar VDCs in Nepal (detail in Section 6.8).

Table 3.3 Number of households in Study area (Birendranagar VDC)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Ward | International migrant households | Internal migrant households | Non-migrant households | Other households | Total |
| 1 | 215 | 16 | 299 | 10 | 540 |
| 2 | 187 | 22 | 224 | 7 | 440 |
| 3 | 92 | 20 | 153 | 7 | 272 |
| 4 | 80 | 15 | 95 | 4 | 194 |
| 5 | 120 | 24 | 121 | 5 | 270 |
| 6 | 49 | 9 | 79 | 5 | 142 |
| 7 | 65 | 19 | 52 | 4 | 140 |
| 8 | 179 | 17 | 194 | 12 | 402 |
| 9 | 113 | 45 | 173 | 10 | 314 |
| Total | 1100 | 187 | 1390 | 64 | 2741 |

Source: Author’s field survey

### Semi-structured interview

Qualitative data was collected in the second phase of the study. The interviewer conducted the semi-structured face-to-face interview with checklists and probes. The women were selected purposively within the surveyed samples. Altogether 14 interviews were conducted. Among them, eight interviewees were wives left behind and a further six were the wives of non-migrants. Interviews were conducted in private and school rooms where the respondents responded freely and their confidentiality was also maintained. Nepali is the commonly spoken language in the study area. All the selected respondents speak and understand Nepali, therefore, all the interviews were conducted in Nepali by the same interviewer (Yagya Murti Bhurtyal, PhD student) for all 14 respondents so that consistency in the data could be maintained and the interviews were recorded on digital media (digital audio recorder) with the permission of the interviewees. Literature also suggests that using the local language can enable the respondents to explain their feelings and experiences in more convenient ways (Twinn, 1997; Squires, 2008). Each interview was given a unique code. The length of the interviews varied from 45 to 60 minutes.

### Difficulties associated with measuring tools for depression and autonomy

This study aims to measure depressive symptoms. A first attempt was made to find a Nepalese version of the standardized scale of the depression measurement tool for women to measure depressive symptoms rather than from clinical findings. There was a problem in finding such tools in the Nepali language. Most of the tools designed to measure depression are a self-reported scale which might not be suitable for a face-to-face interview. A self-administered questionnaire is also not the most suitable method of data collection considering women’s poor literacy rate in Nepal, so, it was decided that the face-to-face interview was the appropriate method of research. Many standardized tools can be found for purchase and require a recognised professional to administer them. In some cases, formal approval is also needed to use them. Furthermore, the research cost was not funded and there were not sufficient funds to pay for the clinical findings of depression. Thus, this study used the survey questionnaire based on the CES-D by Radloff (1997) and the demographic health survey questionnaires which are easily available free of cost and are widely used in different populations.

## Data management and analysis

The purpose of data management and analysis is to summarise the data with description and explanation in a systematic manner to answer the research questions (Silverman, 2006). Only the procedures of data management and analysis may vary according to the purpose, objectives of the study and nature of the data (Dey, 1993; Punch, 1998). This study was guided by the principles of the mixed-methods, and utilised sequential explanatory design where quantitative data were collected in the first phase and analysed, then followed by qualitative data and analysis. Data analyses for quantitative and qualitative data were done separately and integration of the findings was conducted in the discussion stage (see chapter 5).

### Quantitative analysis

#### Measurements

##### Dependent variables

Depression, autonomy and health service utilisation were measured by using a survey questionnaire. The depression screening questionnaire consists of a 20 items scale of questions, validated for measuring depressive symptoms and these symptoms were measured within the last four weeks as suggested by Radloff (1977) so that recall bias can be minimised. The standard cut-off point was used as suggested by Radloff (1977) which is the score ≥ 16 for depression.

Women’s autonomy and health service utilisation by the wives left behind and the wives of non-migrants were measured by using a standard questionnaire adopted from NDHS (2006). All the outcome variables were treated as categorical variables for data analysis.

Women’s autonomy has been measured by adopting the NDHS questionnaire, in terms of women’s access and control over their own and husband’s earnings (access and control over financial resources), decision-making power (decisions about their own health care, major purchases, and daily household purchases), freedom of mobility and participation in social and political activities. The questionnaire has multiple responses for each variable (see Appendix 2) and is further modified into binary outcomes (woman’s own decision or someone else’s). Each response was given 0 for someone else and 1 for a woman’s decision. A composite index (score) was created by summing up all the values of each response. The autonomy score ranges from 0 to 8 (detail in Section 4.4.4). Autonomy is complex and determined by various determinants. There were no standard tools to measure the overall autonomy. Previous studies also suggest that a composite index is the best practice to measure the overall autonomy. Thus, a composite index was created which makes statistical analysis easier and similar measures of autonomy have been used in the previous studies elsewhere (Kishor, 1995; Jejeebhoy and Sathar, 2001). In addition, a single composite index is straightforward, clear and makes it easily understood. It can help to summarise complex and multiple components in a single index which makes it easier to compare the complex dimensions of autonomy. However, it has some challenges as it assigns equal weight to each component and does not take into account their interrelationships and may lead to misinterpretation.

##### Explanatory variables:

During the survey various socio-demographic variables of the respondents were collected. Age, religion, caste/ethnicity, educational status, employment status, own mobile phone, number of children, facilities at home, family types, types of house, husband’s and household head’s characteristics were collected and treated as categorical variables for investigation. The age of the respondents was further categorised based on their median value. Caste/ethnicity was categorised as described in the monograph of Nepal published by CBS (2003) (Dahal, 2003). Access to facilities, for example, distance, time taken and mode of transport to sub-health posts, health posts, hospital, nursing home, clinic and pharmacy were analysed as categorical variables. Likewise, household income was also treated as a categorical variable. The data related to migration, for example, the country and duration of husbands’ migration, frequency and mode of communication with husband were collected only from the migrant households and treated as categorical variables for data analysis. Wherever possible, the data was categorised into interval levels. The interval level variable is regarded as the highest level of measurement which can be expressed in numerically meaningful terms (de Vaus, 2002), for example, age, number of family members.

Autonomy variables, access to and control over own earnings, husband’s earnings, participation in household decisions, decisions to purchase major goods and daily needs, their mobility, participation in social and political activities were also treated as categorical variables while conducting data analysis. Furthermore, health service utilisation variables such as types of service used were also grouped into categories. (Appendix 2)

### Procedures of quantitative data analysis

At the beginning of data entry, the collected survey information was thoroughly checked for errors before entering and each filled questionnaire was given a unique code. The research team was also well informed to check the questionnaire thoroughly afterwards for completeness. The data from the survey was then entered into the SPSS version 19. All the collected variables were entered with their codes (Appendix 2; 6 and 12) and whenever necessary, the groups were merged so as to make a proper interpretation of the data and results. The outcome variables were categorised into binary. For the descriptive analysis, the chi-squared test was performed to find the significant association between the variables and a further logistic regression model was used to detect the strength of relationships.

The frequencies and percentages of each category (dependent vs explanatory variables) were determined by using cross-tabulation and their relationships with the outcome variables were calculated by using logistic regression. The analysis of each explanatory variable with the outcome variables was carried out one-by-one to find their relationships and strength by using logistic regression. To find the strength of the relationship, an odds ratio for each category vs reference category was calculated. Before entering the variables into the model, all the variables were further coded into binary variables (for example: non-depressed = 0 and depressed = 1). Furthermore, after conducting univariate logistic analysis, further binary logistic regression analysis was also performed to determine which variables were associated with the outcome variable when entering all variables in one model. The binary logistic regression allows the entry of more than one explanatory variable in the analysis to determine the effect and strength with the binary outcome variable (Field, 2009).

For the purpose of binary logistic analysis, the outcome variables were categorised as follows:

**Depression**: Respondents classified as depressed (who scored ≥ 16 in depression scale) versus non-depressed (depression score < 16)

**Women’s autonomy**: High autonomy (autonomy score ≥ 3) vs Low autonomy (< 3)

**Health service utilisation**: Private vs Government.

#### Explanatory variables:

The explanatory variables were also categorised into binary (Appendix 6 and 12).

### Survey

In the first phase, after the completion of the household listing and categorisation of the eligible households of migrant and non-migrant households, the survey samples were selected randomly. The survey questionnaire was used to collect quantitative data. Data was collected by face-to-face interviews with the respondents. Before the interview, a consent letter was read and each respondent was asked to sign the consent form. The survey questionnaire was asked to every woman who was selected randomly and their responses were recorded and after the completion of every interview, the questionnaire was checked thoroughly for completeness. After the survey interview, every woman was asked for their participation in the semi-structured interview if they were selected. The response rate was 100%. Each sample was given a unique code. This study was based on the primarily data collected from May to August 2011 in Birendranagar VDC of Chitwan district. A total of 800 households were surveyed in the first phase of the study. Among them, 400 households were migrant households and another 400 were non-migrant households. After each interview, the women respondents were informed of their participation in the semi-structured interview if they were selected.

Table 3.4 Sampling frame for survey

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Ward | Eligible international migrant households | Sample number | Eligible non-migrant households | Sample number |
| 1 | 165 | 82 | 275 | 88 |
| 2 | 133 | 66 | 204 | 68 |
| 3 | 60 | 30 | 130 | 44 |
| 4 | 55 | 27 | 80 | 26 |
| 5 | 81 | 40 | 105 | 35 |
| 6 | 44 | 22 | 64 | 22 |
| 7 | 41 | 20 | 44 | 14 |
| 8 | 136 | 65 | 170 | 56 |
| 9 | 94 | 47 | 144 | 47 |
| Total | 809 | 400 | 1216 | 400 |

Source: Author’s field survey

The list of all eligible households was prepared for migrant and non-migrant households separately. A systematic random sampling approach was employed for the selection of the sample. For migrant households, every second household was selected systematically and every third household was selected for non-migrant households systematically.

### Qualitative data analysis

There is no single process to analyse and present the qualitative data (Shin *et al.*, 2009). However, the data analysis should be done systematically to describe and explain data in order to answer the research questions (Patton, 2002). Shin and colleagues (2009: 857) further define the qualitative data analysis “*as a process wherein researchers systematically organize data on particular topics and discover and interpret certain meanings, themes, and rules from the data so they can help facilitate the understanding of the topics in questions and share the newly found information with the world*”.

#### Transcription and translation

The transcribing of interview recordings is the first step of qualitative data analysis where the audio recordings are transcribed into written form (ten Have, 2007; Bailey, 2008). Each interview was recorded in the digital audio recorder in Nepali and given a unique code. The collected audio data was then transcribed textually into Nepali first and then translated into English by the principal investigator (Yagya Murti Bhurtyal, PhD student). At the initial stage of data analysis, the interview begins with the transcription along with a cover note describing the setting and basic information about an interviewee which was based on the original audio recorded interview (McLellan *et al.*, 2003). The Nepali version of the transcripts was translated into English and some English transcripts were back translated into Nepali for quality purpose, which was cross-checked by the English lecturer at Tribhuvan University, who is a native speaker of Nepali for reliability and accuracy (Pitchforth and van Teijlingen, 2005). If any disagreement arose from the translated text, detailed discussions were made among the researchers for appropriate translation. The process of transcription is considered as an important tool for analysing qualitative data by which a researcher can be well familiar with the interview data (ten Have, 2007). The final translations were also sent to the supervisors for cross-checking.

#### Thematic analysis

Different methods or approaches can be used to analyse qualitative data (Shin *et al.*, 2009). Literature suggests that framework analysis, grounded theory and thematic analysis are popular methods of data analysis in qualitative research for example, health related research (Patton, 2002; Shin *et al.*, 2009). Gale and colleagues (2013) argue that a framework analysis approach is not suitable for all types of qualitative data, for example, heterogeneous data. Grounded theory is used to identify the categories and concepts that are then linked into formal theoretical models (Corbin and Strauss, 2008). Based on the objectives of this study, the findings of qualitative data were not linked to any theoretical models. Therefore, among these methods, the thematic analysis approach was used to analyse the qualitative data which was also considered the simplest method of qualitative data analysis. Furthermore, this method allows the researcher to have a better understanding of the information provided by the respondents by reading and re-reading which can help to find and organise the similar information and different views and opinions and summarise them in the simplest way (Pope *et al.*, 2007).

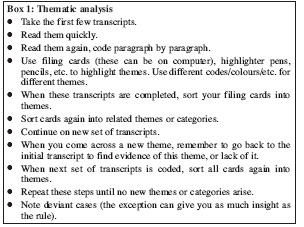


Figure 3.9 The steps in thematic analysis

Source: Forrest *et al.* 2005, p: 41

As seen in the box, each transcript of the interview was read thoroughly, carefully and frequently to seek for patterns and themes within the interview. During this process, major themes and sub-themes were identified and grouped according to their similarities.

Coding is the first step in qualitative analysis that helps to generate the themes. In this process, the ideas and categories (for example, particular phrases, type of behaviours) were identified and grouped under themes.

Major themes or codes for depression, autonomy and health service utilisation were identified by reading and re-reading the transcripts and the categories also refined and grouped under the main theme. This study included depression in women and women’s experience of their autonomy living with or without husbands, and their health service utilisation. These themes with related quotations were analysed manually.

In recent years, some computer software has been developed to analyse qualitative data, for example, NVivo. Researchers argue that using computer software packages may be more time consuming than not using them (Lewins, 2008) but the data can be managed effectively. Findings from a study by Shin and colleagues (2009) showed that only about 23 percent of qualitative data analysis was carried out by using computer software in qualitative health research and even a very low 1.12 percent in qualitative research respectively. Basit (2003) and Bond (2012) also argued that software packages are more time consuming and fraught with difficulties and hassle to learn how to use them. Furthermore, Basit (2003) also explained that the choice of data analysis methods depends upon the data size, time and resources and the researcher’s expertise and skill. This thesis also adopted manual qualitative data analysis which is also quite popular in the qualitative research study. There are a number of reasons for using manual data analysis. Firstly, I have not previously used a computer software programme that is used to analyse the qualitative data and I also attended some sessions to learn about NVivo software for qualitative data analysis, but I believe that to learn a new computer software package takes considerable time in order to get the full benefit. Secondly, due to the small quantity of data, I wanted to familiarise myself and gain a deeper understanding of the transcripts of the study issues which could help me gain experience and interpret the results in appropriate ways. Thirdly, I am from a developing country (Nepal) where computer software is not easily available and it is expensive to obtain a license or purchase. Therefore this is a great opportunity for me to familiarise myself and gain knowledge of qualitative data analysis by doing it manually which I think will be very useful in future.

## Triangulation and sequential approach

This study was based on the collection and analysis of quantitative data first and followed by the collection and analysis of qualitative data in the later phase. In the sequential approach, data collected in different phases is analysed separately in sequence and the findings are integrated into the discussion. However, validation of the research process is done through triangulation of the methods, data and findings in the mixed methods. Triangulation refers to the process of combining different data sets, methods and approaches to generate an accurate, comprehensive picture of the study object in a single study (Smith, 1999; Silverman, 2006). Triangulation involves the results of an investigation from one method being cross-checked against the results from another method, adopting a different research strategy (Bryman, 2008). Patton (2002: 556) stated that “*It is in data analysis that the strategy of triangulation really pays, not only in providing diverse ways of looking at the same phenomena but in adding to credibility by strengthening confidence in whatever conclusions are drawn.*”

In this study importance was given to the quantitative phase and the findings from two phase of study were integrated at the interpretation phase (Creswell *et al.*, 2003). The results obtained from the quantitative phase might be unexpected and unexplained. The subsequent phase of qualitative inquiry helps to explore the reasons and further clarifies the results obtained from the first phase of the study.

According to Patton (2002: 556), there are four kinds of triangulation: i) Methods triangulation (cross-checking the consistency of findings from different data collection methods i.e. quantitative or qualitative); ii) source triangulation (using various data sources within a study); iii) analyst or investigator triangulation (using different researchers or analysts); and iv) theory triangulation (using multiple perspectives or theories to study the same phenomena).

The concept of triangulation was used throughout the thesis to achieve the objectives of triangulation. This thesis also employed these four types of triangulation. First, two supervisors and a PhD student (Yagya Murti Bhurtyal) were involved in completing this research study. The PhD student had a major role and was involved extensively in data collection and analysis and supervisors provided ample guidance and expertise for the validation of the research findings. Secondly, this study was conducted by using quantitative and qualitative methods of data collection which can be seen as methods triangulation, for example, the quantitative method in the first phase followed by the qualitative method in the second phase. Likewise, survey questionnaires and semi-structured interviews were used to collect data from various sources (source triangulation). Finally, a combination of quantitative and qualitative approaches, called ‘mixed methods’ was used for the study. Moreover, the findings of the quantitative and qualitative analysis were integrated at the interpretation phase. The methods, data collection and analysis procedures and results interpretation used in this thesis were shown in the figure 3.10.

Figure 3.10 Process involved in data collection, analysis and interpretation

Adopted from Creswell 2003; Tashakkori and Teddlie, 2003

Triangulation is often considered to address the issue of internal validity by using different methods of data collection and sources to check the integrity of the findings (Ritchie and Lewis, 2003). Triangulation is most popular in mixed-methods (Creswell and Plano Clark, 2007). However, researchers argue that triangulation can be challenging when integrating two sets of different data and their results collected from different methods in the study (Creswell and Plano Clark, 2007).

## Integration and Interpretation

Integration of approaches is primarily done at the point of final interpretation in a mixed methods study (Greene *et al.*, 1989; Bryman, 2006). The conclusions are drawn in relation to the findings from the quantitative and qualitative components (Teddlie and Tashakkori, 2006). Interpretation refers to “*what was found, making sense of the findings, offering explanations, drawing conclusions, extrapolating lessons, making inferences, considering the meaning*” of the research data (Patton, 2002: 480). Data from the quantitative and qualitative methods were analysed separately and findings from each method were integrated in the discussion (Teddlie and Tashakkori, 2003; Creswell and Plano Clark, 2007). O’Cathain *et al.* (2007b) further elaborate that the integration approach is used during the interpretation stage rather than analysis and the purpose of the integration of the findings of two different methods in the discussion is either for confirmation or complementarity which is also called triangulation.

## Quality assessment of the research: Validity and reliability

Mixed methods study combines both the theoretical and practical aspects of both quantitative and qualitative component in a single study (Rocco *et al.*, 2003). It is important that the findings of the research study should maintain truthfulness as far as possible (Graneheim and Lundman, 2004). Researchers argue that the use of quality assessment for quantitative and qualitative methods is a debatable issue. Internal validity (the degree to which the findings is how correctly measured the phenomena) and external validity (the degree of generability of the findings of one study to other similar settings) of the research are traditionally used to evaluate quantitative and qualitative research.

Thus, validity and reliability are always important issues in mixed methods research and these issues must be carefully considered. Validity and reliability concern the measurements of the data and the truthfulness, credibility and reproducibility of the findings (Teddlie and Tashakkori, 2009). Validity refers to how accurately an instrument measures something which is intended to be measured (Patton, 2002) while reliability refers to how precisely and consistently an instrument measures the attributes repeatedly (Tashakkori and Teddlie, 1998; Bryman, 2004). Indeed, the quality assessment of the research is often based on the validity and reliability of the research process, thus, an attempt was made to maintain validity and reliability throughout the research process in this study by establishing the linkage between the research objectives and the tools used (Forrest and van Teijlingen, 2004).

### Research validity

Validity is the accuracy and trustworthiness of the instruments, data and findings in the study (Bernard, 2006). Furthermore, it also refers to the degree of measurement of an instrument and what it intends to measure with consistent results (Wilkinson and Bhandarkar, 1984; Bowling, 2002). A research instrument is only valid if it measures what it is supposed to measure with consistent results in repeated use (Bowling, 2002). There are different types of ‘validity’ found in the literature (Bowling, 2002; Patton, 2002): for example, the face, content and criterion validity which are related to the research tools and concerned with the assessment of relevance and presentation of questionnaire; content of the questionnaire and the correlation of the measures with other measures respectively (Bowling, 2002). It is argued that instrument validity can be obtained by comparing the test to other tests so that the validity of an instrument should be achieved or verified. Furthermore, it is also important to collect valid and reliable data for the study. The data and findings are valid only when collected by using valid instruments. Moreover, the validity of questionnaires used in this study was checked for its relevance and presentation, the measurements in the pilot study and its content by various experts (Section 3.12) which helps to modify the questionnaire according to the context of the study.

Furthermore, another two types of validity, internal and external validity are extensively discussed in the research (Bowling, 2002). Internal validity is related to instruments and their measurements in the study and how accurately and precisely the attributes were measured in the study. However, the external validity is concerned about the findings of the study and its generalisability.

Bowling (2002) argues that selection bias, information bias and confounding are the threats to internal validity which is related to the instruments and such threats can be minimised through piloting and reviewing the questionnaire and its contents by various experts (Section 3.12).

In pragmatic research, validity refers to the researcher’s ability to integrate the research findings in a meaningful and valid way collected by two methods. Inference quality assessment is used in mixed-methods which refer to the truthfulness of the conclusions and the interpretations drawn from the data collected by two methods (Greene *et al.*, 1989; Bryman, 2006; Onwuegbuzie and Johnson, 2006; Creswell, 2009; Tashakkori and Teddlie, 2009; O’Cathain *et al.*, 2010). The instruments, data and results are validated through triangulation in mixed methods (Section 3.18). In this thesis, both quantitative and qualitative data were validated through triangulation and results were integrated and meaningful conclusions were drawn from the findings of two methods.

### Research reliability

Reliability refers to the degree to which an instrument yields the same result or consistent measurements repeatedly over time (Silverman, 2006). Reliability also concerns with the replicability and consistency of the results, interpretations and claims (Punch, 1998; Silverman, 2006). Bowling (2002) describes that the reproducibility and consistency of the instruments is necessary to obtain reliable, true and valid data and findings in the study. The pre-testing of the instruments was carried out by conducting a pilot study which helps to ensure that the tools produce reliable and valid data. In this study, piloting was performed to pre-test the questionnaires for reliability in 10 migrant and 10 non-migrant households (see Section piloting 3.12) by which the modification of unclear questions was carried out from the feedback. In the data collection, response reliability was maintained by asking extra questions that allows the verification and cross-checking of the responses. For example: the duration and country of the husband’s migration were cross-checked. This information was collected at the time of screening and again at the time of survey. Furthermore, while conducting semi-structured interviews in the second phase, it also helped to check the reliability of data by asking the probing questions, for example: who makes the decision for your health care?

## Reflectivity

“Reflectivity is the process of reflecting critically on the self as researcher” (Lincoln *et al.*, 2011: 124). The researcher is an instrument who is involved in all the study processes (Patton, 2002). “First impressions are lasting ones” should be kept in mind. It is most important that the researcher’s first impression given to the research environment and the respondents play a vital role in conducting research and collecting information. The past experiences of the researcher can also add to the creation of a good relationship with the people who are involved in the study.

As a researcher, it was a great challenge for me to conduct research on the issues related to women. Being a male, initially I was a little hesitant about how to interact with women to collect information about the study issues. Thus, it is essential to build a truthful environment before the study to interact with the women and other people who were supposed to be involved in the research directly or indirectly.

I previously worked in INGOs and a Government institution for more than ten years. At that time I was involved in forming women’s groups and working with them in different aspects of life. Furthermore, I was also involved in training the women for leadership development, income generation and saving activities and other educational and health-related issues as a resource person. In the light of this, my past experience made me more comfortable in interacting with women.

All the semi-structured interviews and the majority of the survey data were conducted and collected by myself. While conducting the study, women were more curious about the study and asked about the future programme for the left-behind women. While conducting the interviews, I found that women interacted freely.

## Positionality

This research was conducted among women in the Birendranagar VDC of Chitwan district in Nepal, where I was born and spent more than 24 years as an inhabitant and I still have my home in Chitwan. I am very familiar with the socio-economic, cultural and political background of the district. During my professional journey, I frequently visited the Chitwan district to form women’s groups and train them for leadership and income generating activities. Being a man, it is always culturally difficult to interact with women and their issues. However, my past experiences of working with women in diverse communities made me more comfortable in interacting with them on the study issues. Furthermore, I was well known in the community being a local person and a government officer. Thus, I found people welcomed me to their homes and talked freely. This also made it easy to conduct my field study. Moreover, I am also aware that as a PhD student from the United Kingdom, I am more conscious about my position and the situation in the village. I visited the study area as normal. In the first phase of the study, household listing was done in the VDC, so most of the people knew that migration research was going in the village. This also made it easy to conduct field study without any interference. Although I am an outsider to this community, I asked the household heads to interview the respondents in the school room. They readily gave permission to do that. Finally, my position as a researcher, with past experience, and as a local person helped me greatly to conduct the field study successfully among women in Chitwan. However, being a male migrant myself and coming from a rich country’s university might have had some effect on the women’s response. Some of the issues that I explored were sensitive and women may not have answered honestly. However, I have taken every possible precaution to minimize the bias and give true information.

## Ethical issues

Ethical approval was obtained from the Nepal Health Research Council (NHRC), Kathmandu (Appendix 5). Other local authorities, for example: the District Administration Office (DAO), the VDC, Health-post and sub-health post were also informed about the study. During the time of the field study, there was an on-going strike by one of the political parties. Therefore, it was essential to inform the DAO about my field study because they control the overall activities in the district. This was done by a personal meeting with the district administration officers. The nature of the study in the field of women and researching within a patriarchal society is challenging and good rapport and a trustful environment with the respondents play a vital role in collecting actual and true information. The appointments with respondents were made a day before the survey and semi-structured interviews. The participants who participated in the study were fully informed about the nature of the research, its objectives, benefits and the confidentiality of the data. The respondents to the survey were randomly selected and before taking part in the survey each respondent was informed and given an explanation of the purpose and objectives of the study. After that, a written consent form in Nepali (Appendix 4) was read and a signature or thumb print from each participant was taken before the interview. If the respondent was not a household head, verbal consent was taken from the household head. All the respondents were informed that their information was recorded for the purposes of study and kept in a confidential manner and individual identity was not disclosed in any form. The participants were informed that their participation was voluntary and they were not given any incentives for their participation in the study. Cultural and gender sensitivities were also honoured at all stages of the study.

## Summary

This chapter explained the methodology adopted in this research study. This study employed the mixed methods approach to collect data by which the research objectives were addressed. To draw a comprehensive picture of the study issues, this study relied on explanatory sequential mixed methods. The research design, sampling procedures and sample size, study participants and study area have been covered in this chapter. The subsequent sections covered the methods of data collections, data management and analysis process for both the quantitative and qualitative phases. The following chapter presents the results of the study.

# CHAPTER FOUR: QUANTITATIVE RESULTS

## Introduction

This chapter explains the results of the field study. The first section of this chapter explains and provides the results of a descriptive analysis of the socio-demographic characteristics of the left-behind wives and wives of non-migrants and their household characteristics and migration-related characteristics of the migrants’ households of the study in the form of frequency counts and percentages and the comparison. The descriptive statistics of the wives left behind and wives of non-migrants provide the pattern and characteristics of both migrants and non-migrants households.

The second section presents the results of analyses of depression in left-behind wives and wives of non-migrants with explanatory variables and the comparison. The third section deals with the analysis of women’s autonomy and the comparison between the wives left behind and wives of non-migrants and the final section relates to the results of types and pattern of health service utilisation by the left-behind wives and wives of non-migrants and the comparison.

The collected data was grouped according to their similarities for analysis purposes. Thus, the explanatory variables and outcome variables were in categories. After grouping the data into categories, cross-table analysis and a chi-squared test were performed to find the distribution of the variables within the categories and the association of the variables between the left-behind wives and wives of non-migrants respectively. Furthermore, univariate and multivariate analyses were also carried out to find the strength and direction of the association between the explanatory variables, for example, socio-demographic, husband’s and household characteristics of respondents and outcome variables, for example, depression, autonomy and types of health service utilisation.

The migration of husbands has impacted on the socio-demographic and household characteristics of migrant households. Due to the greater variability of the socio-demographic and household characteristics between the left-behind wives and the wives of non-migrants (for example, the higher number of male household heads in non-migrant and female household heads in migrant households), the variable wise data analyses for left-behind wives and wives of non-migrants were carried out separately within each group. However, when comparing the data between the two groups (migrants vs non-migrants) for each category, analyses were also done separately for each variable either in a chi-squared test or univariate logistic regression by taking individual data for each category from the migrant and non-migrant groups. While doing this analysis the non-migrant group was taken as a reference group.

The statistical analysis began with the determination of the frequency and percentage distribution of each categorical variable, for example, age, caste, religion and so on of the respondents. The second level of analysis involved cross-tabulations of the outcome variables (for example, depression, autonomy and types of health service utilisation) and each explanatory variable to obtain the proportions within each outcome category corresponding to each category of the explanatory variable. An effect was measured by using an odds ratio which was obtained by using logistic regression. The odds ratio was calculated taking one category as a reference versus, for example, age: above 32 years was taken as reference and the other category, for example, age: 32 and below whose effect is to be determined (the odds column in the tables below where 1 denotes the reference category). These analysis approaches were used throughout the thesis for data analysis.

Figure . Flow diagram of quantitative data analysis plan

Migrant data

Non-migrant data

Analysis of data: Univariate or multivariate analysis

Results and findings

Comparison between groups

Analysis of data: Univariate or multivariate analysis

Individual group data from migrant groups

Results and findings

Reference category group data from non-migrant group

## Descriptive Statistics

Descriptive statistics of the socio-demographic variables deliver the information about the characteristics of the respondents of the study. This section presents the frequency and percentage distribution of the respondents.

### General characteristics of the demographic variables of respondents

In this study, a total of 800 households were surveyed in the nine communities (wards) of Birendranagar VDC of Chitwan district of Nepal. Half or 400 households were migrant households and an equal number of non-migrant households were also included in the survey. The data collected in the survey were entered in the SPSS 19 version and the response rate was 100 percent. Thus, all 800 cases were included in the data analysis. All the respondents in this study were married women between the ages of 15-49 years.

Table 4.1 Frequency and percentage of the socio-demographic characteristics of respondents

| Variables | | Total | | Household Type | | | | χ2 | p |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Migrant Household | | Non-migrant household | |
| N= 800 | % | N= 400 | % | N= 400 | % |
| Age | 18-29 years | 300 | 37.5 | 181 | 45.3 | 119 | 29.8 | 29.89\*\* (2df) | <0.001 |
|  | 30-39 years | 350 | 43.8 | 169 | 42.3 | 181 | 45.3 |  |
|  | 40-49 years | 150 | 18.8 | 50 | 12.5 | 100 | 25.0 |  |
|  | Mean year (SD) | 32.5 (7.33) |  | 31.1 (6.69) |  | 33.4 (7.69) |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Religion | Hindu | 557 | 69.6 | 269 | 67.3 | 288 | 72.0 | 2.17 (2df) | 0.338 |
|  | Buddhist | 205 | 25.6 | 110 | 27.5 | 95 | 23.7 |  |
|  | Other | 38 | 4.8 | 21 | 5.3 | 17 | 4.3 |  |
|  |  |  |  |  |  |  |  |  |  |
| Caste | Brahman/  Chhetri | 350 | 43.8 | 158 | 39.5 | 192 | 48.0 | 17.06\*\* (2df) | <0.001 |
|  | Janajati | 348 | 43.5 | 202 | 50.5 | 146 | 36.5 |  |
|  | Other | 102 | 12.7 | 40 | 10.0 | 62 | 15.5 |  |
|  |  |  |  |  |  |  |  |  |  |
| Education | No education | 80 | 10.0 | 34 | 8.5 | 46 | 11.5 | 11.02\* (3df) | 0.012 |
|  | Primary | 345 | 43.1 | 161 | 40.3 | 184 | 46.0 |  |
|  | Secondary | 259 | 32.4 | 151 | 37.8 | 108 | 27.0 |  |
|  | Above SLC | 116 | 14.5 | 54 | 13.5 | 62 | 15.5 |  |
|  |  |  |  |  |  |  |  |  |  |
| Employment | Employed | 315 | 39.4 | 144 | 36.0 | 171 | 42.7 | 3.27 (1df) | 0.071 |
|  | Not employed | 485 | 60.4 | 256 | 64.0 | 229 | 57.3 |  |
|  |  |  |  |  |  |  |  |  |  |
| Occupation | Housewives | 485 | 60.4 | 256 | 64.0 | 229 | 57.3 | 6.62 (3df) | 0.085 |
|  | Agriculture | 177 | 22.1 | 88 | 22.0 | 89 | 22.3 |  |
|  | Service/job | 60 | 7.5 | 23 | 5.8 | 37 | 9.3 |  |
|  | Business | 78 | 9.8 | 33 | 8.3 | 45 | 11.3 |  |
|  |  |  |  |  |  |  |  |  |  |
| Income | Mean (Rs) | 4474 |  | 4690 |  | 4292 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Own named properties | Yes | 178 | 22.3 | 107 | 26.8 | 71 | 17.8 | 9.37\* (1df) | 0.002 |
|  | No | 622 | 77.8 | 293 | 73.3 | 329 | 82.3 |  |
|  |  |  |  |  |  |  |  |  |  |
| Mobile phone | Yes | 651 | 81.4 | 384 | 96.0 | 267 | 66.8 |  |  |
|  | No | 149 | 18.4 | 16 | 4.0 | 133 | 33.3 |  |
|  |  |  |  |  |  |  |  |  |  |
| Number of children | No Children | 60 | 7.5 | 30 | 7.5 | 30 | 7.5 | 6.33 (3df) | 0.097 |
| 1-2 Children | 454 | 56.8 | 242 | 60.5 | 212 | 53.0 |  |
|  | 3-4 Children | 255 | 31.9 | 117 | 29.3 | 138 | 34.5 |  |
|  | 5+ Children | 31 | 3.9 | 11 | 2.8 | 20 | 5.0 |  |
| Mean number of children per household (SD) |  | 2.2 (1.25) |  | 2.1 (1.18) |  | 2.3 (1.31) |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Household head | Respondent | 314 | 39.2 | 259 | 64.7 | 55 | 13.7 |  |  |
|  | Someone else | 486 | 60.8 | 141 | 35.3 | 345 | 86.3 |  |  |

Note: \* - Significant at 5% and \*\* - Significant at 1%

In this section, the socio-demographic characteristics of respondents of migrant households and non-migrant households were described and table 4.1 presents the socio-demographic variables of the left-behind wives and the wives of non-migrants in the migrant and non-migrant households.

#### Age

The mean age of respondents is 32.5 years (SD = 7.3) with the nearly half of (43.8%, n = 350) respondents between 30 and 39 years. The mean age of left-behind wives was 31.1 years (SD = 6.7) whereas it was 33.4 years (SD = 7.7) for the wives of non-migrants. The majority, about 81 percent of women in total were within the age range of 18 to 39 years. The highest percentage (45.3%, n = 181) of left-behind wives was within the age range of 18 to 29 years but in non-migrant households, a large number of women were between the ages of 30 to 39 years.

About 12.5 percent of women were found in the age category of 40-49 years in migrant households whereas two times higher (25.0%) of women were in non-migrant households in the same age category.

#### Religion

About 70 percent (n = 557) of the sample were Hindu followed by Buddhist (25.6%) in an overall sample (n = 800). Hinduism were found to be the dominant religion in both migrant (Hindu: 67.3%) and non-migrant households (Hindu: 72.0%), followed by Buddhist (27.5%) and (23.8%) in migrant and non-migrant households respectively. Other categories of religions such as Muslim and Christian were found in only about five percent of sample households. This predominance of the Hindu religion reflects the distribution in the Nepalese population as a whole. The majority of Nepalese (80.1%) follow the Hindu religion (CBS, 2012).

#### Caste

According to Hindu ideology, four caste systems (Brahman, Chhetri, Baishya and Shudra) exist in Nepal. The major caste groups are Brahmins, Chhetri, Magar, Tharu, Tamang, Gurung, Newar, Vishokarma etc. Brahman and Chhetri are called upper caste while other castes are categorised as lower caste. Overall, about 97 percent of inhabitants were found in two caste categories: Brahman/Chhetri (43.8%, n = 350) and Janajati (43.5%, n = 348) castes in the survey. A higher percentage (50.5%, n = 202) of Janajati caste were found in migrant households whereas Brahman/Chhetri (48.0%, n = 192) caste were found dominant in non-migrant households. Other caste categories represent Dalit and Newar castes which were found in a minor percentage in both households.

#### Education

The majority (75.5%, n = 604) of the women had completed their education level below School Leaving Certificate Level (SLC) (School Leaving Certificate in Nepal refers to the national level exam after completion of grade 10 and only after successful completion, then students can enrol in college). Women with no formal education were only 10 percent (n = 80) in total. More than 50 percent (n = 205) of left-behind wives completed secondary level or higher education while only 42.5 percent (n = 170) of wives of non-migrant completed secondary or higher education.

#### Employment and occupation

About 60 percent (n = 485) of women were not employed in any income earning activities in the surveyed households. Among them, about 63.5 percent (n = 256) of women in migrant households were housewives whereas only 57.3 percent (n = 229) of women in non-migrant households were in the same category. Similarly, about 43 percent (n = 171) of the wives of non-migrants were employed which is about six percent higher than the left-behind wives (36.0%). Employed women were found to be engaged in agriculture, business and services. Among these categories, agriculture was found to be the main occupation of the left-behind wives (22.0%) and the wives of non-migrants (22.3%). Among the employed women (n = 315), a higher number of women were employed in the agricultural sector (56.2%, n = 177), followed by business (24.7%, n = 78) and services (19.0%, n = 60).

#### Women’s earnings

Women’s earnings represent that from their self-employment or jobs. Women were found to be engaged in agriculture, business and services. About 36 percent (n = 144) of the wives left behind and 42.5 percent (n = 171) of the wives of non-migrant had engaged in income-related activities respectively. This figure showed that more women in non-migrant households had employment. However, the mean earning per month for employed left-behind wives was higher than the money earned by the wives of non-migrants (Table 4.1).

#### Household head

Most of the migrant households (74%, n = 296) were found to be headed by females whereas only 19 percent of non-migrant households were headed by females (Table 4.3). Among 400 migrant households, 64.7 percent (n = 259) of households were headed by left-behind wives. Similarly, only 13.7 percent (n = 55) of non-migrant households were headed by the wives of non-migrants. This result showed that almost five times more (65%, n = 259) households were headed by women left behind in migrant households as compared to non-migrant households (13.8%, n = 55). In migrant households, about 35 percent (n = 141) of women said that their households were headed by in-laws. But in non-migrant homes, about 86 percent (n = 345) of households were either headed by their husbands or in-laws.

#### Properties in the woman’s name

The majority of respondents (77.7%, n = 622) said that they did not have any property in their own name. In migrant households, about 27 percent (n = 107) of the wives left behind reported that they had some property in their own name whereas for the wives of non-migrants this was lower at 17.8 percent (n = 71). About 10 percent more left-behind women had property in their own name compared to women of non-migrant households (Table 4.1)

#### Mobile phone

Almost all left-behind wives (96.0%, n = 384) had their own mobile phone but only about 67 percent (n = 267) of non-migrants’ wives had their own mobile phone.

#### Having children and the number of children

The majority (92.5%) of women in both households had at least one child. The wives of non-migrant households had a mean number of children of 2.3 which is slightly higher than the mean number of children (mean = 2.1) of left-behind wives. This signifies the tendency of a larger family for non-migrants’ families. About 40 percent of the wives of non-migrants had three or more children compared to 32.1 percent for left-behind wives. A similar proportion was observed for both women with no children (Table: 4.1).

### Husbands’ characteristics

The husbands of the left-behind wives were found to be younger than the husbands of the wives of non-migrants. The mean age of migrated husbands was 35.1 (SD = 6.78) years whereas the non-migrant husbands were age of 38.5 (SD = 8.86) years. Almost two thirds (74.3%, n = 297) of the migrant husbands were found to be less than or equal to 39 years. There was a tendency to migrate abroad at a young age.

Overall, about four percent (n = 33) of husbands did not have any formal or informal education. About 17 percent (n = 66) of husbands in non-migrant households completed their education above SLC which was slightly higher than migrant husbands (13.0%, n = 52). The majority of husbands in both households (50.6%, n = 405) had completed secondary education (59.2% in migrant households and 42.0% in non-migrant households). The figure showed that more migrant husbands (86%, n = 344) had completed either primary or secondary education.

Agriculture was the main occupation for non-migrant husbands and about 42.3 percent (n = 169) were engaged in agricultural work. In the case of migrant husbands, about 35 percent had agriculture as a main occupation while they were in the country of origin. About 27.8 percent (n = 111) of migrant husbands were unemployed before migration. The unemployment status for non-migrant husbands was found to be about below four percent (n = 14).

Table 4.2 Husband's background characteristics

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | Total households | | Household type | | | | χ2 | p |
| Migrant households | | Non-migrant households | |
|  | N= 800 | % | N= 400 | % | N= 400 | % |
| **Husband’s age** |  |  |  |  |  |  |  |  |
| 20-29 years | 149 | 18.6 | 84 | 21.0 | 65 | 16.3 | 39.37 | <0.001 |
| 30-39 years | 375 | 46.9 | 213 | 53.3 | 162 | 40.5 |  |
| 40-49 years | 214 | 26.8 | 92 | 23.0 | 122 | 30.5 |  |
| 50+ years | 62 | 15.7 | 11 | 2.7 | 51 | 12.7 |  |
| Mean year  (SD) | 36.8 (7.96) |  | 35.1 (6.78) |  | 38.5 (8.68) |  |  |  |
| **Husband’s education** | |  |  |  |  |  |  |  |
| No education | 33 | 4.1 | 4 | 1.0 | 29 | 7.3 | 36.04 | <0.001 |
| Primary | 244 | 30.5 | 107 | 26.8 | 137 | 34.2 |  |  |
| Secondary | 405 | 50.6 | 237 | 59.2 | 168 | 42.0 |  |  |
| Above SLC | 118 | 14.8 | 52 | 13.0 | 66 | 16.5 |  |  |
| **Husband’s occupation\*** | | |  |  |  |  |  |  |
| Agriculture | 310 | 38.8 | 141 | 35.3 | 169 | 42.3 | 91.75 | <0.001 |
| Service/job | 246 | 30.8 | 104 | 26.0 | 142 | 35.5 |  |  |
| Business | 119 | 14.9 | 44 | 11.0 | 75 | 18.8 |  |  |
| Unemployment | 125 | 15.6 | 111 | 27.8 | 14 | 3.5 |  |  |

\*: for migrant households, husband’s occupation before migration

### Household characteristics of respondents

About 74 percent (n = 296) of households were headed by females in migrant households whereas only 19 percent (n = 76) of non-migrant households were headed by females. Two types of family structure were found to be adopted in the study area and more than 50 percent (n = 207) of respondents in migrant households said they lived in a nuclear family whereas about 66 percent (n = 263) of respondents in non-migrants households lived in a nuclear family system. This result showed that the nuclear family system was dominant over the extended family among both migrants and non-migrants, but interestingly a higher proportion (66%) of wives of non-migrants were found to be living in nuclear families than migrant wives (51.8%). About 48 percent (n = 193) of the wives left behind reported that they were living with other family members and in the case of non-migrants it was only about 34 percent (n = 137).

Among the 400 migrant families, about 65 percent (n = 260) with mean family members of 4.8 lived in permanent house whereas only about 48 percent (n = 191) with mean family members of 5.3 of non-migrant families had their permanent house. No statistical test was performed to test difference between the means. More than half (52.3%, n = 209) of non-migrant families said that they were living in semi-permanent and temporary house whereas it was less in migrant families (35.0%, n = 140). About 88 percent of non-migrant households had four or more family members and only about 67 percent of migrant households were found to have family members of four or more. About 33 percent of migrant households contained three or less family members which was about three times higher than non-migrant households containing three or less family members.

According to the survey result, almost all (96.2%, n = 385) the left-behind wives said that remittances from their husband was a main source of their household income. In the case of non-migrant households, more than 47 percent of respondents said that agriculture was their main source of household income, followed by services (32.7%) and business (20.0%). The mean household income per year was almost double that in migrant household as compared to non-migrant households (Table: 4.3).

Table 4.3 Household characteristics of study population

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Total** | | **Household type** | | | | | | | |  | |  | |
| **Migrant household** | | | | | **Non-migrant household** | | |
|  | | **N= 800** | **%** | **N= 400** | | | **%** | | **N= 400** | **%** | **χ2** | | **p** | |
| **Household head gender** | | |  |  | | |  | |  |  |  | |  | |
| Female | 372 | | 46.5 | 296 | | | 74.0 | | 76 | 19.0 | 241.0  (1df) | | <0.001 | |
| Male | 428 | | 53.5 | 104 | | | 26.0 | | 324 | 81.0 |  | |
| **Family type** |  | |  |  | | |  | |  |  |  | |  | |
| Nuclear | 470 | | 58.8 | 207 | | | 51.8 | | 263 | 65.7 | 15.60  (1df) | | <0.001 | |
| Extended | 330 | | 41.2 | 193 | | | 48.2 | | 137 | 34.3 |  | |
| **Number of family members** | | |  |  | | |  | |  |  |  | |  | |
| 1-3 members | 178 | | 22.3 | 130 | 32.5 | | | 48 | | 12.0 | 51.83  (2 df) | | <0.001 | |
| 4-6 members | 456 | | 57.0 | 188 | 47.0 | | | 268 | | 67.0 |  | |
| 7+ members | 166 | | 20.8 | 82 | 20.5 | | | 84 | | 21.0 |  | |
| Mean (SD) | 5.0 (1.97) | |  | 4.8 (2.16) |  | | | 5.3 (1.74) | |  |  | |  | |
| **Land holdings per household** | | |  |  | |  | | |  |  |  | |  | |
| Mean (SD) in hectare | 0.4 (0.36) | |  | 0.3 (0.30) |  | | | 0.5 (0.39) | |  |  | |  | |
| **House ownership** |  | |  |  |  | | |  | |  |  | |  | |
| Owned | 785 | | 98.1 | 393 | 98.3 | | | 392 | | 98.0 | 0.07  (1 df) | | 0.794 | |
| Rented | 15 | | 1.9 | 7 | 1.8 | | | 8 | | 2.0 |  | |
| **House type** |  | |  |  |  | | |  | |  |  | |  | |
| Permanent | 451 | | 56.4 | 260 | 65.0 | | | 191 | | 47.8 | 24.20  (2 df) | | <0.001 | |
| Semi-permanent | 286 | | 35.8 | 115 | 28.7 | | | 171 | | 42.8 |  | |
| Temporary | 63 | | 7.9 | 25 | 6.3 | | | 38 | | 9.5 |  | |
| **Main source of household income** | | |  |  | |  | | |  |  |  | |  | |
| Agriculture | 199 | | 24.9 | 10 | 2.5 | | | 189 | | 47.3 |  | |  | |
| Business | 83 | | 10.4 | 3 | 0.8 | | | 80 | | 20.0 |  | |  | |
| Service/Job | 133 | | 16.6 | 2 | 0.5 | | | 131 | | 32.7 |  | |  | |
| Remittance | 385 | | 48.1 | 385 | 96.2 | | | - | | - |  | |  | |
| **Mean household income (Rs\*)** | 243710 | |  | 329255 |  | | | 158165 | |  |  | |  | |

\*: Rs 140 = £1

### Characteristics of household head

More than fifty percent of household heads in migrant households were young as compared to non-migrant households (42.3%). The mean ages of the household head were found to be 41.04 (SD = 13.5) and 42.6 (SD = 10.4) years in migrant and non-migrant households respectively. No statistical test was performed to test difference between the means. More than half household heads were found within the age group of 30-49 years in migrant households and about 67 percent in non-migrant households. Similarly, for the household heads aged over 60 years category, almost double the number of migrant households (n = 60) were headed by an elderly person as compared to the non-migrant households (n = 31).

The majority of the household heads had completed primary and secondary level education in both households. About five percent more household heads were illiterate in migrant households as compared to non-migrant households. Almost double the number of household heads had completed higher education in non-migrant households when compared to migrant households (Table 4.4).

More than fifty percent of household heads of non-migrant households worked in the agricultural sector whereas nearly the same percentage of household heads was unemployed in migrant households. About five times more household heads (25.2%) in non-migrant households were employed in service or government jobs as compared to migrant household heads (5.0%). Similarly, about 14 percent of household heads of non-migrant households had their occupation as a business which was only 7.8 percent in migrant households. The age, sex, education and occupation of the household head between the migrant and non-migrant households were found significant difference (Table 4.4).

Table 4.4 Household head's characteristics

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Total** | | **Household type** | | | | **χ2** | **p** |
| **Migrant household** | | **Non-migrant household** | |
| **N= 800** | **%** | **N= 400** | **%** | **N= 400** | **%** |
| **Age** |  |  |  |  |  |  |  |  |
| 20-29 years | 116 | 14.5 | 85 | 21.2 | 31 | 7.8 | 54.99  (4 df) | <0.001 |
| 30-39 years | 271 | 33.9 | 133 | 33.2 | 138 | 34.5 |  |
| 40-49 years | 202 | 25.2 | 71 | 17.8 | 131 | 32.8 |  |
| 50-59 years | 120 | 15.0 | 51 | 12.8 | 69 | 17.2 |  |
| 60+ years | 91 | 11.4 | 60 | 15.0 | 31 | 7.8 |  |
| Mean year (SD) | 42.0  (12.0) |  | 41.04  (13.51) |  | 42.6 (10.41) |  |  |  |
| **Sex** |  |  |  |  |  |  |  |  |
| Female | 372 | 46.5 | 296 | 74.0 | 76 | 19.0 | 243.19  (1 df) | <0.001 |
| Male | 428 | 53.5 | 104 | 26.0 | 324 | 81.0 |  |
| **Education** |  |  |  |  |  |  |  |  |
| No education | 124 | 15.5 | 72 | 18.0 | 52 | 13.0 | 12.76  (3 df) | 0.005 |
| Primary | 371 | 46.4 | 197 | 49.2 | 174 | 43.5 |  |
| Secondary | 242 | 30.2 | 109 | 27.2 | 133 | 33.2 |  |
| Above SLC | 63 | 7.9 | 22 | 5.5 | 41 | 10.2 |  |
| **Occupation** |  |  |  |  |  |  |  |  |
| Agriculture | 370 | 46.2 | 157 | 39.2 | 213 | 53.2 | 183.21  (3 df) | <0.001 |
| Service/job | 121 | 15.1 | 20 | 5.0 | 101 | 25.2 |  |
| Business | 85 | 10.6 | 31 | 7.8 | 54 | 13.5 |  |
| Unemployment | 224 | 28.0 | 192 | 48.0 | 32 | 8.0 |  |

### Facilities at home

Table 4.5 explains the basic facilities at home. More migrant households had basic facilities at home compared to non-migrant households. However, motorbikes and internet facilities were more evident in non-migrant households compared to migrant households. Mobile phones, landline phones and television facilities between migrant and non-migrant households were found significant.

Table 4.5 Comparison of household facilities between the migrant and non-migrant households

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Total** | | **Household type** | | | | **χ2** | **p** |
| **Migrant household** | | **Non-migrant household** | |
| **N= 800** | **%** | **N= 400** | **%** | **N= 400** | **%** |
| Electricity | 797 | | 99.6 | 399 | 99.8 | 398 | 99.5 |  | >0.999\* |
| Radio/tape | 677 | | 84.6 | 332 | 83.0 | 345 | 86.3 | 1.38 | 0.240 |
| Mobile phone | 776 | | 97.0 | 395 | 98.8 | 381 | 95.3 | 7.26 | 0.007 |
| Landline telephone | 53 | | 6.6 | 35 | 8.8 | 18 | 4.5 | 5.17 | 0.023 |
| Television | 658 | | 82.3 | 350 | 87.5 | 308 | 77.0 | 14.39 | <0.001 |
| Refrigerator | 137 | | 17.1 | 71 | 17.8 | 66 | 16.5 | 0.14 | 0.707 |
| Computer | 90 | | 11.3 | 46 | 11.5 | 44 | 11.0 | 0.01 | 0.911 |
| Internet | 57 | | 7.1 | 21 | 5.3 | 36 | 9.0 | 3.70 | 0.054 |
| Bicycle | 724 | | 90.5 | 369 | 92.3 | 355 | 88.8 | 2.46 | 0.117 |
| Motorbike | 144 | | 18.0 | 62 | 15.5 | 82 | 20.5 | 3.06 | 0.080 |

\*Fisher Exact test

### Health service facilities

Around 70 percent of respondents in both migrant and non-migrant households were living within 30 minutes from a sub-health post which was found to be the nearest health facility. Similarly, about 70 percent of the respondents of non-migrant households reached a health post within 30 minutes whereas more than half (53.5%) of respondents of migrant households were within the 30 minute range. This result indicated the unequal distribution of migrant and non-migrant households within the different wards of the VDC. The hospital was found to be about 23 kilometres away and the respondents were required to travel more than 30 minutes to reach it.

The bicycle was found to be a common mode of transportation to visit their health facilities such as sub-health post, health post and pharmacy. About 55 percent of respondents from migrant households used a bicycle to visit a sub-health post whereas more than 60 percent of respondents from non-migrant households used one. Similarly, slightly more respondents from migrant households than respondents of non-migrant households visited a sub-health post by walking. But, all households used vehicles to visit the health post which is two to five km away. Likewise, about 50 percent of respondents from both households visited the pharmacy by walking followed by bicycle and motorbike. There was a significant difference to reach the sub-health post, health post and pharmacy within 30 minutes and more than 30 minutes.

Table 4.6 Health service facilities and access

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Migrant households (N= 400)** | | **Non-migrant households (N= 400)** | | **χ2** | **p** |
| **N** | **%** | **N** | **%** |
| **1 Sub-health post** |  |  |  |  |  |  |
| **Time taken** |  |  |  |  |  |  |
| Less than 30 minutes | 293 | 73.3 | 259 | 64.8 | 6.36 | 0.012 |
| More than 30 minutes | 107 | 26.8 | 141 | 35.2 | (1df) |  |
| Mean distance (Kilometres) | 3.4 |  | 4.0 |  |  |  |
| **Means of transportation to sub-health post** |  |  |  |  |  |  |
| Foot | 155 | 38.8 | 121 | 30.3 | 6.74 | 0.034 |
| Bicycle | 220 | 55.0 | 246 | 61.4 | (2df) |  |
| Motorbike | 25 | 6.2 | 33 | 8.3 |  |  |
| **2 Health post** |  |  |  |  |  |  |
| **Time taken** |  |  |  |  |  |  |
| Less than 30 minutes | 213 | 53.5 | 283 | 70.8 | 25.26 | <0.001 |
| More than 30 minutes | 187 | 46.8 | 117 | 29.3 | (1df) |  |
| Mean distance (kilometres) | 5.5 |  | 5.1 |  |  |  |
| **Means of transportation to health post** |  |  |  |  |  |  |
| Bicycle | 225 | 56.2 | 148 | 37.0 | 29.9 | <0.001 |
| Motorbike | 30 | 7.5 | 40 | 10.0 | (2df) |  |
| Mixed vehicles | 145 | 36.3 | 212 | 53.0 |  |  |
| **3. Hospital** |  |  |  |  |  |  |
| **Time taken** |  |  |  |  |  |  |
| More than 30 minutes | 400 | 100.0 | 400 | 100.0 |  |  |
| Mean distance (kilometres) | 23.7 |  | 23.1 |  |  |  |
| **Means of transportation to hospital** |  |  |  |  |  |  |
| Mixed vehicles | 400 | 100.0 | 400 | 100.0 |  |  |
| **4 Pharmacy** |  |  |  |  |  |  |
| **Time taken** |  |  |  |  |  |  |
| Less than 30 minutes | 318 | 79.5 | 374 | 93.5 | 32.38 | <0.001 |
| More than 30 minutes | 82 | 20.5 | 26 | 6.5 | (1df) |  |
| Mean distance (kilometres) | 2.8 |  | 2.0 |  |  |  |
| **Means of transportation to pharmacy** |  |  |  |  |  |  |
| Foot | 195 | 48.8 | 218 | 54.5 | 2.67 | 0.263 |
| Bicycle | 170 | 42.5 | 152 | 38.0 | (2df) |  |
| Motorbike and other | 35 | 8.7 | 30 | 7.5 |  |  |

### Migration

#### Destination countries

Qatar, Saudi Arabia and Malaysia were found to be the three top destinations of migration. However, more than 50 percent of migrants from Nepal migrated to Qatar and Saudi Arabia. Thus, the Asian gulf countries were found to be a popular destination of migration portfolio where more than 65 percent (n = 262) of people migrated.

Table 4.7 Number and percentage of migrants in destination countries

|  |  |  |
| --- | --- | --- |
| **Country** | **N= 400** | **%** |
| Qatar | 101 | 25.3 |
| Saudi Arab | 101 | 25.3 |
| Malaysia | 53 | 13.2 |
| India | 45 | 11.2 |
| United Arab Emirates | 38 | 9.5 |
| Other | 62 | 15.5 |

Two thirds of migrants (75.3%) were found to have a migration duration between one to five years followed by 17.5 percent between six to ten years and only 7.2 percent migrants were abroad more than 11 years.

The majority of the migrants’ wives (70%, n = 278) received remittances from their husbands, and in thirty percent of households (n = 119) it went to someone else

#### Use of remittances

Almost all migrants sent remittances to their left-behind families at home and their families used the remit money for different purposes. A question, ‘for what purposes are the remittances used?’ was asked to all migrants’ wives to find the spending pattern of the remittance sent by the migrants. Almost all left-behind families (99.3%) used the remit money for family maintenance (for example, food, and clothes) followed by medical treatment (96.5%) and child education (88.3%). This result also showed that the majority of the left-behind families spent the remit money for daily needs (about more than 90 percent, table: 4.8). Furthermore, about 63 percent of migrant families also used remittances to pay loans which the migrant borrowed at the time of migration. About 10-21 percent of migrant families invested their remittance for reconstruction of their existing house, purchased land, purchased vehicles and built a new house. Only about five percent of families invested their remittances for business purposes.

Table 4.8 Pattern of remittances used in migrant households

|  |  |  |
| --- | --- | --- |
| **Category** | **N= 400** | **%** |
| Family maintenance (Food and well-being) | 397 | 99.3 |
| Medical treatment | 386 | 96.5 |
| Child education | 353 | 88.3 |
| Payment loan | 253 | 63.3 |
| Farming | 161 | 40.3 |
| Maintenance of existing house | 84 | 21.0 |
| Purchase land | 73 | 18.3 |
| Vehicle purchase | 44 | 11.0 |
| Building new house | 40 | 10.0 |
| Investment in business | 22 | 5.5 |

## Depression

The major interest of this study is to understand the level of depression among the wives left behind by the international migrants and compare the results with the wives of non-migrants. The CES-D scale was used to determine the depression score and the cut-off point of 16 was used for depression (Radloff, 1977). The women who score 16 or more were classified as “depressed” and below 16 as non-depressed.

To find out the factors that were associated with the development of depression in left-behind wives and the wives of non-migrants, the univariate logistic analysis was carried out between the socio-demographical characteristics; husbands’ and household characteristics of the left-behind wives and depression.

This section presents the outcome of the logistic regression between the explanatory variables and the outcome variable. The individual factors associated with depression in the wives left behind and wives of non-migrants may be different and these factors may have changed over time and the circumstances that were created due to the migration of their husbands may also have influenced on these factors. For example, the change in socio-demographic conditions and household characteristics may play a vital role in the development of depression on wives left behind in the absence of their husbands. The factors which are associated with depression in left-behind wives may or may not be similar to those associated with depression in the wives of non-migrants. Thus, the analysis was performed separately for the left-behind wives and the wives of non-migrants and the results from a separate analysis were compared.

The univariate analysis of each explanatory variable with the outcome variable was performed to investigate whether the measured explanatory variables are associated with depression in left-behind wives or not. Relationships between each variable with depression are presented below in sub-sections. In addition, multivariate analysis was also performed to find the significantly associated factors when including all the variables at one time.

### Depression in left-behind wives

One of the objectives of this study was to examine depression in the left-behind wives. This section presents the results of the univariate and multivariate analysis to identify the factors associated with the depression in left-behind wives. A total of 400 migrants’ households were surveyed and it was found that overall, 79 percent (n = 316) of left-behind wives experienced depressive symptoms with a mean depressive score of 20.30 (SD = 5.45). The following sections presents the results of the analysis of socio-demographics of respondents, their husbands’ and household characteristics to examine whether there was a significant association between these factors and depression in left-behind wives. The analysis of the association between the variable and output variable (depression) helps to identify the significant predictors contributing to depression in wives left behind.

#### Socio-demographic factors and depression in the wives left behind

In this section, the results of a univariate analysis of socio-demographic variables and depression are presented below in table 4.9. Variables were coded as described in Section 3.17.2. The age of the respondents was categorised taking the median as a reference which was 32 years.

The univariate analysis results indicated that two variables: having any property in the women’s name and having children were associated with the development of depression in wives left behind. A significant association was observed between depression and having any property in the women’s name and also having children respectively. The left-behind wives who did not have any property (OR = 1.72, 95% CI: 1.03 to 2.89, p = 0.038) in their own name had 1.72 times greater odds of being depressed than the wives left behind who did have property in their own name. Similarly, the women who did not have children (OR= 8.39, 95% CI: 1.13 to 62.49, p = 0.038) had almost eight times greater odds of being depressed than the women who had children.

Caste and education were not significant at the 5% level. However, there was a tendency of a positive association of these variables for example: caste (p = 0.07) and education (p = 0.081) with depression in the wives left behind. Lower caste and illiterate wives left behind had higher odds of depression than the upper caste and literate wives left behind respectively.

**(The variable categories which have very small number of samples, for example, below 5 or 0 were excluded from the statistical analysis).**

Table 4.9 Association between socio-demographic variables of wives left behind and depression

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Depressed** | | | **Non-depressed** | |  |  |
| **N= 316** | | **%** | **N= 84** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  | |  |  |  |  |  |
|  | 32 and below | 198 | | 80.8 | 47 | 19.2 | 1.32 (0.81 to 2.15) | 0.263 |
|  | Above 32 | 118 | | 76.1 | 37 | 23.9 | 1 |  |
| **Religion** | |  | |  |  |  |  |  |
|  | Hindu | 208 | | 77.3 | 61 | 22.7 | 1 |  |
|  | Other | 108 | | 82.4 | 23 | 17.6 | 1.38 (0.81 to 2.35) | 0.239 |
| **Caste** | |  | |  |  |  |  |  |
|  | Upper | 130 | | 74.7 | 44 | 25.3 | 1 |  |
|  | Lower | 186 | | 82.3 | 40 | 17.6 | 1.57 (0.97 to 2.55) | 0.07 |
| **Education** | |  | |  |  |  |  |  |
|  | Illiterate | 31 | | 91.2 | 3 | 8.8 | 2.94 (0.88 to 9.85) | 0.081 |
|  | Literate | 285 | | 77.9 | 81 | 22.1 | 1 |  |
| **Employment** | |  | |  |  |  |  |  |
|  | Unemployed | 202 | | 78.9 | 54 | 21.1 | 1 |  |
|  | Employed | 114 | | 79.2 | 30 | 20.8 | 1.02 (0.62 to 1.68) | 0.951 |
| **Own named property** | | | |  |  |  |  |  |
|  | Yes | | 77 | 72.0 | 30 | 28.0 | 1 |  |
|  | No | | 239 | 81.6 | 54 | 18.4 | 1.72 (1.03 to 2.89) | 0.038 |
| **Having children** | | |  |  |  |  |  |  |
|  | Yes | | 287 | 77.6 | 83 | 22.4 | 1 |  |
|  | No | | 29 | 96.7 | 1 | 3.3 | 8.39 (1.13 to 62.49) | 0.038 |
| **Own mobile phone** | | |  |  |  |  |  |  |
|  | Yes | | 301 | 78.4 | 83 | 21.6 | 1 |  |
|  | No | | 15 | 93.8 | 1 | 6.2 | 4.14 (0.54 to 31.77) | 0.172 |

#### Husband’s characteristics and depression

This section presents the results of univariate logistic model to determine whether the husband’s characteristics were associated with the development of depression in the wives left behind. The univariate analysis results showed that there was no significant difference between depression in left-behind wives and the husbands’ characteristics, for example, husband’s age, education and occupation (Table: 4.10).

Table 4.10 Association between husband's characteristics and depression

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Depressed** | | **Non-depressed** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Husband’s age** | |  |  |  |  |  |  |
|  | 36 and below | 198 | 79.8 | 50 | 20.2 | 1.14 (0.70 to 1.87) | 0.599 |
|  | Above 36 | 118 | 77.6 | 34 | 22.4 | 1 |  |
| **Husband’s education** | | |  |  |  |  |  |
|  | Illiterate | 4 | 100.0 | 0 | 0.0 |  |  |
|  | Literate | 312 | 78.8 | 84 | 21.2 |  |  |
| **Husband’s occupation** | | |  |  |  |  |  |
|  | Employed | 227 | 78.5 | 62 | 21.5 | 1 |  |
|  | Unemployed | 89 | 80.2 | 22 | 19.8 | 1.11 (0.64 to 1.91) | 0.720 |

#### Household characteristics and depression

This section highlights the association of household characteristics with depression in the wives left behind. The results of the univariate logistic analyses are presented in table 4.11. The univariate analysis results showed that the education of the household heads and the total household annual income were significantly associated with depression in the left-behind wives. The odds ratio of 2.85 suggests that the women with illiterate household heads had nearly three-fold greater odds of being depressed than the women with educated household heads (OR = 2.85, 95% CI: 1.25 to 6.47, p = 0.012). Similarly, the wives left behind whose household’s total annual income was below the national average (OR: 1.91, 95% CI: 1.07 to 3.41, p = 0.030) had almost two times higher odds of depression than the wives left behind who had a household total annual income above the national average.

The other household variables, for example: household head’s gender, age, occupation, family and house type, number of family members and household income source (Table: 4.11) were not found significantly associated with depression in the wives left behind.

Table 4.11 Association between household's characteristics and depression

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Depressed** | | **Non-depressed** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Household head** | |  |  |  |  |  |  |
|  | Female | 230 | 78.5 | 63 | 21.5 | 1 |  |
|  | Male | 86 | 80.4 | 21 | 19.6 | 1.12 (0.65 to 1.95) | 0.684 |
| **Age of household head** | |  |  |  |  |  |  |
|  | 40 and below | 186 | 78.8 | 50 | 21.2 | 1 |  |
|  | Above 40 | 130 | 79.3 | 34 | 20.7 | 1.03 (0.63 to 1.68) | 0.913 |
| **Household head’s education** | | |  |  |  |  |  |
|  | Illiterate | 65 | 90.3 | 7 | 9.7 | 2.85 (1.25 to 6.47) | 0.012 |
|  | Literate | 251 | 76.5 | 77 | 23.5 | 1 |  |
| **Household head’s occupation** | | |  |  |  |  |  |
|  | Unemployed | 145 | 75.5 | 47 | 24.5 | 1 |  |
|  | Employed | 171 | 82.2 | 37 | 17.8 | 1.50 (0.92 to 2.43) | 0.102 |
| **Family type** | |  |  |  |  |  |  |
|  | Extended | 151 | 78.2 | 42 | 21.8 | 1 |  |
|  | Nuclear | 165 | 79.7 | 42 | 20.3 | 1.09 (0.68 to 1.77) | 0.717 |
| **House type** | |  |  |  |  |  |  |
|  | Permanent | 199 | 76.5 | 61 | 23.5 | 1 |  |
|  | Semi and Temporary | 117 | 83.6 | 23 | 16.4 | 1.56 (0.92 to 2.65) | 0.101 |
| **Family members** | |  |  |  |  |  |  |
|  | 5 or less | 215 | 79.3 | 56 | 20.7 | 1.06 (0.64 to 1.78) | 0.811 |
|  | More than 5 | 101 | 78.3 | 28 | 21.7 | 1 |  |
| **Main source of household income** | | |  |  |  |  |  |
|  | Remittances | 302 | 78.4 | 83 | 21.6 | 1 |  |
|  | Other sources | 14 | 93.3 | 1 | 6.7 | 3.85 (0.50 to 29.69) | 0.417 |
| **Total annual income** | |  |  |  |  |  |  |
|  | Above national average\* | 213 | 76.1 | 67 | 23.9 | 1 |  |
|  | Below national average | 103 | 85.8 | 17 | 14.2 | 1.91 (1.07 to 3.41) | 0.030 |

\* Average national household income = Rs 41659 (Source: CBS, 2011a, p: 41)

#### Depression and household facilities

This result section describes the univariate analysis between the household facilities and depression was presented in table 4.12. Almost all household facilities (p > 0.05) were not significantly associated with depression in the wives left behind. However, the women who did not have a radio/tape, landline telephone, television, refrigerator, computer, bicycle and motorbike had greater odds for depression than the women who had these facilities. Only the radio/tape facility was found to be significant for depression (p = 0.045). The women who did not have a radio/tape had 2.23 times greater odds of being depressed than the women who had one.

Table 4.12 Association between the household facilities and depression

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Depressed** | | **Non-depressed** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Electricity** |  |  |  |  |  |  |
| Yes | 315 | 99.7 | 84 | 100.0 |  |  |
| No | 1 | 0.3 | 0 | 0.0 |  |  |
| **Radio/tape** |  |  |  |  |  |  |
| Yes | 256 | 81.0 | 76 | 90.5 | 1 |  |
| No | 60 | 19.0 | 8 | 9.5 | 2.23 (1.02 to 4.86) | 0.045 |
| **Mobile Phone** |  |  |  |  |  |  |
| Yes | 311 | 98.4 | 84 | 100.0 |  |  |
| No | 5 | 1.6 | 0 | 0.0 |  |  |
| **Landline telephone** |  |  |  |  |  |  |
| Yes | 24 | 7.6 | 11 | 13.1 | 1 |  |
| No | 292 | 92.4 | 73 | 86.9 | 1.83 (0.86 to 3.91) | 0.117 |
| **Television** |  |  |  |  |  |  |
| Yes | 273 | 86.4 | 77 | 91.7 | 1 |  |
| No | 43 | 13,6 | 7 | 8.3 | 1.73 (0.75 to 4.01) | 0.119 |
| **Refrigerator** |  |  |  |  |  |  |
| Yes | 51 | 16.1 | 20 | 23.8 | 1 |  |
| No | 265 | 83.9 | 64 | 76.2 | 1.62 (0.91 to 2.91) | 0.104 |
| **Computer** |  |  |  |  |  |  |
| Yes | 34 | 10.8 | 12 | 14.3 | 1 |  |
| No | 282 | 89.2 | 72 | 85.7 | 1.38 (0.68 to 2.80) | 0.370 |
| **Internet** |  |  |  |  |  |  |
| Yes | 17 | 5.4 | 4 | 4.8 | 1.14 (0.37 to 3.47) | 0.822 |
| No | 299 | 94.6 | 80 | 95.2 | 1 |  |
| **Bicycle** |  |  |  |  |  |  |
| Yes | 290 | 91.8 | 79 | 94.0 | 1 |  |
| No | 26 | 8.2 | 5 | 6.0 | 1.42 (0.53 to 3.81) | 0.490 |
| **Motorbike** |  |  |  |  |  |  |
| Yes | 44 | 13.9 | 18 | 21.4 | 1 |  |
| No | 272 | 86.1 | 66 | 78.6 | 1.69 (0.92 to 3.11) | 0.094 |

#### Depression and duration of husbands’ migration

An analysis of the duration of husbands’ migration and depression in left-behind wives was performed to find out whether the duration of migration of husbands was associated with depression in wives left behind or not. The results of the logistic model showed that there was a significant association between the years of the husbands’ migration and depression in the wives who were left behind at home. The wives whose husbands migrated for between 1-5 years had 1.72 times higher odds for depression than the wives whose husbands had migrated for more than 5 years. This result showed that the wives left behind were more likely to become depressed within the early years of migration of husbands.

Table 4.13 Association between years of husband's migration and depression in wives left behind

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Year of migration** | **Left-behind wives** | | | |  |  |
| **Depressed** | | **Not-depressed** | |
| **N N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **1-5 years** | 245 | 81.4 | 56 | 18.6 | 1.72 (1.02 to 2.92) | 0.042 |
| **> 5 years** | 71 | 71.7 | 28 | 28.3 | 1 |  |

### Backward Stepwise Likelihood Ratio regression method (Multivariate analysis)

The backward stepwise logistic method was used for regression analysis. This is a method, where the SPSS model runs with all the variables and the model begins with only the regression constant and further begins with the entire variable in the initial model. At each step of the model the variables were eliminated at a time based on the likelihood ratio. The model uses a cut-off point less than or equal to 0.05. At each step of the model the variables with least significance are removed and those variables meeting this cut-off point (p < 0.05) are retained in the model. Hence, only the significant variables (p < 0.05) with an outcome variable are retained in the final model. The Stepwise method of regression analysis is thought to be suitable where no such method was used previously (Field, 2009). The explanatory variables were entered into the model in three blocks i) Socio-demographic variables of respondents; ii) Husband’s characteristics; and iii) Household characteristics.

#### Multivariate analysis of depression in wives left behind

The purpose of the multivariate analysis was to find the significant factors for depression in left-behind wives after the mediating effects of all variables. After conducting univariate analysis, a final multiple logistic regression analysis was carried out to find the important predictors that were associated with depression. This technique helps to quantify the impact of predictor variables simultaneously on a binary outcome variable (Field, 2009). For multivariate analysis, the explanatory variables were entered first into three blocks: i) socio-demographic variables of the respondents; ii) husband’s characteristics; and iii) household characteristics and also all variables in a block. In this section, the outputs of the first and final model are presented in the tables below and the results of other subsequent models were presented in Appendix 10.

##### Socio-demographic variables and depression

The results of the initial and final models of multivariate analysis between the respondents’ socio-demographic variables on the depression in left-behind wives are presented in table 4.14. The results of other intermediate models are presented in Appendix 10. None of the variables was found to be significantly associated in the initial model, however only own named property showed a significant association with depression in the wives left behind at a 5% level of significance and other variables, i.e. age, caste, religion, education and occupation of the respondents were not significantly associated with depression in the final model.

Table 4.14 Multivariate logistic regression model of outcome variable 'depression' in wives left behind with their socio-economic variables (Initial and Final model)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables retained in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| **Initial model** |  |  |  |  |
| Age | 1.37 | 0.81 | 2.33 | 0.238 |
| Religion | 1.09 | 0.55 | 2.13 | 0.809 |
| Caste | 1.47 | 0.80 | 2.72 | 0.215 |
| Education | 2.77 | 0.80 | 9.64 | 0.109 |
| Occupation | 1.06 | 0.63 | 1.78 | 0.819 |
| Own named property | 1.49 | 0.86 | 2.59 | 0.159 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| Own named property | 1.71 | 1.02 | 2.87 | 0.042 |

##### Husbands’ characteristics and depression in left-behind wives

Table 4.15 outlines the results of multivariate analysis of the husbands’ characteristics with depression in left-behind wives. None of the variables was found to have significant association in the model (Table 4.15).

Table 4.15 Multivariate logistic analysis model of outcome variable 'depression' in wives left behind and husband's characteristics

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Model** | **Variables in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| **Initial model** | Husband’s age | 1.13 | 0.68 | 1.86 | 0.645 |
|  | Husband’s occupation | 1.08 | 0.62 | 1.88 | 0.798 |
|  |  |  |  |  |  |
| **Final model** | Husband’s age | 1.14 | 0.70 | 1.87 | 0.599 |

##### Household characteristics and depression in left-behind wives

Table 4.16 presents the results of the multivariate logistic regression of household variables with its association with depression in the wives left behind. In the initial model, only the household head’s education (p = 0.022) was significantly associated with depression but household head’s education (OR = 2.42, p = 0.038) and household’s annual income (OR = 1.93, p = 0.03) were retained in the final model showing their significant association with depression in the wives left behind. The other variables, for example, household head’s gender, age of household head, household head’s occupation, family type, house type and total family members were not found to have significant association with depression in the final model.

Table 4.16 Multivariate logistic regression model of outcome variable 'depression' in wives left behind with household characteristics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables retained in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| **Initial model** |  |  |  |  |
| HH\* gender | 1.60 | 0.67 | 3.86 | 0.294 |
| HH age | 0.81 | 0.37 | 1.80 | 0.607 |
| HH education | 2.78 | 1.16 | 6.66 | 0.022 |
| HH occupation | 1.69 | 0.96 | 2.96 | 0.068 |
| Family type | 1.39 | 0.69 | 2.82 | 0.359 |
| House type | 1.36 | 0.76 | 2.41 | 0.301 |
| Total family members | 0.76 | 0.38 | 1.50 | 0.428 |
| Average annual household income | 1.81 | 0.97 | 3.38 | 0.062 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| HH education | 2.42 | 1.05 | 5.56 | 0.038 |
| Average annual household income | 1.93 | 1.06 | 3.52 | 0.032 |

\*HH = Head of household

##### Final multiple regression model: depression with all explanatory variables

The results of the multivariate analysis of all explanatory variables associated with depression in the wives left behind and their associations are presented in table 4.17. The multivariate logistic regression model begins with all 17 explanatory variables listed in table 4.17 being entered in a block and the model run with all predictor variables of depression and ending at 15 steps. At each step, the variable with the largest p-value or least significant variable for its association with depression was removed and then adjusted the effects of explanatory variables at each step. This process continued until only significant variables (p-value < 0.05) were retained in the final model. The model calculates the relationships of several explanatory variables and the effect modification of an individual variable in the presence of other variables on an outcome variable simultaneously. The intermediate models are presented in Appendix 10.

In the initial model, among 17 explanatory variables, only one variable: household head’s occupation was found to have a significant association with depression. In subsequent models, explanatory variables which had a large p-value (p > 0.05) such as husband’s occupation (p = 0.979); women’s religion (p = 0.819); age of the household head (p = 0.774) and so on were removed from the models (Appendix 10) and adjusted effects of retained predictors on depression were calculated in each subsequent model. In the final model, the effect of household head’s occupation disappeared and only three variables namely: household head’s education (OR = 2.33, p = 0.048); average annual household income (OR = 1.86, p = 0.042) and years of husband’s migration (OR = 1.71, p = 0.050) were found significantly associated with depression in left-behind wives. The model suggested that those factors found significant in the final model had a higher risk of contributing depression in wives left behind and the effects of these variables were modified in the presence of other variables.

Table 4.17 Multivariate logistic regression model of outcome variable 'depression' in wives left behind with all explanatory variables

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables retained in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| **Initial model** |  |  |  |  |
| Women’s age | 1.72 | 0.70 | 4.20 | 0.235 |
| Women’s religion | 1.09 | 0.54 | 2.20 | 0.882 |
| Women’s caste | 1.59 | 0.84 | 3.01 | 0.159 |
| Women’s education | 1.44 | 0.32 | 6.58 | 0.632 |
| Women’s employment | 1.48 | 0.73 | 3.01 | 0.277 |
| Own named property | 1.24 | 0.68 | 2.26 | 0.479 |
| Husband’s age | 1.53 | 0.62 | 3.75 | 0.357 |
| Husband’s occupation | 1.01 | 0.55 | 1.83 | 0.979 |
| Household gender | 1.24 | 0.48 | 3.19 | 0.655 |
| Age of household head | 1.14 | 0.50 | 2.58 | 0.761 |
| Household head’s education | 1.97 | 0.70 | 5.53 | 0.199 |
| Household head’s occupation | 2.25 | 1.07 | 4.73 | 0.032 |
| Family type | 1.66 | 0.79 | 3.48 | 0.179 |
| House type | 1.23 | 0.68 | 2.23 | 0.503 |
| Family members | 1.89 | 0.58 | 2.45 | 0.643 |
| Average annual household income | 1.79 | 0.93 | 3.43 | 0.080 |
| Year of husband’s migration | 1.56 | 0.87 | 2.81 | 0.138 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| Household head’s education | 2.33 | 1.01 | 5.37 | 0.048 |
| Average annual household income | 1.86 | 1.023 | 3.38 | 0.042 |
| Year of husband’s migration | 1.71 | 1.00 | 2.91 | 0.050 |

### Depression in wives of non-migrants

The prevalence of depression in the wives of non-migrants was also measured by using the CES-D questionnaire as described above in Section 3.11. A total of 400 non-migrants’ households were surveyed and the coding of all the explanatory variables and the dependent variable were similar as described in Section 4.3 (Appendix 6). The non-depressed and depressed wives of non-migrants were identified and categorised based on the score < 16 for non-depressed and ≥ 16 for depressed. By using this cut-off point, among 400 wives of non-migrants, 105 (26.3%) wives of non-migrants were identified as depressed (mean depression score: 11.87, SD = 6.67) while 295 respondents were non-depressed. The univariate analysis of each explanatory variable with the dependent variable (depression) was performed (as described in Section 4.3.1.1) in the logistic model one at a time to examine their relationship. The purpose of analysing one variable at a time was to find their association with depression without the mediating effect of other variables. The following sub-sections present the results of univariate analysis to find the factors associated with depression in the wives of non-migrants.

#### Socio-demographic factors and depression in the wives of non-migrants

This section presents the univariate analysis results (Table 4.18) that showed that age, employment of the wives of non-migrants and having their own mobile phone had a significant association with depression. The wives of non-migrants whose age was above 32 years (OR = 2.17, 95% CI: 1.34 to 3.15, p = 0.002) were found to have 2.17 times greater odds for depression than the wives of non-migrants aged 32 years and below. Depression was significantly associated with the employment status of respondents with the higher odds of 1.70 for employed wives of non-migrants (OR = 1.70, 95% CI: 1.08 to 2.66, p = 0.021) than the unemployed wives of non-migrants. The wives of non-migrants who did not have their own mobile phone (OR: 1.58, 95%CI: 1.0 to 2.51, p = 0.05) had 1.51 times greater odds of being depressed than the wives who had their own mobile phone.

Religion, caste, education, having own named property and children categories were not significantly associated with depression in the wives of non-migrants.

Table 4.18 Association between socio-demographic variables and depression in wives of non-migrants

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Depressed** | | **Non-depressed** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  |  |  |  |  |  |
|  | 32 and below | 30 | 18.0 | 137 | 82.0 | 1 |  |
|  | Above 32 | 75 | 32.2 | 158 | 67.8 | 2.17 (1.34 to 3.15) | 0.002 |
| **Religion** | |  |  |  |  |  |  |
|  | Hindu | 76 | 26.4 | 212 | 73.6 | 1.03 (0.62 to 1.69) | 0.919 |
|  | Other | 29 | 25.9 | 83 | 74.1 | 1 |  |
| **Caste** | |  |  |  |  |  |  |
|  | Upper | 51 | 24.4 | 158 | 75.6 | 1 |  |
|  | Lower | 54 | 28.3 | 137 | 71.7 | 1.22 (0.78 to 1.91) | 0.380 |
| **Education** | |  |  |  |  |  |  |
|  | Illiterate | 17 | 37.0 | 29 | 63.0 | 1.77 (0.93 to 3.38) | 0.082 |
|  | Literate | 88 | 24.9 | 266 | 75.1 | 1 |  |
| **Employment** | |  |  |  |  |  |  |
|  | Unemployed | 50 | 21.9 | 179 | 78.2 | 1 |  |
|  | Employed | 55 | 32.2 | 116 | 67.8 | 1.70 (1.08 to 2.66) | 0.021 |
| **Own named property** | | |  |  |  |  |  |
|  | Yes | 17 | 23.9 | 54 | 76.1 | 1 | 0.626 |
|  | No | 88 | 26.7 | 241 | 73.3 | 1.16 (0.64 to 2.11) |  |
| **Having children** | |  |  |  |  |  |  |
|  | Yes | 98 | 26.5 | 272 | 73.5 | 1.18 (0.49 to 2.85) | 0.706 |
|  | No | 7 | 23.3 | 23 | 76.7 |  |  |
| **Own mobile phone** | |  |  |  |  |  |  |
|  | Yes | 62 | 23.2 | 205 | 76.8 | 1 |  |
|  | No | 43 | 32.3 | 90 | 67.7 | 1.58 (1.0 to 2.51) | 0.05 |

#### Husband’s characteristics and depression in wives of non-migrants

A significant association was observed between the depressive symptoms in the wives of non-migrants and the age of their husbands. The respondents whose husbands were aged above 36 years (OR = 1.78, 95% CI: 1.12 to 2.84, p = 0.015) had 1.78 times greater odds for depression than women whose husbands were 36 years and below. The husband’s occupation and education were not found to have a significant effect on depression in the wives of non-migrants.

Table 4.19 Association between husband’s background characteristics and depression in wives of non-migrants

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Depressed** | | **Non-depressed** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Husband’s age** | |  |  |  |  |  |  |
|  | 36 and below | 35 | 20.1 | 139 | 79.9 | 1 |  |
|  | Above 36 | 70 | 31.0 | 156 | 69.0 | 1.78 (1.12 to 2.84) | 0.015 |
| **Husband’s education** | | |  |  |  |  |  |
|  | Illiterate | 11 | 37.9 | 18 | 62.1 | 1.80 (0.82 to 3.95) | 0.142 |
|  | Literate | 94 | 25.3 | 277 | 74.7 | 1 |  |
| **Husband’s occupation** | | |  |  |  |  |  |
|  | Employed | 3 | 21.4 | 11 | 78.6 | 1.32 (0.36 to 4.82) | 0.677 |
|  | Unemployed | 102 | 26.4 | 284 | 73.6 | 1 |  |

#### Household characteristics and depression in the wives of non-migrants

The explanatory variables of household characteristics and depression in the wives of non-migrants were analysed one by one in the logistic model. The age of the household head, house type and number of family members were found to be significantly associated with depression in the wives of non-migrants (p < 0.05). In the non-migrants’ households, the wives whose household heads were above 40 years (OR = 1.58, 95% CI: 1.0 to 2.47, p = 0.048) had 1.58 times higher odds for depression than the wives whose household heads were 40 years or below aged. Likewise, the respondents who lived in a semi and temporary house (OR = 2.25, 95% CI: 1.41 to 3.58, p = 0.001) had 2.25 times greater odds of having depressive symptoms than the wives of non-migrants who lived in a permanent house. The depression in the wives of non-migrants living with more than five family members (OR = 1.66, 95% CI: 1.05 to 2.60, p = 0.029) was observed to have 1.66 times greater odds for depression than the wives of non-migrants living with five or less family members.

The other explanatory variables such as the household head’s gender, education and occupation were not found to be significantly associated with depression in the wives of non-migrants.

Table 4.20 Association between household characteristics and depression in wives of non-migrants

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Depressed** | | **Non-depressed** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Household head** | |  |  |  |  |  |  |
|  | Female | 25 | 32.9 | 51 | 67.1 | 1.50 (0.87 to 2.57) | 0.145 |
|  | Male | 80 | 24.7 | 244 | 75.3 | 1 |  |
| **Age of household head** | |  |  |  |  |  |  |
|  | 40 and below | 43 | 21.8 | 154 | 78.2 | 1 |  |
|  | Above 40 | 62 | 30.5 | 141 | 69.5 | 1.58 (1.0 to 2.47) | 0.048 |
| **Household head’s education** | | |  |  |  |  |  |
|  | Illiterate | 14 | 26.9 | 38 | 73.1 | 1.04 (0.54 to 2.01) | 0.906 |
|  | Literate | 91 | 26.1 | 257 | 73.9 | 1 |  |
| **Household head’s occupation** | | |  |  |  |  |  |
|  | Unemployed | 11 | 34.4 | 21 | 65.6 | 1.53 (0.71 to 3.29) | 0.279 |
|  | Employed | 94 | 25.5 | 274 | 74.5 | 1 |  |
| **Family type** | |  |  |  |  |  |  |
|  | Extended | 41 | 29.9 | 96 | 70.1 | 1.33 (0.84 to 2.11) | 0.228 |
|  | Nuclear | 64 | 24.3 | 199 | 75.7 | 1 |  |
| **House type** | |  |  |  |  |  |  |
|  | Permanent | 35 | 18.3 | 156 | 81.7 | 1 |  |
|  | Semi and Temporary | 70 | 33.5 | 139 | 66.5 | 2.25 (1.41 to 3.58) | 0.001 |
| **Family members** | |  |  |  |  |  |  |
|  | 5 or less | 56 | 22.5 | 193 | 77.5 | 1 |  |
|  | More than 5 | 49 | 32.5 | 102 | 67.5 | 1.66 (1.05 to 2.60) | 0.029 |
| **Total annual income** | |  |  |  |  |  |  |
|  | Above national average | 27 | 28.7 | 67 | 71.3 | 1.18 (0.70 to 1.97) | 0.533 |
|  | Below national average | 78 | 25.5 | 228 | 74.8 | 1 |  |

#### Depression and household facilities in non-migrant households

The univariate analysis of household facilities with depression was carried out and the results are presented in the table 4.21. The outputs of the model showed that household facilities such as television, refrigerator and bicycle were found to be significantly associated with depression in the wives of non-migrants (Table 4.21). The wives of non-migrants who were living without the majority of household facilities were found to have greater odds than the wives of non-migrants having such household facilities in their house (Table 4.21). The wives of non-migrants whose household did not have a bicycle (OR = 3.48, 95% CI: 1.85 to 6.56, p < 0.001) were observed 3.48 times higher odds for depression than the wives of non-migrants with such a facility in their house. Similarly, the wives of non-migrants living in homes without television (OR = 1.96, 95% CI: 1.19 to 3.23, p = 0.008) and a refrigerator (OR = 2.23, 95% CI: 1.09 to 4.45, p = 0.028) had 1.96 and 2.23 times greater odds of depression than wives with a television and refrigerator in their home.

Table 4.21 Association between the household facilities and depression in wives of non-migrants

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Depressed** | | **Non-depressed** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Electricity** |  |  |  |  |  |  |
| Yes | 105 | 26.4 | 293 | 73.6 |  |  |
| No | 0 | 0.0 | 2 | 100.0 |  |  |
| **Radio/tape** |  |  |  |  |  |  |
| Yes | 85 | 24.6 | 260 | 75.4 | 1 |  |
| No | 20 | 36.4 | 35 | 63.6 | 1.75 (0.96 to 3.19) | 0.069 |
| **Mobile phone** |  |  |  |  |  |  |
| Yes | 97 | 25.5 | 284 | 74.4 | 1 |  |
| No | 8 | 42.1 | 11 | 57.9 | 2.13 (0.83 to 5.45) | 0.115 |
| **Landline telephone** |  |  |  |  |  |  |
| Yes | 4 | 22.4 | 14 | 77.8 | 1 |  |
| No | 101 | 26.4 | 281 | 73.6 | 1.26 (0.41 to 3.91) | 0.692 |
| **Television** |  |  |  |  |  |  |
| Yes | 71 | 23.1 | 237 | 76.9 | 1 |  |
| No | 34 | 37.0 | 58 | 63.0 | 1.96 (1.19 to 3.23) | 0.008 |
| **Refrigerator** |  |  |  |  |  |  |
| Yes | 10 | 15.2 | 56 | 84.8 | 1 |  |
| No | 95 | 28.4 | 239 | 71.6 | 2.23 (1.09 to 4.54) | 0.028 |
| **Computer** |  |  |  |  |  |  |
| Yes | 7 | 15.9 | 37 | 84.1 | 1 |  |
| No | 98 | 27.5 | 258 | 72.5 | 2.01 (0.87 to 4.65) | 0.104 |
| **Internet** |  |  |  |  |  |  |
| Yes | 8 | 22.2 | 28 | 77.8 | 1 |  |
| No | 97 | 26.6 | 267 | 73.4 | 1.27 (0.56 to 2.89) | 0.566 |
| **Bicycle** |  |  |  |  |  |  |
| Yes | 82 | 23.1 | 273 | 76.9 | 1 |  |
| No | 23 | 51.1 | 22 | 48.9 | 3.48 (1.85 to 6.56) | <0.001 |
| **Motorbike** |  |  |  |  |  |  |
| Yes | 17 | 20.7 | 65 | 79.3 | 1 |  |
| No | 88 | 27.7 | 230 | 72.3 | 1.46 (0.81 to 2.63) | 0.205 |

### Comparison of prevalence of depression between the left-behind wives and the wives of non-migrants

For comparison of depression between the two groups of women corresponding to the explanatory variables, the chi-squared test and logistic regression were carried out to examine the differences between the two groups and find their association. For this comparison, the results of the left-behind wives were compared to the results of wives of non-migrants with respect to their similar category. To answer the questions: Is there any difference in depression between the left-behind wives and the wives of non-migrants with respect to their corresponding categories of variables?

A chi-squared test for two independent samples for each category was performed whether there was any difference between the left-behind wives and the wives of non-migrants for depression in the same category of variables. For this calculation, the wives of the non-migrant group were taken as a reference category and the results are presented below.

This result indicated that the women whose husbands had migrated abroad were more likely to be depressed as compared to the women who were living with their husbands and the prevalence of depression was also higher in the left-behind wives than in the wives of non-migrants (Table 4.22).

Table 4.22 Comparison of depression in the left-behind wives and the wives of non-migrants

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | **Mean depression score (SD)** | **Depressed** | | **Not-depressed** | | **OR (95% CI)** | **p** |
| **N** | **%** | **N** | **%** |
| Wives of non-migrants | 11.87 (6.61) | 105 | 26.3 | 295 | 73.7 | 1 |  |
| Left-behind wives | 20.30 (5.45) | 316 | 79.0 | 84 | 21.0 | 10.57 (7.62 to 14.67) | <0.001 |
| **Total** | 16.09 (7.38) | 421 | 52.6 | 379 | 47.4 |  |  |

The following sub-sections describe the results of the chi-squared test and logistic regression analysis to compare the prevalence of depression among the left-behind wives and the wives of non-migrants with regard to the explanatory variables. The following three sub-sections compare the results of depression between the left-behind wives and wives of non-migrants within the same category of variable. Similarly, the sub-sections 4.3.4.4-5 presents the comparison results of depression in left-behind wives and the wives of non-migrants between the categories of an explanatory variable.

#### Depression and respondents background characteristics

In this section, analyses of the prevalence of depression between the wives left behind and the wives of non-migrants along with their background characteristics are presented in table 4.23. A chi-squared test was performed to see the difference between two groups within a similar category. For the chi-squared test, the category of wives of the non-migrant group for each variable was taken as a reference category to find whether the husbands’ migration had an impact on depression in the wives left behind. The results of the chi-squared analysis showed highly significant differences between depression in the left-behind wives and the wives of non-migrants for all explanatory variables of the respondent’s background characteristics (Table 4.23).

Table 4.23 Comparison of prevalence of depression (depression score ≥ 16) among the left-behind wives and the wives of non-migrants by their background characteristics

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Total women** | | **Left-behind wives** | | **Wives of non-migrants** | | **p** |
| **N** | **%** | **N** | **%** | **N** | **%** |
| **Age** | |  |  |  |  |  |  |  |
|  | 32 and below | 228 | 55.3 | 198 | 80.8 | 30 | 18.0 | <0.001\*\*\* |
|  | Above 32 | 193 | 49.7 | 118 | 76.1 | 75 | 32.2 | <0.001\*\*\* |
| **Religion** | |  |  |  |  |  |  |  |
|  | Hindu | 284 | 51.0 | 208 | 77.3 | 76 | 26.4 | <0.001\*\*\* |
|  | Other | 137 | 56.4 | 108 | 82.4 | 29 | 25.9 | <0.001\*\*\* |
| **Caste** | |  |  |  |  |  |  |  |
|  | Upper | 181 | 47.3 | 130 | 74.7 | 51 | 24.4 | <0.001\*\*\* |
|  | Lower | 240 | 57.6 | 186 | 82.3 | 54 | 28.3 | <0.001\*\*\* |
| **Education** | |  |  |  |  |  |  |  |
|  | Illiterate | 48 | 60.0 | 31 | 91.2 | 17 | 37.0 | <0.001\*\*\* |
|  | Literate | 373 | 51.8 | 285 | 77.9 | 88 | 24.9 | <0.001\*\*\* |
| **Employment** | |  |  |  |  |  |  |  |
|  | Unemployed | 252 | 52.0 | 202 | 78.9 | 50 | 21.8 | <0.001\*\*\* |
|  | Employed | 169 | 53.7 | 114 | 79.2 | 55 | 32.2 | <0.001\*\*\* |
| **Own named property** | | |  |  |  |  |  |  |
|  | Yes | 94 | 52.8 | 77 | 72.0 | 17 | 23.9 | <0.001\*\*\* |
|  | No | 327 | 52.6 | 239 | 81.6 | 88 | 26.7 | <0.001\*\*\* |
| **Having children** | |  |  |  |  |  |  |  |
|  | Yes | 385 | 52.0 | 287 | 77.6 | 98 | 26.5 | <0.001\*\*\* |
|  | No | 36 | 60.0 | 29 | 96.7 | 7 | 23.3 | <0.001\*\*\* |
| **Own mobile phone** | |  |  |  |  |  |  |  |
|  | Yes | 363 | 55.8 | 301 | 78.4 | 62 | 23.2 | <0.001\*\*\* |
|  | No | 58 | 38.9 | 15 | 93.8 | 43 | 32.3 | <0.001\*\*\* |
|  | |  |  |  |  |  |  |  |

\*\*\*: Significant at 1%

#### Depression and husbands’ characteristics

This section compares the results of the chi-squared test between the wives left behind and the wives of non-migrants. The results showed that in every single category for every variable, the left-behind wives were much more likely to be depressed, reflecting the much greater prevalence of depression among left-behind wives (Table 4.24).

Table 4.24 Comparison of prevalence of depression among left-behind wives and the wives of non-migrants by husband’s background characteristics

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Total women** | | **Left-behind wives** | | **Wives of non-migrants** | | **p** |
| **N** | **%** | **N** | **%** | **N** | **%** |
| **Age** | |  |  |  |  |  |  |  |
|  | 36 and below | 233 | 55.2 | 198 | 79.8 | 35 | 20.1 | <0.001\*\*\* |
|  | Above 36 | 188 | 49.7 | 118 | 77.6 | 70 | 31.0 | <0.001\*\*\* |
| **Education** | |  |  |  |  |  |  |  |
|  | Illiterate | 15 | 45.5 | 4 | 100.0 | 11 | 37.9 |  |
|  | Literate | 406 | 52.9 | 312 | 78.8 | 94 | 25.3 | <0.001\*\*\* |
| **Employment** | |  |  |  |  |  |  |  |
|  | Unemployed | 92 | 73.6 | 89 | 80.2 | 3 | 21.4 | <0.001\*\*\* |
|  | Employed | 329 | 48.7 | 227 | 78.5 | 102 | 26.4 | <0.001\*\*\* |

\*\*\*: significant at 1%

#### Depression and household characteristics

To compare depression in the wives left behind and the wives of non-migrants with regard to their household characteristics, the chi-squared test was performed between two groups of women for depression. The results are presented in table 4.25 and the outputs of the test showed that all explanatory variables of household characteristics for the respondents found a significant difference for depression between the left-behind wives and the wives of non-migrants (Table 4.25).

Table 4.25 Comparison of prevalence of depression among left-behind wives and the wives of non-migrants by household characteristics

| **Variables** | | **Total Women** | | **Left-behind wives** | | **Wives of non-migrants** | | **p** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **N** | **%** | **N** | **%** | **N** | **%** |
| **Household head** | |  |  |  |  |  |  |  |
|  | Female | 255 | 69.1 | 230 | 78.5 | 25 | 32.9 | <0.001\*\*\* |
|  | Male | 166 | 38.5 | 86 | 80.4 | 80 | 24.7 | <0.001\*\*\* |
| **Age of household head** | |  |  |  |  |  |  |  |
|  | 40 and below | 229 | 52.9 | 186 | 78.8 | 43 | 21.8 | <0.001\*\*\* |
|  | Above 40 | 192 | 53.3 | 130 | 79.3 | 62 | 30.5 | <0.001\*\*\* |
| **Household head’s education** | |  |  |  |  |  |  |  |
|  | Illiterate | 79 | 63.7 | 65 | 90.3 | 14 | 26.9 | <0.001\*\*\* |
|  | Literate | 342 | 50.6 | 251 | 76.5 | 91 | 26.1 | <0.001\*\*\* |
| **Household head’s occupation** | |  |  |  |  |  |  |  |
|  | Unemployed | 156 | 69.6 | 145 | 75.5 | 11 | 34.4 | <0.001\*\*\* |
|  | Employed | 265 | 46.0 | 171 | 82.2 | 94 | 25.5 | <0.001\*\*\* |
| **Family type** | |  |  |  |  |  |  |  |
|  | Extended | 192 | 58.2 | 151 | 78.2 | 41 | 29.3 | <0.001\*\*\* |
|  | Nuclear | 229 | 48.7 | 165 | 79.7 | 64 | 24.3 | <0.001\*\*\* |
| **House type** | |  |  |  |  |  |  |  |
|  | Permanent | 234 | 51.9 | 199 | 76.5 | 35 | 18.3 | <0.001\*\*\* |
|  | Semi and Temporary | 187 | 53.6 | 117 | 83.6 | 70 | 35.5 | <0.001\*\*\* |
| **Family members** | |  |  |  |  |  |  |  |
|  | 5 or less | 271 | 52.1 | 215 | 79.3 | 56 | 22.5 | <0.001\*\*\* |
|  | More than 5 | 150 | 53.6 | 101 | 78.3 | 49 | 32.5 | <0.001\*\*\* |
| **Main source of HH income** | |  |  |  |  |  |  |  |
|  | Remittances | 302 | 78.4 | 302 | 78.4 | - | - |  |
|  | Other sources | 119 | 28.7 | 14 | 93.3 | 105 | 26.5 |  |
| **Total annual income** | |  |  |  |  |  |  |  |
|  | Above national average | 240 | 64.2 | 213 | 76.1 | 27 | 28.7 | <0.001\*\*\* |
|  | Below national average | 181 | 42.5 | 103 | 85.8 | 78 | 25.5 | <0.001\*\*\* |

\*\*\*: Significant at 1%

#### Comparison of logistic regression results between depression in the left-behind wives and the wives of non-migrants by their background characteristics

The above sub-sections described the significance of association of the variables between the wives left behind and the wives of non-migrants. Although, this section aims to compare the results of logistic regression between wives left behind and the wives of non-migrants within the different categories of an explanatory variable. For a comparison of the results between the wives left behind and the wives of non-migrants, the analysis was carried out separately and the results were compared. The reason for doing the analysis separately was to find ‘whether the left-behind wives were depressed or not when their husbands migrated. When the analysis was performed by combining two datasets, then, the results may be influenced and mediated by their nature of exposure and the fundamental differences between the migrant and non-migrant households, for example: the high number of female headed households in migrants’ households and males in non-migrants households, income level (migrant household receives remittances), etc. The results of the exposure group (migrants’ wives) were compared with the results of non-exposure (non-migrants’ wives) or the control group to find the effect of international migration.

For a comparison of two groups, a univariate logistic regression or chi-squared test was carried out to find whether the explanatory variables were significantly associated with depression in the left-behind wives and the wives of non-migrants (Section 4.1). The calculation of the odds ratio for each variable was done separately by using the univariate logistic regression to find the strength of association of different variables in depression among the left-behind wives and the wives of non-migrants. Depression is a dependent variable and age, religion, caste, education, employment, own named property, having children and own mobile phone were predictor variables. The logistic analysis results are presented in table 4.26. Caste, education, own named property and having children identified associated factors for depression in left-behind wives but age, education, employment and own mobile phone variables were found to be significantly associated with depression in the wives of non-migrants.

When comparing the results between the left-behind wives and the wives of non-migrants, only women’s education was found to be significantly associated with depression in both groups. Women with no education in both groups were more likely to be depressed than the women with some education.

The age was found to be significantly associated with depression in the wives of non-migrants but was not found to be a factor in depression in left-behind wives. Within the age category, opposite results were observed between the two groups of women. For wives of non-migrants, older wives were more likely to be depressed than the younger ones but in the case of wives left behind, younger wives had higher odds of depression than the older ones.

Within the caste groups, lower caste left-behind wives were more likely to be depressed than upper caste wives left behind. However, caste was not significantly associated with depression in the wives of non-migrants. The wives of non-migrants who were employed had higher odds for depression than the unemployed wives of non-migrants but there was no difference in depression in either employed or unemployed left-behind wives.

For left-behind wives, the women who did not have any property and children were more likely to be depressed compared to the women with some property and children. But these factors did not show a significant association with depression in wives of non-migrants who either have property and children or not. Likewise, for the wives of non-migrants, women who did not have their own mobile phone were also more likely to be depressed than women with their own mobile phone. There was no effect of having a mobile phone or not for depression in left-behind wives. Table 4.26 showed that only education was a common significant variable for depression in women in both households but other variables associated for depression in left-behind wives and the wives of non-migrants were not same.

Table 4.26 Comparative results of univariate logistic regression between left-behind wives and wives of non-migrants on depression with their background characteristics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Predictor variables** | **Reference category** | **Total Women** | **Left-behind wives** | **Wives of non-migrants** |
|  |  | **adj. OR** | **adj. OR** | **adj. OR** |
| **Migration status of husband** |  |  |  |  |
| Left-behind wives | Wives of non-migrants | 10.57\*\*\* |  |  |
| **Age** |  |  |  |  |
| 32 years and below | Above 32 | 1.25 | 1.32 | 0.46\*\* |
| **Religion** |  |  |  |  |
| Other | Hindu | 1.24 | 1.38 | 0.98 |
| **Caste** |  |  |  |  |
| Lower | Upper | 1.15\*\* | 1.57\* | 1.22 |
| **Education** |  |  |  |  |
| Illiterate | Literate | 1.34 | 2.94\* | 1.77\* |
| **Employment** |  |  |  |  |
| Employed | Unemployed | 1.07 | 1.02 | 1.70\*\* |
| **Own named property** |  |  |  |  |
| No | Yes | 0.99 | 1.70\*\* | 1.16 |
| **Having Children** |  |  |  |  |
| No | Yes | 1.38 | 8.39\*\* | 0.86 |
| **Own Mobile Phone** |  |  |  |  |
| No | Yes | 0.51\*\*\* | 4.14 | 1.58\*\* |

\*: Significant at 10%; \*\*: Significant at 5% and \*\*\*: Significant at 1%; adj.: adjusted

#### Comparison of the association of household characteristics and depression on left-behind wives and wives of non-migrants

This section presents the results of the univariate logistic regression of depression with household characteristics. The comparison of the odds ratio from the logistic regression analysis of depression between the left-behind wives and the wives of non-migrants with their household characteristics are presented in table 4.27.

Household head’s education and household total annual income were found to be associated significantly with depression in left-behind wives. However, the age of the household head, house type and number of family members were associated significantly with depression in the wives of non-migrants. No significant association was observed between depression and household head’s gender, employment and family type in both groups of women. Table 4.27 showed that different variables were associated with depression in left-behind wives and the wives of non-migrants

Table 4.27 Comparative results of univariate logistic regression between the left-behind wives and the wives of non-migrants on depression with their household characteristics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Predicator variables** | **Reference category** | **Total women**  **adj. OR** | **Left-behind wives**  **adj. OR** | **Wives of non-migrants**  **adj. OR** |
| **Household head** |  |  |  |  |
| Male | Female | 0.28\*\*\* | 1.12 | 0.67 |
| **Age of household head** |  |  |  |  |
| Above 40 years | 40 years and below | 0.98 | 1.03 | 1.58\*\* |
| **HH’s education** |  |  |  |  |
| Illiterate | Literate | 1.71\*\* | 2.85\*\* | 1.04 |
| **HH’s occupation** |  |  |  |  |
| Employed | Unemployed | 0.37\*\*\* | 1.50 | 0.66 |
| **Family type** |  |  |  |  |
| Nuclear | Extended | 0.68\*\* | 1.09 | 0.75 |
| **House type** |  |  |  |  |
| Semi and temporary | Permanent | 1.07 | 1.56 | 2.25\*\* |
| **Family members** |  |  |  |  |
| More than 5 | 5 or less | 1.06 | 1.06 | 1.66\*\* |
| **Total HH annual income** |  |  |  |  |
| Below national average | Above national average | 0.41\*\*\* | 1.91\*\* | 0.85 |

\*\*: Significant at 5%; \*\*\*: Significant at 1%; adj.: adjusted

In summary, a higher prevalence of depression was found in wives who were left behind compared to the wives of non-migrants. Individual factors such as caste, having children and property were associated significantly as contributing to depression in left-behind wives in the univariate analysis. Similarly, household head’s education, total household income and duration of husband’s migration were associated significantly with depression in wives left behind in both univariate and multivariate analyses. For the wives of non-migrants, significant contributory factors for their depression were age, education, employment, husband’s and household’s age, house type and family members.

## Women’s autonomy

Another objective of this study is to measure the autonomy of left-behind wives and compare it with the wives of non-migrants. Women’s autonomy was measured by eight outcome variables: control of and access to their own earnings; husband’s earnings; decisions about their own health care; major household purchases; daily household purchases; freedom of movement; participation in social and political activities. To fulfil this objective, a survey questionnaire was designed to collect information about women’s autonomy as outlined in the methodology (Section 3.17.1.1). To measure women’s autonomy, the respondents were asked about their access to and control over financial resources, decision-making autonomy in the household, freedom of movement and social and political freedom. If the respondent decides for herself and answered yes to autonomy, questions were coded 1 and 0 for someone else. For the analysis of women’s autonomy, each outcome (control over own earnings, husband’s earnings, decision for own health care, major and daily household purchases and visit to family or relatives) was analysed separately.

### Left-behind women

This section presents the analyses of the left-behind wives’ control over financial resources, their decisions for own health care, purchase of major and daily goods and their visits to family or relatives in the absence of their husbands. The logistic regression was run to find the association between the variables and their strength. The results of the logistic regression analysis of each variable were presented in table 4.28.

#### Women’s autonomy: Control over women’s earnings

Control over women’s earnings is one of the predictors of women’s autonomy and this section presents the results of the univariate logistic regression among the left-behind wives. Among 400 left-behind women, only 144 (36%) women were found to be involved in income related activities such as jobs or business. Among them, about 92 percent (n = 133) of employed left-behind wives said that they had control of their own earnings. A significant association was found only between the caste of left-behind wives and the persons who decide women’s earnings. The lower caste left-behind wives (OR = 5.15, 95% CI: 1.05 to 16.38, p = 0.042) were more likely to have control over their own income and had 4.15 times greater odds than the left-behind wives of an upper caste for controlling their own earnings. The odds of older aged women and women having children suggested that they had a positive relation with the control over their own earnings. Religion, education, having own named property and occupation were not shown to have a significant association with control over their own earnings.

A significant difference was observed between the husband’s age and the decision to control women’s own earnings. The women whose husbands were aged over 36 years (OR = 9.0, 95% CI: 1.12 to 72.30, p = 0.039) had 9.0 times higher odds of having freedom to control their own earnings than women whose husbands were aged 36 years and below. The results showed that the left-behind wives who had a female household head and were living with 5 or less family members had more control over their own earnings as compared to the wives left behind who live in male-headed households and had more than five family members. The other variables did not observe a significant association with control over their own earnings.

#### Women’s autonomy: Control over husbands’ earnings

The women left behind were asked a question about the control of their husband’s earnings as a part of women’s autonomy. This section aims to find the associated factors and their strength in the women left behind. The results of the logistic regression showed that age, women having property and children categories were found to be significantly associated with control over their husbands’ earnings. The majority of women aged over 32 years (83.2%) reported that they can make decisions for the use of their husband’s earnings. The women aged over 32 years (OR = 4.18, 95% CI: 2.56 to 6.82, p < 0.001) were found to have more control over their husband’s earnings as compared to the women aged 32 years and below. Similarly, the women who had property in their own name were found to be more likely to report their control over their husband’s earnings. The women who had property in their own name had 4.06 times greater odds of control over their husband’s earnings as compared to the odds of the women who did not have any property in their own name. Likewise, the women who had children (OR = 7.29, 95% CI: 3.04 to 17.46, p < 0.001) had 7.29 times higher odds to control over their husband’s earnings than women who did not have children. Religion, caste, education, employment and own mobile phone variables of left-behind wives were not significantly associated with control over their husbands’ earnings.

A significant association was observed between the husband’s age and the wives’ control over the husband’s earnings. Those wives whose husband’s age was above 36 years (OR: 3.53, 95% CI: 2.18 to 5.71, p < 0.001) had 3.53 times greater odds of control over their husband’s earnings than wives whose husband’s age was 36 years and below.

The results of a statistical analysis between the household characteristics and the wives’ control over their husband’s earnings are presented in table 4.28. Wives’ control over their husband’s earnings was found to be highly significantly associated with their household characteristics. Only the house type was not significantly associated with control over husbands’ earnings. The women whose household heads were female (OR = 95.87, 95% CI: 41.40 to 221.76, p < 0.001), aged 40 years and below (OR = 49.16, 95% CI: 25.74 to 93.89, p < 0.001), literate (OR = 3.15, 95% CI: 1.87 to 5.32, p < 0.001) and unemployed (OR = 8.49, 95% CI: 5.11 to 14.10, p < 0.001) had 95.87, 49.16, 3.15, and 8.49 times higher odds for the control over their husband’s earnings than women whose household heads were male, aged above 40 years, illiterate and employed respectively.

The women who live in nuclear families (OR = 34.29, 95% CI: 17.44, p < 0.001) had 34.29 times greater odds of controlling their husband’s earnings than women who live in an extended family system. Similarly, women living with 5 or less family members (OR: 12.16, 95% CI: 7.41 to 19.98, p < 0.001) were found to have 12.16 times higher odds of controlling their husband’s earnings than women who were living with more than 5 family members. The main source of income and women’s control over their husband’s income also showed a significant difference and women who received remittances as a main source of household income (OR = 4.02, 95% CI: 1.34 to 12.00, p = 0.013) had 4.02 times greater odds of controlling their husband’s earnings than women who had other sources than remittances as a source of household income.

#### Women’s autonomy: Decisions for own health care

Decision for their own health care is also one of the dimensions of women’s autonomy. This section details the results of decisions for women’s health care in the households (who made decisions) as a part of women’s autonomy. The later Section 4.6 describes only the types of health service utilisation by the women for their health problems.

The result of univariate analysis showed that about 87 percent of women aged above 32 years reported that they made the decisions about their own health care by themselves whereas about 57 percent of the women aged 32 and below made their own decisions for their health care. There was 5.15 times greater odds of making their own decisions for their health care by women aged over 32 years (OR = 5.15, 95% CI: 3.02 to 8.77, p < 0.001) as compared to the odds of women aged 32 and below. There is a significant association between the age of women and their autonomy to take decisions for their own health care. This result showed that the older left-behind wives have more decision-making power and their participation in decision-making for women’s health care. Similarly, the left-behind women who had property in their own name (OR = 4.11, 95% CI: 2.24 to 7.56, p < 0.001) and have children (OR = 7.03, 95% CI: 3.04 to 16.30, p < 0.001) were found to have greater odds 4.11 and 7.56 of making their own decisions about their own health care than the women without any property in their own name and no children respectively. Statistically significant differences were observed for women having property in their own name or children, with decisions for their own health care.

Husband’s age and occupation and the wives’ decisions about their own health care were found to be significantly associated. The wives whose husband’s age was over 36 years (OR = 4.58, 95% CI: 2.71 to 7.74, p < 0.001) had 4.58 times greater odds of taking their health care decisions by themselves than the wives whose husbands were 36 years and below. Similarly, the wives whose husbands were employed (OR = 1.66, 95% CI: 1.05 to 2.62, p = 0.031) had 1.66 times higher odds of taking their own decisions for their own health than the wives whose husbands were not employed.

The analysis results between the household characteristics and women’s decisions for their own health indicated that almost all variables were significantly associated (Table 4.28). Women whose household heads were female (OR = 88.30, 95% CI: 41.48 to 187.97, p < 0.001), aged 40 years and below (OR = 104.55, 95% CI: 43.32 to 252.32, p < 0.001), and literate (OR = 3.05, 95% CI: 1.81 to 5.14, p < 0.001) had higher odds of making their own decisions about their own health care than women whose household heads were male, above 40 years, and illiterate respectively. Similarly, women who live in a nuclear family (OR = 184.20, 95% CI: 44.37 to 764.68, p < 0.001) and with 5 or less family members (OR = 12.32, 95% CI: 7.47 to 20.33, p < 0.001) were found to have higher odds of making their own decisions about health care than women who live in an extended family and had more than 5 family members respectively. Likewise, the women who received remittances as a major household income (OR = 3.44, 95% CI: 1.20 to 9.87, p = 0.022) were found to have 3.44 times greater odds of making their own health care decisions than women who had other sources of household income. This result was also significantly associated. Similarly, women whose household total annual income was below national average (OR = 2.14, 95% CI: 1.30 to 3.55, p = 0.003) had 2.14 times higher odds of making their own health care decisions than women whose household annual income was above the national average.

#### Women’s autonomy: Decisions for major household purchases

Decision for major purchases is considered one of the elements in predicting women’s autonomy. The univariate logistic regression was performed to find the significantly associated factors and their strength. The results of the decisions about major household purchases in the migrants’ households are presented in table 4.28. The majority of women (65%) aged over 32 years were more likely to make their own decisions for major household purchases and only about 38 percent of women aged 32 years and below made their personal decisions for major household purchases. The left-behind women aged over 32 years (OR = 3.02, 95% CI: 1.99 to 4.60, p<0.001) had 3.02 times greater odds than the women left behind aged 32 years and below of making their own decisions for major household purchases. A significant difference was found between the women aged 32 years and under and above 32 years with regard to their decisions for purchasing major household goods. Similarly, left-behind wives having their own named property (OR = 2.65, 95% CI: 1.67 to 4.21, p< 0.001) and children (OR = 3.29, 95% CI: 1.38 to 7.85, p = 0.007) were found to have 2.65 and 3.29 times greater odds of making decisions about major household purchases than women without any property in their own name and no children respectively. The women with property and children were more likely to make decisions for major household purchases than women without any property and children. The other variables, for example, women’s religion, caste, education, employment and having own mobile phone showed a non-significance association for major household purchases.

A highly significant association was observed between the women’s own decisions for major household purchases and their husband’s age. The wives whose husband’s age was over 36 years (OR = 2.24, 95% CI: 1.64 to 3.76, p < 0.001) had 2.48 times greater odds of making their personal decisions for major household purchases than wives whose husband’s age was 36 years and below.

In the univariate analysis, six explanatory variables had significant associations with women’s decisions for major household purchases (Table 4.28). A higher odds ratio was obtained for women whose household heads were female ( OR = 63.0, 95% CI: 19.51 to 203.49, p < 0.001), aged 40 years and below (OR = 11.97, 95% CI: 7.17 to 19.40, p < 0.001), literate (OR = 2.26, 95% CI: 1.12 to 3.89, p = 0.003) and unemployed (OR = 4.30, 95% CI: 2.83 to 6.53, p < 0.001) than women whose household heads were male, aged over 40 years, illiterate and employed respectively. Likewise, women who live in a nuclear family (OR = 6.91, 95% CI: 4.44 to 10.73, p < 0.001) and have five or less family members (OR = 6.68, 95% CI: 4.05 to 11.02, p < 0.001) had 4.44 and 6.68 times greater odds of making their own decisions for major household purchases than women who live in an extended family and have more than five family members respectively. The family type and number of family members showed significant associations with the outcome. Moreover, no significant association was observed between the household income and its sources and women’s decisions about major household purchases. However, the wives left behind who received more remittances were more likely to make their own decisions for major household purchases than women who received less remittance.

#### Women’s autonomy: Decisions for daily household purchases

Women’s involvement in decision making for daily household purchases is considered a part of women’s autonomy. Women’s involvement in household purchases in the absence of their husbands was measured and data was analysed by using the univariate logistic regression to find the association of variables and their strength. The results are presented in table 4.28. About 87 percent of women aged over 32 reported that they made their own decisions for the purchase of their daily household needs and only 57 percent of women aged 32 and under made such decisions. The older left-behind wives (OR = 4.79, 95% CI: 2.83 to 8.09, p<0.001) were more likely to make decisions for daily household purchases with the odds of 4.79 times higher compared to women of young age The association of women’s religion, caste, education, employment and the decisions for daily household purchases by women left behind were not statistically significant. However, the illiterate left-behind wives were more likely to make their own decisions for daily household purchases when compared to the educated counterparts. The majority of left-behind wives (86%) who had property in their own name (86%) and children (71.9%) were more likely to make decisions for the purchase of daily needs in the house than left-behind wives without any property and children. The odds of the left-behind wives who had their own property (OR = 3.74, 95% CI: 2.06 to 6.78, p< 0.001) and children (OR = 7.03, 95% CI: 3.04 to 16.30, p< 0.001) were found to be 3.74 and 7.03 times higher of making their own decisions for daily household purchases compared to their respective counterparts.

Significant associations were observed between women’s decisions for daily household purchases and the husband’s age and employment status (Table 4.28). The left-behind wives whose husbands were over 36 years of age (OR = 4.27, 95% CI: 2.54 to 7.16, p < 0.001) had 4.27 times greater odds of making their own decisions for daily household purchases than the wives whose husbands were 36 years and under. Likewise, the wives of employed husbands (OR = 1.75, 95% CI: 1.11 to 2.77, p = 0.016) were found to have 1.75 times greater odds of making decisions about their daily household purchases than wives of unemployed husbands.

Eight explanatory variables showed highly significant associations with the outcome variable i.e. women’s decisions for daily household purchases in univariate analysis. The results are presented in table 4.28 below. Those women whose household heads were female (OR = 88.30, 95% CI: 41.48 to 187.97, p < 0.001) had 88.3 times greater odds of making their own decisions about purchasing daily household needs than women whose household heads were male. Similarly, those women whose household heads were aged 40 years and under (OR = 104.55, 95% CI: 43.30 to 252.32, p < 0.001), literate (OR = 2.84, 95% CI: 1.68 to 4.79, p < 0.001) and unemployed (OR = 10.44, 95% CI: 5.99 to 18.21, p < 0.001) had higher odds of 104.55, 2.84 and 10.44 times of making self-decisions for daily household purchases than women whose household heads were aged above 40 years, illiterate and employed respectively. There were strong significant associations between these variables with the women’s decisions about daily household purchases. Similarly, family type, number of family members, source of household income and total annual income showed significant associations with the women’s decisions for daily household purchases.

#### Women’s autonomy: Decisions for visits to family or relatives

As a part of women’s autonomy, the respondents were asked about the decisions for their visits in the absence of their husbands. The result showed that the majority of the women (80.0%) aged above 32 reported that they took their own decisions regarding their visits to family or relatives and only 52.2 percent of women aged 32 years and below made their own decisions for visits to family or relatives. The odds of decisions for making visits to family or relatives for women aged above 32 years (OR = 3.97, 95% CI: 2.49 to 6.33, p< 0.001) were found to be 3.97 times greater than women aged 32 and below. A statistically significant difference was observed between the age of the respondents and their decisions for the visit to family or relatives. This result shows that the decision for their visit tends to increase with their age. Similarly, the odds for women who had property in their own name (OR = 2.72, 95% CI: 1.63 to 4.53, p < 0.001) and children (OR = 5.02, 95% CI: 2.17 to 11.58, p < 0.001) were more likely to make their self-decisions for their visits than women who did not have property and children.

Table 4.28 The univariate logistic regression analysis of socio-demographic, husband's and household characteristics of respondents with women's autonomy variables

| Variables | Persons who decides | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Women’s earnings | | | | | | Husband’s earnings | | | | | | Own health care | | | | | |
| Women | | Someone else | |  |  | Women | | Someone else | |  |  | Women | | Someone else | |  |  |
| N | % | N | % | OR | p | N | % | N | % | OR | p | N | % | N | % | OR | p |
| **1. Socio-demographic** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Age** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 32 & below | 67 | 88.2 | 9 | 11.8 | 1 |  | 133 | 54.3 | 112 | 45.7 | 1 |  | 139 | 56.7 | 106 | 43.3 | 1 |  |
| Above 32 | 66 | 97.1 | 2 | 2.9 | 4.43 (0.92 to 21.29) | 0.063 | 129 | 83.2 | 26 | 16.8 | 4.18 (2.56 to 6.82) | <0.001 | 135 | 87.1 | 20 | 12.9 | 5.15 (3.02 to 8.77) | <0.001 |
| **Religion** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hindu | 89 | 91.8 | 8 | 8.2 | 1 |  | 181 | 67.3 | 88 | 32.7 | 1.27 (0.82 to 1.96) | 0.282 | 191 | 71.0 | 78 | 29.0 | 1.42 (0.91 to 2.20) | 0.123 |
| Other | 44 | 93.6 | 3 | 6.4 | 1.32 (0.33 to 5.22) | 0.694 | 81 | 61.8 | 50 | 38.2 | 1 |  | 83 | 63.4 | 48 | 36.6 | 1 |  |
| **Caste** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Upper | 52 | 86.7 | 8 | 13.3 | 1 |  | 116 | 66.7 | 58 | 33.3 | 1.10 (0.72 to 1.66) | 0.667 | 122 | 70.1 | 52 | 29.9 | 1.14 (0.75 to 1.75) | 0.542 |
| Lower | 81 | 96.4 | 3 | 3.6 | 4.15 (1.05 to 16.38) | 0.042 | 146 | 64.6 | 80 | 35.4 | 1 |  | 152 | 67.3 | 74 | 32.7 | 1 |  |
| **Education** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Illiterate | 15 | 88.2 | 2 | 11.8 | 1 |  | 25 | 73.5 | 9 | 26.5 | 1.51 (0.69 to 3.34) | 0.306 | 26 | 76.5 | 8 | 23.5 | 1.55 (0.68 to 3.52) | 0.299 |
| Literate | 118 | 92.9 | 9 | 7.1 | 1.75 (0.35 to 8.87) | 0.50 | 237 | 64.8 | 129 | 35.2 | 1 |  | 248 | 67.8 | 118 | 32.2 | 1 |  |
| **Employment** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unemployed | 0 |  | 0 |  |  |  | 170 | 66.4 | 86 | 33.3 | 1 |  | 173 | 67.6 | 83 | 32.4 | 1 |  |
| Employed | 133 | 92.4 | 11 | 7.6 |  |  | 92 | 63.9 | 52 | 36.1 | 0.90 (0.58 to 1.37) | 0.611 | 101 | 70.1 | 43 | 29.9 | 1.13 (0.72 to 1.75) | 0.597 |
| **Own named property** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 48 | 98.0 | 1 | 2.0 | 5.65 (0.70 to 45.47) | 0.104 | 91 | 85.0 | 16 | 15.0 | 4.06 (2.27 to 7.25) | <0.001 | 93 | 86.9 | 14 | 13.1 | 4.11 (2.24 to 7.56) | <0.001 |
| No | 85 | 89.5 | 10 | 10.5 | 1 |  | 171 | 58.4 | 122 | 41.6 | 1 |  | 181 | 61.8 | 112 | 38.2 | 1 |  |
| **Having children** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 128 | 93.4 | 9 | 6.6 | 5.96 (0.97 to 33.52) | 0.055 | 255 | 68.9 | 115 | 31.1 | 7.29 (3.04 to 17.46) | <0.001 | 266 | 71.9 | 104 | 28.1 | 7.03 (3.04 to 16.30) | <0.001 |
| No | 5 | 71.4 | 2 | 28.6 | 1 |  | 7 | 23.3 | 23 | 76.7 | 1 |  | 8 | 26.7 | 22 | 73.3 | 1 |  |
| **Own mobile phone** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 125 | 92.6 | 10 | 7.4 |  |  | 251 | 65.4 | 113 | 34.6 | 0.86 (0.29 to 2.52) | 0.780 | 262 | 68.2 | 122 | 31.8 | 0.72 (0.23 to 2.27) | 0.569 |
| No | 8 | 88.9 | 1 | 11.1 |  |  | 11 | 68.8 | 5 | 31.3 | 1 |  | 12 | 75.0 | 4 | 25.0 | 1 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2. Husband’s characteristics** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Age** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 36 & below | 70 | 87.5 | 10 | 12.5 | 1 |  | 138 | 55.6 | 110 | 44.4 | 1 |  | 143 | 57.7 | 105 | 42.3 | 1 |  |
| Above 36 | 63 | 98.4 | 1 | 1.6 | 9.0 (1.12 to 72.3.) | 0.039 | 124 | 81.6 | 28 | 18.4 | 3.53 (2.18 to 5.71) | <0.001 | 131 | 86.2 | 21 | 13.8 | 4.58 (2.71 to 7.74) | <0.001 |
| **Education** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Illiterate | 0 |  | 0 |  |  |  | 3 | 75.0 | 1 | 25.0 |  |  | 3 | 75.0 | 1 | 25.0 |  |  |
| Literate | 133 | 92.4 | 11 | 7.6 |  |  | 259 | 65.4 | 137 | 34.6 |  |  | 271 | 68.4 | 125 | 31.6 |  |  |
| **Occupation** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unemployed | 22 | 95.7 | 1 | 4.3 | 1.98 (0.24 to 16.28) | 0.542 | 196 | 67.8 | 93 | 32.2 | 1.45 (0.91 to 2.26) | 0.145 | 67 | 60.4 | 44 | 39.6 | 1 |  |
| Employed | 111 | 91.7 | 10 | 8.3 |  |  | 66 | 59.5 | 45 | 40.5 | 1 |  | 207 | 71.6 | 82 | 28.4 | 1.66 (1.05 to 2.62) | 0.031 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **3. Household characteristics** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Household head** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Female | 106 | 97.2 | 3 | 2.8 |  | <0.001\* | 255 | 86.1 | 41 | 13.9 | 95.87 (41.4 to 221.76) | <0.007 | 264 | 89.2 | 32 | 10.8 | 88.3 (41.48 to 187.97) | <0.001 |
| Male | 27 | 77.1 | 8 | 22.9 |  |  | 7 | 6.7 | 97 | 93.3 | 1 |  | 10 | 9.6 | 94 | 90.4 | 1 |  |
| **Age of HH head** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40 & below | 40 | 100 | 0 | 0.0 |  |  | 222 | 94.1 | 14 | 5.9 | 49.16 (25.74 to 93.89) | <0.001 | 230 | 97.5 | 6 | 2.5 | 104.55 (43.32 to 252.32) | <0.001 |
| Above 40 | 49 | 81.7 | 11 | 18.3 |  |  | 40 | 24.4 | 124 | 75.6 | 1 |  | 44 | 26.8 | 120 | 73.2 | 1 |  |
| **HH’s education** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Illiterate | 24 | 93.2 | 2 | 7.7 |  | 0.999\* | 31 | 43.1 | 41 | 56.9 | 1 |  | 34 | 47.2 | 38 | 52.8 | 1 |  |
| Literate | 109 | 92.4 | 9 | 7.6 |  |  | 231 | 70.4 | 97 | 29.6 | 3.15 (1.87 to 5.32) | <0.001 | 240 | 73.2 | 88 | 26.8 | 3.05 (1.82 to 5.14) | <0.001 |
| **HH’s occupation** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unemployed | 14 | 100 | 0 | 0.0 |  |  | 168 | 87.5 | 24 | 12.5 | 8.49 (5.11 to 14.10) | <0.001 | 172 | 89.6 | 20 | 10.4 | 8.94 (5.22 to 15.29) | <0.001 |
| Employed | 119 | 91.5 | 11 | 8.5 |  |  | 94 | 45.2 | 114 | 54.8 | 1 |  | 102 | 49.0 | 106 | 51.0 | 1 |  |
| **Family type** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Extended | 54 | 83.1 | 11 | 7.6 |  |  | 66 | 34.2 | 127 | 65.8 | 1 |  | 69 | 35.8 | 124 | 64.2 | 1 |  |
| Nuclear | 79 | 100 | 0 | 0.0 |  |  | 196 | 94.7 | 11 | 5.3 | 34.29 (17.44 to 67.42) | <0.001 | 205 | 99.0 | 2 | 1.0 | 184.2 (44.37 to 764.68) | <0.001 |
| **House type** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Permanent | 87 | 92.6 | 7 | 7.4 |  | 0.999\* | 162 | 62.3 | 98 | 37.7 | 1 |  | 170 | 65.4 | 90 | 34.6 | 1 |  |
| Semi & temporary | 46 | 92.0 | 4 | 8.0 |  |  | 100 | 71.4 | 40 | 28.6 | 1.51 (0.97 to 2.37) | 0.068 | 104 | 74.3 | 36 | 25.7 | 1.53 (0.97 to 2.42) | 0.068 |
| **Family members** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 or less | 86 | 96.6 | 3 | 3.4 |  | 0.035 | 225 | 83.0 | 46 | 17.0 | 12.16 (7.41 to 19.98) | <0.001 | 232 | 85.6 | 39 | 14.4 | 12.32 (7.47 to 20.33) | <0.001 |
| More than 5 | 47 | 85.5 | 8 | 14.5 |  |  | 37 | 28.7 | 92 | 71.3 | 1 |  | 42 | 32.6 | 87 | 67.4 | 1 |  |
| **Main source of HH income** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Remittances | 124 | 92.5 | 10 | 7.5 |  | 0.999\* | 257 | 66.8 | 128 | 33.2 | 4.02 (1.34 to 12.00) | 0.013 | 268 | 69.6 | 117 | 30.4 | 3.44 (1.20 to 9.87) | 0.022 |
| Other sources | 9 | 90.0 | 1 | 10.0 |  |  | 5 | 33.3 | 10 | 66.7 | 1 |  | 6 | 40.0 | 9 | 60.0 | 1 |  |
| **Total HH annual income** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Above national average | 102 | 91.9 | 9 | 8.1 |  | 0.999\* | 169 | 60.4 | 111 | 39.6 | 1 |  | 179 | 63.9 | 101 | 36.1 | 1 |  |
| Below national average | 31 | 93.9 | 2 | 6.1 |  |  | 93 | 77.5 | 27 | 22.5 | 2.26 (1.39 to 3.70) | 0.001 | 95 | 79.2 | 25 | 20.8 | 2.14 (1.30 to 3.55) | 0.003 |

HH: Household; \*: Fisher Exact test (Due to the low or zero frequency of the responses, the odds ratios were not calculated.)

Cont…..Table 4.28 The univariate logistic regression analysis of socio-demographic, husband’s and household characteristics of respondents with women’s autonomy variables.

| Variables | Persons who decides | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Major household purchases | | | | | | Daily household purchases | | | | | | Women’s visit to family or relatives | | | | | |
|  | Women | | Someone else | |  |  | Women | | Someone else | |  |  | Women | | Someone else | |  |  |
|  | N | % | N | % | OR | p | N | % | N | % | OR | p | N | % | N | % | OR | p |
| **1. Socio-demographic** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Age** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 32 & below | 92 | 37.6 | 153 | 62.4 | 1 |  | 140 | 57.1 | 105 | 42.9 | 1 |  | 123 | 50.2 | 122 | 49.8 | 1 |  |
| Above 32 | 100 | 64.5 | 55 | 35.5 | 3.02 (1.99 to 4.60) | <0.001 | 134 | 86.5 | 21 | 13.5 | 4.79 (2.83 to 8.09) | <0.001 | 124 | 80.0 | 31 | 20.0 | 3.97 (2.49 to 6.33) | <0.001 |
| **Religion** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hindu | 135 | 50.2 | 134 | 49.8 | 1.31 (0.86 to 1.99) | 0.210 | 189 | 70.3 | 80 | 29.7 | 1.28 (0.82 to 1.99) | 0.278 | 171 | 63.6 | 98 | 36.4 | 1.26 (0.82 to 1.94) | 0.284 |
| Other | 57 | 43.5 | 74 | 56.5 | 1 |  | 85 | 64.9 | 46 | 35.1 | 1 |  | 76 | 58.0 | 55 | 42.0 | 1 |  |
| **Caste** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Upper | 80 | 46.0 | 94 | 54.0 | 1 |  | 121 | 69.5 | 53 | 30.5 | 1.09 (0.71 to 1.67) | 0.694 | 111 | 63.8 | 63 | 36.2 | 1.17 (0.78 to 1.75) | 0.461 |
| Lower | 112 | 49.6 | 114 | 50.4 | 1.15 (0.78 to 1.72) | 0.477 | 153 | 67.7 | 73 | 32.3 | 1 |  | 136 | 60.2 | 90 | 39.8 | 1 |  |
| **Education** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Illiterate | 20 | 58.8 | 14 | 41.2 | 1.61 (0.79 to 3.29) | 0.190 | 26 | 76.5 | 8 | 23.5 | 1.55 (0.68 to 3.52) | 0.299 | 26 | 76.5 | 8 | 23.5 | 1 |  |
| Literate | 172 | 53.0 | 194 | 53.0 | 1 |  | 248 | 67.8 | 118 | 32.3 | 1 |  | 221 | 60.4 | 145 | 39.6 | 0.47 (0.21 to 1.06) | 0.070 |
| Employment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unemployed | 126 | 49.2 | 130 | 50.8 | 1.14 (0.76 to 1.73) | 0.515 | 175 | 68.4 | 81 | 31.6 | 1 |  | 158 | 61.7 | 98 | 38.3 | 1 |  |
| Employed | 66 | 45.8 | 78 | 54.2 | 1 |  | 99 | 68.8 | 45 | 31.3 | 1.02 (0.66 to 1.58) | 0.936 | 89 | 61.8 | 55 | 38.2 | 1.0 (0.66 to 1.53) | 0.986 |
| **Own named property** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 70 | 65.4 | 37 | 34.6 | 2.65 (1.67 to 4.21) | <0.001 | 92 | 86.0 | 15 | 14.0 | 3.74 (2.06 to 6.78) | <0.001 | 83 | 77.6 | 24 | 22.4 | 2.72 (1.63 to 4.53) | <0.001 |
| No | 122 | 41.6 | 171 | 58.4 | 1 |  | 182 | 62.1 | 111 | 37.9 | 1 |  | 164 | 56.0 | 129 | 44.0 | 1 |  |
| **Having children** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 185 | 50.0 | 185 | 50.0 | 3.29 (1.38 to 7.85) | 0.007 | 266 | 71.9 | 104 | 28.1 | 7.03 (3.04 to 16.30) | <0.001 | 239 | 64.6 | 131 | 35.4 | 5.02 (2.17 to 11.58) | <0.001 |
| No | 7 | 23.3 | 23 | 76.7 | 1 |  | 8 | 26.7 | 22 | 73.3 | 1 |  | 8 | 26.7 | 22 | 73.3 | 1 |  |
| **Own mobile phone** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yes | 184 | 47.9 | 200 | 52.1 | 0.92 (0.34 to 2.50) | 0.870 | 262 | 68.2 | 122 | 31.8 | 0.72 (0.23 to 2.27) | 0.569 | 236 | 61.5 | 148 | 38.5 | 0.73 (0.25 to 2.13) | 0.558 |
| No | 8 | 50.0 | 8 | 50.0 | 1 |  | 12 | 75.0 | 4 | 25.0 | 1 |  | 11 | 68.8 | 5 | 31.3 | 1 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2. Husband’s characteristics** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Age** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 36 & below | 98 | 39.5 | 150 | 60.5 | 1 |  | 144 | 58.1 | 104 | 41.9 | 1 |  | 126 | 50.8 | 122 | 49.2 | 1 |  |
| Above 36 | 94 | 61.8 |  |  | 2.48 (1.64 to 3.76) | <0.001 | 130 | 85.5 | 22 | 14.5 | 4.27 (2.54 to 7.16) | <0.001 | 121 | 79.6 | 31 | 20.4 | 3.78 (2.37 to 6.03) | <0.001 |
| **Education** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Illiterate | 1 | 25.0 | 3 | 75.0 |  |  | 2 | 50.0 | 2 | 50.0 |  |  | 2 | 50.0 | 2 | 50.0 |  |  |
| Literate | 191 | 48.2 | 205 | 51.8 |  |  | 272 | 68.7 | 124 | 31.3 |  |  | 245 | 61.9 | 151 | 38.1 |  |  |
| **Occupation** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unemployed | 49 | 44.1 | 62 | 55.9 | 1 |  | 66 | 59.5 | 45 | 40.5 | 1 |  | 63 | 56.8 | 48 | 43.2 | 1 |  |
| Employed | 143 | 49.5 | 146 | 50.5 | 1.24 (0.80 to 1.92) | 0.339 | 208 | 72.0 | 81 | 28.0 | 1.75 (1.11 to 2.77) | 0.016 | 184 | 63.7 | 105 | 36.3 | 1.34 (0.86 to 2.09) | 0.204 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **3. Household characteristics** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Household head** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Female | 189 | 63.9 | 107 | 36.1 | 63.0 (19.51 to 203.49) | <0.001 | 265 | 89.5 | 31 | 10.5 | 88.30 (41.48 to 187.97) | <0.001 | 243 | 82.1 | 53 | 17.9 | 125.15 (44.05 to 355.54) | <0.001 |
| Male | 3 | 2.9 | 101 | 97.1 | 1 |  | 9 | 8.7 | 95 | 91.3 | 1 |  | 4 | 3.8 | 100 | 96.2 | 1 |  |
| **Age of HH head** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40 & below | 165 | 69.9 | 71 | 30.1 | 11.79 (7.17 to 19.40) | <0.001 | 230 | 97.5 | 6 | 2.5 | 104.55 (43.30 to 252.32) | <0.001 | 211 | 89.4 | 25 | 10.6 | 30.01 (17.22 to 52.30) | <0.001 |
| Above 40 | 27 | 16.5 | 137 | 83.5 | 1 |  | 44 | 26.8 | 120 | 73.2 | 1 |  | 36 | 22.0 | 128 | 78.0 | 1 |  |
| **HH’s education** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Illiterate | 23 | 31.9 | 49 | 68.1 | 1 |  | 35 | 48.6 | 37 | 51.4 | 1 |  | 31 | 43.1 | 41 | 56.9 | 1 |  |
| Literate | 169 | 51.5 | 159 | 48.5 | 2.26 (1.12 to 3.89) | 0.003 | 239 | 72.9 | 89 | 27.1 | 2.84 (1.68 to 4.79) | <0.001 | 216 | 65.9 | 112 | 34.1 | 2.55 (1.52 to 4.29) | <0.001 |
| **HH’s occupation** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unemployed | 127 | 66.1 | 65 | 33.9 | 4.30 (2.83 to 6.53) | <0.001 | 174 | 90.6 | 18 | 9.4 | 10.44 (5.99 to 18.21) | <0.001 | 158 | 82.3 | 34 | 17.7 | 6.21 (3.92 to 9.86) | <0.001 |
| Employed | 65 | 31.2 | 143 | 68.6 | 1 |  | 100 | 48.1 | 108 | 51.9 | 1 |  | 89 | 42.8 | 119 | 57.2 | 1 |  |
| **Family type** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Extended | 48 | 24.9 | 145 | 75.1 | 1 |  | 69 | 35.8 | 124 | 64.2 | 1 |  | 54 | 28.0 | 139 | 72.0 | 1 |  |
| Nuclear | 144 | 69.6 | 63 | 30.4 | 6.91 (4.44 to 10.73) | <0.001 | 205 | 99.9 | 2 | 1.0 | 184.2 (44.37 to 764.68) | <0.001 | 193 | 93.2 | 14 | 6.8 | 35.49 (18.96 to 66.43) | <0.001 |
| **House type** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Permanent | 129 | 49.6 | 131 | 50.4 | 1.20 (0.80 to 1.82) | 0.379 | 171 | 65.8 | 89 | 34.2 | 1 |  | 157 | 60.4 | 103 | 39.6 | 1 |  |
| Semi & temporary | 63 | 45.0 | 77 | 55.0 | 1 |  | 103 | 73.6 | 37 | 26.4 | 1.45 (0.92 to 2.28) | 0.110 | 90 | 64.3 | 50 | 35.7 | 1.18 (0.77 to 1.81) | 0.444 |
| **Family members** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 or less | 167 | 61.6 | 104 | 38.4 | 6.68 (4.05 to 11.02) | <0.001 | 232 | 85.6 | 39 | 14.4 | 12.32 (7.47 to 20.33) | <0.001 | 213 | 78.6 | 58 | 21.4 | 10.26 (6.30 to 16.71) | <0.001 |
| More than 5 | 25 | 19.4 | 104 | 80.6 | 1 |  | 42 | 32.6 | 87 | 67.4 | 1 |  | 34 | 26.4 | 95 | 73.6 | 1 |  |
| **Main source of HH income** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Remittances | 186 | 48.3 | 199 | 51.7 | 1.40 (0.49 to 4.02) | 0.529 | 268 | 69.6 | 117 | 30.4 | 3.44 (1.20 to 9.87) | 0.022 | 241 | 62.6 | 144 | 37.4 | 2.51 (0.88 to 7.20) | 0.087 |
| Other sources | 6 | 40.0 | 9 | 60.0 | 1 |  | 6 | 40.0 | 9 | 60.0 | 1 |  | 6 | 40.0 | 9 | 60.0 | 1 |  |
| **Total HH annual income** | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Above national average | 136 | 48.6 | 144 | 51.4 | 1.08 (0.70 to 1.66) | 0.727 | 178 | 63.6 | 102 | 36.4 | 1 |  | 158 | 56.4 | 122 | 43.6 | 1 |  |
| Below national average | 56 | 46.7 | 64 | 53.3 | 1 |  | 96 | 80.0 | 24 | 20.0 | 2.29 (1.38 to 3.81) | 0.001 | 89 | 74.2 | 31 | 25.8 | 2.21 (1.38 to 3.55) | 0.001 |

HH: Household; \*: Fisher Exact test (Due to the low or zero frequency of the responses, the odds ratios were not calculated A Fisher exact test was performed.)

The result of univariate analysis showed that the wives whose husbands were aged above 36 years (OR = 3.78, 95% CI: 2.37 to 6.03, p < 0.001) had 3.78 times greater odds of taking their own decisions for their visit to family or relatives than wives whose husbands were 36 years and below age. The husband’s age and the wives’ own decision for visit to family or relatives were highly significantly associated but no significant association was observed for the husband’s occupation.

The results of univariate analysis indicated that most of the explanatory variables were significantly associated with the outcome variable i.e. women’s decisions about visiting their family or relatives (Table 4.28).

Women whose household heads were female (OR = 125.15, 95% CI: 44.05 to 355.54, p < 0.001) had greater odds of taking their self-decisions for their visits to family or relatives than women who had male household heads. Similarly, the characteristics of household heads such as the age (OR = 30.01, 95% CI: 17.22 to 52.30, p < 0.001), education (OR = 2.55, 95% CI: 1.52 to 4.29, p < 0.001), and occupation (OR = 6.21, 95% CI: 3.92 to 9.86, p < 0.001) were found to be strongly associated with women’s own decisions to visit their family or relatives. Furthermore, the family system and number of family members were also significantly associated with women’s self-decisions for their movement. The women who lived in a nuclear family (OR = 35.49, 95% CI: 18.96 to 66.43, p < 0.001) and had five and less family members (OR = 10.26, 95% CI: 6.30 to 16.71, p < 0.001) were more likely to make their own decisions for their visits to family or relatives than women who lived in an extended family and had above five family members. The other factors such as the main income source of households and house type were not associated with women’s decisions for their visits to family or relatives. However, the women having low household income were more likely to make self-decisions for their movement than women with higher household income.

### Women’s participation in all four decisions (decisions for their own health care, major household purchase, daily household purchase and visit to their family or relatives)

The dimension of women’s autonomy is also determined by their ability to make decisions and their participation in the decision-making process in the household. This section relates to women’s participation in decision making in the household. Among 400 left-behind women, about 44 percent (n = 177) of women respondents said that they made all four decisions (decisions for their own health care, major household purchases, daily household purchases and visit to their family or relatives) by themselves in the household in the absence of their husband.

The increasing age of women was found to be associated with making the majority of the decisions in the household by themselves. The odds of 2.63 for women aged above 32 years (OR = 2.63, 95% CI: 1.74 to 3.98, p < 0.001) suggests that they had 2.63 times greater odds of making all four decisions in the household than women aged 32 years and below. Women’s participation in decision making was significantly associated with their age. The women who belong to the Hindu religion (OR = 1.20, 95% CI: 0.79 to 1.83, p = 0.395) had 1.20 times greater odds of making their own decisions about their own health care, major household purchases, daily household purchases and visits to their family or relatives than women who follow other religions. As to caste, lower caste women were found to have greater odds of 1.28 for making the majority of decisions than women of higher caste (OR = 1.28, 95% CI: 0.86 to 1.91, p = 0.224). Both variables, the religion and caste of the women were not found to have a statistically significant difference in decisions made by the women themselves. Furthermore, there were greater odds of 1.90 for illiterate women making more decisions in the household than educated women (OR = 1.90, 95% CI: 0.93 to 3.88, p = 0.078). Similarly, the unemployed women (OR = 1.18, 95% CI: 0.78 to 1.78, p = 0.435) had 1.18 times greater odds of making their own decisions for their health care, household purchases and their visit than employed women. Women having property in their own name (OR = 1.92, 95% CI: 1.23 to 3.01, p = 0.004) and children (OR = 2.79, 95% CI: 1.17 to 6.67, p = 0.021) were found higher odds of 1.92 and 2.79 times to make more household decisions than women who did not have any property and children respectively. Significant associations were observed between the women’s own decisions for their own health care, household purchases and visit to family or relatives and women who had property in their own name or not and the women who had children or not.

Table 4.29 The association of women’s decision for all four decisions (Health care, major and daily household purchases and visit to family or relatives) by respondent’s background characteristics

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Migrant households** | | | |  |  |
| **Women who decides all four decisions** | | | |
| **Yes** | | **No** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  |  |  |  |  |  |
|  | 32 and below | 86 | 35.1 | 159 | 64.9 | 1 |  |
|  | Above 32 | 91 | 58.7 | 64 | 41.3 | 2.63 (1.74 to 3.98) | <0.001 |
| **Religion** | |  |  |  |  |  |  |
|  | Hindu | 123 | 45.7 | 146 | 54.3 | 1.20 (0.79 to 1.83) | 0.395 |
|  | Other | 54 | 41.2 | 77 | 58.8 | 1 |  |
| **Caste** | |  |  |  |  |  |  |
|  | Upper | 71 | 40.8 | 103 | 59.2 | 1 |  |
|  | Lower | 106 | 46.9 | 120 | 53.1 | 1.28 (0.86 to 1.91) | 0.224 |
| **Education** | |  |  |  |  |  |  |
|  | Illiterate | 20 | 58.8 | 14 | 41.2 | 1.90 (0.93 to 3.88) | 0.078 |
|  | Literate | 157 | 42.9 | 209 | 57.1 | 1 |  |
| **Employment** | |  |  |  |  |  |  |
|  | Unemployed | 117 | 45.7 | 139 | 54.3 | 1.18 (0.78 to 1.78) | 0.435 |
|  | Employed | 60 | 41.7 | 84 | 58.3 | 1 |  |
| **Own named property** | | |  |  |  |  |  |
|  | Yes | 60 | 56.1 | 47 | 43.9 | 1.92 (1.23 to 3.01) | 0.004 |
|  | No | 117 | 39.9 | 176 | 60.1 | 1 |  |
| **Having children** | |  |  |  |  |  |  |
|  | Yes | 170 | 45.9 | 200 | 54.1 | 2.79 (1.17 to 6.67) | 0.021 |
|  | No | 7 | 23.3 | 23 | 76.7 | 1 |  |
| **Own mobile phone** | | |  |  |  |  |  |
|  | Yes | 170 | 44.3 | 214 | 55.7 | 1.02 (0.37 to 2.80) | 0.967 |
|  | No | 7 | 43.8 | 9 | 56.3 | 1 |  |

### Autonomy of wives of non-migrants

This section presents an analysis of the wives’ of non-migrants control over financial resources, their decisions for their own health care, purchases of major and daily goods and their visits to family or relatives. The logistic regression (detail in Section 4.3) was run to find the association between the variables and their strength.

#### Women’s autonomy: Control over own earnings

Among 400 wives of non-migrants, only 171 (42.8%) wives of non-migrants were found to have their own earnings. Only the gender of household heads showed significant association. The wives of non-migrants with a female household head had greater odds (OR = 3.27, 95% CI: 1.48 to 7.26, p = 0.003) of having control over their husband’s earnings compared to wives living with male headship The other variables did not show a significant association with women’s control over their own earnings (Appendix 14: Table 14.1-3).

#### Women’s autonomy: Control over husband’s earnings

Husband’s education, household head’s gender and occupation were significantly associated with women’s control over their husband’s earnings in non-migrant households (Appendix 14: Table 14.4-6).

#### Women’s autonomy: Decisions for women’s own health care

Women’s age, having children, husband’s age and occupation, household head’s gender, age and occupation had a significant association with the decisions for women’s own health care. The results are presented in Appendix 14: Table: 14.7-9.

#### Women’s autonomy: Decisions for major and daily household purchases

Husband’s age, household head’s gender, age and occupation showed significant association with women’s decisions about major purchases (Appendix: Table 14.10-12). For daily purchases, the variables such as women’s age, education, husband’s age, household gender, occupation and household income were significantly associated with women’s decisions for daily household purchases (Appendix 14: Table 14.13-15).

#### Women’s autonomy: Decisions for visits to family and relatives

Husband’s age, household head’s gender, age and occupation and house type showed significant association with the women’s decisions for their visits to family or relatives. The analysis results are presented in Appendix 14: Table 14.16-18.

### Measurement of women’s autonomy

Women’s autonomy is complex and multi-dimensional. There was no single classification or agreed method for measuring women’s autonomy in the literature (Kishor, 1995; Jejeebhoy and Sathar, 2001). However, the commonly used classification of women’s autonomy is “high” or “low” autonomy (Jejeebhoy and Sathar, 2001) or “low”, “medium” and “high” autonomy (Kishor, 1995; Yabiku *et al.*, 2010). In order to measure the overall autonomy of left-behind wives, the autonomy score was calculated individually. For this, each respondent was asked questions related to access and control over financial resources such as their own earnings, husband’s earnings, decisions for their own health care, major and daily household purchases, decisions about their visits to family or relatives, participation in politics and social groups. The respondents who said yes to each autonomy item were given a score of 1 and no for 0. The responses to each autonomy item were then added to give the final autonomy score. The overall score for autonomy ranges from 0 to 8. A higher value represents greater autonomy. For descriptive analysis, women’s autonomy was categorised into three categories i.e. low, medium and high autonomy based on the score (Table 4.30). A score from 0-2 was included in low autonomy; 3-5 in medium and 6-8 in high autonomy, so that each category has three distributions. A similar practice was adapted by Kishor (1995) in Egypt; Yabiku *et al.* (2010) in Mozambique and Sathar and Kazi (2000) in Pakistan.

Table 4.30 Score of autonomy category

|  |  |
| --- | --- |
| **Autonomy category** | **Score** |
| Low | 0 to 2 |
| Medium | 3 to 5 |
| High | 6 to 8 |

#### Women’s autonomy between left-behind wives and wives of non-migrants

This result (Table 4.31) showed that left-behind wives had greater autonomy than the wives of non-migrants. The majority of left-behind wives experienced medium (37.5%) and higher (32.0%) autonomy for access to and control over economic resources, decision-making, freedom of movement and social and political freedom compared to the wives of non-migrants which were found to be only about 8.2 percent for medium and 4.2 percent for higher autonomy respectively. In contrast, the majority of the wives of non-migrants either had low autonomy (87.8%) in their finances, decision-making, movement, and social and political freedom compared to the wives left behind (Table 4.31).

Table 4.31 Frequency and percentage of women’s autonomy and left-behind wives and wives of non-migrants

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Autonomy Category** | | **Left-behind wives** | | **Wives of non-migrants** | |
| **N** | **%** | **N** | **%** |
|  | Low autonomy | 122 | 30.5 | 350 | 87.6 |
|  | Medium autonomy | 150 | 37.5 | 33 | 8.2 |
|  | High autonomy | 128 | 32.0 | 17 | 4.2 |

### Measurements of overall autonomy of left-behind wives

To find the associated variables with women’s autonomy, a logistic regression was performed between each explanatory variable with women’s autonomy at one time. In order to examine the relationship between women’s autonomy and the explanatory variables in the logistic regression, the dependent variable: women’s autonomy was coded into binary, with low autonomy was coded into 0 and medium and high autonomy into 1. The results of the logistic regression analysis are presented below.

#### Left-behind women’s autonomy by their background characteristics

The univariate analysis of women’s overall autonomy and respondent’s background variables are presented in table 4.32. The result of logistic regression showed that the autonomy of women was more likely to be associated significantly with factors such as women’s age, having property in their own name, and having children. The other variables such as women’s religion, caste, education and employment status were not significantly associated.

About 88 percent of women aged above 32 years had greater autonomy which was only 58 percent in the case of women aged 32 years and below. The women whose age was over 32 years (OR = 5.19, 95% CI: 3.02 to 8.94, p < 0.001) had 5.19 times higher odds of having overall autonomy than women whose age was 32 years and below. Similarly, the women who had any property in their own name (OR = 4.76, 95% CI: 2.50 to 9.07, p < 0.001) and children (OR = 7.43, 95% CI: 3.20 to 17.22, p < 0.001) also had greater autonomy with odds 4.76 and 7.43 times higher for their autonomy than women who did not have any property or children respectively. The higher odds for the women, who were employed, followed the Hindu religion and belonged to an upper caste indicated that they had higher autonomy than women who were unemployed, followed other religions and belonged to a lower caste.

Table 4.32 Univariate analysis for the association between the women’s autonomy and respondent’s background characteristics

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Women’s autonomy** | | | |  |  |
| **Low autonomy** | | **High autonomy** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  |  |  |  |  |  |
|  | 32 and below | 103 | 42.0 | 142 | 58.0 | 1 |  |
|  | Above 32 | 19 | 12.3 | 136 | 87.7 | 5.19 (3.02 to 8.94) | <0.001 |
| **Religion** | |  |  |  |  |  |  |
|  | Hindu | 76 | 28.3 | 193 | 71.7 | 1.37 (0.88 to 2.15) | 0.163 |
|  | Other | 46 | 35.1 | 85 | 64.9 | 1 |  |
| **Caste** | |  |  |  |  |  |  |
|  | Upper | 50 | 28.7 | 124 | 71.3 | 1.16 (0.75 to 1.79) | 0.501 |
|  | Lower | 72 | 31.9 | 154 | 68.1 |  |  |
| **Education** | |  |  |  |  |  |  |
|  | Illiterate | 7 | 20.6 | 27 | 79.4 | 1.77 (0.75 to 4.18) | 0.194 |
|  | Literate | 115 | 31.4 | 251 | 68.6 | 1 |  |
| **Employment** | |  |  |  |  |  |  |
|  | Unemployed | 82 | 32.0 | 174 | 68.0 | 1 |  |
|  | Employed | 40 | 27.8 | 104 | 72.2 | 1.23 (0.78-1.92) | 0.439 |
| **Own named property** | | |  |  |  |  |  |
|  | Yes | 12 | 11.2 | 95 | 88.8 | 4.76 (2.50 to 9.07) | <0.001 |
|  | No | 110 | 37.5 | 183 | 62.5 | 1 |  |
| **Having children** | | |  |  |  |  |  |
|  | Yes | 100 | 27.0 | 270 | 73.0 | 7.43 (3.20 to 17.22) | <0.001 |
|  | No | 22 | 73.3 | 8 | 26.7 | 1 |  |
| **Own mobile phone** | | |  |  |  |  |  |
|  | Yes | 118 | 30.7 | 266 | 69.3 |  |  |
|  | No | 4 | 25.0 | 12 | 75.0 |  |  |

#### Husband’s characteristics and overall autonomy of left-behind wives

Significant associations were observed between women’s autonomy and the husband’s age and employment status. The women whose husbands were over 36 years and employed experienced more autonomy than the women whose husbands were aged 36 years and below and unemployed.

Table 4.33 Association between women’s autonomy and husband’s characteristics

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Women’s autonomy** | | | |  |  |
| **Low autonomy** | | **High autonomy** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Husband’s age** | |  |  |  |  |  |  |
|  | 36 and below | 102 | 41.1 | 146 | 58.9 | 1 |  |
|  | Above 36 | 20 | 13.2 | 132 | 86.8 | 4.61 (2.70 to 7.87) | <0.001 |
| **Husband’s education** | | | |  |  |  |  |
|  | Illiterate | 1 | 25.0 | 3 | 75.0 |  |  |
|  | Literate | 121 | 30.6 | 275 | 69.4 |  |  |
| **Husband’s occupation** | | | |  |  |  |  |
|  | Unemployed | 44 | 39.6 | 67 | 60.4 | 1 |  |
|  | Employed | 78 | 27.0 | 211 | 73.0 | 1.78 (1.12 to 2.82) | 0.014 |

#### Overall autonomy and household characteristics of left-behind wives

The results of the univariate analysis of logistic regression between women’s autonomy and household characteristics are presented in table 4.34.

Significant associations were found between the women’s overall autonomy and households’ heads gender, age, education and occupation. The women whose household heads were female, aged 40 and below, literate and unemployed had greater odds of overall autonomy than women whose household heads were male, aged above 40 years, illiterate and employed respectively. Similarly, the women who were living in a nuclear family and had 5 or less family members were observed to have higher odds of overall autonomy than women who lived in an extended family and had more than 5 family members. Likewise, the women who lived in a semi or temporary home and received remittances and had a household’s total annual income below the national average also had greater odds of autonomy than women who lived in a permanent home, did not receive remittances and had a household’s annual income above the national average respectively.

Table 4.34 Association between women’s autonomy and household characteristics

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Women’s autonomy** | | | |  |  |
| **Low autonomy** | | **High autonomy** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Household head** | |  |  |  |  |  |  |
|  | Male | 95 | 88.8 | 12 | 11.2 | 1 |  |
|  | Female | 27 | 9.2 | 266 | 90.8 | 77.99 (37.99 to 160.11) | <0.001 |
| **Age of household head** | | | |  |  |  |  |
|  | 40 and below | 6 | 2.5 | 230 | 97.5 | 92.64 (38.52 to 222.80) | <0.001 |
|  | Above 40 | 116 | 70.7 | 48 | 29.3 | 1 |  |
| **Household head’s education** | | | |  |  |  |  |
|  | Illiterate | 37 | 51.4 | 35 | 48.6 | 1 |  |
|  | Literate | 85 | 25.9 | 243 | 74.1 | 3.02 (1.79 to 5.10) | <0.001 |
| **Household head’s occupation** | | | |  |  |  |  |
|  | Unemployed | 19 | 9.9 | 173 | 90.1 | 8.93 (5.17 to 15.42) | <0.001 |
|  | Employed | 103 | 49.5 | 105 | 50.5 | 1 |  |
| **Family type** | |  |  |  |  |  |  |
|  | Extended | 120 | 62.2 | 73 | 37.8 | 1 |  |
|  | Nuclear | 2 | 1.0 | 205 | 99.0 | 168.49 (40.62 to 698.97) | <0.001 |
| **House type** | |  |  |  |  |  |  |
|  | Permanent | 87 | 33.5 | 173 | 66.5 | 1 |  |
|  | Semi and Temporary | 35 | 25.0 | 105 | 75.0 | 1.51 (0.95 to 2.39) | 0.080 |
| **Family members** | |  |  |  |  |  |  |
|  | 5 or less | 38 | 14.0 | 233 | 86.0 | 11.45 (6.95 to 18.85) | <0.001 |
|  | More than 5 | 84 | 65.1 | 45 | 34.9 | 1 |  |
| **Main source of HH income** | | | |  |  |  |  |
|  | Remittances | 113 | 29.4 | 272 | 70.6 | 3.61 (1.26 to 10.38) | 0.017 |
|  | Other sources | 9 | 60.0 | 6 | 40.0 | 1 |  |
| **Total annual income** | | |  |  |  |  |  |
|  | Above national average | 98 | 35.0 | 182 | 65.0 | 1 |  |
|  | Below national average | 24 | 20.0 | 96 | 80.0 | 2.15 (1.29 to 3.59) | 0.003 |

### Multivariate analysis of women’s autonomy

This section presents the results of the multivariate analysis of explanatory variables with the autonomy variable.

#### Background characteristics of respondents and women’s autonomy

This sub-section presents the results of the initial and final models of multivariate analysis between respondent’s socio-demographic variables and the autonomy of wives left behind which are presented in table 4.35. The results of intermediate models are presented in Appendix 13. The variables age, religion, own named property and the numbers of children were found to have significant association with women’s autonomy in the initial model and all these variables also retained in the final model showed significant association. The other variables caste, education, occupation were not found to be significant in either model.

Table 4.35 Multivariate logistic regression model of outcome variable ‘women’s autonomy’ with women’s background variables

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables retained in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| **Initial model** |  |  |  |  |
| Age | 3.76 | 2.09 | 6.77 | <0.001 |
| Religion | 1.87 | 1.00 | 3.47 | 0.049 |
| Caste | 1.04 | 0.57 | 1.90 | 0.903 |
| Education | 1.27 | 0.50 | 3.26 | 0.618 |
| Occupation | 1.17 | 0.70 | 1.94 | 0.545 |
| Own named property | 3.72 | 1.87 | 7.42 | <0.001 |
| Having children | 5.44 | 2.23 | 13.27 | <0.001 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| Age | 3.81 | 2.16 | 6.74 | <0.001 |
| Religion | 1.90 | 1.15 | 3.14 | 0.012 |
| Own name property | 3.59 | 1.82 | 7.09 | <0.001 |
| Having children | 5.44 | 2.23 | 13.26 | <0.001 |

#### Husband’s characteristics and women’s autonomy

Husband’s age was found significant in both the initial and final model. Husband’s age was associated with women’s autonomy.

Table 4.36 Multivariate logistic regression model of outcome variable ‘women’s autonomy’ with husband’s characteristics

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Model** | **Variables in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| Initial model | Husband’s age | 4.36 | 2.54 | 7.48 | <0.001 |
|  | Husband’s occupation | 1.37 | 0.84 | 2.21 | 0.206 |
|  |  |  |  |  |  |
| Final model | Husband’s age | 4.61 | 2.70 | 7.87 | <0.001 |

#### Household characteristics and women’s autonomy

Table 4.37 explains the results of the multivariate analysis of household characteristics and the autonomy of the left-behind wives. Household head’s gender, age, family type were found to be significant in the initial model. However, only four variables: household head’s age, gender, occupation and family types (p < 0.005) showed significant association with the autonomy of the left-behind wives.

Table 4.37 Multivariate logistic regression model of outcome variable ‘women’s autonomy’ with household variables

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables retained in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| **Initial model** |  |  |  |  |
| HH\* gender | 5.72 | 2.16 | 15.15 | <0.001 |
| HH age | 8.74 | 2.93 | 26.11 | <0.001 |
| HH education | 1.69 | 0.67 | 4.29 | 0.271 |
| HH occupation | 2.65 | 1.11 | 6.31 | 0.028 |
| Family type | 19.40 | 4.13 | 91.13 | <0.001 |
| House type | 1.28 | 0.53 | 3.08 | 0.580 |
| Total family members | 1.55 | 0.67 | 3.55 | 0.304 |
| Total annual household income | 1.02 | 0.39 | 2.68 | 0.971 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| HH gender | 5.63 | 2.28 | 13.90 | <.001 |
| HH age | 10.52 | 3.69 | 29.99 | <.001 |
| HH occupation | 2.73 | 1.16 | 6.40 | 0.021 |
| Family type | 22.48 | 4.95 | 102.06 | <.001 |

\*: HH = Household head

### All variables and women’s autonomy

This section describes the results of the multivariate analysis of all explanatory variables relating to women’s autonomy which are presented in table 4.38. All variables were entered into the logistic model. Household head’s gender, age, occupation, family type and number of family members were found to be significantly associated with women’s autonomy in the initial model. However, women’s age, number of children, household head’s gender and age, family type and number of family members showed a significant association with women’s autonomy in the final model. Initially, women’s age and the number of children were not significant but were observed to be significant in the final model. A wider confidence interval for odds ratios was observed in some of the explanatory variables. The literature suggests that wider confidence interval results can be by multicollinearity of the variables or categories of predictors having a small number (Petrie and Sabin, 2000). For multicollinearity, bivariate correlations between the variables were checked through a correlation matrix (Appendix 8). None of the variables were found to be highly correlated (Spearman’s correlation coefficient, r = 0.8 to 1) (Garson, 2012). Generally, a correlation coefficient between the variables above 0.8 is said to be highly correlated (Kline, 2011; Garson, 2012). .However, some of the variables were moderately correlated to each other. Petrie and Sabin (2000) and Kline (2011) argued that the correlated variables do not necessarily have interaction effects on the outcome variable. Similarly, multivariate multicollinearity of the variables was also checked by calculating the tolerance value or variance inflation factor (VIF). Tolerance is the proportion of variance of the variable and calculated by 1-R-squared (squared multiple correlations) while the variance inflation factor is the reciprocal of tolerance (Kline, 2011; Garson, 2012). Tolerances less than 0.20 or VIFs greater than 5 indicates multicollinearity (Garson, 2012). Landau and Everitt (2003) and (Kline (2011) suggested the variables with a tolerance value less than 0.10 and VIF greater than 10 indicate multicollinearity. The VIF value for each variable was found below 4 and the tolerance value was also found to be less than 0.20 when tested against all other variables in the analysis (Appendix 9). The results of bivariate correlation and multivariate collinearity check between the predicted variables did not conform multicollinearity (Appendix 8 & 9). Indeed, in this study, some of the categories of the variables had a small number of responses and that may be the cause of a wider confidence interval. Hence, the results should be interpreted with caution.

Table 4.38 Multivariate logistic regression model of outcome variable ‘women’s autonomy’ with all variables

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables retained in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| **Initial model** |  |  |  |  |
| Women’s age | 5.22 | 0.72 | 37.99 | 0.103 |
| Women’s religion | 2.92 | 0.87 | 9.77 | 0.082 |
| Women’s caste | 2.28 | 0.66 | 7.86 | 0.190 |
| Women’s education | 1.13 | 0.18 | 7.18 | 0.900 |
| Women’s employment | 1.52 | 0.56 | 4.08 | 0.409 |
| Own name property | 2.54 | 0.74 | 8.74 | 0.140 |
| Having children | 2.91 | 0.48 | 17.75 | 0.247 |
| Husband’s age | 1.34 | 0.19 | 9.27 | 0.768 |
| Husband’s occupation | 1.77 | 0.57 | 5.53 | 0.324 |
| Household head’s gender | 4.76 | 1.60 | 14.16 | 0.005 |
| Age of household head | 10.97 | 2.98 | 40.34 | <0.000 |
| Household head’s education | 1.13 | 0.36 | 3.59 | 0.837 |
| Household head’s occupation | 2.69 | 0.94 | 7.69 | 0.065 |
| Family type | 7.64 | 1.44 | 40.55 | 0.017 |
| House type | 1.35 | 0.50 | 3.61 | 0.554 |
| Number of family members | 3.10 | 1.13 | 8.50 | 0.028 |
| Average annual household income | 1.50 | 0.49 | 4.61 | 0.484 |
| Year of husband’s migration | 1.18 | 0.37 | 3.79 | 0.784 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| Women’s age | 4.04 | 1.56 | 10.421 | 0.004 |
| Having children | 5.61 | 1.19 | 26.482 | 0.029 |
| HH gender | 5.88 | 2.32 | 14.876 | <0.000 |
| HH age | 13.43 | 4.15 | 43.485 | <0.000 |
| Family type | 10.61 | 2.13 | 52.852 | 0.004 |
| Number of family member | 2.57 | 1.06 | 6.262 | 0.038 |
|  |  |  |  |  |

### Comparison of women’s autonomy between the left-behind wives and wives of non-migrants

This section presents the results of the univariate logistic regression. For each outcome variable of autonomy, an odds ratio (OR) is calculated to determine whether the wives of migrants experienced more autonomy or not when their husbands were abroad compared to the wives of non-migrants and their strength of association. The odds of each outcome variable of autonomy for the wives left behind was compared with the odds of the same variable of autonomy for the wives of non-migrants (reference category, OR = 1). There were two groups of women i.e. wives left behind (exposure to husbands’ international migration) and wives of non-migrants (reference category or no exposure to husbands’ migration). The OR represents the odds that autonomy outcomes occurred when a group were exposed to husbands’ international migration, compared to the odds of the autonomy outcomes in the group which were not exposed to international migration.

This section describes the comparison of autonomy variables between the wives left behind and the wives of non-migrants. The comparison between the two groups was made in terms of OR. For this, all the respondents of the migrant households and non-migrant households who took the decisions for the autonomy indicators were grouped separately in their respective category. The odds for each category of the wives left behind were calculated by taking the baseline or reference data separately extracted from the reference group i.e. the wives of non-migrants. A univariate logistic regression was performed to find the odds of making decisions by the wives left behind with respect to the wives of non-migrants. For this comparison, one group (wives left behind) experienced husbands’ migration and the other did not (reference group).

The comparative results were presented in table 4.39 to find ‘whether there is any difference between the two groups in their autonomy and associated variables.

The number of women employed in migrant and non-migrant households was 144 and 171 respectively. Among them, about 92 percent of left-behind wives said that they had freedom and control over their own earnings whereas only 53 percent of the wives of non-migrants had control over their own earnings. The wives left behind (OR = 8.35, 95% CI: 4.46 to 15.64, p < 0.001) were 8.35 times more likely to control their own earnings compared to the wives of non-migrants who were employed. A significant association (p < 0.001) was observed between the wives left behind and the wives of non-migrants over the control of their own earnings. Similarly, left-behind wives (OR = 18.63, 95% CI: 12.53 to 27.68, p < 0.001) were also found to have more control over their husband’s earnings compared to the wives of non-migrants. Control over husband’s earnings was significantly associated between the left-behind wives and the wives of non-migrants.

Results obtained from the univariate analysis showed that there was a higher level of autonomy in the left-behind wives of migrant households for making decisions about their own health care (OR = 14.99, 95% CI: 10.05 to 22.37, p < 0.001) which significantly increased with odds of 14.99 greater than the wives of non-migrant households. Similarly, compared to wives who took the decisions of major household purchases, the left-behind wives were found to have higher odds (OR = 13.28, 95% CI: 8.52 to 20.68, p < 0.001) of 13.28 for making decisions for major purchases in the household than the wives of non-migrants. A strong association was observed in the autonomy of the left-behind wives (OR = 9.12, 95% CI = 6.58 to 12.64, p < 0.001) who took decisions for the purchase of daily household needs compared to the wives of non-migrants.

In relation to their freedom of movement, the left-behind wives had greater odds of taking self-decisions for their visits to family or relatives (OR = 19.22, 95% CI: 12.65 to 29.20, p < 0.001) compared to the wives of non-migrants.

Table 4.39 The comparison and association of decisions and the person who decides in the migrant and non-migrant households

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Who decides…..** | | | | **OR (95% CI)** | **p** |
| **Women\*** | | **Someone else** | |
| **N** | **%** | **N** | **%** |
| **Control over women’s earnings** |  |  |  |  |  |  |
| Non-migrant households (N= 171) | 91 | 53.2 | 80 | 46.8 | 1 |  |
| Migrant households (N= 144) | 133 | 92.3 | 14 | 9.7 | 8.35 (4.46 to 15.64) | <0.001 |
|  |  |  |  |  |  |  |
| **Control over husband’s earnings** |  |  |  |  |  |  |
| Non-migrant households (N= 400) | 37 | 9.3 | 363 | 90.7 | 1 |  |
| Migrant households (N= 400) | 262 | 65.5 | 138 | 34.5 | 18.63 (12.53 to 27.68) | <0.001 |
|  |  |  |  |  |  |  |
| **Decision of your health care** |  |  |  |  |  |  |
| Non-migrant households (N= 400) | 38 | 9.5 | 362 | 90.5 | 1 |  |
| Migrant households (N= 400) | 274 | 68.5 | 126 | 31.5 | 14.99 (10.05 to 22.37) | <0.001 |
|  |  |  |  |  |  |  |
| **Decision for major household purchases** | |  |  |  |  |  |
| Non-migrant households (N= 400) | 26 | 6.5 | 374 | 93.5 | 1 |  |
| Migrant households (N= 400) | 192 | 48.0 | 208 | 52.0 | 13.28 (8.52 to 20.68) | <0.001 |
|  |  |  |  |  |  |  |
| **Decision for purchase of daily household needs** | | |  |  |  |  |
| Non-migrant households (N= 400) | 77 | 19.3 | 323 | 80.7 | 1 |  |
| Migrant households (N= 400) | 274 | 68.5 | 126 | 31.5 | 9.12 (6.58 to 12.64) | <0.001 |
|  |  |  |  |  |  |  |
| **Decision for your visit to relatives and friends** | | |  |  |  |  |
| Non-migrant households (N= 400) | 31 | 7.8 | 369 | 92.2 | 1 |  |
| Migrant households (N= 400) | 247 | 61.7 | 153 | 38.3 | 19.22 (12.65 to 29.20) | <0.001 |

Note: \* Women denote the left-behind wives and wives of non-migrants

### Comparison of overall autonomy between wives left behind and wives of non-migrants

In this section, the comparison is made of overall autonomy between the left-behind wives and the wives of non-migrants with respect to their individual, husband’s and household characteristics. In order to compare the two groups, a chi-squared test was carried out to find a significant association between the left-behind wives and the wives of non-migrants with regard to an explanatory variable.

#### Overall autonomy between the left-behind wives and wives of non-migrants by their background characteristics

The results indicate that higher autonomy was observed with the increasing age of the women in both migrants’ and non-migrants’ households. Higher overall autonomy was found in both age groups. Similarly, about 72 percent of left-behind wives and 14 percent of the wives of non-migrants who belonged to the Hindu religion reported higher autonomy. The higher numbers of upper and lower caste left-behind wives reported that they had higher autonomy compared to the wives of non-migrants of the same castes.

The left-behind wives who were either illiterate or literate experienced more than 5 times higher overall autonomy than the wives of non-migrants in similar categories. Similar results were also found in the case of women’s occupations. Higher percentages of left-behind wives who either had any property in their own name (88.5%) or not (62.5%) said they had higher autonomy as compared to the wives of non-migrants with any property in their own name (15.5%) or not (11.9%). The women having children in both households had greater autonomy. But, more than five times higher left-behind wives either having children or not, had higher autonomy compared to the wives of non-migrants in the same categories respectively.

There were significant differences in the overall autonomy between the left-behind wives and the wives of non-migrants across all sub-groups (Table 4.40). The left-behind wives were more likely to have greater autonomy than the wives of non-migrants regardless of their individual characteristics.

Table 4.40 Comparison of women’s autonomy between the left-behind wives and wives of non-migrants by their socio-demographic characteristics (Chi-squared test)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Left-behind wives** | | | | **Wives of non-migrants** | | | |  |
| **High autonomy** | | **Low autonomy** | | **High autonomy** | | **Low autonomy** | |
| **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | **p** |
| **Age** | |  |  |  |  |  |  |  |  |  |
|  | 32 and below | 142 | 58.0 | 103 | 42.0 | 14 | 8.4 | 153 | 91.6 | <0.001 |
|  | Above 32 | 136 | 87.7 | 19 | 12.3 | 36 | 15.5 | 197 | 84.5 | <0.001 |
| **Religion** | |  |  |  |  |  |  |  |  |  |
|  | Hindu | 193 | 71.7 | 76 | 28.3 | 40 | 13.9 | 248 | 86.1 | <0.001 |
|  | Other | 85 | 64.9 | 46 | 35.1 | 10 | 8.9 | 102 | 91.1 | <0.001 |
| **Caste** | |  |  |  |  |  |  |  |  |  |
|  | Upper | 124 | 71.3 | 50 | 28.7 | 28 | 13.4 | 181 | 86.6 | <0.001 |
|  | Lower | 154 | 68.1 | 72 | 31.9 | 22 | 11.5 | 169 | 88.5 | <0.001 |
| **Education** | |  |  |  |  |  |  |  |  |  |
|  | Illiterate | 27 | 79.4 | 7 | 20.6 | 7 | 15.2 | 39 | 84.8 | <0.001 |
|  | Literate | 251 | 68.6 | 115 | 31.4 | 43 | 12.1 | 311 | 87.9 | <0.001 |
| **Employment** | |  |  |  |  |  |  |  |  |  |
|  | Unemployed | 174 | 68.0 | 82 | 32.0 | 18 | 7.9 | 211 | 92.1 | <0.001 |
|  | Employed | 104 | 72.2 | 40 | 27.8 | 32 | 18.7 | 139 | 81.3 | <0.001 |
| **Own named property** | | | |  |  |  |  |  |  |  |
|  | Yes | 95 | 88.8 | 12 | 11.2 | 11 | 15.5 | 60 | 84.5 | <0.001 |
|  | No | 183 | 62.5 | 110 | 37.5 | 39 | 11.9 | 290 | 88.1 | <0.001 |
| **Having children** | | |  |  |  |  |  |  |  |  |
|  | Yes | 270 | 73.0 | 100 | 27.0 | 48 | 13.0 | 322 | 87.0 | <0.001 |
|  | No | 8 | 26.7 | 22 | 73.3 | 2 | 6.7 | 28 | 93.3 | 0.083 |
| **Own mobile phone** | | | |  |  |  |  |  |  |  |
|  | Yes | 266 | 69.3 | 118 | 30.7 | 31 | 11.6 | 236 | 88.4 | <0.001 |
|  | No | 12 | 75.0 | 4 | 25.0 | 19 | 14.3 | 114 | 85.7 | <0.001 |

#### Overall autonomy and husband’s background characteristics

The husband’s age was significantly associated with the wives autonomy. The result indicated that the wives in both households whose husbands were above 36 years old had more autonomy than the wives whose husbands were aged 36 and below. But, greater overall autonomy was experienced by the left-behind wives than the wives of non-migrants, taking account of their husband’s age. Furthermore, husband’s employment status was also found to have a significant difference for higher autonomy among the left-behind wives and the wives of non-migrants. The wives of non-migrants whose husbands were employed experienced less autonomy then the left-behind wives whose husbands were employed.

Table 4.41 Comparison of women’s autonomy between left-behind wives and wives of non-migrants by their husband’s background characteristics (Chi-squared test)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Left-behind wives** | | | | **Wives of non-migrants** | | | |  |
| **High autonomy** | | **Low autonomy** | | **High autonomy** | | **Low autonomy** | |
| **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | **p** |
| **Age** | |  |  |  |  |  |  |  |  |  |
|  | 36 and below | 146 | 58.9 | 102 | 41.1 | 13 | 7.5 | 161 | 92.5 | <0.001 |
|  | Above 36 | 132 | 86.8 | 20 | 13.2 | 37 | 16.4 | 189 | 83.6 | <0.001 |
| **Education** | |  |  |  |  |  |  |  |  |  |
|  | Illiterate | 3 | 75.0 | 1 | 25.0 | 8 | 27.6 | 21 | 72.4 |  |
|  | Literate | 275 | 69.4 | 121 | 30.6 | 42 | 11.3 | 329 | 88.7 |  |
| **Employment** | |  |  |  |  |  |  |  |  |  |
|  | Unemployed | 67 | 60.4 | 44 | 39.6 | 1 | 7.1 | 13 | 92.9 |  |
|  | Employed | 211 | 73.0 | 78 | 27.0 | 49 | 12.7 | 337 | 87.3 | <0.001 |

#### Overall autonomy and household characteristics

All the predicated household variables were found significantly different for the higher autonomy of the left-behind wives compared to the wives of non-migrants. In the case of female-headed households, about 91 percent of left-behind wives had higher autonomy compared to the wives of non-migrants. Similarly, age, education and occupation of the household head were also significantly associated with the higher autonomy of left-behind wives than the wives of non-migrants.

In the case of the family system, almost all left-behind women who lived in a nuclear family had high autonomy but only about 14 percent in the wives of non-migrants. In an extended family, only about 38 percent of left-behind wives had high autonomy which was almost four times less with the wives of non-migrants. A significant association was observed for high autonomy in left-behind wives and the family system. The number of family members was also found to have significant association with high autonomy. The wives who lived in a family with five or less members experienced more autonomy in both households. However, about more than six times higher left-behind wives who lived with five or less family members said they had high autonomy as compared to the wives of non-migrants who lived in a family of five or less members.

Moreover, the left-behind wives who lived in either permanent or temporary homes also had high overall autonomy compared to the wives of non-migrants in similar conditions.

Table 4.42 Comparison of women’s autonomy between left-behind wives and wives of non-migrants by their household characteristics

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Left-behind wives** | | | | **Wives of non-migrants** | | | |  |
| **High autonomy** | | **Low autonomy** | | **High autonomy** | | **Low autonomy** | |
| **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | **p** |
| **Household head** | |  |  |  |  |  |  |  |  |  |
|  | Female | 266 | 90.8 | 27 | 9.2 | 36 | 47.4 | 40 | 52.6 | <0.001 |
|  | Male | 12 | 11.2 | 95 | 88.8 | 14 | 4.3 | 310 | 95.7 | <0.018 |
| **Age of household head** | | |  |  |  |  |  |  |  |  |
|  | 40 and below | 230 | 97.5 | 6 | 2.5 | 32 | 16.2 | 165 | 83.8 | <0.001 |
|  | Above 40 | 48 | 29.3 | 116 | 70.7 | 18 | 8.9 | 185 | 91.1 | <0.001 |
| **Household head’s education** | | | |  |  |  |  |  |  |  |
|  | Illiterate | 35 | 48.6 | 37 | 51.4 | 5 | 9.6 | 47 | 90.4 | <0.001 |
|  | Literate | 243 | 74.1 | 85 | 25.9 | 45 | 12.9 | 303 | 87.1 | <0.001 |
| **Household head’s occupation** | | | |  |  |  |  |  |  |  |
|  | Unemployed | 173 | 90.1 | 19 | 9.9 | 16 | 50.0 | 16 | 50.0 | <0.001 |
|  | Employed | 105 | 50.5 | 103 | 49.5 | 34 | 9.2 | 334 | 90.8 | <0.001 |
| **Family type** | |  |  |  |  |  |  |  |  |  |
|  | Extended | 73 | 37.8 | 120 | 62.2 | 14 | 10.2 | 123 | 89.8 | <0.001 |
|  | Nuclear | 205 | 99.0 | 2 | 1.0 | 36 | 13.7 | 227 | 86.3 | <0.001 |
| **House type** | |  |  |  |  |  |  |  |  |  |
|  | Permanent | 173 | 66.5 | 87 | 33.5 | 22 | 11.5 | 169 | 88.5 | <0.001 |
|  | Semi and Temporary | 105 | 75.0 | 35 | 25.0 | 28 | 13.4 | 181 | 86.6 | <0.001 |
| **Family members** | |  |  |  |  |  |  |  |  |  |
|  | 5 or less | 233 | 86.0 | 38 | 14.0 | 33 | 13.3 | 216 | 86.7 | <0.001 |
|  | More than 5 | 45 | 34.9 | 84 | 65.1 | 17 | 11.3 | 134 | 88.7 | <0.001 |
| **Main source of HH income** | | | |  |  |  |  |  |  |  |
|  | Remittances | 272 | 70.6 | 113 | 29.4 | - | - | - | - |  |
|  | Other sources | 6 | 40.0 | 9 | 60.0 | 50 | 12.5 | 350 | 87.5 |  |
| **Total annual income** | | |  |  |  |  |  |  |  |  |
|  | Above national average | 182 | 65.0 | 98 | 35.0 | 6 | 6.4 | 88 | 93.6 | <0.001 |
|  | Below national average | 96 | 80.0 | 24 | 20.0 | 44 | 14.4 | 262 | 85.6 | <0.001 |

## Relationship between depression and autonomy among left-behind wives

The left-behind wives had a higher level of depression and experienced greater autonomy. A chi-squared test was performed to find the association between them. No significant association was found between autonomy and depression among the wives left behind (Table: 4.43).

Table 4.43 Association between autonomy and depression among left-behind wives

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Level of autonomy | Left-behind wives | | χ2 (df) | P |
| **Not depressed** | **Depressed** |
| Low autonomy | 20 | 102 | 1.86 (1) | 0.172 |
| High autonomy | 64 | 214 |  |  |
| Total | 84 | 316 |  |  |

The chi-squared test was performed between depression and women’s autonomy among the left-behind wives by controlling the socio-demographic variables, husband’s characteristics and household characteristics. The results are presented in tables 4.44-46).

The results (Table 4.44) showed that more number of wives left behind was found in depressed and high autonomy group in each category (for example, 32 years and below age category) of the control socio-demographic variables. Only a significant association was found between the depression and women’s autonomy in the women’s other religion category.

Table 4.44 Relationship between depression and autonomy by controlling socio-demographic variables of left-behind wives

| Control variables | Output variables | Left-behind wives | | χ2 | p |
| --- | --- | --- | --- | --- | --- |
| Depressed | Not-depressed |
| Age |  |  |  |  |  |
| 32 and below | High autonomy | 112 | 30 |  |  |
| Low autonomy | 86 | 17 | 0.823 | 0.364 |
| Above 32 | High autonomy | 102 | 34 |  |  |
| Low autonomy | 16 | 3 | 0.778 | 0.378 |
| Religion |  |  |  |  |  |
| Hindu | High autonomy | 150 | 43 |  |  |
| Low autonomy | 58 | 18 | 0.061 | 0.804 |
| Other | High autonomy | 64 | 21 |  |  |
| Low autonomy | 44 | 2 | 8.546 | 0.003 |
| Caste |  |  |  |  |  |
| Upper | High autonomy | 92 | 32 |  |  |
| Low autonomy | 38 | 12 | 0.062 | 0.804 |
| Lower | High autonomy | 122 | 32 |  |  |
| Low autonomy | 64 | 8 | 3.148 | 0.076 |
| Education |  |  |  |  |  |
| Illiterate | High autonomy | 25 | 2 |  |  |
| Low autonomy | 6 | 1 |  | 0.551\* |
| Literate | High autonomy | 189 | 62 |  |  |
| Low autonomy | 96 | 19 | 3.062 | 0.080 |
| Employment |  |  |  |  |  |
| Unemployed | High autonomy | 132 | 42 |  |  |
| Low autonomy | 70 | 12 | 3.024 | 0.082 |
| Employed | High autonomy | 82 | 22 |  |  |
| Low autonomy | 32 | 8 | 0.023 | 0.879 |
| Own named property |  |  |  |  |  |
| Yes | High autonomy | 147 | 36 |  |  |
| Low autonomy | 92 | 18 | 0.500 | 0.479 |
| No | High autonomy | 67 | 28 |  |  |
| Low autonomy | 10 | 2 | 0.866 | 0.352 |
| Having children |  |  |  |  |  |
| Yes | High autonomy | 206 | 64 |  |  |
| Low autonomy | 81 | 19 | 0.376 | 0.540 |
| No | High autonomy | 8 | 0 |  |  |
| Low autonomy | 21 | 1 |  | N/A |
| Own mobile phone |  |  |  |  |  |
| Yes | High autonomy | 202 | 64 |  |  |
| Low autonomy | 99 | 19 | 3.056 | 0.074 |
| No | High autonomy | 12 | 0 |  |  |
| Low autonomy | 3 | 1 |  | N/A |

\*: Fisher Exact Test; N/A: Not available due to zero or low frequency in the cells.

The results of chi-squared test between the depression and autonomy of left-behind wives were presented in table 4.45. The results showed that depression and autonomy of left-behind wives were not significantly associated each other when controlling their husbands’ characteristics.

Table 4.45 Relationship between depression and autonomy by controlling husband’s characteristics of left-behind wives

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Control variables | Output variables | Left-behind wives | | χ2 | p |
| **Depressed** | **Not-depressed** |
| Age |  |  |  |  |  |
| 36 and below | High autonomy | 112 | 34 |  |  |
| Low autonomy | 86 | 16 | 2.156 | 0.142 |
| Above 36 | High autonomy | 102 | 30 |  |  |
| Low autonomy | 16 | 4 | 0.074 | 0.785 |
| Education |  |  |  |  |  |
| Illiterate | High autonomy | 0 | 3 |  |  |
| Low autonomy | 0 | 1 |  | N/A |
| Literate | High autonomy | 211 | 64 |  |  |
| Low autonomy | 101 | 20 | 2.287 | 0.130 |
| Employment |  |  |  |  |  |
| Unemployed | High autonomy | 52 | 15 |  |  |
| Low autonomy | 37 | 7 | 0.702 | 0.402 |
| Employed | High autonomy | 162 | 49 |  |  |
| Low autonomy | 65 | 13 | 1.453 | 0.228 |

N/A: Not available due to zero or low frequency in the cells

The significant results were found between the depression and autonomy among the left-behind wives who were living in semi and temporary house and extended families headed by male of aged above 40 years. High numbers of left-behind wives were found to be depressed and experienced low autonomy when living with male household heads and in extended families.

Table 4.46 Relationship between the depression and autonomy by controlling household characteristics of left-behind wives

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Control Variables | Output variables | Left-behind wives | | χ2 | p |
| **Depressed** | **Not-depressed** |
| Household head |  |  |  |  |  |
| Female | High autonomy | 207 | 59 |  |  |
| Low autonomy | 23 | 4 | 0.788 | 0.375 |
| Male | High autonomy | 7 | 5 |  |  |
| Low autonomy | 79 | 16 | 4.162 | 0.041 |
| Age of household head | |  |  |  |  |
| 40 and below | High autonomy | 181 | 49 |  |  |
| Low autonomy | 5 | 1 | 0.075 | 0.784 |
| Above 40 | High autonomy | 130 | 15 |  |  |
| Low autonomy | 97 | 19 | 4.569 | 0.033 |
| Household head’s education | |  |  |  |  |
| Illiterate | High autonomy | 32 | 3 |  |  |
| Low autonomy | 33 | 4 | 0.103 | 0.749 |
| Literate | High autonomy | 182 | 61 |  |  |
| Low autonomy | 69 | 16 | 1.383 | 0.240 |
| Household head’s occupation | |  |  |  |  |
| Unemployed | High autonomy | 129 | 44 |  |  |
| Low autonomy | 16 | 3 | 0.861 | 0.353 |
| Employed | High autonomy | 85 | 20 |  |  |
| Low autonomy | 86 | 17 | 0.230 | 0.632 |
| Family type |  |  |  |  |  |
| Extended | High autonomy | 50 | 23 |  |  |
| Low autonomy | 101 | 19 | 6.549 | 0.010 |
| Nuclear | High autonomy | 164 | 41 |  |  |
| Low autonomy | 1 | 1 |  | 0.365\* |
| House type |  |  |  |  |  |
| Permanent | High autonomy | 131 | 42 |  |  |
| Low autonomy | 68 | 19 | 0.192 | 0.662 |
| Semi and Temporary | High autonomy | 83 | 22 |  |  |
| Low autonomy | 34 | 1 | 6.260 | 0.012 |
| Family members |  |  |  |  |  |
| 5 or less | High autonomy | 179 | 54 |  |  |
| Low autonomy | 36 | 2 | 6.395 | 0.011 |
| More than 5 | High autonomy | 35 | 10 |  |  |
| Low autonomy | 66 | 18 | 0.011 | 0.917 |
| Total annual income | |  |  |  |  |
| Above national average | High autonomy | 135 | 47 |  |  |
| Low autonomy | 78 | 20 | 1.027 | 0.311 |
| Below national average | High autonomy | 79 | 17 |  |  |
| Low autonomy | 24 | 0 |  | N/A |

\*: Fisher Exact Test

## Health service utilisation

One of the objectives of this study was to examine the types of health service utilisation for minor illnesses by left-behind wives in comparison to the wives of non-migrants, so questions related to minor illnesses and service utilisation for minor illnesses were asked to all respondents. In Nepal, private, governmental and traditional health services are commonly existed and women are using different health facilities. This section aims to find what types of health service are used (private, government or traditional healers by the left-behind wives and compared to the wives of non-migrants for their illnesses and whether there was any significant pattern of health service utilisation. For analysis purposes, the health service used was categorised into private, government and traditional healers. The chi-squared test was performed to find the association between the types of health service utilised for minor illness. The later section describes the analysis of the types of health service utilized by the wives left behind within the last 12 months.

### Health service utilisation by left-behind wives

This section begins with the results of the prevalence of minor illnesses among the left-behind wives and the types of health service used by them when their husbands are abroad.

#### Prevalence of minor illnesses and service utilization

About 40 percent of left-behind women were found to be suffering from minor illnesses (cough or fever or diarrhoea) within the last four weeks. Among 400 respondents, 23 percent of left-behind wives suffered from fever followed by cough (12.8%) and diarrhoea (9.0%). A total of 161 (40.0%) left-behind women said that they had suffered from minor illnesses within the last four weeks. Overall there were 179 episodes of minor illness, among them 18 women had multiple cases of minor illness, for example: cough and fever and so on.

#### Type of health service utilised for minor illness

Left-behind women’s responses to health service utilisation for minor illness (cough, fever and diarrhoea) within the last four weeks are presented in table 4.47. Women’s health service utilisation varied according to the types of minor illness. The respondents were asked questions related to minor illnesses and health service utilisation for minor illnesses. Women’s response to health services used were categorised into private health centres (which includes doctor’s clinics, pharmacy, nursing home), government health centres (includes government hospital, health posts and sub-health posts), traditional healers and no treatment. The majority of the left-behind wives used a private health service for fever (70.7%), cough (43.1%), and diarrhoea (52.8%).

Table 4.47 Wives left behind's response to health service utilisation for minor illness within last four weeks

|  |  |  |  |
| --- | --- | --- | --- |
| **Illness** | **Health Service used** | **N** | **%** |
| **Fever** | Private | 65 | 70.7 |
|  | Government Service | 7 | 7.6 |
|  | Traditional healers | 4 | 4.3 |
|  | No treatment | 16 | 17.4 |
|  | Total | 92 | 100.00 |
| **Cough** | Private | 22 | 43.1 |
|  | Government Service | 11 | 21.6 |
|  | Traditional healers | 2 | 3.9 |
|  | No treatment | 16 | 31.4 |
|  | Total | 51 | 100.00 |
| **Diarrhoea** | Private | 19 | 52.8 |
|  | Government Service | 9 | 25.0 |
|  | Traditional healers | 1 | 2.8 |
|  | No treatment | 7 | 19.4 |
|  | Total | 36 | 100.00 |

Among the respondents who suffered from minor illnesses, about 80 percent (n = 140) sought advice or treatment from any one of the health facilities. In this case, the majority of the left-behind wives (75.7%, n = 106) were seeking advice or treatment for minor illness from private and about 20 percent used government health facilities. A minor percentage (5%) of left-behind wives went to traditional healers seeking advice or treatment for minor illness.

Table 4.48 Overall health service utilisation by left-behind wives for minor illness within last four weeks

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Health service utilisation by left-behind wives** | | | | | | | |
| **Total (N=179)** | | **Private** | | **Government** | | **Traditional healers** | |
| **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** |
| Minor illnesses (Cough, fever and diarrhoea) | 140 | 78.2 | 106 | 75.7 | 27 | 19.3 | 7 | 5.0 |

### Types of health service utilisation within the last 12 months for any illnesses

To see the pattern of health service utilisation by left-behind wives within the last 12 months, the respondents were asked which health service they used within the last 12 months for any kind of illness and the responses were classified into private clinics, government service, pharmacy and traditional healers. More than half of the left-behind wives (52.5%, n = 278) used a private health service, followed by government health facilities (21.2%), pharmacy (17.0%) and only about seven percent of respondents used traditional healers.

Table 4.49 Health service utilisation by left-behind wives within the last 12 months

|  |  |  |
| --- | --- | --- |
| **Health service used** | **N** | **%** |
| Private | 210 | 52.5 |
| Government service | 85 | 21.2 |
| Pharmacy | 68 | 17.0 |
| Traditional healer | 27 | 6.8 |
| No treatment | 10 | 2.5 |
| **Total** | 400 | 100.0 |

### Type of health service utilisation by left-behind wives

The health service utilisation for minor illnesses within the last 4 weeks by left-behind wives is summarised in table 4.50 according to their background characteristics. The results showed that the majority of left-behind wives used private health facilities for their minor illnesses rather than government health facilities. All background variables of the respondents were not significant to health service utilisation for minor illness except employment.

Table 4.50 Left-behind women’s health service utilisation for minor illness by their background characteristics

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Left-behind wives (N = 140)** | | | |  |  |
| **Private** | | **Government** | | **p** | |
| **N** | **%** | **N** | **%** |
| **Age** | |  |  |  |  |  | |
|  | 32 and below | 65 | 76.5 | 20 | 23.5 | 0.954 | |
|  | Above 32 | 41 | 74.5 | 14 | 25.5 |  | |
| **Religion** | |  |  |  |  |  | |
|  | Hindu | 71 | 79.8 | 18 | 20.2 | 0.203 | |
|  | Other | 35 | 68.6 | 16 | 31.4 |  | |
| **Caste** | |  |  |  |  |  | |
|  | Upper | 40 | 81.6 | 9 | 18.4 | 0.321 | |
|  | Lower | 66 | 72.5 | 25 | 27.5 |  | |
| **Education** | |  |  |  |  |  | |
|  | Illiterate | 7 | 58.4 | 5 | 41.6 | 0.265 | |
|  | Literate | 99 | 77.3 | 29 | 22.7 |  | |
| **Employment** | |  |  |  |  |  | |
|  | Unemployed | 74 | 84.1 | 14 | 15.9 | 0.005 | |
|  | Employed | 32 | 61.5 | 20 | 38.5 |  | |
| **Own named property** | | |  |  |  |  | |
|  | Yes | 25 | 86.2 | 4 | 13.8 | 0.217 | |
|  | No | 81 | 73.0 | 30 | 27.0 |  | |
| **Having children** | |  |  |  |  |  | |
|  | Yes | 99 | 76.2 | 31 | 23.8 | 0.956 | |
|  | No | 7 | 70.0 | 3 | 30.0 |  | |

Almost three times more left-behind wives said that they used private health facilities for minor illnesses rather than government health facilities irrespective of their husband’s background characteristics (Table 4.51). The utilisation of the health service was not found significant with their husband’s age and employment.

Table 4.51 Husband’s characteristics and health service utilisation for minor illnesses

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Left-behind wives (N = 140)** | | | |  |  |
| **Private** | | **Government** | | **p** | |
| **N** | **%** | **N** | **%** |
| **Husband’s age** | |  |  |  |  |  | |
|  | 36 and below | 66 | 76.7 | 20 | 23.3 | 0.876 | |
|  | Above 36 | 40 | 74.1 | 14 | 25.9 |  | |
| **Education** | |  |  |  |  |  | |
|  | Illiterate | 1 | 100.0 | 0 | 0.0 |  | |
|  | Literate | 105 | 76.1 | 34 | 23.9 |  | |
| **Employment** | |  |  |  |  |  | |
|  | Unemployed | 26 | 72.2 | 10 | 27.8 | 0.733 | |
|  | Employed | 80 | 76.9 | 24 | 23.1 |  | |
|  | |  |  |  |  |  | |

The association between health service utilisation for minor illnesses within 4 weeks by the left-behind wives and their household characteristics was evaluated. The results indicated that the majority of the left-behind wives used private health facilities rather than government health services for their minor illnesses. Household head’s education, occupation and the number of family members showed significant association with health service utilisation for minor illnesses.

Table 4.52 Women’s health service utilisation for minor illnesses and household’s characteristics

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Left-behind wives (N = 140)** | | | | | |  |
| **Private** | | | | **Government** | |
| **N** | | | **%** | **N** | **%** | **p** |
| **Household head** | |  | | |  |  |  |  |
|  | Female | 80 | | | 80.0 | 20 | 20.0 | 0.099 |
|  | Male | 26 | | | 65.0 | 14 | 35.0 |  |
| **Age of household head** | |  | | |  |  |  |  |
|  | 40 years and below | 68 | | | 81.9 | 15 | 18.1 | 0.062 |
|  | Above 40 years | 38 | | | 66.7 | 19 | 33.3 |  |
| **Household head’s education** | | | | |  |  |  |  |
|  | Illiterate | | 19 | | 57.6 | 14 | 42.4 | 0.011 |
|  | Literate | | 87 | | 81.3 | 20 | 18.7 |  |
| **Household head’s occupation** | | | | |  |  |  |  |
|  | Unemployed | | 54 | | 84.4 | 10 | 15.6 | 0.046 |
|  | Employed | | 52 | | 68.4 | 24 | 31.6 |  |
| **Family type** | | |  | |  |  |  |  |
|  | Extended | | 44 | | 69.8 | 19 | 30.2 | 0.205 |
|  | Nuclear | | 62 | | 80.5 | 15 | 19.5 |  |
| **House type** | | |  | |  |  |  |  |
|  | Permanent | | 73 | | 80.2 | 18 | 19.8 | 0.137 |
|  | Semi and Temporary | | 33 | | 67.3 | 16 | 32.7 |  |
| **Family members** | | |  | |  |  |  |  |
|  | 5 or less | | 78 | | 84.8 | 14 | 15.2 | 0.001 |
|  | More than 5 | | 28 | | 58.3 | 20 | 41.7 |  |
| **Main source of HH income** | | | | |  |  |  |  |
|  | Remittances | | | 105 | 78.4 | 29 | 21.6 |  |
|  | Other sources | | | 1 | 16.7 | 5 | 83.3 |  |
| **Total annual income** | | | |  |  |  |  |  |
|  | Above national average | | | 80 | 80.0 | 20 | 20.0 | 0.099 |
|  | Below national average | | | 26 | 65.0 | 14 | 35.0 |  |

### Comparison of health service utilisation between left-behind wives and wives of non-migrants

The prevalence of minor illnesses between left-behind wives and the wives of non-migrants was almost similar and ranged from 8.8% to 23.5% (Table 4.53). No significant association was observed for minor illnesses between the wives of migrants and non-migrants.

Table 4.53 Prevalence of minor illnesses between wives left-behind and wives of non-migrants

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name of illness** | **Left-behind wives** | | **Wives of non-migrants** | | **p** |
| **N (400)** | **%** | **N (400)** | **%** |
| Fever | 92 | 23.0 | 94 | 23.5 | 0.933 |
| Cough | 51 | 12.8 | 48 | 12.0 | 0.830 |
| Diarrhoea | 36 | 9.0 | 35 | 8.8 | > 0.999 |
| Total | 179 | 44.8 | 177 | 44.3 |  |

#### Health service utilisation between left-behind wives and wives of non-migrants by types of illness

Table 4.54 presents the health service utilisation by left-behind wives and the wives of non-migrants for fever, cough and diarrhoea. The majority of respondents in both households used a private health service for fever, cough and diarrhoea ranging from 40 to 74%. Similarly, 7 to 25% respondents sought their health service from government health facilities for fever, cough and diarrhoea. A minority of respondents used traditional healers which ranged from about 3 to 19% for minor illnesses.

Table 4.54 Comparison of health service utilisation between left-behind wives and wives of non-migrants for minor illnesses

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Types of Illness** | **Health Service used** | **Left-behind wives** | | **Wives of non-migrants** | | **χ2** | **p** |
| **N** | **%** | **N** | **%** |
| **Fever** | Private | 65 | 70.7 | 69 | 73.4 | 1.39 | 0.709 |
|  | Government Service | 7 | 7.6 | 9 | 9.6 | (3df) |  |
|  | Traditional healers | 4 | 4.3 | 5 | 5.3 |  |  |
|  | No treatment | 16 | 17.4 | 11 | 11.7 |  |  |
|  | Total | 92 | 100.00 | 94 | 100.0 |  |  |
| **Cough** | Private | 22 | 43.1 | 22 | 45.8 | 7.24 |  |
|  | Government Service | 11 | 21.6 | 9 | 18.8 | (3df) | 0.065 |
|  | Traditional healers | 2 | 3.9 | 9 | 18.8 |  |  |
|  | No treatment | 16 | 31.4 | 8 | 16.6 |  |  |
|  | Total | 51 | 100.00 | 48 | 100.0 |  |  |
| **Diarrhoea** | Private | 19 | 52.8 | 14 | 40.0 |  |  |
|  | Government Service | 9 | 25.0 | 8 | 22.9 |  |  |
|  | Traditional healers | 1 | 2.8 | 2 | 5.7 |  |  |
|  | No treatment | 7 | 19.4 | 11 | 31.4 |  |  |
|  | Total | 36 | 100.00 | 35 | 100.0 |  |  |

The summary of health service utilisation for overall minor illnesses (cough, fever and diarrhoea) by left-behind wives and the wives of non-migrants are presented in table 4.55. The results indicate that similar proportions of respondents in both households seek treatment for minor illnesses from any type of health facility. The highest percentage of respondents in both households (75.7% of left-behind wives and 71.4% of wives of non-migrants) seeks treatment from private health facilities. In addition, about 18 percent of respondents from both households said that they used the government health service and almost double the wives of non-migrants (10.9%) were found to seek treatment from traditional healers than the left-behind wives (5.0%).

Table 4.55 Comparison of health service utilisation for minor illnesses between left-behind wives and wives of non-migrants

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Type of illness** | **Respondents** | **Type of health service utilisation** | | | | | | | | **χ2** |  |
| **Total** | | **Private** | | **Government** | | **Traditional healers** | |  | |
| **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | **p** |
| Minor illness (Cough, fever and diarrhoea) | Left-behind wives  (N = 179) | 140 | 78.2 | 106 | 75.7 | 27 | 19.3 | 7 | 5.0 | 3.38 (2df) | 0.185 |
|  | Wives of non-migrants (N = 177) | 147 | 83.0 | 105 | 71.4 | 26 | 17.7 | 16 | 10.9 |  |  |

### Comparison of health service utilisation for any types of illness within last 12 months

The respondents were asked about their health service utilisation within the last 12 months. There was a significant difference in health service utilisation within the last 12 months between the left-behind wives and the wives of non-migrants (χ2 = 57.43, df = 4, p < 0.001). More than half (52.5%) of the left-behind wives were found to seek treatment for their illness from private health facilities whereas only one third of the wives of non-migrants sought treatment from private health facilities. In non-migrant households, almost an equal number of wives of non-migrants were found to seek treatment from a pharmacy (30.5%), government (29.0%), and private (26.7%).

Table 4.56 Health service utilisation between the left-behind wives and wives of non-migrants within last 12 months

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Types of Health service used within last 12 months** | **Left-behind wives (N = 400)** | | **Wives of non-migrants (N = 400)** | | **χ2** | **p** |
| **N** | **%** | **N** | **%** |
| Private | 210 | 52.5 | 107 | 26.7 | 57.43, 4df | <0.001 |
| Government service | 85 | 21.2 | 116 | 29.0 |  |
| Pharmacy | 68 | 17.0 | 122 | 30.5 |  |
| Traditional healers | 27 | 6.8 | 43 | 10.8 |  |
| No treatment | 10 | 2.5 | 12 | 3.0 |  |

## Summary:

The prevalence of depression in the left-behind wives and the wives of non-migrants were found to be 79.0% and 26.3% respectively. The left-behind wives had 10.57 times greater odds of being depressed than the wives of non-migrants. This result indicates that wives left behind were more likely to be depressed when their husbands were abroad. Left-behind wives, whose husbands were away long-term, living with an illiterate household head with low household income were more likely to be depressed.

Similarly, the left-behind wives were more likely to experience greater autonomy when their husbands were abroad compared to the wives who resided with their husbands. Left-behind wives were more likely to have greater autonomy for control over their own and their husband’s earnings, decisions for their own health care, major and daily household purchases and freedom of movement than those of the wives of non-migrants. Older aged left-behind wives who have children and are living with 5 or less family members and a female household head aged below 40 were more likely to have greater autonomy.

A higher level of depression and greater autonomy was observed in wives left behind. The result showed that greater autonomy was experienced by left-behind wives even they had higher level of depression. However, depression in left-behind wives and their autonomy were not significantly associated with each other.

There is no significant difference between the two groups of women concerning health service utilisation when they have minor illnesses. However, left-behind wives were more likely to use private health facilities for their other health problems compared to the wives of non-migrants. The details are presented in Section 6.9.

# CHAPTER FIVE: QUALITATIVE RESULTS

## Introduction

This chapter presents the findings from the qualitative study which was conducted in the second phase of the study. This chapter further explores the impacts of international male migration on left-behind wives. The main aim of this qualitative component was to explore how and why women are depressed, how the wives feel and experience their autonomy and the reasons for using private and government health facilities when living with or without their husbands. This component was based on and specifically focused on the significant factors identified in the quantitative findings (chapter 4). Therefore, this chapter anticipates exploring the narrative of the respondents (left-behind wives and the wives of non-migrants) in connection with their experiences of living with and in the absence of their husbands.

The findings from the quantitative study revealed that:

* About 80 percent of the left-behind wives were found to be depressed. The factors of women’s caste, education, property ownership, household income and duration of husband’s migration were significantly associated with depression. And the left-behind wives were more likely to be depressed than the wives of non-migrants.
* The left-behind wives were more likely to have greater autonomy as measured quantitatively.
* The left-behind wives were more likely to use private health facilities for any health problems.

For qualitative study, the following objectives were set out based on the quantitative findings to understand:

* How and why husband’s migration has an impact on depression in left-behind wives in relation to caste, education, property ownership, household income and duration of husband’s migration.
* How and why are the wives of non-migrants depressed? Do the factors such as age, employment, husband’s age, house type contribute to their depression?
* How the left-behind wives feel and experience their autonomy and how factors such as age, education, property ownership, having children, household head’s gender, age, education, family type and number of family members affect women’s autonomy in the absence of their husbands.
* How the wives of non-migrants feel and experience their autonomy when living with their husbands and how factors such as age, having children, household head gender and family type affect women’s autonomy?
* Why left-behind wives frequently used private health facilities and the wives of non-migrants used government ones for their health problems.

The chapter begins with the general background of participants followed by themes that emerged from the semi-structured interviews with the left-behind wives and the wives of non-migrants.

## General background of participants

Among the 800 women who participated in the survey, 14 respondents took part in semi-structured interviews. Among them, eight respondents were wives left behind and remaining six were wives of non-migrants. Table 5.1 summarises the respondents’ background characteristics. The age of women ranges from 22 to 35 years in wives left behind and 24 to 42 years in wives of non-migrants. Almost all women were Hindu and only two respondents were Buddhist. Half the respondents were educated up to secondary school level while three respondents completed undergraduate level and two respondents were illiterate. With regard to employment status, out of 14 women, ten were unemployed or housewives, four respondents were involved in income related activities. Similarly, nine respondents were living in nuclear families and the rest were in extended families. The majority of women (n = 12) had children. The average family sizes of migrant and non-migrant households were 4.5 and 4.1 respectively.

The following sections describe the major themes and sub-themes emerging from the respondent’s transcripts regarding the study issues. These themes are based on the major reasons, experiences and problems regarding depression, autonomy and health service utilisation which were expressed by the respondents. The themes are identified by the respondent’s views expressed on the topic asked and categorising the similar views under the same theme.

Table 5.1 Socio-demographic characteristics of interviewees

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ID | Age | Religion | Caste | Education\* | Occupation | Having children | Own named Property | Household Head | Family type | Duration of husband’s migration | No of family members | Husband’s migration status |
| 01 | 27 | Hindu | Brahman | U | Teacher | Yes | No | Male | Extended | 2 years | 5 | Migrant |
| 02 | 26 | Hindu | Thakuri | S | Housewives | Yes | No | Female | Extended | 5 years | 8 | Migrant |
| 03 | 22 | Hindu | Brahman | S | Housewives | Yes | No | Male | Extended | 1 year | 7 | Migrant |
| 04 | 24 | Buddhist | Tamang | U | Accountant | No | No | Female | Extended | 2 years | 2 | Migrant |
| 05 | 35 | Hindu | Newar | I | Housewives | Yes | No | Female | Nuclear | 7 years | 3 | Migrant |
| 06 | 34 | Hindu | Vishokarma | S | Business | Yes | Yes | Female | Nuclear | 10 years | 3 | Migrant |
| 07 | 30 | Hindu | Brahman | S | Housewives | Yes | Yes | Female | Nuclear | 12 years | 4 | Migrant |
| 08 | 27 | Hindu | Magar | S | Housewives | Yes | No | Female | Nuclear | 2 years | 4 | Migrant |
| 09 | 24 | Hindu | Brahman | U | Housewives | No | No | Male | Nuclear |  | 3 | Non-migrant |
| 10 | 42 | Buddhist | Tamang | I | Housewives | Yes | No | Male | Nuclear |  | 3 | Non-migrant |
| 11 | 29 | Hindu | Brahman | S | Housewives | Yes | No | Male | Extended |  | 5 | Non-migrant |
| 12 | 36 | Hindu | Brahman | L | Agriculture | Yes | No | Male | Nuclear |  | 5 | Non-migrant |
| 13 | 28 | Hindu | Brahman | S | Housewives | Yes | No | Male | Nuclear |  | 4 | Non-migrant |
| 14 | 40 | Hindu | Brahman | P | Housewives | Yes | No | Male | Nuclear |  | 5 | Non-migrant |

\* Education: I: Illiterate, L: Literate, P: Primary, S: Secondary, U: Undergraduate

Table 5.2 Respondents depression, autonomy score and type of health service used

|  |  |  |  |
| --- | --- | --- | --- |
| Respondent’s ID | Depression score\* | Autonomy score\*\* | Type of health service used |
| 01 | 23 | 3 | Private |
| 02 | 24 | 0 | Government |
| 03 | 31 | 0 | Government |
| 04 | 28 | 6 | Private |
| 05 | 19 | 6 | Private |
| 06 | 30 | 6 | Private |
| 07 | 12 | 5 | Private |
| 08 | 12 | 5 | Private |
| 09 | 6 | 0 | Private |
| 10 | 20 | 3 | Government |
| 11 | 18 | 1 | Government |
| 12 | 10 | 2 | Government |
| 13 | 6 | 1 | Government |
| 14 | 13 | 0 | Government |

\*Depression score: Depressed ≥ 16, Not depressed < 16; \*\*Autonomy status: 0-2: Low autonomy, 3-5: Medium autonomy, 6-8: High autonomy

## Women’s depression

### Factors contributing to depression in women

Women have more risk of having depressive symptoms during their lifetime than men and there are many causative factors in their depression. To find the reasons for depression, all 14 women who participated in the semi-structured interview were asked ‘whether they experienced depression or not and the reason for their depression.’ The left-behind wives were further asked a probing question whether their depression was due to the migration of their husbands or not and asked to express their experiences of how it related to their husband’s migration. Most of the left-behind wives in this study reported that they experienced depressive symptoms due to the migration of their husbands.

The quantitative data analysis and the individual factors of the left-behind wives such as women’s caste, education, property ownership, household head’s education, total household income and years of the husband’s migration showed a significant association with depression. Moreover, factors such as women’s age, employment, husband’s age and house type showed a significant association with depression in the wives of non-migrants. This section presents the possible reasons for the depression in the left-behind wives and the wives of non-migrants which were significantly associated in the quantitative findings. However, the similar findings of the left-behind wives and the wives of non-migrants are integrated accordingly under the same theme.

The following themes were identified in the depression of women from the semi-structured interviews with the left-behind wives and the wives of non-migrants.

#### Worried about future

Most of the wives of non-migrants expressed that they were more worried about their own and children’s future. They also responded that women are facing many problems and the burden of responsibilities with their increasing age. Respondents perceived that older women have to take more responsibility and also bear the burden of growing children which are the reasons for their depression. The wife of a non-migrant aged 40 years (respondent 14) described how women of this age are depressed. She believed that with increasing age they have to deal with many household problems and situations that make them depressed. For example,

*…..I am more worried about children’s future and our economic situation. The children are growing. I have to give them a good education and food. With increasing age, there are many more burdens of responsibility on my shoulders so I must be more responsible to manage the home and I have to think about our future. These things make me stressed and depressed. (Respondent 14, Wife of non-migrant)*

The wife of a non-migrant aged 42 years (respondent 10) with children talked about her feelings and actions which help to develop depressive symptoms. She believed that adult women must face many difficult situations in life. She recounted as:

*At this age, I feel hopeless and disappointed. We do not have enough money. Children are at a marriageable age. We have to arrange their marriage. It requires more money. We have to sell a piece of land to do this (children’s marriage). Thinking all this, I feel empty and lost, what am I to do? (Respondent 10, wife of non-migrant)*

However, there were different views among the younger left-behind wives who were more likely to have depressive symptoms.

They found it difficult to carry household responsibilities in the absence of their husbands. A younger left-behind wife aged 24 (respondent 4), described that ‘*I cannot take too much responsibility at this age*’ she further explained that ‘*this is the age of enjoyment’* and *‘not being depressed*’. But the scenario is in the other direction. She mentioned her experience as ‘*I cannot sleep without sleeping tablets; you know how much pressure I have to bear in his (husband) absence’*. She further narrated:

*I am just 24. I cannot bear all the responsibilities. If this continues, one day I will go mad.**(Respondent 4, Left-behind wife)*

The older wives of non-migrants and younger left-behind wives reported about their responsibilities and worries about the future contributing to depression.

#### Lower level of women’s education

The left-behind wives perceived that having a good education helps them to take responsibility and manage their family in a better way in the absence of their husbands. The left-behind wives who were illiterate or poorly educated described that they felt stress in carrying out external work when their husbands were away. One illiterate left-behind wife narrated that how was her experience:

*I cannot read or write. I sit at home and manage the family and house. Being uneducated, I feel tense, and stressed in doing the outside work. I also fear talking with outsiders. You know people are also backbiting which can damage our relationship (with husband). If I had a good education, I would not be in such a situation. (Respondent 5, Left-behind wife)*

Similarly, left-behind wives who had some education described how educated and uneducated women were treated and faced problems in society. They believed that having a good education can develop confidence and help to tackle and manage the family and situations in the absence of their husbands. They expressed their views regarding depression and how their education helped to minimise depression. For example, a left-behind wife shared her opinion as:

*Yes…good education helps to develop self-confidence and to do any work and make decisions. Nobody dominates educated people. Illiterate women do not have any idea of how to cope with situations and so lose self-confidence. (Respondent 4, Left-behind wife)*

Another left-behind wife expressed her experience and opinion about the importance of education in facing the situations arising in the absence of her husband as:

*……with education, I have confidence to tackle the situation. I found that many illiterate women hesitated and frustrated in managing the family and taking responsibilities in the absence of a male. Because, this (house) was managed by their husbands in the past and they (wives) also do not have good exposure to the outside environment. (Respondent 6, Left-behind wife)*

Women’s education plays a vital role in coping with the situation in the absence of their husbands and that helps to minimise their depression.

#### Struggle to fulfil responsibility

The left-behind wives said that employed women have more stress and depression. The majority of the left-behind wives also reported that they had difficulty to manage the house and a job in the absence of their husbands. A left-behind wife (respondent 1) described that she is a teacher in a school and as being a daughter-in-law she has to do household chores and also care for her son. She mentioned ‘*I am always in a hurry to go school and many times, I have been late. I got a verbal warning.*’ In this situation, she becomes stressful of having many responsibilities. Another left-behind wife had a similar experience, for example:

*I am a teller in a private finance company. Many times I have been late in the office. I got a warning letter. (Respondent 4, Left-behind wife).*

The majority of left-behind wives due to the migration of their husbands increase their role and responsibilities. For example, one of the left-behind wives (respondent 5) expressed that her husband went to Qatar, ‘*leaving me to take all the responsibilities and I must carry out his work as well.*’ She explained how left-behind women who face the situation of carrying out all household responsibilities in the absence of a husband are more likely to be depressed than the wives of non-migrants. This view reflects the lack of experience, fear and worry about taking new responsibilities which was supported by the similar experiences of another left-behind wife as:

*You know, living apart from a husband is always painful and stressful. In our culture, when a girl is married then she spends all her life in that home. Nobody other than her husband is close. Another thing, my husband was responsible for the household decisions and purchases. I don’t have any idea about these things. Now I have to face many new people and environments on the way to fulfilling the household responsibilities. I become nervous and worry about facing the situation and feel more stressed and depressed in carrying out this work which I have never done before. (Respondent 8, Left-behind wife)*

The working women find it difficult to fulfil a dual responsibility in the absence of their husband but support from the family members could help to reduce the stress.

#### Husband’s behaviour and women’s depression

The husband’s age was found to have a significant association with depression in the wives of non-migrants but not in the left-behind wives in the quantitative analysis.

The wives of non-migrants perceived that they had depressive symptoms due to the behaviour of their husbands. The wife of a non-migrant (respondent 13) described that she was depressed due to her husband’s drinking behaviour. She said that ‘*he was not like this when we got married but now with increasing age, he has this (drinking) habit*.’ She further expressed that the reason for her depression was her husband’s behaviour, as ‘*he comes home at late night and starts quarrelling with me without any reason*.’

Similarly, another wife of a non-migrant shared her experience of the reason for her depression:

*My husband argues with me about very simple things. He was not like this in the past. He also punches the children. I cannot bear to see these things. We have had arguments and can you tell me how to live with this situation? (Respondent 11, Wife of non-migrant)*

The husband’s age was shown to have a significant association with depression in the wives of non-migrants. These findings indicate that this could be partially due to the changing behaviour of husbands with their increasing age, for instance increased alcohol use.

#### Living in a traditional family structure with in-laws

Most respondents said that the family structure is patriarchally oriented and in-laws or husbands headed the families. They also reported that the in-laws’ attitude and perception towards them is associated with their traditions and religious beliefs and they believe that a household head’s individual characteristics are vital for them in the absence of their husbands. Most of the left-behind wives found it difficult to share their feelings and experiences with their in-laws who were religious and traditional. They also reported that household heads do not listen to their voice and they have had difficulties and miserable situations under illiterate household heads. They perceived that educated household heads are liberal and can understand their feelings and situations when their husbands are abroad. One of the left-behind wives shared her experience:

*My household head (mother-in-law) is illiterate and she holds all the authority. She believes in religion and is traditional by nature. She says I do not know anything and she wants me to stay at home all the time looking after children, cooking food, washing clothes and utensils. I do not have any freedom. I cannot imagine living in this condition without a husband. However, this is my obligation. (Respondent 2, Left-behind wife)*

In the traditional culture and family system, the household head rules the family and the subordinate family members must obey and follow his/her decisions. The women said that living under strict family rules and regulations made them depressed. Another left-behind wife described her condition when living in an extended family under the control of in-laws:

*You know my condition is miserable…….living under an illiterate household head is horrible. He (father-in-law) does not understand and puts barriers at every step. I must obey what he says and if not he threatens to kick me out of home. I think educated people do not do such things and may understand the situation. (Respondent 3, Left-behind wife)*

She (Respondent 3) also mentioned that in-laws do not appreciate their work and contribution to the house.She said:

*……….they want me to carry out all the household work and work in the farm as well. They do not appreciate my work. This makes me stressful and frustrated all the time (Respondent 3, Left-behind wife)*

The majority of left-behind wives perceived that their condition under illiterate household heads was one of the contributory factors in their depression.

In contrast, some respondents whose household head had some level of education had different views. For example, a left-behind wife (respondent 1) whose household head was educated described that when she felt stressed and depressed, the sympathy which was shown by her household head helped to reduce the mental stress in the absence of her husband. For example,

*I am getting moral support from the family members and I have not experienced extreme situations in the absence of my husband. Everybody is sympathetic to me. My father-in-law is educated and a government job holder. He behaves very well to me. (Respondent 1, Left-behind wife)*

Likewise, the wives of non-migrants perceived that they had a good relationship with their in-laws. They also believed that the good relationship may be due to the presence of their husband. For example,

*They are very helpful and give a hand in my work. My husband also tells them to support me. (Respondent 11, Wife of non-migrant)*

Speaking about receiving family help and support, the majority of left-behind wives expressed that they had poor mental health due to the lack of family help and support in the absence of their husbands. They further described that in the absence of their husband, they expected moral as well as physical support from their family members especially in-laws. It is difficult for the women especially a daughter-in-law to get sufficient help and support from family members.

A left-behind wife (respondent 6) living in a nuclear family with children explained that she started a parlour business but could not get the help from other family members which she had expected and needed someone to look after her son or give her a hand in her business. She further expressed:

*I have plenty of work to do. You know, I opened a parlour business. Nobody helped me. My in-laws are living next to my flat. My son is also small and I have to cook food for him and send him to school and work at the parlour. I have to shut down the parlour when I need to go shopping. It makes me frustrated and depressed in the end. (Respondent 6, Left-behind wife)*

In a patriarchal social structure, women’s voices have not been heard by in-laws. However, in the absence of their husbands, left-behind wives were expecting moral support and a positive attitude from their heads towards them which was considered important in reducing their depression.

#### Discrimination

The majority of women from both migrant and non-migrant households mentioned that discrimination and prejudice against them is more common within the family and society in almost all aspects of their life and such types of discrimination are often guided by the lack of education and religious and cultural tradition. They also perceived that any types of discrimination against them make their life stressful and miserable.

##### Discrimination and prejudice within the family

Women in both migrant and non-migrant households said that they faced systematic discrimination. One of the wives left behind (respondent 2) described that discrimination between the daughter-in-law and daughter within the family was seen in the behaviour of the family members towards her as she mentioned that, ‘*I have to wake up early but their (in-laws) daughter wakes up late in the morning. The disparity is clearly visible*.’ She further highlighted how the discrimination was observed within the family:

*I have to do all the household chores but their (in-law) daughter is not doing any work, just eating and sitting. They (in-laws) are biased against me. You know, in the absence of a husband, how I suffer from this attitude. (Respondent 2, Left-behind wife)*

The majority of left-behind wives felt that there was a change in behaviour from their in-laws and other family members towards them, before and after their husband’s migration. For example,

*You know the presence of a husband or not make a big difference in their (in-laws) behaviour towards me. I feel this difference. Now they (in-laws) say do this do that. If I make a mistake then they scold me. Things turn around almost opposite. There is a difference in their saying and doing (Respondent 3, Left-behind wife)*

The wives of non-migrants believed that they faced less discrimination in the family because of the presence of their husband. However, the wives of non-migrants reported that there is still some discrimination between the daughter-in-law and daughters. For example,

*Our society is bound by religious and cultural tradition. There is a different way of looking at a daughter and daughter-in-laws. They (daughters) can do whatever they like but I can’t. They (in-laws) dictate to me indirectly because of the presence of my husband. (Respondent 11, Wife of non-migrant)*

Women in extended families face more discrimination in the absence of their husbands than the women living with husbands. However, there is discrimination in the family between daughter-in-laws and daughters. Discrimination against the left-behind wives also contributes to their depression.

##### Caste based discrimination

Any kind of discrimination against women makes their life difficult. Women’s perception of discrimination is shaped by religion and tradition in the community. The majority of the respondents who belong to both lower and upper castes believe that caste discrimination still exists in society. The women respondents of a lower caste said that they were experiencing more depressive symptoms due to social exclusion and discrimination. They expressed that people of an upper caste did not like them and restricted their mobility and participation in social activities. One of the respondents who belong to a lower caste expressed how she faced social discrimination as follows:

*There is discrimination for us in the society. People are not behaving appropriately. We are not allowed to move freely when there is some religious work. We are untouchable. These things make it difficult for us to survive in the absence of a husband. (Respondent 6, Left-behind wife)*

She further explained that:

*I feel isolated. If there is a wedding ceremony in the neighbourhood, hardly anybody invites us and even if invited we don’t have permission to enter the houses of upper caste people. This is only one example. You know, at every step, there is social discrimination and isolation. It makes me nervous, stressed and depressed. (Respondent 6, Left-behind wife)*

The left-behind wives, particularly those belonging to a lower caste claimed that there is clear discrimination within society against them for being a lower caste which causes them stress and depression. A left-behind wife (respondent 5) explained that “*in the absence of my husband I need help from others as well but being of a lower caste, it is difficult to get this (help). It is difficult to live in such a stressful situation.*”

The majority of left-behind wives also described that not only their depression related to discrimination, but they also experienced stress when they feel that their activities and mobility are also being judged by people in society. For example, a left-behind wife:

*……..I have too much stress in the absence of my husband. You know, I have to do all work and go out to work. When I talk to other men, people are watching what I do, where I go and whom I talk to and start backbiting. (Respondent 4, Left-behind wife)*

However, the majority of the wives of non-migrants perceived that when living with their husbands there is less discrimination within the family and society. Most of them agreed that the wives who lived with their husbands are treated in a good way in the family and also in society but they still found some level of discrimination. For example, a wife of a non-migrant narrated:

*This is a male dominated society. Women are discriminated in every aspect but the only difference is the degree of discrimination. (Respondent 9, Wife of non-migrant)*

The existing caste-based discrimination contributes to depression in the left-behind wives especially those who belong to a lower caste in the absence of their husbands. However, women who live with their husbands experience less discrimination.

#### Worries about husband’s situation abroad

Almost all the left-behind wives reported that they were worried about their husbands’ conditions and life abroad. They said that their husbands had not been involved in household chores, for example, cooking before. They perceived that thinking about the condition of their husbands abroad was the cause of depression. One left-behind wife (respondent 4) mentioned that she could not sleep for many nights thinking about husband. Speaking about her condition, she said that she goes to bed without any energy.

*I feel more depressed living without him. I am always remembering and thinking about him and I wonder and worry about his situation abroad. (Respondent 4, Left-behind wife)*

The most of the left-behind wives said that they give more care and attention to their husbands’ health. They also claimed that this behaviour is common in Nepal. They expressed that they are more worried about their husbands’ wellbeing and the thoughts about the negative consequences which come to their mind about their husbands’ situation abroad contribute to their depression. A left-behind wife described that she felt depressed and had too many thoughts about her husband’s health and wellbeing, worried about how to cope alone in the new situation after the migration of her husband and also not having people close to her to share personal feelings which were all reasons for her depression.

*I have been married for just 3 years. After one and half years of marriage, I gave birth to a baby boy. I never feel depressed when living with my husband. I got support and help from my husband. When my husband went abroad, after that I suffered from depression because I used to think many things. I am more worried about his situation abroad. Where does my husband stay abroad? What kind of place does he stay in? How about his work; who will look after him when he becomes sick etc. etc. Then, how can I cope with the situation of separation? Who will listen to my feelings? And who can I share my feelings with? All the time we have lived together, so I have no experience of living alone. (Respondent 1, Left-behind wife)*

A left-behind wife (respondent 7) expressed her worries about her husbands’ situation abroad. She mentioned that she heard and read news on TV and in the newspaper about the condition of migrant workers abroad. She said that ‘*in Qatar migrant workers have to work in high temperatures so that migrants have poor health.*’ Most of the left-behind wives expressed similar thoughts: (respondent 7) ‘*I asked my husband on the phone about his work and living conditions and sometimes also ask his friend who came here (Nepal) on annual leave.* ’ Another left-behind wife expressed how she gets depressed and worried:

*I heard of many casualties of migrant workers in Qatar and Malaysia on TV. I don’t want to lose him. Thinking about him (husband), I spend many nights without sleep. I lost my appetite and desire to work. (Respondent 2, Left-behind wife)*

The above expressed women’s experiences show that women are more worried about their husband’s living arrangements, health and working conditions which appear to be the reasons that contribute to depression in the left-behind wives.

#### Separation

The separation from husbands due to a husband’s migration was associated with depression in the left-behind wives. The majority of left-behind wives believed that physical and geographical separation from their husbands increases their depression. For example, one of the respondents (respondent 4), whose husband went abroad after just one month of their marriage explained that ‘*separation immediately after marriage is more difficult*.’ She suffered from loneliness and was worried about thinking of her husband’s health and wellbeing. She narrated her feelings of separation from her husband:

*………after one month, he (husband) went to Qatar and left me with his mother. It is a very painful and stressful condition living alone. Sometimes, I think why am I married, if I have to live alone? It would have been better not to marry. That’s why, most of the times, I was depressed…..it makes me completely exhausted and blind and I cannot imagine my future without him. I also heard about many casualties of migrant workers abroad and many migrants’ dead bodies arrive almost daily. That makes me very depressed and sad. I go to bed with no excitement. I cannot sleep and I usually take sleeping tablets. (Respondent 4, Left-behind wife)*

Many left-behind wives reported that they had no past experience of living apart**.** For example

*We (husband) were lived together after we got married. He never left home for a long time before. I am not expecting this situation…….I found it hopeless. (Respondent 2, Left-behind wife)*

Similarly, the left-behind wives expressed that they have a fear of possible accidents and the loss of their loved one always on their mind which makes them depressed. One of the left-behind wives described as:

*I feel more depression….. I cannot imagine life without him. Separation is very painful and heart-breaking. I cannot express my stress in words. I lost weight, appetite and sleep. I don’t have any desire to work and talk to others, (Respondent 6, Left-behind wife)*

All the wives of non-migrants described that they had not had any experience of separation.

*When we got married, we lived together. I do not have such (separation) experience. (Respondent 9, Wife of non-migrant)*

Long-term separation from their husbands appears the main reason for depression in the left-behind wives.

#### Living with husband

Those women who lived with their husbands were found to be happier and less depressed.One of the wives of non-migrants (respondent 9) expressed that she was happy living with her husband *‘living with husband is the happiest time.’*  Most of the wives of non-migrants described that when living with a husband they are receiving help and support and encouragement. For example,

*We have a happy married life. I am satisfied with what we have at present. Why be sad when living with a husband? We have a good relationship. We live together and help each other. We share our every happiness and sorrow. I never feel depressed. (Respondent 10, Wife of non-migrant)*

The wives who lived with husbands receive help and support from their husbands and appear to be happy and not depressed.

#### Dwelling condition

The majority of the left-behind wives lived in a permanent or semi-permanent dwelling, while the majority of wives of non-migrants described that they live in a semi-permanent or temporary house. One of the wives of a non-migrant described that ‘*I am not happy with this house*’. She compared her house with the others, ‘*migrants’ houses are good and permanent but ours is temporary.*’ She also mentioned her feelings when living in a temporary house ‘*I feel morally down in front of others*.’ Another wife of a non-migrant described her frustration in living in a temporary house as follows:

*We are living in a temporary house. In the rainy season, there was a leak in the roof and it is still not repaired. You see, there are permanent houses of migrants. I can’t bring my friends to my house. I feel very sad and depressed. (Respondent 11, Wife of non-migrant)*

In contrast, most of the left-behind wives expressed that they have a good house. A left-behind wife (respondent 4) described ‘*our house is good and repaired last year*.’ Another left-behind wife who lived in a permanent house expressed the level of women’s satisfaction in living in a good house:

*I am happy to have a good shelter. It (house) was built after three years of migration (husband). (Respondent 7, Left-behind wife)*

The type of dwelling also contributes to depression in women. The type of house also appears to contribute to depression in the wives of non-migrants.

#### Financial constraints

Financial difficulties, for example, poverty or poor economic conditions and having a low household income are often linked to depression. Almost all the respondents agreed that financial hardship and worries were the main reason for depression in them. All left-behind wives said that their husbands migrated for employment and poor economic condition was the main cause of their husband’s migration. For example,

*We are not well off. We have no resources to solve the monetary requirements …….money is a bigger thing than others. We have a little farm which is not enough for survival. We have a financial problem so he decided to go abroad to earn money for the family. (Respondent 4, Wife Left-behind)*

The majority of the left-behind wives and the wives of the non-migrants described that they had depressive episodes because of their poor economic conditions and low household incomes which are not sufficient to fulfil their basic needs. The majority of left-behind wives perceived that their depression was partly a result of economic hardship in the absence of their husbands. A left-behind wife (respondent 5) described how she suffered from depression when living in poverty. She mentioned her unhappiness and distress as ‘*not having a regular income to cover the food expenses for a whole year. How can we be happy without food and shelter?*’ She further expressed that poor economic conditions were the reason for her depression, and said, ‘*I can’t eat and sleep properly. I am always tense and stressed thinking about how to manage a house without money and I end up depressed.*’ Another left-behind wife expressed that she was disappointed in tackling poverty even after receiving remittances from her husband. For example,

*I was also a little disappointed with our poor economic conditions and we did not have enough money to cover our basic needs. My husband’s remittance is just enough to cover basic needs. (Respondent 2, Left-behind wife)*

Half of the wives of non-migrants (n = 3) said that they also suffered from depression because of their financial difficulties and living in poverty. A wife of a non-migrant (respondent 10) described how she survived on a low household income and faced economic problems in daily life. She also mentioned how women were depressed in economic hardship: ‘*living in poverty and economic hardship were the cause of depression by which I feel more tension and stress to fulfil the basic needs of the family*.’ Similarly, another wife of a non-migrant expressed how she faced the situation of financial problems:

*You know, we have poor economic conditions. Who will be happy living in poverty? Without money, we can’t fulfil our desire and needs. It is a very sad and frustrating time for me. (Respondent 11, Wife of non-migrant)*

Speaking about low household income, the majority of the wives of both migrant and non-migrant households described that ‘having a low income’ is also a factor for depression. The majority of the left-behind wives claimed that low household income was the cause of their husbands’ migration and they further expressed that living on a low income is very stressful.

A left-behind wife (respondent 7) mentioned her stress at having a low income to fulfil the basic needs to survive as ‘*you know the price of everything goes up*’. She also argued that ‘*I have to give a good education to my children, school fees and stationery are also very high*’. She further expressed ‘*I have depression due to financial difficulties*’. Likewise, another left-behind wife expressed her stress of having a low income despite receiving regular remittances from her migrant husband, for example,

*My husband sends money at regular intervals almost more than 150 thousand (~£1071) in a year. However, we don’t have savings. I have to spend all the money on food, clothes and children’s school. Children become ill from time to time, treatment costs have also gone up. To fulfil all these, I have to borrow money from others. I am always tense and stressed about that. (Respondent 8, Left-behind wife)*

The majority of the left-behind wives further narrated that the remittance money was also not sufficient to cover their household expenses. One of the left-behind wives (respondent 6) described that she felt depressed at managing the house on a low income. She explained her experience ‘*if you go to a medical check-up, it costs more than Rs 2000 (~£15) per visit and children’s school fees and stationery cost about Rs 5000 (~£36); then how to buy food, clothes and other basic needs from the remittances*?’

*……food prices are going higher and higher. Inflation makes everything expensive. Health is also very expensive. Once you go for a check-up, it will cost thousand rupees (~£7) as normal. To think of these costs, I feel tension and bother about these things. (Respondent 4, Left-behind wife)*

Similar conditions were also mentioned by the wives of non-migrants. A wife of a non-migrant (respondent 10) mentioned that ‘*my husband earns very low wages which are not sufficient for living hand to mouth*’ and she further explained her frustration about the difficulties in providing good education for the children as ‘*they (children) are studying in a government school; if I had good income then I would enrol them in a boarding school*’.

Poverty or poor economic conditions and low income appear to contribute to depression in women of both households.

##### Sharing of remittances

The left-behind wives who live in extended households described that their in-laws are receiving remittances sent by their husbands and give them only a limited amount of money for their expenditure. They said that they do not have control over the remittances and are mostly worried about the spending of the remittances sent by their husbands. They further expressed that if the remittances are shared with the other family members, then there will not be any savings for the future of their family.

*Father in-law receives remittances and he spends money for household expenses and other purposes. I don’t have any control over it. I am worried about saving money for the future. It is out of the control of our hands. I am afraid that we will have nothing in future. (Respondent 3, Left-behind wife)*

Not having control over the remittances sent by the husband and disputes about sharing the remittances contribute to depression in left-behind wives.

##### Women’s low ownership of assets and property

Generally, assets and property ownership rests with males in Nepal. The majority of the participants in both households mentioned that they did not have any property in their own name. They perceived that existing patriarchal culture prevents them having assets in their name. A left-behind wife (respondent 5) described that the perception and attitude of other family members towards her restrict her gaining the property ownership, ‘*If I have property in my name, I will seduce and make extra-relations with another man after having it*.’ She further expressed that ‘*living in a family having such a type of mentality makes me very sad, distressed and depressed.*’

Another left-behind wife described the women’s property ownership and how the other family members perceive it:

*……..having property in my name, they (other family members) think that I will be proud and neglect other family members. It makes me feel very bad and depressed. I feel that I am not a member of this family. (Respondent 2, Left-behind wife)*

The majority (n = 6) of the left-behind wives also perceived that negative thinking would arise if they did not have property in their name. A left-behind wife (respondent 1) expressed the view that the ‘gender inequality’ in the family, which makes them unable to access household resources and they find it harder to gain property rights and they mentioned how women were viewed with prejudice by the family and society as far as property rights for them were concerned: ‘*only being a woman’*. A left-behind wife expressed how difficult it is to have property in a woman’s name in a male dominated family:

*…..I do not have any property in my name. Do you know how women are suffering from this? I have my own desire to fulfil and enjoy life, but without any property, how is it possible? In a patrilineal family, nobody wants to buy or transfer any property in a woman’s name. (Respondent 4, Left-behind wife)*

Women found difficulty in having property ownership in their name in the existing patriarchal family system that also appears to increase depression in women.

#### Physical workloads with added responsibility

Almost all (n = 7) of the left-behind wives mentioned that too much work contributes to their depression. Women respondents agreed that they have their own routine work, for example, cooking food, washing clothes. Beside this work they also have to engage in other household chores and care for children and the elderly and are also not very familiar and accustomed to the outside environment. One of the left-behind wives (respondent 7) described, ‘*there is much work to do, cooking, washing clothes, and looking after children and other outside work*.’ Apart from their routine household chores, left-behind women have to do extra work and take responsibilities which were done by their husbands before migration. She expressed that ‘*I have to bear all the responsibilities of my house alone*.’

Most of the left behind were afraid and worried about taking new responsibilities and feel the burden of work in the absence of their husbands which makes them depressed. For example, left-behind wives also reported that they struggle to take new responsibility and feel stress when making any decisions.

*I have always a fear and tense in mind about doing wrong decisions. I was not involved in the past. (Respondent 4, Left-behind wife)*

A left-behind wife (respondent 5) shared her lack of experience of carrying out new responsibilities which creates her situation worse. She said that ‘*I have never gone to pay school fees and electricity bills. I have lots of nervousness about doing that. I don’t know where to go and whom to contact*.’

Women are confined to household chores and have only limited exposure to the external environment outside the home. In the absence of their husbands, they have to carry out added responsibilities. One of the left-behind wives expressed her worry and nervousness about doing extra work.

*I have to search for farm labour. I have no idea where to contact them and where they are. My husband did that. I even found that I am worried about how to deal with them which I had never done before. (Respondent 8, Left-behind wife)*

Due to the migration of their husbands, left-behind wives described that they must live without a husband and they have to adapt themselves to the changed environment and alter their life style. The left-behind wives reported that they feel anxiety and stress about taking on the extra burden of work which their husbands did. For example,

*I have to adjust living without a husband. I feel bored and it is a dull environment at home without him (husband). I sit with nothing exciting to do. Still I have to do housework inside and outside. There is a heavy burden of work. I feel tired mentally and physically at the end.* *(Respondent 6, Left-behind wife)*

The left-behind wives who lived in nuclear families must bear sole responsibility in the absence of their husbands. A left-behind wife (respondent 5), in a nuclear family commented ‘*I am the only one in the house to do all the work’*. While the other left-behind wife (respondent 3), living in an extended family described that she had experienced a higher workload on her shoulders and she mentioned how she suffered mentally and was badly treated in the family:

*I work from morning to evening continuously. They (in-laws) are sitting and talking to each other in the home. They don’t feel any sympathy for me. Not only household tasks, I have to work in the field, planting, weeding and hoeing as well. Time is not the same at all. I have so much pressure of work. This affects not only my physical health but equally my mental wellbeing. (Respondent 3, Left-behind wife)*

In contrast, the majority of the wives of non-migrants described that they have to carry out only their regular household tasks, for example, cooking, washing clothes and caring for children. They further mentioned that their husband did the outside work. For example,

*I am busy doing regular household tasks. It is not a big job. These (cooking, washing clothes) are the work every woman has to do in the family. I do not feel pressure of work. (Respondent 9, Wife of non-migrant)*

The above expressed women’s experiences show that the extra responsibilities on women’s shoulders due to the husbands’ migration increase their risk of being depressed.

#### Social networks and participation in social activities

Social support and network has a greater impact on depression in women when living without husbands. The majority of the left-behind wives believe that social networks are helpful to get help and support from their peers in the absence of their husbands. The left-behind wives who live in a nuclear family describe that poor social and family cohesion has more impact on their mental health. A left-behind wife (respondent 5) expressed that ‘*I have very few friends*’. She perceived that ‘*if I had many friends certainly I would get help and support in difficult times*.’ Left-behind women further believed that the women who have less friends and poor family support have more risk of depression.

One left-behind wife described, ‘*Our family is patriarchal, and women have rare opportunities to participate in social activities*’. She also mentioned that the lack of opportunity to participate in social activities leads to her feeling ‘isolated’ and ‘depressed’.

*In our family, only male members participate in social functions. We get only limited chance to go to wedding ceremonies in the neighbourhood only if the whole family are invited. This makes me isolated and depressed. (Respondent 3, Left-behind wife)*

The left-behind wives agreed that social networking and participation in social activities would assist in getting help and support from their peers and also to share their feelings with friends which can relieve stress, so the lack of such a social network contributes to depression in them.

#### Communication with husband

Most of the left-behind wives had their own mobile phone (Table 4.1). They said that it makes easy to communicate with their husbands and share their happiness and sorrows. Most respondents reported that when they missed a call from their husband, there had been some arguments and misunderstanding, they suffered, and they described crying spells, sleeplessness and loss of appetite.

*When I missed his (husband) call, he put many questions after I received his next call. Where were you? Why did you not take your mobile with you? I can’t take my mobile all the time. He does not understand. This makes me frustrated and I can’t sleep or eat and I cry during the night. (Respondent 3, 4, Left-behind wives).*

One respondent explained how she suffered from her past experiences when a call from her husband was picked up by her in-laws:

*They (in-laws) exaggerate things. They told my husband, ‘your wife does not have a desire to stay at home, she is out most of the time.’ They want to create misunderstanding between us (Respondent 6, Left-behind wife)*

Apart from some misunderstanding, they accepted that it makes easier for them to share their feelings.

*We talk over the internet almost every day. We share our feelings. He (husband) gave me directions to run the household. I always ask him before making any decisions at home. I also asked about his working and living conditions. He told me he is now working in a construction company. (Respondent 8, Left-behind wife)*

Communication with migrant husbands helps to share feelings and relieves the stress through knowing the husband’s situation. However, poor communication with the husband increases tension, stress and depression in the left-behind wives.

The major depressive symptoms/causes reported by the left-behind wives during the interviews are listed in table 5.2

**Table: 5.2 Reported depressive symptoms or causes during interviews by respondents**

|  |
| --- |
| Symptoms/causes |
| Loss of appetite  Crying spells  Unfriendly people  Less talk than usual  People were unfriendly  Sleepless  Loneliness  Sad/tension/frustration  Bother  Trouble keeping in mind what was done  Depressed |

## Women’s autonomy

This section aims to explore the autonomy of left-behind wives and the wives of non-migrants. In this section only the quantitative variables which showed a significant association with the women’s autonomy are explored. The themes which were explored from the qualitative interviews are presented below.

### Increasing age

Respondents believed that age is a factor for low autonomy among the left-behind wives when living in extended households but they experience more freedom living in nuclear households.

A left-behind wife (respondent 1) described that the attitude of family members in giving any kind of freedom to women of a young age is unlikely when living in an extended family. She mentioned that ‘*They (in-laws) said that* *I am too young to be involved in decision making and I have to follow the family rules*.’

Furthermore, a left-behind wife aged 36 expressed how the age of a woman helps them to get autonomy and freedom. She also mentioned that a woman’s autonomy mainly depends upon the living arrangements. She recounted how she felt her autonomy at this age:

*Age is a matter of getting autonomy…….it depends upon the household conditions. When I was young and living with in-laws, at that time I may say I had no freedom. Now, I don’t have any problem. I can buy whatever I like and eat and wear. My husband is away and he also told me to spend money for necessary things. I run my house and I don’t need to get permission from others as well. In my opinion, there is no problem if we use our freedom wisely. (Respondent 6, Left-behind wife)*

In contrast, almost all the wives of non-migrants reported that they experienced no freedom and autonomy as they said that all the decisions were made by their husbands and they must get permission from their husbands. A wife of a non-migrant who lived with her husband stated:

*I have no freedom at all. I cannot do anything without his (husband) permission. My husband makes all the decisions. I have to ask him for my visits. (Respondent 10, Wife of non-migrant)*

The young left-behind wives when living in extended families had difficulties in gaining any autonomy. However, the older left-behind wives experienced greater autonomy and freedom of movement. Most of the left-behind wives perceived that with increasing age, they have more freedom and autonomy but the wives of non-migrants did not have autonomy and freedom and the husbands are responsible for making decisions.

### Level of education

The majority (n =12) of the respondents believed that education plays a vital role in experiencing autonomy. They perceived that being educated they have more opportunity to be involved in decision-making activities. A left-behind wife (respondent 4) who completed a bachelor degree described how her education helped to gain autonomy. For example:

*I did a bachelor degree. Sasu (mother-in-law) asks me before taking decisions. She said I am an educated person. (Respondent 4, Left-behind wife)*

A left-behind wife, for example, respondent 1, who had some education, has been involved in decision-making activities even though she is not a household head. She also mentioned that how her household head encouraged her to participate in decision-making activities and how she gained freedom of movement due to being educated. She shared her feelings as:

*I have freedom to do what I need and wish. Father-in-law runs the household activities and he asks me before making any decisions. He also told me to take decisions when he is away because I am an undergraduate and worked as a teacher. I take decisions for my own health care. I do not visit unnecessary people and places and I do not have extra demands. I have free to travel but should ask for permission so that they know where I am going and how long for and do the normal things as usual. There are no restrictions or limitations as they (in-laws) trust me not to be involved in wrong things. (Respondent 1, Left-behind wife)*

Similarly, a left-behind wife (respondent) who described herself as illiterate also reported similar experiences to the educated left-behind wives when living in nuclear families. However, she felt the difference in making decisions and she required help from others. For example,

*……there is a difference being educated or not, especially while making any decisions. I can’t read and write so I ask to my brother before making any decisions. If I was educated I would not ask him (brother). (Respondent 5, Left-behind wife)*

Respondents from non-migrant households agreed that women’s education does not help them to get more autonomy and they perceived that males are dominant over women in every aspect. For example, the wife of a non-migrant who had an undergraduate degree shared her feelings about her autonomy and freedom as:

*I have a bachelor degree in business management. I feel no difference in being educated or not. I have to get permission from my husband for everything. (Respondent 9, Wife of non-migrant)*

The majority (n = 6) of the left-behind wives mentioned that women’s education can help in getting higher autonomy in the absence of their husbands but the wives of non-migrants even if they are educated are not able to enjoy their autonomy and freedom.

### Having property and assets in women’s name

The majority of the participants reported that they did not have any property of their own. Most of them believed that if they had some property in their name, they would feel some freedom. The patriarchal tradition and culture of holding property in a male’s name could not benefit the women for getting property rights. A left-behind wife (respondent 2) described how women cannot get freedom without having property, that ‘*males are dominant in the family and even in society*’ which prevents her having any property. She further explained that ‘*if I had property in my name, I would go somewhere*.’ They (in-laws) do not trust me and have a negative attitude towards women. For example,

*No property in my name. All in father-in-law’s name. They (in-laws) believe that if I had property in my name, I would seduce and elope with another man. (Respondent 3, Left-behind wife)*

Some left-behind wives reported that they have some sort of autonomy. However, they believed that the other family members could limit their autonomy. For example, one respondent expressed how her mother-in law tried to prevent her buying property in a woman’s name:

*This year we bought a piece of land in my name. He (my husband) is not here so this land is in my name otherwise it would be in his name. Mother in-law told my husband not to buy in my name. The other properties are in his (husband’s) name. (Respondent 4, Left-behind wife)*

The left-behind wives who had property in their own name said that they have a higher level of autonomy in the absence of their husband. One left-behind wife (respondent 7) described how she experienced autonomy and freedom in his absence and also made decisions and stated:

*I have properties in my name. I bought jewellery last year. My husband sent remittances to me. I also have a bank balance. I can happily manage the house and take full responsibility of the house without him. I am free to use it and make decisions. (Respondent 7, Left-behind wife)*

However, almost all wives of non-migrants mentioned that they do not have any property and assets in their own name. They also expressed that all the household property and assets are either in their husband’s name or the in-laws’ name. They said that they have no autonomy to have property in their own name. One of the wives of a non-migrant expressed her situation:

*………this land is in my husband’s name. I have nothing. I must depend upon my husband’s earnings. In our family no women have any assets in their own name. (Respondent 14, Wife of non-migrant)*

Women describe experiencing their higher autonomy as having some property in their own name. The left-behind wives appear to gain some property ownership. However, the women’s property and ownership rights depend upon the living arrangements and their position. In particular, it is difficult to gain women’s property ownership and rights for the wives of non-migrants living in a patriarchal situation.

### Having children

The majority of the left behind experienced having more freedom of movement and took decisions in the house after having children. A left-behind wife (respondent 1) perceived that she had more freedom after having children. She also mentioned how circumstances changed after giving birth to a child, for example,

*I feel more freedom after having children. He (father-in-law) gave me more money because we might be sick and need to go for a check-up and buy children’s food. (Respondent 1, Left-behind wife)*

Another left-behind wife also felt a similar experience and added that she felt more responsible after having a child. She shared her experience:

*……I am experiencing more freedom. See, when you have children, you may feel responsibilities on your shoulders.* *(Respondent 6, Left-behind wife)*

A left-behind wife (respondent 4) who did not have any children believed that not having more freedom and autonomy before giving birth to a child is more common in male dominated families in Nepal. She said that there is tighter freedom of movement for women without children and they must have somebody to escort them. For example,

*I have to get permission from my mother-in-law and ask somebody (husband’s sister) to go with me even I have to go to my natal home. (Respondent 3, Left-behind wife)*

Having children, for women appears to be a benefit in experiencing autonomy. The left-behind wives who had children with them experience more freedom of movement and decision-making in the absence of their husbands. But, the left-behind wives who lived in extended families found it difficult to gain autonomy.

### Traditional culture and belief

All of the women agreed that the existing traditional culture and belief in the family is the main barrier to getting higher freedom and autonomy. This is particularly in the extended households where the in-laws are household heads who have a strong belief in traditional culture and religion. Almost all respondents perceived that their household heads are conservative and traditional by nature. The majority of the left-behind wives expressed that their autonomy depends upon the household heads when living in extended families. They also believed that existing religion and traditional culture prevent them achieving higher autonomy. For example, one of the left-behind wives (respondent 3) described that she did not feel any freedom, ‘*when I come in late, he (father-in-law) scolds me*.’ She also mentioned her experience of living under male headship and how the cultural attitude to women prevents her freedom. She narrated:

*Father-in-law is our household head……….he (father-in-law) has his own strict rules. He has faith in religion and does not want to give freedom to women. He told me women must live within the four boundaries of the house and never cross them. (Respondent 3, Left-behind wife)*

Some left-behind wives when living under a male household head expressed that not only the gender of the household head, but other attributes, for example, the age and education of the household head also play an important role in obtaining women’s autonomy.

The majority (n = 10) of the respondents who lived in an extended household described that their household heads are older and compare things now and in the past. For instance, one of the left-behind wives (respondent 2) explained that ‘*if I wanted to purchase gold jewellery, they (in-laws) said that it is very expensive now. They told me they used to buy in Rs 3000 (~ £21) per tola (10 gram) in their time but it is now Rs 50,000 (£357) per tola. They are not moving with the times.*’ She also mentioned that ‘*not only purchasing personal things, but they also give me only limited money when I need to go for a medical check-up*.’

The majority (n = 5) of the left-behind wives perceived that old aged household heads have a negative attitude towards giving freedom to women and are strongly attached to religious beliefs. A left-behind wife shared her experiences about the culture and perception of her in-law that restricted her autonomy and freedom:

*He (father-in-law) is about 68 years old……….. He has faith in religion and he says women must be under the control of men. There is no position for women in our family. (Respondent 3, Left-behind wife)*

The left-behind wives also experienced low autonomy when their household heads have a low level of education. They agreed that an educated household head can understand their situation and they get more freedom when living with them in the absence of their husbands. For example,

*You know an educated household head can understand my situation. There is less chance of bias and discrimination among family members. We share our work. He asks me for my opinion before making decisions. He always asks me the necessary things and gives money for the purchase of my belongings. (Respondent 1, Left-behind wife)*

Many left-behind wives perceived that they cannot have more freedom and autonomy when living with poorly educated or illiterate household heads. A left-behind wife (respondent 3) whose household head was illiterate expressed that she did not get freedom and argued that:

*My father-in-law does not understand my condition. He just completed non-formal education. He does not give any freedom to women……..if my household head was educated, I would get more freedom. (Respondent 3, Left-behind wife)*

In contrast, the left-behind wives who headed households in the absence of their husbands expressed that they had greater autonomy. One of the left-behind wives (respondent 6) reported that she had greater autonomy and could do whatever she liked. She mentioned the reason for getting more freedom as ‘*my husband is not here so I do not require permission for my visit*.’

Another left-behind wife who acted as a household head quoted her feeling of autonomy in the absence of her husband as:

*……I run my house. I have to make all the decisions. I feel greater autonomy. I can buy the things that I like to eat, wear and there is no need to ask anybody for my visit. (Respondent 7, Left-behind wife)*

Traditional culture and belief appear to prevent women from getting higher autonomy. The left-behind wives who lived with in-laws found it difficult to exercise their autonomy and freedom because of the attributes of their in-laws. However, the left-behind wives who headed households experienced greater autonomy.

### Family structure

All the left-behind wives agreed that they had more autonomy when living in a nuclear family in the absence of their husband than living in extended households. The wives who lived in the extended families responded that their in-laws are household heads and they were not able to get greater autonomy as compared to living in a nuclear family.

Here are two expressions from left-behind wives who are living in nuclear families narrating about their autonomy and freedom:

*I don’t need to ask anybody for my visit and decisions. I am free to make decisions in my house. (Respondent 7, Left-behind wife)*

*…..I opened my own business. I have to go shopping. I have full freedom of movement and full power to make decisions. (Respondent 6, Left-behind wife)*

However, the left-behind wives who lived in extended households described that they were not able to get freedom when living with in-laws. For example,

*I have no freedom at all. I live with my in-laws. (Respondent 3, Left-behind wife)*

*… I am not involved in any decisions and nobody asks me for my opinion. They (in-laws) said that I am young and only the elderly take decisions and I must obey their decisions. (Respondent 2, Left-behind wife)*

Most of the respondents believed that having more family members may restrict their autonomy and limit their activities within or outside the home. Most of the respondents shared their experience as:

*We are a big family and nobody gave me responsibility and I was not involved in any activities besides household chores. (Respondent 2, Left-behind wife)*

A left-behind wife with less family members stated:

*I am living here with two children. I have more freedom and nobody obstructs me. (Respondent 7, Left-behind wife)*

The living arrangements also appear to influence the autonomy of the left-behind wives. The left-behind wives who live in a nuclear family had higher autonomy than the left-behind wives who lived with in-laws. In extended families, there are a large number of family members which also seems to be a barrier to the autonomy of left-behind wives.

### Sense of freedom after husband’s migration

The majority (n = 5) of the left-behind wives agreed that they had more autonomy after the husband’s migration. However, they described that their autonomy also depends upon the family structure and headships. The left-behind wives reported that before migration, husbands were the household heads and they made decisions and controlled the household resources. They perceived that after the husband’s migration, they are in-charge of their house and had the opportunity to play with the household resources and also get more power to make decisions in the absence of their husbands.

*Before migration (husband) he had all the responsibility. Now I am the household head. I receive and control the remittances and make household decisions. I am free to use them for the family wellbeing. (Respondent 7, Left-behind wife)*

Although, the left-behind wives who lived in extended households believed that they are not getting more autonomy, they agreed that the level of autonomy has improved compared with before migration. They perceived that this change may be due to the remittances sent by their husbands.

*I found little change. He (father-in-law) gives me some pocket money. This was not the case in the past. I think this may be due to my husband’s migration. My husband sent remittances to father-in-law. (Respondent 2, Left-behind wife)*

The husband’s migration appears to increase the wives’ autonomy. The woman’s role has changed due to the husband’s migration and they have gained status as the household head and have more autonomy and freedom to make independent decisions. However, the left-behind wives in extended households may not able to gain higher autonomy from a husband’s migration because of their position in the family.

### Status of personal autonomy

This section aims to explore the women’s experience of their personal autonomy. Personal autonomy is related to their freedom to control their life and freedom of movement. To explore the women’s personal autonomy, women were asked how they feel and experience for their personal matters and decision-making concerning their needs and movements.

Most of the left-behind wives reported that they had more personal freedom and made independent decisions about personal matters in the absence of their husbands. However, it is interesting to note that the majority of respondents said that they have either restricted or limited freedom of movement and they need to ask for permission from their husbands or in-laws or inform them before making a visit. For example,

*I have freedom as I need and wish. There is no difference and I do not visit unnecessary people and places and I do not have extra demands. I am free to travel but should ask for permission so that they know where I am going and how long for and do the normal things, that as usual…..There are no restrictions or limitations, as they (in-laws) trust me. (Respondent 1, Left-behind wife)*

Most of the left-behind wives believe that their family structure plays an important role in gaining and exercising personal freedom. The left-behind wives who live in a nuclear family reported that they had more personal freedom. They further described that in the absence of their husbands, they have to take household responsibility as a household head and have more power to take personal decisions about movement For example,

*Yes, I have full freedom. I can do whatever I like. I am free to eat and wear what I like. I am a household head. I can make all decisions myself. I can go out and there are no restrictions on my travel. (Respondent 7, Left-behind wife)*

However, the majority of left-behind wives who were living with in-laws found it more difficult to gain freedom in the absence of their husband. They perceived that a household head’s behaviour and beliefs also influence a woman’s freedom and autonomy. A left-behind wife who lived with in-laws expressed her feelings and experiences:

*I don’t have my personal freedom at all. I have to do all the household work and care for my child. In some cases, if I want to visit my parent’s home, they (in-laws) say to me ‘who will do the housework?’ I hardly get permission to go even to my parent’s home and if I get permission, then they ask me to come home as early as possible. If I want to visit my friends, they restrict this. They ask why I should go to meet them; why cannot they visit you. If I do not ask them about making a visit, they scold me. I can’t buy what I like. For the purchase of my personal belongings, they (in-laws) give me very little money and they think that a little bit is enough. They keep on saying this much is enough. Don’t spend more money. Why do you need more? They ask me to reduce expenditure wherever possible, as they say that all the basic needs are being supplied by them. They always compare the cost of things with what used to be in their days. My husband sent money but I have to suffer (Respondent 3, Left-behind wife)*

Another left-behind wife (respondent 4) shared her experience of freedom of movement and how it was restricted by her mother in-law who also judged her behaviour as follows:

*I need permission to travel from sasu (mother-in-law) and she does not like my travelling to outside the home. Most of the time, she is watching me and told my husband that ‘your wife always goes out’. (Respondent 4, Left-behind wife)*

Most of the wives of non-migrants who were living with a husband agreed that they experience low personal freedom and mobility. The wives of non-migrants mentioned that husbands or in-laws were their household heads and in such cases, they reported that they had no or only partial autonomy and they shared the experiences of living with husbands or in-laws. One of the wives of non-migrants described how her autonomy was shaped and her behaviour was monitored.

*I must ask and get permission from my husband to buy my personal belongings. If I go out without asking him, then he scolds me. He told me that if I need to go out, I must go with his sister. (Respondent 14, Wife of non-migrant)*

A similar response was reported by a woman living with her husband in an extended family. A wife of a non-migrant (respondent 11) mentioned her experience of how and why she did not feel autonomy while living in an extended family.

*I do not have any autonomy at all. Our family is an extended family and my mother-in-law is the household head. I have to get permission from her to go out even to my parent’s home. I have to respect her decision. Her decision is final. There is nowhere I am happy. If I have not asked her, I will be in trouble. Sasu (mother-in-law) asked me why I needed to go to my parent’s home. “Here is plenty of housework and who will do the work in your absence?” (Respondent 11, Wife of non-migrant)*

However, some wives of non-migrants reported that they had some personal freedom when living with their husband. These freedoms are related to their movement near to their homes but they required permission to travel to the city or even their natal home. They also described that to buy personal belongings where costs are involved also required the permission of their husbands. For example

*I may say yes or no for my freedom. I can go near my home without asking him (husband) but I must ask him for my visits to the city and I also require permission to go to my natal home. Without his permission I can’t do this. (Respondent 9, Wife of non-migrant)*

Personal autonomy depends upon household structure. The household head is the key role in determining the women’s personal and movement autonomy. The left-behind wives who lived in nuclear households acting as a household head in the absence of husbands had greater personal autonomy and freedom of mobility but the left-behind wives who lived in extended families could not obtain such autonomy and freedom. In the case of the wives of non-migrants, their personal autonomy and freedom of movement rests on the decision of their husbands or in-laws. The left-behind wives have greater personal autonomy than the wives of non-migrants.

### Access to and control over financial resources (Financial autonomy)

The respondents agreed that gaining access to and control over financial resources also depends upon their family structure and household heads as well as their position and status. The interviewees were asked about their control, access and decisions regarding the financial resources in the house.

#### Freedom to use and control of own income

Most of the interviewees stated that they did not have their own earnings. Most of them reported they are dependent on their husband’s earnings. The majority of women in the interviews said that they do not have a job and also believed that not having a good level of education is a barrier to get a job, thus they do not have their own income. However, some left-behind wives who had their own earnings expressed that they had greater freedom in the use of their own earnings in the absence of their husband. A left-behind wife (respondent 4) who worked as a teller in a finance company described that she had freedom to spend her income as she wished. Likewise, another left-behind wife also shared about her freedom to use her own earnings:

*Yes, I have a job in a school. It depends upon the situation. There are no obligations for my spending. I can only spend money in buying necessary things. (Respondent 1, Left-behind wife)*

In non-migrant households, almost all the interviewees living with a husband were unemployed (Table 4.1). They mentioned that they do not have their own earnings and their husbands do not allow them to do job and they must stay at home doing household tasks and caring for the children.

*I am a graduate in business administration. I am unemployed. There is no point in my control over my earnings. I want to do some job but my husband does not like this. (Respondent 9, Wife of non-migrant)*

A wife of a non-migrant who worked on a farm reported that she does not have control over her own earnings and recounted:

*I have some income from the farm job. I give all my earnings to my husband because he controls our house. (Respondent 12, Wife of non-migrant)*

The presence of a husband seems to restrict the freedom for wives’ spending their earnings. The employed left-behind wives had more freedom and access to their own earnings whereas the wives of non-migrants had less or no freedom over their own earnings.

#### Freedom to use and control of husband’s earnings

Most of the respondents agreed that the household head is mostly responsible for the use and control of their husband’s earnings. However, it also depends upon the living arrangements, for example, nuclear or extended families. In addition, most of the migrants’ wives received remittances when they live in nuclear families while in-laws and other male relatives received remit money when migrants’ wives were living in an extended family system. But in the case of non-migrant households, the wives of non-migrants mentioned that their husband is the household head and they do not have control over their husband’s earnings.

One of the left-behind wives who lived with in-laws shared her experience about her control over her husband’s earnings:

*Daddy (father-in-law) is a household head so he received money sent by my husband and used it wherever necessary. (Respondent 1, Left-behind wife)*

The migrants’ wives perceived that if they are not receiving remit money, then they have either limited or no access to their husband’s earnings. Most of the wives left behind who lived in extended families reported that their in-laws are household heads and they control all the household financial resources and also receive and control the remittances sent by their husbands and they just receive a limited amount of money for their expenses. For example,

*I don’t have any access to any financial resources in the house. My father-in-law is a household head of the house and he controls all the financial resources and the remittances sent by my husband. I don’t have any property in my name. I must depend on him (father-in-law) for my expenses. He gives me only limited money. (Respondent 3, Left-behind wife)*

Some women respondents who received their husband’s earnings agreed that they made their own decisions about spending money for daily purchases but needed to ask their husbands if they required to purchase major goods such as land, television etc. Thus, they believed that they have only partial control over their husband’s earnings. For example,

*I am free to purchase the household’s daily needs. But when I require to purchase a major thing, then I must ask him (husband) and if he gives me permission only then I will purchase otherwise I do not. (Respondent 4, Left-behind wife)*

In some cases, women also required to obtain permission for expenditure and must make clear to their husband where and how the money was spent.

*My husband always asks me about the expenditure. I have to explain all the expenses. He told me not spend any more money. (Respondent 8, Left-behind wife)*

Similarly, some respondents said that they can decide for themselves and used their husband’s earnings and do not need to get permission. For example,

*My husband sent money to me. I keep it in the bank account and withdraw as required. I can decide myself where and how the money is to be spent. He (husband) only gives me advice that I should spend money wisely and as required. (Respondent 7, Left-behind wife)*

Most of the wives of non-migrants said that their husbands were household heads and the main income earner in the household and they had more control over economic resources and their earnings too. Women also perceived that patriarchal dominance prevented them accessing their husband’s earnings and their control over economic resources is rare. In most cases, they have either partial or no control over their husband’s income and other economic resources. For example,

*I have to say yes or no either. He gave me a lump-sum of money for daily household purchases and I save some money from this. He kept all the household income and his salary as well. When I need money for my personal purchases, he gives me a limited amount which is sometimes enough and sometimes not. (Respondent 11, Wife of non-migrant)*

The majority of the wives of non-migrants perceived that there is a gender disparity between male and female which also determines the control of and access to economic resources in the house. They agreed that mostly men are not supposed to do household tasks and women do not go out to work. This division of inequality restricts the women not only within the household but also limits their access to their husband’s earnings. In such cases, the women who are living with their husbands argued that their husbands were responsible for their earnings and mostly controlled the earnings on their own. For example,

*My husband keeps his salary in the bank and he runs the house. All the properties are in his own name and nothing in my name. He gives me very limited money and if I ask for more, he asks why I need more and he says he does not have more money with him and I have to economise in expenditure. (Respondent 14, Wife of non-migrant)*

The patriarchal family system and male household heads appear responsible for the low control and access over their husband’s earnings and other economic resources. The left-behind wives who received remittances from migrant husbands had greater access and control over their husband’s earnings and other economic resources in the absence of husbands in a nuclear family while there was low access and control over husband’s earnings when living in an extended family under the headship of in-laws. In the case of the wives of non-migrants, they had no or low access to their husbands earnings and other economic resources.

### Women’s social and political autonomy

In this study most participants reported that their participation in social and political activities was very limited and restricted by patriarchal dominance. In many cases, they may need permission either from their husbands or other members of the household to participate in social and political events.

The majority of left-behind wives reported that they were free to participate in social gatherings such as marriage and other religious activities. Left-behind wives also described that they participated in social activities when invited. One of the left-behind wives (respondent 1) mentioned that a woman cannot have power to decide for herself when living in an extended family to participate in such functions, she said ‘*I should get permission or inform to the other family members to participate in social and religious functions*.’ These situations are common and in some cases, in-laws give permission to participate. However, if these functions are organised at night they should be accompanied by other members of the family or neighbours. One of the interviewees stated:

*Yes…I do participate actively in such occasions (marriage and other religious activities)…. I like to help people in household chores and look after the guests in such gatherings. If such activities are organised at night then I accompany the sisters in the neighbourhood. (Respondent 1, Left-behind wife)*

Moreover, not only participating in social gatherings, some women said they are actively participating in women’s groups. But they showed no active desire to participate in political events. For example,

*I am participating in a women’s group as an active member most of the time. But I don’t like to be involved in political events. Usually, we (in-laws) went all together to participate in social gatherings and ceremonies like marriage, and other religious functions. My household head gives me permission to go and participate in the religious and social ceremonies near our home. I go in the day time but not at night. (Respondent 2, Left-behind wife)*

In this study, some of the wives left behind agreed that they have freedom to participate in social events near their home, but need to get permission to attend such events when at a distance. One interviewee (respondent 2) who lived in an extended family reported that she gained social autonomy because of others. She mentioned that in-laws are liberal towards her allowing to participate in social and religious events like marriage and believed that other people in the neighbourhood also participate in such events. For example:

*I may say yes to social participation. If the social functions are near our home or in the neighbourhood, they don’t hinder me from this, but at a distance, I must get permission and sometimes they say no. This might be because of fear of others in society. They (in-laws) have thought that if I participate in such functions, I will misuse the freedom. (Respondent 3, Left-behind wife)*

Some left-behind wives enjoy working in the group but are not willing to go to social events in the absence of their husband. The left-behind wives also mentioned that their elderly were also happy when they (left-behind wives) preferred to go to religious activities.

*I work in a finance company that’s why they made me a secretary in the Tamang organisation. I enjoy working there. At least, I have some freedom to talk with other people in the group. My mum (mother-in-law) also becomes happy when I participate in religious activities. (Respondent 4, Left-behind wife)*

Some of the left-behind wives living in nuclear families expressed that they were free to participate in the social events in the absence of their husbands. They believed that participating in social events can make their life easier by making friends and getting help from others in difficult times when their husbands are away.

*I used to go to all the social gatherings like weddings and rice feeding ceremonies. Attending such events helps me to make friends. My relatives also come to the house and ask if I have any difficulties or not in the absence of my husband. I am also a member of a women’s group. (Respondent 5, Left-behind wife)*

The women described that most of the family members did not like women’s participation in political functions but they easily give permission to participate in religious ceremonies. For example:

*My husband does not like me to take part in political functions. In some cases, our neighbours went to participate in political rallies and asked me to participate. I also don’t like to but to be sociable, I went with them a couple of times but I did not tell to my husband. When there are religious ceremonies, my husband does not hinder me for attending at all. (Respondent 7, Left-behind wife)*

Some left-behind wives expressed that they have freedom to participate in social activities but having too many responsibilities they said that they do not have time to take part in such social gatherings in the absence of their husbands. However, they showed their desire to join in a group if they have free time. For example,

*I am quite busy in my household tasks and in the parlour shop. I don’t have time to participate in such functions. I only go to such events if it is close relatives. (Respondent 6, Left-behind wife)*

Most of the wives of non-migrants described that they do not have social and political autonomy. They mentioned that their husbands participated in most of the social and political activities. All of them agreed that they got the chance to participate in social events only with their husband’s permission or if invited to all family.

One of the wives of non-migrants expressed her view:

*My husband participates in most of the social functions. They (people) sent an invitation in his name. I can only participate when he gives me permission.**(Respondent 10, Wife of non-migrant)*

Given the patriarchal dominance in the family, there is less chance for women to participate in social functions. Males participate in such activities. In the absence of husbands, the left-behind wives have a chance to participate and appear to gain higher social autonomy whereas there is limited social autonomy for the wives of non-migrants.

### Women’s involvement in decision-making

The respondents reported that the male acts as the household head and main decision maker in both nuclear and extended households. Almost all women in the interview said that they carry out their traditional roles as housewives and the majority of decisions in the household are usually made by the husband or in-laws. They also reported that their involvement in decision-making activities depends upon the family structure and their position in the household.

They also perceived that the left-behind wives who are living in nuclear families have more power to make independent decisions. For example,

*He (husband) is in Qatar and I run the house. I make all the decisions whether small or big. I am free to take any decisions. (Respondent 7, Left-behind wife)*

Although, left-behind wives who lived with in-laws in extended households described that they are often neglected and have no role in decisions made in the house. A left-behind wife who lived in an extended family narrated:

*Father-in-law is a household head and he makes all the decisions. He never asks me for a decision. I have no role in any decisions. He told me women are not involved in decision-making and we just follow the decisions. (Respondent 3, Left-behind wife)*

The majority of the left-behind wives who were household heads said that they are free to make minor decisions, for example, daily household purchases and health care decisions but still need to ask to their husbands for permission and consent when making big decisions. They also reported that sometimes, they also consult other family members before making big decisions. For example,

*I operate my house and I can decide our daily purchases and health care. But for major purchases, he (husband) decides and if I need to take decisions then I must ask my husband. I cannot make big decisions without his approval. In some cases, he told me to take advice from his parents. (Respondent 5, Left-behind wife)*

In non-migrant households, all the wives of non-migrants agreed that almost all economic decisions were taken by their husbands and the majority of decisions were taken by their husbands or in-laws without consulting them. They also agreed that their participation in decision making depends upon the family structure. Only some wives of non-migrants living with a husband in a nuclear family expressed that they had limited freedom in making their own decisions for daily household purchases. However, they first need to ask for permission if they need to make decisions for large purchases.

*……I can purchase things which I need for daily usage from the grocery shop nearby my home. I do not need permission for this. But I need to ask my husband for the purchase of these (rice, oil, pulses) when in larger amount. (Respondent 12, Wife of non-migrant).*

A respondent who lives in an extended family shared her experience how she was not involved in decision making:

*My father-in-law is the household head and he controls all the household activities and takes all the decisions. We just know after the decisions. He does not ask me at all. If I ask him, he says why do you want to know? It is not your business. (Respondent 11, Wife of non-migrant)*

A wife of a non-migrant (respondent 9) also described that she was excluded from most of the decisions and the major decisions were made by the male members. She perceived that her exclusion was for being a woman ‘*I am a woman and I am a daughter-in-law*.’ She believed that it is difficult for women to be involved in decision making. She argued that ‘*our society is patriarchal and males are dominant in all aspects over women*.’ For example,

*I am not involved in decision making. Our society is a male dominated society and in my home, only male members take decisions. My husband takes all decision. I am only a housewife. (Respondent 13, Wife of non-migrant)*

Some wives of non-migrants made it clear that they have no role in decision-making at home at all. One of the interviewees described that she had no role in decision making and how she was restricted participating in the decision-making process by her husband:

*My husband takes all the decisions. He (husband) is a driver and he goes to work in the morning and comes home late. My husband does not give me any authority to take decisions even for daily purchases. He buys from the market himself. He does not listen to me and he is a different type of person. If I take some decisions without his consent, then he argues and scolds me. I am only responsible for household chores, caring for the children and cattle. (Respondent 14, Wife of non-migrant)*

The left-behind wives as household heads have more freedom and are involved in decision-making in the home but those left-behind wives who live under in-laws do not have a role in decision-making. However, in the non-migrant households decisions are made by husbands, and the wives of non-migrants are excluded from the decision-making process.

## Health service utilisation

The types of health service utilisation for minor illness by left-behind wives and the wives of non-migrants were explored in this section and the views expressed by both left-behind wives and the wives of non-migrants are presented under the appropriate themes.

### Type of health service utilisation for minor illnesses

The respondents were asked what types of health facilities they used for minor illnesses. Most of the respondents (n = 12) believed that minor illnesses are not a major disease and can be cured by simple herbal medicines.

*I do not go for medical services for a common cold; I used to drink boiled water with some herbal leaves like Tulsi. When I got fever, I took paracetamol from a grocery shop near home. When it gets worse, only then I will go for a check-up to the doctor’s clinic and sometimes Bharatpur. (Respondent 2, 4, 7 wives Left-behind)*

The majority (n =6) of the left-behind wives reported that they used private health facilities when they suffer more than usual. For example,

*When I suffer from all minor illnesses at one time, then I will go to a doctor’s clinic at Bharatpur. Otherwise, I take homemade medicines and wait for recovery. (Respondent 2, 6, Left-behind wives)*

Some of the left-behind wives expressed that they depended upon the pharmacy and home remedies for minor illnesses. They further mentioned that they bought medicines from the pharmacy and if not cured, only then they seek the doctor. For example,

*I used to go to the pharmacy for medicines for minor illnesses. I bought de-cold and paracetamol from the pharmacy. If the condition is worse only then I go to a doctor’s clinic. (Respondent 4, Left-behind wife)*

Another left-behind wife (respondent 1) replied that when she suffers from minor illnesses, she used to visit the private health service. She mentioned that the reason for visiting the private health facility was, ‘*There is a doctor all the time and I found many services (health) under one roof*.’

The majority (n = 4) of the wives of non-migrants expressed that they used herbal medicines and home remedies when suffering from minor illnesses. They had belief in the home remedies for minor illnesses. One of the wives of non-migrants (respondent 12) described how she made herbal medicines for minor illnesses at home and used them. She said, ‘*I made some herbal medicine at home by boiling some leaves of herbal plants and I consume it*.’ They further mentioned that if their illness was not cured by home remedies only then they used other health facilities. For example,

*I used to go and buy medicine in the pharmacy near my home. They give me medicine for any illnesses. (Respondent 10, wife of non-migrant)*

*We made some herbal medicine at home and if that did not work then I go to the sub-health post and get simple medicine free of charge. I usually go to the government health services. (Respondent 14, Wife of non-migrant)*

Almost all women used herbal and home remedies for minor illness and take medicines from a pharmacy and if not cured then visit private or government health facilities.

### Types of health service utilisation within the last 12 months

Women were further asked what type of health services they used within the last 12 months for any kind of health problems and why. Almost all (n = 7) left-behind wives said that they used more private health service rather than government health facilities. A number of reasons were identified for using private and government health facilities by the left-behind wives and the wives of non-migrants.

Availability of more health services at one place in private health facilities was a common reason mentioned for using them by the left-behind wives. They believed that private health services have all facilities and are well equipped and they receive health services on time when they reach the facilities. They also expressed that the cost of service is high compared to the government health facilities.

*I prefer to use private health facilities because I found they are good, and have all the facilities under one roof. (Respondent 1, Left-behind wife)*

Similarly, the left-behind wives also perceived that private health facilities are better equipped with qualified specialist doctors than government health facilities. One of the left-behind wives (respondent 4) mentioned that she preferred to visit private health facilities. She believed that government health posts are run by health assistants not specialist doctors. She further narrated her experiences about why she used private rather than the government health facility:

*Actually, there are qualified doctors available in private health facilities and they give a better response and care. (Respondent 4, Left-behind wife)*

Another left-behind wife expressed:

*I had fever and went to a health post. The doctor (commonly called so for any health professionals by villagers) told me to have a blood test. They don’t have testing facilities and suggested going to Bharatpur (city). If I need to go to Bharatpur for a test, then why should I waste my time visiting there? (Respondent 2, Left-behind wife)*

Some of the left-behind wives (n = 2) described that they had poor past experiences of using government health facilities and also not having faith in their medication which are the reasons for using the private health facilities now. For example,

*……I don’t trust the efficacy and effectiveness of the medication. More than a year ago, they (health professionals) prescribed the medicine and told me to come after a week. The medicine was not effective and I went to them. They referred me to another place. I don’t like their manner, negligence and carelessness. I don’t like government facilities, mainly the improper medication. (Respondent 1, Left-behind wife)*

Similarly, most of the left-behind wives (n = 6) mentioned that they were not treated properly in the government health facilities. One of the left-behind wives described her experience why she does not visit the government health facilities:

*……in the government health facility, it is overcrowded and has a filthy atmosphere there. I found they do not check or treat properly…..But I feel private health facilities give more time and care to find out the patients’ problems. (Respondent 7, Left-behind wife)*

Wives left behind mentioned that they received support and encouragement from their husbands who lived abroad to use better health facilities especially private health facilities. They also described that their husbands are worried about their health as well as the children’s health. For example,

*……he (husband) always gives advice to me over the phone to use good health services if we become sick. He told me not to worry about money, health comes first. (Respondent 4, Left-behind wife)*

For wives of non-migrants, almost all wives of non-migrants (n = 5) reported that they used government health facilities more for their health problems. Cheaper health services available in the government health facilities were commonly mentioned as the reason for using them by the wives of non-migrants. They recounted that the government health facilities are far cheaper than the private health facilities. They also mentioned that some of the services are also found free of cost in government health facilities.

*I used to go to a sub-health post for my health problems. The service is free of charge. In the government hospital, the charge was very nominal as compared to the private one. (Respondent 10, Wife of non-migrant)*

Some of the wives of non-migrants described that the government health facilities are near to their homes.

*A sub-health post is near my home. I can reach there in a 20 minute walk. (Respondent 10, Wife of non-migrant)*

## Summary

The international migration of husbands has impacted on the mental health, autonomy and health service utilisation behaviour of left-behind wives. There are many factors contributing to depression in the wives left behind. The major contributory factors for depression were worries about their husband’s situation abroad, long-term separation from husbands, physical workload and responsibility and lack of family help and support. However, social network and participation in social activities and communication with husbands help to minimise the depression in the wives left behind. Similarly, the depression level in the wives of non-migrants was low when living with a husband. However, the husband’s behaviour towards them contributed to the depression to some degree.

Left-behind wives experience greater autonomy in the absence of their husbands. The factors facilitating the greater autonomy of left-behind wives are increasing age, level of education, having children and property with their own name, living in a nuclear family and a sense of freedom after the husband’s migration. However, the other factors, such as living in an extended family and traditional culture and belief prevent the women from experiencing autonomy.

Private health facilities are frequently used by left-behind wives for their health problems. Lack of facilities at government health centres and of the availability of service and health professionals at private health facilities are the main reasons for using private health services.

# CHAPTER SIX: DISCUSSION

## Introduction

This study is the first to examine the effects of husband’s international migration on left-behind wives in terms of depression, autonomy and health service utilisation in Chitwan Nepal. This chapter discusses an approach to integrate the findings from both quantitative and qualitative methods and the side by side interpretation of the results and their relationship with the existing literature on the study objectives (Section 2.6).

This chapter is further divided into eight sections. The first three sections discuss the socio-demographic characteristics of the respondents from both migrant and non-migrant households, the prevalence of depression in left-behind wives and the wives of non-migrants, and the factors associated with depression. The subsequent sections discuss the situation of the autonomy of the left-behind wives and the wives of non-migrants and comparison. The following section describes the discussion of types of health service utilisation by the left-behind wives and the wives of non-migrants and the comparison. The strengths and limitations of the study and a summary of the chapter are included in the final two sections of this chapter.

The quantitative and qualitative findings were integrated through triangulation (Section 3.18-19) at the interpretation stage. In this chapter, the results were integrated using confirmation, expansion and discrepancy approach of triangulation. The integration of the results is presented sequentially by bringing the quantitative and qualitative findings together in the discussion from the separate quantitative and qualitative data analysis.

The results obtained from the quantitative phase might not be conclusive or unexplained, and the subsequent phase of qualitative inquiry helps to explore the reasons and seek further clarification of the unexplained results of the quantitative phase. However, one of the limitations of integrating the data from quantitative and qualitative components was inconsistency, contradiction or disagreement of the results from quantitative and qualitative data. In this situation, this problem was overcome by discussing the reasons for the possible conflicting results of quantitative analysis and identifying potential explanation.

In this study, the qualitative phase or questions for in-depth interviews was based on the findings of the quantitative phase. However, the findings of the qualitative data identified additional factors, for example, relationships with in-laws and financial difficulties in the study issues. The inclusion of these identified factors during the semi-structured interview in the qualitative phase was considered as an important for this study and is discussed below. For this study, qualitative inquiry becomes a way of not only cross validating the findings of the quantitative data but is equally important in broadening what the respondents feel, and their experiences of the study issues which are not addressed quantitatively and it also allows further exploration of the study issues in-depth and widens the breadth of the possible factors.

This study analysed the data from 400 left-behind wives and the same number of the wives of non-migrants. The discussion is based on the findings of the analyses of the quantitative and qualitative components of the study.

The results of this study clearly indicated that left-behind wives experienced more autonomy in the absence of their husbands but had a high prevalence of self-reported depression compared to the wives of non-migrants. It was also found that left-behind wives used more private health facilities than the wives of non-migrants.

## Socio-demographic characteristics of respondents

The effects of husbands’ absence due to international migration on left-behind wives are complex and are associated with many factors (for example: socio-demographic factors of the respondent, household characteristics). Existing literature suggests that these factors are both positively or negatively associated with depression, autonomy and the health service utilisation of left-behind wives.

The women who participated in the study were 15-49 years of age and most of the previous studies related to women and depression (Deyessa *et al.*, 2008; Bojorquez *et al.*, 2009); autonomy (Niraula and Morgan, 1996; Allendorf, 2007) and health service utilisation (Allendorf, 2007) were also conducted within the same age group (15-49 years). The mean age of left-behind wives was 31.1 years and 33.4 years for wives of non-migrants. This showed that left-behind wives were slightly younger than the wives of non-migrants. A similar pattern of age was found in the studies by Roy and Nangia (2005) in India and Bojorquez *et al.* (2009) in Mexico on left-behind wives. The age difference between migrants and non-migrants was found to be significant (χ2 = 29.89, 2df). This finding is not surprising, because more than 80 percent of the migrants are young married men between the age of 20-30 years (Kaspar, 2006; NIDS, 2011).

This study found that Hindu religion was followed by the majority of the respondents in both migrant (67.3%) and non-migrant (72%) households. This predominance of Hinduism reflects the distribution in the Nepalese population as a whole. About 81 percent of the Nepalese population follow the Hindu religion (CBS, 2012). A slightly lower percentage of Hindu followers were observed in this study. This may be due to the predominance of Janajati inhabitants in the study area (Table 4.1) and the other possible reason may be that people do not rigidly stick to one religion and can change their religion (Nepali Times, 2010).

This study found that the majority of the respondents (90%) completed education up to primary level. However, the majority of the wives left behind completed secondary and above level of education compared to a smaller proportion of the wives of non-migrants. A significant difference was observed between the education of the left-behind wives and the wives of non-migrants. A similar finding was also observed by Roy and Nangia (2005) in India. The findings of this PhD study showed that the left-behind wives were young and had completed some level of formal education. This is not surprising as recent data also reveals that there has been an improved school enrolment of girls which shows the growing literacy rate of women in Nepal (CBS, 2012).

The employment of left-behind wives and the wives of non-migrants was not found to be significantly different. However, there was a significant difference between the employment of the left-behind wives and the wives of non-migrants in terms of depression (Table 4.23), and autonomy (Table 4.40). The majority (64%) of left-behind wives were ‘housewives’ who did not have any income generating employment but a higher proportion of the wives of non-migrants were found to be employed. This result was also supported by Roy and Nangia (2005) who also reported a higher number of employed wives of non-migrants compared to the left-behind wives. Brink (1991), in a study carried out in Egypt, also found more unemployed left-behind wives. In Nepal, given the existing nature of male dominance in the family and cultural beliefs, women are confined within the households as housewives. The other possible reason may be that their husbands are willing for their wives to stay at home to manage the house and care for the children in their absence (Desai and Banerji, 2008). Similarly, Nepal’s Demographic Health Survey also reported that the workload at home, having children and family permission to work are the main reasons for the low employment of women (NDHS, 2012). Furthermore, dependency on the husband’s earnings is also common in Nepal and this study also found that almost all migrant households received remittances from migrants. The possible explanation for the low employment of left-behind wives may be due to their dependency on the remittances sent by their husbands (Bever, 2002). Other factors such as: low literacy, existing inequalities and disparities also limit the women to get employment opportunities (Furuta and Salway, 2006; NDHS, 2012).

Similar reasons were also expressed by the women respondents in the qualitative interview (Sections 5.3.1.2; 5.3.1.6) for example: “*I must do all the work in the house. I have to cook, wash all the clothes, look after the children and elderly in-laws.”; “My husband also wants to me to stay at home caring for his mum. But, I want to do something for us and not just to stay at home. He usually argued with me to leave the job and mummy (mother-in-law) also wants that.”*; “*I am not well educated so that I didn’t get a job*”.

The left-behind wives were more likely to have their own named property than the wives of non-migrants. A significant association was observed in property ownership category. Similar findings were also reported by the Nepal Demographic Health Survey (2012). In the report of NDHS (2012), the women who live alone or separate have more assets in their own name in the age group 15-49 years but the reasons for women being alone or separated were not mentioned. However, such findings reflect the women’s property ownership situation in Nepal. Moreover, the left-behind wives may have property ownership because migrants may want to improve their household conditions and add to their fixed assets such as land and house. Due to their husbands’ absence, left-behind wives may have to purchase assets in their own name.

## Prevalence of depression on left-behind wives and its comparison with wives of non-migrants

This study found that left-behind wives were more likely to get depressed than the wives of non-migrants. The prevalence of depression in left-behind wives aged between 15 to 49 years was found to be 79 percent with a mean depression score of 20.3 (SD: 5.45). The prevalence of depression on left-behind wives was higher than the findings of Bojorquez and colleagues (2009), who used the same tools and cut-off point in Mexico, and also reported that the husband’s migration is more likely to have significant effects in the depression of left-behind wives. They reported that the prevalence of depression on left-behind wives was 23.2 percent with a higher mean depression score when husbands were living abroad (Bojorquez *et al.*, 2009). In their study, the frequency of husbands’ visits to the families left behind was not mentioned and the internal migration of husbands was also included in the study. This PhD study has excluded internal migration and the difference in the results between this study and the study by Bojorquez and colleagues (2009) in Mexico may be due to the distance and duration of migration and frequency of visits to the family. Most of the migrants from Nepal went to Gulf countries, Malaysia and other countries for employment purposes. These countries are quite far from home and migrants did not visit their families for a long period of time but the migrants from Mexico to USA may visit their homes more frequently because Mexico has a common border with the USA.

This PhD study indicated that left-behind wives were more likely to be depressed than the wives of non-migrants. The prevalence of depression in left-behind wives was 79 percent whereas only a 26.3 percent prevalence rate was found in the wives of non-migrants. There was a significant difference in depression between left-behind wives and the wives of non-migrants. The left-behind wives (OR = 10.57, p < 0.001) had 10.57 times greater odds of having depressive symptoms compared to the wives of non-migrants. This result indicated that the husband’s migration has a strong association with depression in left-behind wives. A similar finding to this study is reported by Bojorquez and colleagues (2009) in Mexico. In their study, left-behind wives are more likely to be depressed compared to the wives of non-migrants using the same instrument and cut-off point of depression.

There is a lack of literature concerning depression in wives left behind in Nepal and elsewhere. Past studies were conducted mainly on women and reported the prevalence of depression in women in Nepal, South Asian countries and other developing countries and is presented in table 6.1. This table helps compare the result of this study with the findings of other studies either using the same instruments or other instruments in different contexts or settings.

Table 6.1 Prevalence of depression on women in different context in different countries

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Studies | Setting | Instrument used | Sample | Reported prevalence of depression in women |
| Eller and Mahat (2003) | Nepal | CES-D | 98 women | 18% |
| Thapa and Hauff, (2005) | Nepal | Hopkins Symptom Checklist-25 | 290 (177 men and 113 women) | 88.5% |
| Kohrt *et al.* (2009) | Nepal | Beck Depression Inventory (BDI) | 316 (186 men and 130 women) | 40.4-75% in lower caste women  40.4% in upper caste women |
| Lamichhane *et al.* (2012) | Nepal | Not mentioned | 100 women | 42% in 21-50 years 33% 31-40 years and 16% 41-50 years aged women |
| Sagtani *et al.*, (2013) | Nepal | CES-D | 210 female sex worker | 82.4% |
| Amin *et al.*, (1998) | India | Beck Depression Inventory (BDI) | 200 (133 men and 67 women) | 32.8-52.4% in women |
| Mumford *et al.*, (1997) | Pakistan | The ICD-10 | 191 (53 men and 138 women) | 66% women |
| Mumford *et al.*, (2000) | Pakistan | The ICD-10 | 220 (82 men and 138 women) | 25% women |
| Zainab *et al.* (2012) | Pakistan | CES-D | 128 married women | 65% |
| Bojorquez *et al*., (2009) | Mexico | CES-D | 418 | 23.2% |

This study showed that the wives left behind were experiencing higher depressive symptoms when their husbands were abroad. In the qualitative interviews, wives left behind reported that they were more worried about their husband’s situation abroad (Section 5.3.17). Long-term separation (Section 5.3.1.8), physical workload with added responsibility (Section 5.3.1.12) and relationships with in-laws (Section 5.3.1.5) were also reported as contributory reasons to their higher depression.

The findings of this study and other studies may vary due to the use of different instruments in accessing the risk factors, underestimated and self-reported symptoms of depression, socio-cultural differences, support, economic factors, life events, inclusion and exclusion of study populations and study sites. Most of the depression studies of women in a Nepalese context are predominantly conducted to find the association of risk factors to perinatal and postpartum depression during pre and post pregnancy (Regmi *et al.*, 2002; Ho-Yen *et al.*, 2006; Sabba, 2013).

When comparing the findings of this study to other studies, inconsistencies in the prevalence of depression in women in different settings (Table 6.1) were found in the literature particularly in the Asian and other developing countries. One of the explanations for low depressive symptom in women may be that they can behave as normal people and also have a belief that these symptoms are a result of weakness rather than depression (Kirmayer and Young, 1998). The other possible explanation for these inconsistencies and the high prevalence of depression in developing countries in women may also be the overexpressed and exaggerated somatic nature of depression by women (Kirmayer and Young, 1998; Tausig *et al.*, 2000; Sigmon *et al.*, 2005).

To date, there have been no studies conducted to examine depression in women left behind in Nepal. Thus, this thesis’s findings are compared to the studies of depression in women in different settings and contexts.

## Factors contributing to depression in left-behind wives

Depression in left-behind wives is associated with multiple factors. The husband’s migration is also considered one of the contributing factors for depression in left-behind wives. There is however very limited literature on depression in left-behind wives. Much past literature suggests that the husbands’ migration has been associated with depression in left-behind wives (Roy and Nangia, 2005; Bojorquez *et al.*, 2009).

The univariate analysis found that women’s education, having own named property and children, household head’s education and average household income and year of husband’s migration were significantly associated (p ≤ 0.05) with depression in the left-behind wives (Table 4.9 and 4.11) and women’s caste had a tendency of a positive association with depression in the left-behind wives. However, the results of the multivariate logistic regression showed that the household head’s education, average annual household income and the years of the husband’s migration were significantly associated with depression in the left-behind wives.

### Depression: Individual-level factors

The factors, for example, having own named property and children were associated with the increasing risk of developing depressive symptoms in left-behind wives (Table 4.9 and 4.14). However, there was evidence of the positive significant association of caste and education with the depression in left-behind wives. These factors are likely to be a marker for depression in the wives left behind.

This study found that left-behind wives who had their own name property and children were less likely to be depressed than the left-behind wives with no property in their own name and no children. Similar findings were also reported in many countries, as the UN (2003: 15) cited that *“In almost all countries, whether ‘developed’ or ‘developing’, legal security of tenure for women is almost entirely dependent on the men they are associated with. Women headed households and women in general are far less secure than men. Very few women own land”.* In Nepal, women’s ownership of property is mainly based on social norms and the patriarchal family system (UN, 2003). Traditionally, inherited property rights are confined to men and women’s property has often been seen to be under the control of her husband (Dyson and Moore, 1983; Luitel, 2001). The exclusion of women from their property rights and the economic inequalities in household property for women is associated with their depression (Belle and Doucet, 2003). Furthermore, wives’ dependency on husbands’ earnings put the wives in such a position that they have only limited right of access to financial and material assets, thus they may suffer a great degree of depression (Chant, 1998). Qualitative data also revealed that patrilineal culture, trust and age restricted women having property in their name (Section 5.3.1.11.2 & 5.4.3). With increasing age a woman is more likely to have her own ownership of high value assets, for example: a house and land when their husbands are away (NDHS, 2012). Similarly, in the absence of a husband, left-behind wives are perhaps more likely to be responsible for making decisions and purchasing high value assets in their own name (Bishop, 1993).

This study revealed that childless women are more likely to be depressed than women with children. Similar findings were also reported in India (Mishra and Dubey, 2014) that childless women feel loneliness and stress and are even more depressed when living separated from their husbands. This may be so in most of the communities in Nepal, women who did not have children are treated poorly and often abused verbally by family members in the absence of their husbands (Luitel, 2001).

This study found that the women of lower caste were more likely to be depressed than the upper caste women. Depression in lower caste women can be elucidated by economic hardship, and a low level of social support. These risk factors are not new (Wade and Kendler, 2000; Dalgard *et al.*, 2006; NRCIM, 2009). The finding of this study is also supported by the study in Nepal by Kohrt *et al.* (2009). They found that 75 percent of dalit (lower caste) women were depressed compared to only 40.4 percent of upper caste women. Lower caste women are mostly underprivileged and of low socio-economic status, having little or no education and being unemployed (Luitel, 2003; Din and Noor, 2009; Kohrt *et al.*, 2009; Mumtaz *et al.*, 2014). The previous study also concluded that low economic status was significantly associated with depression in women (Lorant *et al.*, 2003; Lorant *et al.*, 2007). Additionally, Nolen-Hoeksema (2001) also reported that women with low socio-economic status are likely to have a more stressful life due to economic hardship and as a result, they become more depressed (Patel *et al.*, 1999; Nolen-Hoeksema, 2001). The findings of qualitative analysis also reveal that social and religious disparities exist between upper caste and lower caste women which makes the lower caste women feel they are being socially isolated which contributes to depression (Section 5.3.1.6). OHCHR (2011) states that due to the deep rooted religious and social beliefs in society, lower caste women are found to be socially isolated because of the lack of resources and other traditional norms. Furthermore, social isolation results in low social help and support given to women which can create social stress which perhaps leads to depression (Klein *et al.*, 2006). In an interview, women who belong to a lower caste perceived that they felt discrimination from being of lower caste as “*I feel isolated. If there is a wedding ceremony in the neighbourhood, hardly anybody invites us and even if invited we don’t have permission to enter the houses of upper caste people”* (Section 5.3.1.6.2).Blackwelder (1998) further described that the boundaries of women’s lives are shaped by the caste based on race, and ethnicity discrimination which can be seen as a dominant factor in depression in women. In Nepal, lower caste women are often victimised for being women and untouchable (Section 5.3.1.6.2). Lower caste women left behind who find such social discrimination are more likely to be depressed in the absence of their husbands (Luitel, 2003). Thus, not only in caste-based discrimination, action should be taken to avoid all types of social, religious and cultural discrimination against women, such discrimination may have adverse effects on their mental health, especially leading to depression in women.

This study also found that depressive symptoms were associated with the education of the women left behind in the univariate analysis. However, this association was not significant in the multivariate analysis. In this study, illiterate left-behind wives were more likely to be depressed than left-behind wives with some education. This finding is also supported by a similar study in Mexico by Bojorquez *et al.* (2009). Their finding also indicated that the left-behind wives with some education are less likely to have depressive symptoms. There were no other previous studies of depression in the left-behind wives that attempted to find the prevalence and its associated factors. Thus, an attempt is made to compare the findings of this study to the findings of other studies of women. Similar findings were also reported in Pakistan (Ali *et al.*, 2002) and Malaysia (Sherian *et al.*, 2008). In contrast, other studies in Malaysia (Din and Noor, 2009); Rwanda (Bolton *et al.*, 2002); Russia, Poland and the Czech Republic (Bobak *et al.*, 2006) and Ethiopia (Deyessa *et al.*, 2008) reported that women’s education was not significantly associated with depressive symptoms. The possible explanation for the depression in illiterate left-behind wives may be due to their feelings of not being well educated, a lack of self-esteem in bearing the overall responsibility for the household and also feeling stress at having to work outside the home which they had never done in the past. Furthermore, being illiterate, the left-behind wives are less exposed to the outside world in a male dominated society (Roy and Nangia, 2005). In that situation illiterate women may feel tension and anxiety in performing new roles and responsibilities in the absence of their husbands. Similar contexts were also reported by the left-behind wives in the interviews (Section 5.3.1.2). For example, “…..*being uneducated, I feel tense, and stress in doing the outside work.”* In the absence of their husbands, left-behind wives may be responsible for taking household decisions independently. In that case, illiterate wives may feel more stressed and depressed about taking such decisions because of the fear of making the wrong decisions (Section 5.3.1.13).

### Depression: Family or household-level factors:

This study found that the household head’s education and total annual household income had a significant association with depression in left-behind wives in both the univariate and multivariate analyses. The subjective experience of depression between the interaction of women’s life and their family environment were the most significant in the development of depressive symptoms in left-behind wives.

The left-behind wives who had an illiterate household head (OR: 2.33, p = 0.048) were more likely to be depressed than the left-behind wives who were living with literate household heads. This finding is supported by a study in Iran by Payab *et al.* (2012) suggesting that the household head’s education is negatively associated with depression in women. In their study, 67 percent of women were depressed where the household head was illiterate (Payab *et al.*, 2012). The possible explanation might be that left-behind wives cannot experience any freedom and their lives are controlled by the household head and the illiterate household heads are more traditional and conservative in nature and not supportive of left-behind wives in the absence of their husbands (Nagawa, 1994). In such a situation left-behind wives may suffer from depression while living with an illiterate household head.

In the qualitative findings, interviewees revealed that they were not getting full support and freedom when living with illiterate households during the period of their husband’s migration. Respondents also expressed that they were treated badly and their conditions became miserable while living under illiterate household heads. The expressed views indicated that a poor relationship with the household head and conflicts about the sharing of resources and freedom (Section 5.3.1.11.1) increase the risk of developing depression. Similar findings were also reported in African countries (Nagawa 1994; de Haas and van Rooij, 2010).

This study also showed that the left-behind wives with a low household income (OR: 1.91, p = 0.030) were more likely to be depressed than the left-behind wives with higher household income. The total annual household income was significantly associated with depression in left-behind wives in both univariate and multivariate analyses. Many published studies also reveal that a low household income is related to depression in women (Belle and Doucet, 2003; Dearing *et al.*, 2004; Poongothai *et al.*, 2009). Moreover, almost all the migrant families in this study received remittances and their husband’s migration was linked to the better economic conditions of the household and helped to reduce existing poverty levels by increasing their household income (Koc and Onan, 2004; Lim, 2003). The left-behind wives who received less remittance may face financial difficulties and an increased level of poverty rather than a decreasing one. The left-behind wives who are facing poverty and financial difficulties are more likely to be depressed (Belle and Doucet, 2003; Patel and Kleinman, 2003). These risk factors have been well established as having a significant positive relationship with depression in women either in developing or developed countries (Patel, 2007; Lund *et al.*, 2010).

In qualitative interviews, women said that the husband’s migration increases the household income. However, with the rising prices of basic goods and inflation, expensive children’s education and health services, their income is just sufficient to cover these household expenses. They also face some financial difficulties in the absence of their husband (Section 5.3.1.11) and they believe that facing such conditions alone increases stress and depression.

### Years of husband’s migration

This study revealed that the years of a husband’s migration had a significant association with depression in left-behind wives in both univariate and multivariate analyses. The univariate finding suggested that the left-behind wives whose husbands migrated for a duration of 5 and less years were more likely to be depressed than left-behind wives whose husbands migrated for more than 5 years. There have been no comparable studies on the duration of separation from husbands and its impact on depression in women. However, many studies reported that separation is the significant predictor for depression in women (de Graaf *et al.*, 2002). This PhD study found that the left-behind wives who were separated from their husband for 5 or less years of migration (OR = 1.72, p = 0.042) were more likely to have depressive symptoms than those who were separated for more than 5 years of their husbands’ migration.

In qualitative interviews, the left-behind wives said that the depressive symptoms are greater in the early years of migration (Section 5.3.1.7-8). The possible explanation may be that they lived together after marriage and had not had such past experience of separation due to their husband’s migration. With the passage of time, left-behind wives may have to find a new way of life and adapt their lives to the changed conditions that result from their husband’s migration.

Furthermore, this study also found that the younger wives left behind were more likely to be depressed than the older ones (Table 4.9). Being apart from a husband at a younger age together with multiple roles and responsibilities may be possible reasons for depression in left-behind wives in the early years of migration. Another possible explanation may be that in the early years of husband’s migration, they have more hopes to come of brighter days and getting good remittance by which they can fulfil their desires and manage crises. In contrast, in the early days of husbands’ migration, they get only limited remittances, with this their expectations cannot be fulfilled and they still struggle with financial difficulties. The other explanation may be that with the long-term absence of husbands, left-behind wives may have to adapt to the changed conditions and may feel more responsible in the absence of their husbands and become busy managing the family and household chores or employment to avoid negative thinking (Section 5.3.1.7). Similar findings were also reported by Easterling and Knox (2010) among the left-behind wives in the USA.

Findings from the qualitative data showed that the pain of separation from husbands may lead to depression in the left-behind wives. Similar findings were also reported by Roy and Nangia (2005) in the study of left-behind wives in India. Qualitative data also indicated that in the absence of their husbands, wives living in poverty, with heavy workloads and family conflict and separation (Sections 5.3.1.8; 5.3.1.11-12) were found to be depressed. Similar findings were reported in the women left behind study in India by Roy and Nangia (2005) and in Morocco by de Haas and van Rooij (2010). These conditions are also commonly seen in migrant families. The qualitative data also reveals that adapting to a changed life for the wives who have been separated from their husbands is also considered very stressful and bearing the pain of separation may be difficult for the wives who stayed at home (Sections 5.3.1.5; 5.3.1.8). A study in the USA by Easterling and Knox (2010) reported that the wives left behind by military personnel also expressed similar feelings and thoughts. Similarly, the left-behind wives who may receive a low degree of social and family support in the absence of their husbands were also found to be more depressed (Section 5.3.1.5). Psychological stress is often seen in women when they get poor family support. Rivera *et al.* (2008) reported that higher psychological distress is significantly associated with low family cohesion and support. Furthermore, findings of previous migration studies in developing countries suggest that left-behind wives are most affected and found to be depressed (Rivera *et al.*, 2008). The qualitative data showed that separation creates a burden of work for women which could ultimately worsen their mental and physical health. A similar finding among left-behind wives in India was also reported by Jetley (1987).

### Other factors that emerged from qualitative findings

There are many other reasons and contributing factors associated with the high prevalence of depression in left-behind wives which are revealed in the qualitative interviews with left-behind wives. The qualitative data showed that poverty, relationship with in-laws, separation from husbands, added responsibilities and workloads and their husband’s situation abroad were found to be the major contributory factors for depression in the left-behind wives (Section 5.3.1.5, 7-8 & 5.3.1.12).

In qualitative interviews, almost all respondents reported that economic hardship was the main cause of their husband’s migration (Section 5.3.1.11). This clearly indicated that migrants’ families have financial difficulties. Rigg (2007) also argues that people are more likely to take the risk of migration to overcome economic hardship and at the same time the migration process adds a high migratory cost as an extra economic burden to the family who have stayed at home which can be a risk factor for high depression in women left behind. Furthermore, existing economic hardship with the added extra burden of migratory costs might further deepen the poverty level in migrant households and the wives who are left at home thus suffering financial hardship which makes them vulnerable and they suffer from mental problems and have been at high risk of developing depression (Jetley, 1987). Likewise, Sadiqi and Ennaji (2004) argue that there is no guarantee that migrants have a good job and income in the destination country which does not seem to be sufficient to counter the economic hardship, in which case, the left-behind wives may face worse economic problems that lead to them to being depressed. Furthermore, Nolen-Hoeksema (2001) also points out that the women with low economic status tend to have a more stressful life due to economic hardship and as a result, they become more depressed.

While living with in-laws and other relatives during the absence of their husbands, they must make good relationships, be obedient and loyal to their husband’s family (Bennett, 1983; Luitel, 2001). Maintaining such a relationship with them can be a great challenge and many misunderstandings and clashes can be seen especially related to the spending of the remittances sent by their husbands (Section 5.3.1.11.1). The left-behind wives in such a situation may face mental problems and the majority are found to be depressed without any family support (Section 5.3.1.5). In the light of this, left-behind wives have two options, either to live with them in such miserable conditions or to separate from them. Wives alone cannot take such decisions and must follow the husband’s preferences (Thomas and Adhikary, 2012). In many cases, it is not possible for the left-behind wives to live separately, and they need help and support from the other relatives in the absence of their husbands. However, interviewees reported that the relationships with in-laws were not pleasant in the absence of their husbands while living in extended families (Section 5.3.1.5) (Nagawa, 1994).

In qualitative interviews, left-behind wives also reported that they do not receive family help and support due to bad relationships with their in-laws (Section 5.3.1.5). In addition, they reported that conflicts arise over sharing of the remittances between them and the control of their freedom and wives prefer to live separately and freely in a nuclear household rather than an extended one (Section 5.3.1.5, 5.4.8). This claim is supported by de Haas and van Rooij (2010) who also mentioned the conflict between migrant wives and their family in-laws in their study in Morocco. While living in a nuclear family, the left-behind wives have to bear dual responsibilities, for example, managing the family and being decision makers (Thomas and Adhikary, 2012). In interviews, left-behind wives reported that they have to take multiple roles in the absence of their husbands (Section 5.3.1.12). Thus, many left-behind wives may not be able to cope with such situations in the absence of their husbands and have been found to be more depressed. de Graaf and colleagues (2002) state that having multiple roles causes women distress, nervousness, sadness and irritation coupled with the separation from the partner which are found to be significant predicators for depression in women.

They also reported that good relationships with in-laws can result in help and support in the sharing of work in the absence of their husband which could help to mitigate their mental stress and also reduce their workloads. Somatic symptoms of depression are often seen in such left-behind wives who get low help and support.

The relationship and frequent communication with their husbands are also crucial for the left-behind wives. In this study, left-behind wives expressed that they were more depressed when they do not regularly keep-in-touch with their husbands (Section 5.3.1.14). Qualitative data also revealed that they were more worried and concerned about their husband’s conditions abroad. The majority of their husbands migrated to the Gulf countries (Table 4.7). They responded that their husbands were engaged in construction and industrial work. The studies of migrant workers in the Gulf countries by Seddon *et al.* (2002) and Joshi *et al.* (2011) also mention a similar context in their studies. They found that migrant workers are mostly employed on construction sites or in agricultural work, often in high temperatures (Seddon *et al.*, 2002; Joshi *et al.*, 2011). These situations are not hidden from the migrant families. The working conditions abroad are not easy for Nepalese migrants. It is not only the working conditions, Amnesty International (2011) states that most Nepalese migrants are facing difficult situations and being forced them to work long hours for seven days with a lower salary than promised and the employers also seize their passports (Amnesty International, 2011).

One possible explanation for high depression in left-behind wives is the fear of losing their husband. The left-behind wives expressed as “*I feel more depressed to read and hear the news of many casualties of migrant workers abroad. I don’t want to lose him. We hear every day of a migrants’ dead body arriving here. I can’t imagine life without him. Separation is very painful and heart-breaking. I can’t express my stress in words. I lose my weight, appetite, sleep. I don’t have desire to work and talk to others.*” (Section 5.3.1.7)

In interviews with the left-behind wives, they were more concerned about the situation of their husband abroad (Section 5.3.1.7). The unemployment situation of migrants and low salaried jobs abroad also increase stress and depressive symptoms in the wives at home (Sadiqi and Ennaji, 2004). The left-behind wives expressed that the most prominent cause for their depression is that they are worried about their husbands’ conditions abroad. Similar findings were also reported by Salgado de Snyder (1993) in Mexico. The left-behind wives perceived that the working and living conditions in many places are not good, for example: Qatar, Saudi Arabia etc. where the migrant workers work in high temperatures (Joshi *et al.*, 2011). They believe that these places are too dangerous for their husbands. They also expressed that they have read a lot of news about discrimination against Nepalese migrants in the Gulf countries. These views are not only their claim, news has also been published in international newspapers, for example: the Guardian (Figure 6.2), and BBC (Appendix 15) about the migrants’ conditions abroad, which also lead to depression in left-behind wives. For example: “*I feel more depressed to live without him. I was always thinking about him and I wonder and worry about his conditions abroad”* (Section 5.3.1.7)*.*

These views are also supported by the report of the Department of Foreign Employment which claimed that more than 1300 Nepalese migrants have died abroad due to mistreatment at work, miserable living conditions and work related accidents within the last 3 years (DoFE report cited in The Kathmandu post, 2012).

The figures (6.1-2) below are a few examples that indicate how migrant workers are in difficult situations and have even lost their lives in the destination country. They do not only lose their lives but also put at a higher risk of depression and poverty who stay at home. It is a very painful situation for the wives and families left behind who have lost their breadwinner or husbands as migrants in the destination countries.



Figure 6.1 News of Nepalese migrants' death in Gulf countries

Source: The Kathmandu Post, 17 August, 2013.



Figure 6.2 News of Nepalese migrants’ death abroad

Source: The Guardian, (Pattisson, P.) (2013)

Left-behind wives reported that another source of depression in them was the added responsibilities and new roles which shifted to them due to the migration of their husbands which work had been primarily done by their husbands (Section 5.3.1.12). Existing financial difficulties with added migratory costs put the left-behind wives in a vulnerable position which forced them to enter the labour market to overcome these difficulties in the absence of a husband (Bishop, 1993; Aysa and Massey, 2004) and at the same time they had to work to meet a possible economic crisis by bearing in mind the possibilities of their husband’s injuries, accident or death abroad which would make their life miserable and this places such mental and physical pressure on them which helps to develop stress and depression in left-behind wives.

## Women’s autonomy and husband’s international migration

Women’s autonomy was measured with regard to their control and access over financial and material resources, the power to make their own decisions, freedom of physical mobility, and participation in social and political activities. Women’s participation in these activities is mainly based on existing patrilineal values, their domestic sphere and family kinship in Nepal (Bennett, 1983; Luitel, 2001). This study found that women’s age, own named property and the number of children living with them, the husband’s age, household head’s gender, age, occupation, family type, total number of family members and total household income all have a positive association with the autonomy of the left-behind wives in univariate analysis (Table 4.28). However, women’s age, religion, having children, household gender, age, family type and total number of family members showed significant association in the multivariate analysis (Table: 4.35-4.38).

### Women’s autonomy: Individual-level factors

The finding of this study suggests that older left-behind wives had greater autonomy than the younger left-behind wives. Older women have greater autonomy for all measures of autonomy (Table: 4.28) and overall autonomy (Table 4.32) compared to their younger counterparts. Similar findings were reported by many studies that older women are more likely to have greater autonomy than younger ones in Nepal (Acharya *et al.*, 2010; NDHS, 2012), in Egypt (Kishor, 1995; Louhichi, 1997), Karnataka, India (Swaminathan *et al.*, 2012), Utter Pradesh and Punjab, India and Pakistan (Jejeebhoy and Sathar, 2001), Bangladesh (Haque *et al.*, 2011), and in Pakistan (Sathar and Kazi, 2000; Sarikhani, 2012). These studies concluded that older women have more freedom and autonomy in all aspects than younger women (Kishor, 1995; Acharya *et al.*, 2010). In traditional families, the hierarchy of authority and power between family members is governed by age and gender (Malhotra *et al.*, 1995; Luitel, 2001). Within the family sphere, the age factor can play a vital role in women’s autonomy and the older women always have an important role in decision making in the households and the juniors have to follow their decisions (Sarikhani, 2012).

The other possible explanations are that when the wives are younger then migrants may want to leave their wives with in-laws or other relatives for help, protection and security reasons during their absence (NIDS, 2010; Thomas and Adhikary, 2012). When living with in-laws, all authority rests on them and the left-behind wives can experience either limited or no autonomy (Luitel, 2001; Sadiqi and Ennaji, 2004).

The other possible explanation may be in general, with increasing age, women become more mature and seem to be more responsible and involved in decision-making processes (for example: decisions for major and daily purchases, own health care) at home and building a faith within the family. Older women have established good relationships with their other family members, children and friends (Bloom *et al.*, 2001). In such circumstances, they can experience greater autonomy than when they were younger (Bloom *et al.*, 2001). Similarly, Sathar and Kazi (2000) argue that older left-behind wives may have greater access to household resources and be able to manage their home in the absence of their husbands and that they have to take on work both inside and outside the home. Being exposed to external environments and having household responsibilities in the absence of their husbands would make them to experience greater autonomy.

The qualitative data also revealed that younger wives left behind had less autonomy in extended families headed by in-laws. The families are shaped by traditional and religious beliefs and the involvement of young aged women in household decisions is not common in Nepal due to their low status and position within the home (Bloom *et al.*, 2001; Luitel, 2001). However, the left-behind wives living in nuclear households stated that they had more autonomy after the migration of their husbands (Section 5.4.6). It may be the case that left-behind wives are solely responsible for running their households as a household head having the power to take decisions in the house in the absence of their husbands.

This study also revealed that the left-behind wives who had property in their own name were more likely to have access and control over financial resources, decision-making autonomy and have more freedom of mobility and participation in social activities than the left-behind wives who did not have any property in their own name. Women’s property ownership showed a positive significant association with all autonomy variables in both univariate and multivariate analyses of respondents’ background characteristics (Table 4.35) but did not find any association when including all variables in the multivariate logistic model (Table 4.38). This finding is supported by studies demonstrating that women having their own property are more autonomous in their access to and control over financial resources, decision-making power and mobility in India (Swaminathan *et al.*, 2012), Kenya and Malawi (Kennedy and Peters, 1992). Their study also found that women with some property have greater autonomy in decision-making and mobility. Being a household head, women have more control over household resources in the absence of their husband and can experience more autonomy. In Nepal, only 19.7 percent of women reported that they have land or a house in their own name (CBS, 2012) and having the ownership of high value assets and cash reflects the women’s financial autonomy.

The explanation may be due to the absence of a husband; left-behind wives are obligated to take responsibility for managing the household, receiving remittances and making decisions in the absence of their husband. There has been a tendency of migrants to buy land, house and invest their remittances for the sake of their future (Bishop, 1993). In this case, left-behind wives have to carry out this work and must take decisions in the absence of their husbands and left-behind wives buy the land and house in their own name (Hadi, 1999). The involvement of left-behind wives in such work increases their autonomy and women who are involved in managing income and home have more freedom to accumulate assets in their own name (Salway *et al.*, 2005).

In a traditional family structure, women are economically dependent on a husband’s earnings and subordinate to their husband where the husband plays the main role in controlling all the resources and income in the household (Sarikhani, 2012). The qualitative data revealed that the migration of the husbands create the opportunity for left-behind wives to carry such responsibility and play with household resources and remittances as a household head and they also have access to having property, either land, money or jewellery in their own name which they earn after the migration of their husbands (Section 5.4.3). They further expressed that all inherited property is in their husband’s name. In Nepal, there is an equal right for household property regardless of gender by law, however this is not found in practice in a patrilineal society where only sons are allowed to claim (Luitel, 2001).

This study also found that the women who had children were more likely to have greater autonomy in all measures than women without children. The measures of women’s autonomy showed a highly significant association with the number of children in both univariate (OR: 7.43, p < 0.001) and multivariate analyses (OR: 7.09, p < 0.001). Similar findings are reported in Nepal (Furuta and Salway, 2006; Acharya *et al.*, 2010). In their study, the measures of autonomy are positively associated with women having more children and they are more likely to make decisions (Acharya *et al.*, 2010). Studies have suggested that women can gain position and status within the family when they have children (Brink, 1991; Hindin, 2000; Acharya *et al.*, 2010).

The possible explanation for greater autonomy is that a woman with children whose husband is abroad may have more access to and control of financial resources because she has to manage the home, care for children, go to pay school fees etc. and in such a situation, she is free to make decisions in the absence of her husband and experience greater freedom of mobility to carry out these responsibilities. Interviewees also expressed that having children made them more responsible and built faith with their husbands and other family members so that they are more able to experience more autonomy and freedom (Section 5.4.4).

The result of this study showed that the left-behind wives who followed the Hindu religion had greater autonomy compared to the wives following other religions. This finding is supporting by similar findings of the studies in India and Pakistan (Jejeebhoy and Sathar, 2001); India (Gunasekaran, 2010). They found that Hindu women have greater autonomy to some extent than Muslim women in decision-making and movement autonomy, but limited autonomy in access and control over financial resources in Tamil Nadu, India. Similarly, Thampi (2005) also reported that Hindu women have more autonomy compared to other religions in Kerala, India. The results may indicate that religion alone cannot determine the autonomy. However, there might be the effects of other influential factors such as women’s age, education, number of children and family structure and the gender of the household head. The other reason may be the dominance of the Hindu religion in the study area (Table 4.1) and as more than 81 percent of people follow the Hindu religion in Nepal (CBS, 2012).

### Women’s autonomy: husband-wife level

This PhD study found that the left-behind wives whose husbands were older than 36 years were more likely to have control over their own earnings (OR: 9.0, p < 0.001), husband’s earnings (OR: 3.53, p < 0.001), decisions for health care (OR: 4.58, p < 0.001), major household purchases (OR: 2.48, p < 0.001), daily household purchases (OR: 4.27, p < 0.001), visits to family and relatives (OR: 3.78, p < 0.001) than the left-behind wives whose husbands were 36 years and below. The husband’s age was found to have a positive significant association with the wives autonomy in all autonomy variables. This finding is also supported by similar findings reported by Sathar and Kazi (2000) in Pakistan. In their study, the husband’s age had a positive association with all the measures of women’s autonomy (mobility, economic access and control, decision-making autonomy). The possible explanation is that with increasing age; they (wife and husband) have a good relationship and trust each other and the left-behind wives may feel more responsible to bear household responsibility in the absence of their husbands.

### Women’s autonomy: household-level

Many studies have concluded that decisions in the home are made at household level and women who were involved in such decisions would acquire more autonomy (Furuta and Salway, 2006). However, women’s autonomy is related to the context in which they live. The gender, age, education and occupation of the household head, family type, number of family members and household income were significantly associated with women’s autonomy in the univariate analysis. However, household head’s gender, age, family type and number of family members were found significant in the multivariate analysis.

This study found that the left-behind wives were more likely to experience greater autonomy when their household head was female than male. The household head’s gender was significantly associated with the autonomy of left-behind wives in both univariate and multivariate analyses. This result is supported by studies in Nepal (Acharya *et al.*, 2010; Gartaula *et al.*, 2012), and India (Ganguly and Negi, 2010). There is no doubt that a husband’s migration, especially when he is a household head, can influence the position of the left-behind wives in the house both socially and economically (Sekher, 1997). Due to the migration of husbands, the left-behind wives are found to be either living with other family members in an extended family or in a nuclear family. In the Nepalese context, household headship is considered an important factor to influence women’s autonomy in a traditional patrilineal family that reflects the varying degree of women’s autonomy (Kishor, 1995; Aslam, 2007). The degree of women’s autonomy may differ according to headship gender. A national census (2011) also revealed that most households are headed by a male member of the family and only one fourth of households are headed by a female in Nepal (CBS, 2012). Women’s autonomy has been found to be significantly influenced by strong patriarchy ties and well-defined cultural norms (Joshi, 2004).

One of the possible explanations is that the patriarchal family structure and socio-cultural dimensions may restrict their overall autonomy (Jejeebhoy and Sathar, 2001). In male-headed households or extended households, women’s autonomy is restricted due to the patrilineal family system and existing Hindu ideology and traditionally, women are also discouraged from participating in social and political activities and limited to the four boundaries of the house and their lives are also controlled by the male household head (Luitel, 2001). The left-behind wives as household heads are more likely to experience greater autonomy compared to the left-behind wives of male (in-law) heads (Joshi, 2004)

In female-headed households, the left-behind wives who also live in extended household may not gain full autonomy and their conditions might be similar to a male-headed household. There has been a general tendency in Nepal for daughter-in-law to be responsible for household chores and the mother-in-law has to take decisions and authority in the household as household head.

However, in nuclear families, if left-behind wives are to be a household head, they become more active in managing their family, housework and making household decisions by themselves in the absence of their husbands (Gulati, 1993). They also received the remittances sent by their husbands and are able to manage their financial condition in the absence of their husbands. The left-behind wives also experience more freedom in their mobility. Wives left behind who experience greater autonomy in the absence of their husbands are more likely to be living in nuclear households. This is due to the restriction of their autonomy by other family members when living in extended families (Kishor, 1995). This suggests that there have been a growing number of nuclear families due to migration.

This study found that the household head’s age, education and occupation were significantly associated with all measures of the wives left behind’s autonomy in univariate analysis. But only the household’s age was significant in multivariate analysis. In migrant households, the household heads may be in-laws, elderly women and wives left behind. Kishor (1995) describes that women’s autonomy is greatly affected by the age, education and occupation of the household head. When headed by senior women and men, for example in-laws, left-behind wives experience less or no autonomy. Traditionally, households are headed by elderly members, mostly men and all the authority and power rests with them. The lives of left-behind wives are in a miserable state and are mostly controlled by the elderly, either a woman or a male head with poor education. The older aged household head with poor education and the autonomy of left-behind wives have been found to be negatively associated. Kishor (2005) in Egypt and Aslam (2007) in Pakistan found similar findings. In their studies, household head’s age, education and occupation are positively associated with women’s greater autonomy. The educated or employed household heads may understand the situation of left-behind wives and may encourage them to participate in decision making processes by sharing responsibilities (Kishor, 2005).

Qualitative data also revealed that old aged household heads are more conservative and traditional in nature and have strong attachment to religion that could prevent the left-behind wives experiencing greater autonomy (Section 5.4.5). Similarly, wives left behind in interviews said that educated household heads can divide household work and create the environment to participate in decision making activities in the household and appreciate their (left-behind wives) value in the households (Section 5.3.1.12 & 5.4.5).

The family type and number of family members is a good predictor for women’s autonomy. This PhD study found that the family type and number of family members were significantly associated with all measures of autonomy in univariate and multivariate analyses. The left-behind wives who lived in a nuclear family and had less family members (5 and below) were more likely to have their control and access to financial resources, make household decisions for purchasing major or daily goods, their own health care and have freedom of mobility than the left-behind wives who were living in an extended family with more than 5 family members. Similar findings are reported in Nepal (Luitel, 2001; Gartaula *et al.*, 2012), Egypt (Brink, 1991; Kishor, 1995), India (Desai and Banerji, 2008) and Bangladesh (Hadi, 2001). These studies suggest that the left-behind wives in nuclear families are likely to be more autonomous than the left-behind wives in extended families. The other studies also suggest that women living in a small family are more likely to have greater autonomy than women living in a larger family in Nepal (Acharya *et al.*, 2010), Guinea and Zambia (Upadhyay and Karasek, 2012), Bolivia, Peru and Nicaragua (Heaton *et al.*, 2005). There are two possible explanations that favour women’s autonomy and family type and number of family members. Firstly, in extended families with more family members, women are generally placed at the bottom of the family ladder (Kishor, 1995; Luitel, 2001) and the household heads may be in-laws who control all the household resources, and make all decisions thus the left-behind wives feel that they have either limited or no autonomy in migrant households (Gartaula *et al.*, 2012). The mobility of migrant wives is also restricted by the in-laws and remittances are also controlled by them. The left-behind wives cannot obtain financial autonomy (de Haas and van Rooij, 2010; Gartaula *et al.*, 2012). Secondly, in contrast, the left-behind wives in a nuclear family with less family members have greater autonomy in the absence of their husbands. They are mainly responsible for all housework and make decisions as the household head and find more freedom in their mobility (Kishor, 1995; Gartaula *et al.*, 2012). In the absence of their husbands, the left-behind wives have more financial freedom in receiving and managing remittances. Moreover, they have to do work outside the home and they might not need to obtain permission to go out in the absence of their husbands and feel more freedom of movement (Gartaula *et al.*, 2012). Finally, due to the husband’s migration, all the household authority rests on the left-behind wives in nuclear households and they have greater autonomy.

Household income also relates to women’s autonomy. This study revealed that those left-behind wives who have higher household income were likely to have greater autonomy in all measures than the left-behind wives living in the house with a low income. Total household income and women’s autonomy were found significantly associated in both univariate and multivariate analyses. The finding of this study are also supporting by the different studies in Nepal (Acharya *et al.*, 2010), India (Jejeebhoy and Sathar, 2001; Khan and Ram, 2009) and Bangladesh (Hadi, 2001; Anderson and Eswaran, 2009). Hadi (2001) further argues that by receiving remittances, the migrant’s family is found to be economically stronger than the non-migrant’s one (Hadi, 2001).

The economic impact on women’s autonomy can be more visible with the increasing household income, by which the purchasing power of the women also increases. This can be often seen by the high value ornaments, clothes etc. (Durand and Massey, 1992). The women in high income families are likely to have greater autonomy than the women living in low income families (Acharya *et al.*, 2010). In some countries, economically deprived women can have more freedom of mobility than well-off women. The reason for this is that the women in poor families must earn and work and in many cases they have to go to the next village and at some distance in the search for work. Many studies suggest that women who are employed or work outside the home are contributing to household income and such women who are also earners in the household can experience greater autonomy for decisions and control over resources and freedom of movement (Acharya and Bennett, 1982; Finley, 1989). The left-behind wives who receive a large amount of remittance are likely to have greater autonomy (Anderson and Eswaran, 2009).. The reason might be that the left-behind wives might have a bank account and surplus savings and more participation in financial matters and family management in the absence of their husbands. In contrast, Desai and Banerji (2008) argue that women in low income households or who receive low remittances may work outside the home to meet economic hardship, thus, they may have more freedom of movement.

### Comparison of women’s autonomy between migrant and non-migrant households

This study revealed that the left-behind wives were more likely to have higher autonomy compared to the wives of non-migrants in their overall autonomy. The finding of this study is also similar to the other studies in India (Roy and Nangia, 2005; Desai and Banerji, 2008), Bangladesh (Hadi, 2001), Gambia (Gunnarsson, 2011), Tanzania (Archambault, 2010) and Mexico (Salgado de Snyder, 1993; Aysa and Massey, 2004; Bojorquez *et al.*, 2009).

#### Individual-level

In this section, the discussions are made comparing the significant results of wives left behind and the wives of non-migrants. Almost all predicted variables were found to have a significant difference with the overall autonomy between left-behind wives and the wives of non-migrants (Table 4.40-42). The left-behind wives were more likely to have greater autonomy compared to the wives of non-migrants irrespective of age. Higher overall autonomy was found in both age groups of left-behind wives as compared to the wives of non-migrants. The results were significant in both age groups. The pattern shows that with the increasing age of women, they are more likely to have higher autonomy in both households. Older women in both households were likely to have more autonomy. The possible reasons were discussed earlier in Section 6.5.1. This result is consistent with the findings of the previous studies in Egypt (Khafagy, 1984) and Bangladesh (Haque *et al.*, 2011)

The left-behind wives who follow any religion, belong to any caste, having any level of education, employed or unemployed, having property or not, having a mobile or not, having children or not were more likely to have greater autonomy than the wives of non-migrants with regard to the corresponding categories. Women’s overall autonomy is increased while their husbands are away. Traditionally, Nepalese women do not expect to have more freedom when their household heads are male or in-laws irrespective of the family system i.e. nuclear or extended (Luitel, 2001). Similar findings are reported in Kenya and Malawi by Kennedy and Peters (1992). Left-behind wives as household heads may have greater overall autonomy to access and control over financial resources, to make household decisions independently and have more freedom for movement (Hadi, 2001). The possible reason for getting higher autonomy of left-behind wives living in a nuclear family is that they are the only person in the household to manage their finances and make household decisions independently and may not need to get permission for their mobility in the absence of their husbands. However, the left-behind wives while living in extended families may get partial autonomy if their husbands are considered as the main earner in the household. In the case of non-migrant households, either in extended or nuclear families, in-laws or husbands act as the household head and all the authority rests on them and the women’s position is subordinate to the husband and they are confined within the boundaries of the home to do household chores, care of children even if they are educated or employed (Luitel, 2001).

#### Husband-wife level

With the increasing age of the husbands, wives are more likely to have higher overall autonomy. A significant difference in overall autonomy was found between the left-behind wives and wives of non-migrants with the increasing age of their husbands. The reason for this may be they are being together for a long time and they have trust to each other and also feel responsible with increasing age.

The women experience higher autonomy in both migrant and non-migrant households headed by females. However, there has been a significant difference of overall autonomy between the left-behind wives and the wives of non-migrants.

Greater autonomy to control and access of financial resources, participation in decision-making and freedom of movement were experienced by the left-behind wives compared to the wives of non-migrants in either female or male-headed households. In Nepal, the growing number of female-headed households could potentially increase women’s involvement in the management of financial resources, decision-making power and their freedom of movement (CBS, 2012). However, men are often seen to control the financial resources which make it difficult for the women to gain their freedom over such resources (Acharya *et al.*, 2010).

#### Household level

The household head’s characteristics and living arrangements also had significant effect on the women’s autonomy. The left-behind wives were more likely to have higher autonomy when tested for the age of the household head, education, occupation, family type, number of family members and total annual average household income compared to the wives of non-migrants with regard to similar categories. These variables for women’s overall autonomy were found significantly different between the left-behind wives and the wives of non-migrants.

Gender, age and occupation of household heads have been found to have a great impact on women’s autonomy and under such circumstances the left-behind wives can enjoy higher autonomy in the absence of their husbands compared to the wives of non-migrants. Moreover, living arrangements are also positively associated with husband’s migration and women’s autonomy (Desai and Banerji, 2008). Wives living in nuclear families were more likely to have higher autonomy as compared to the wives of non-migrants who are also living in nuclear families. The results also showed that left-behind wives either living in an extended or a nuclear family have greater autonomy compared to the wives who are living in extended and nuclear families respectively. However, a lower percentage of left-behind wives in extended families had a higher degree of autonomy compared to in a nuclear one. This might be because of the greater control over them exercised by the in-laws in the extended families which is more common in a patriarchal society (Luitel, 2001).

The women were found to have more autonomy when living with less family members in both households. However, there was a significant difference in higher overall autonomy among left-behind wives and the wives of non-migrants who lived with less family members. Increased women’s autonomy was found in migrant households irrespective of the number of family members as compared to the wives of non-migrants. In general, nuclear households have less family members compared to extended households and left-behind wives who live in nuclear households, perhaps as household heads have greater autonomy compared to the wives of non-migrants who either live in nuclear or extended households headed by their husbands or in-laws.

Obviously, migration has a positive impact on family income (Adams and Page, 2005) and wives who have access to and control over financial resources had greater autonomy (Kennedy and Peters, 1992). Migrant families who received large amounts of remittances may have a good household income and a surplus. Total household income was positively associated with the overall autonomy of the left-behind wives in migrant households compared to the wives of non-migrants. The findings of this study are also consistent with the findings from other studies (Kennedy and Peters, 1992; Jejeebhoy and Sathar, 2001; Anderson and Eswaran, 2009; Acharya *et al.*, 2010). These studies indicated that household income has a significant positive association with the women’s autonomy measures. The women with higher household income are more likely to have higher autonomy for control of economic resources, decision making for health care, household purchases and their movement.

Qualitative data showed that the ways of viewing the left-behind wives in extended families have not changed much in the traditional patrilineal descent (6.4.5). However, the transformation of gender role and the position of women within families are acknowledged after the departure of their husbands (Brettell, 2003). This transformation is supposed to be more visible in nuclear families where women are heads of household. The respondents also expressed that freedom of women’s movement is moulded by the patrilineal society and household structures (Section 5.4.6). The left-behind wives must get permission for their travel even to their natal homes when living with in-laws. They received a limited amount of money when they needed it and sometimes, it was not sufficient for their expenses.

The study in Mexico by Bojorquez and colleagues (2009) reported that there is no clear confirmation about increased women’s autonomy and the husband’s migration. In their study, the left-behind wives can have more freedom of movement than the wives of non-migrants but the other measures of autonomy (personal, social and economic) are not different between the left-behind wives and the wives of non-migrants.

Moreover, the left-behind wives who follow any religion were more likely to have greater autonomy compared to the wives of non-migrants in the same category. The left-behind wives of either upper or lower caste also experienced greater autonomy as compared to the wives of non-migrants within the respective categories. Educated and employed left-behind wives had greater autonomy than the wives of non-migrants in the same category. Left-behind wives who had property in their own name and their own mobile phone had higher autonomy than the wives of non-migrants.

The possible explanation may be that due to patrilineal descent in non-migrant households, wives are often placed in a low position and are subordinate to their husband, and are more confined to household chores and the care of children in the domestic arena and are often seen to have less role in decision making so that they have less autonomy and power for decision-making and are also subject to tighter patrilineal control and have less financial and social privileges (Chant, 1998). Whereas in migrant households, after the departure of the husband, left-behind wives often gain position as head of the household who tend to hold the power to control and manage the home by which they have more autonomy and power to make decisions independently in spending and allocating the household resources including remittances (Khafagy, 1984). The other factors may be the women’s age and their relationship with household heads which is often critical in gaining more autonomy and power in extended families.

Findings from qualitative data analysis showed that the left-behind wives when living in extended families with in-laws, do not experience autonomy because the families are shaped by traditional norms and values where they must obey their in-laws and do most of the household duties such as caring for children, cooking food, washing clothes and doing farm labour which are expected to be done by wives left behind (Section 6.4.4). Similar assertions were also reported in the studies in India (Galanti, 2003) and Morocco (de Haas and van Rooij, 2010). Furthermore, they expressed that in extended migrant families, household heads or in-laws are mostly male members who received the remittances and the left-behind wives have no decisive role in the spending and sharing of the remittances sent by their husbands and their movement was also restricted and they would get more freedom when living separately from them (Section 5.4.9). Similar conditions are also faced by the wives of non-migrants.

The findings indicated that the left-behind wives were more likely to have access to and control over their own earnings (OR = 8.35, p < 0.001), control over the husband’s earnings (OR = 18.63, p < 0.001) compared to the wives of non-migrants. Similarly, while making decisions in the households, the left-behind wives were more likely to make their own decisions for their own health care (OR = 14.99, p < 0.001), for major household purchases (OR = 13.28, p < 0.001), for purchase of daily household needs (OR = 9.12, p < 0.001) and their own visit to family and relatives (OR = 19.22, p < 0.001) compared to the wives of non-migrants.

These results indicated that the left-behind wives had greater autonomy compared to the wives of non-migrants in all measures of autonomy. These results revealed that the husband’s international migration has significant effects on the autonomy of left-behind wives. There are no such types of previous studies which compare the autonomy of left-behind wives and the wives of non-migrants. So, it is difficult to compare the findings of this study with other similar studies. However, an attempt was made for a possible comparison with other studies of women’s autonomy in different settings and contexts.

### Types of women’s autonomy

There have been a number of individual and socio-economic characteristics of women that show a significant association with the autonomy indicators (Section 4.4). This study found that the left-behind wives experienced greater autonomy after the husband’s international migration compared to the wives of non-migrants. The wife’s gender role is transformed by her husband’s migration and the changing role of the left-behind wives make them independent in making household decisions and also have control over household assets.

The above sections described significant associated predictor variables of respondents with autonomy measures. This section describes the women’s financial, decision-making and movement autonomy.

#### Financial autonomy

The results of this PhD study showed that the left-behind wives were more likely to have financial autonomy than the wives of non-migrants. The left-behind wives had more control over their own earnings (OR = 8.53, p < 0.001) and their husband’s earnings (OR = 18.63, p < 0.001) than the wives of non-migrants. There is evidence supporting the similar findings of this study also reported in Nepal (Gartaula *et al.*, 2012); Mexico (Bojorquez *et al.*, 2009) and India (Roy and Nangia, 2005; Desai and Banerji, 2008). These studies suggest that migrants’ wives can have more freedom over financial resources than the wives of non-migrants. Studies are also suggesting that this is not always the case when living in extended families. The women as household heads can receive the remittances sent by their husbands and have more financial autonomy in the absence of their husbands. In the case of migrant wives who are living in an extended household, they are not fully autonomous for making financial decisions which are controlled by their in-laws (Gartaula *et al.*, 2012). For the wives of non-migrants either living in a nuclear or an extended household, most of the financial resources are controlled by either their husbands or in-laws and all economic decisions are taken by them. Women must depend upon their husbands or in-laws for their financial expenditure. The findings from this study also revealed that only very few wives of non-migrants had control over their own earnings (Table 4.39; Appendix 14: Table 14.1).

#### Decision-making autonomy

The findings of this study showed that the left-behind wives were more likely to make household decisions independently compared to the wives of non-migrants regarding their health care and service utilisation, and the purchase of household goods. The decisions for their own health care (OR = 14.99, p < 0.001), decisions for major household purchases (OR = 13.28, p < 0.001), decisions for purchase of daily household needs (OR = 9.12, p < 0.001), and decisions for visit to family and relatives (OR = 19.22, p < 0.001) were found to have a significant difference between the left-behind wives and the wives of non-migrants. These results suggest that left-behind wives have more decision-making power and make their decisions independently compared to the wives of non-migrants. Similar findings are also reported in Nepal (Gartaula *et al.*, 2012), Mexico (Bojorquez *et al.*, 2009) and India (Roy and Nangia, 2005; Desai and Banerji, 2008). The possible explanation may be that the decision-making freedom basically depends upon the headship of the household and the household structure (Brink, 1991). The left-behind wives as household heads have greater decision-making authority and even if they are not a household head, it is mainly dependent on their relationship with their in-laws who act as household heads. On the other hand, the household of the wives of non-migrants are headed by either their husbands or in-laws depending on family type. The decisions in these households are made by either husbands or in-laws (Brink, 1991; Luitel, 2001). The wives of non-migrants can experience only limited or no autonomy. Another reason may be the nature of the patrilineal descent of power and authority and women’s status and position in the household.

Left-behind wives are more likely to make their own decisions for their own health care and service utilisation compared to the wives of non-migrants. Left-behind wives living in a nuclear family may make decisions for their own health care in time. This may be perhaps because they do not need to ask others or their husbands which also possibly encourages them to seek health service in time. On the other hand, the left-behind wives living in extended households may have less autonomy to make health care decisions on time. They have less control over remittances and household heads may give them only limited money for health care and service utilisation.

In the case of the wives of non-migrants, husbands or in-laws are the main decision makers for women’s health care either in nuclear or extended households (Acharya *et al.*, 2010; Poudel and Pitakmanaket, 2010; Simkhada *et al.*, 2010; Thapa and Niehof, 2013) and they have low or no autonomy to make decisions for their own health care. Many studies findings suggest that there is a delay in making decisions for women’s health care and service utilisation (Yamasaki-Nakagawa *et al.*, 2001) and sometimes in-laws are not giving priority to their health care.

The decision-making power of the left-behind wives depends upon the living arrangements. The left-behind wives who are living in a nuclear family are more likely to make household decisions independently compared to the wives of non-migrants. Some studies point out that the left-behind wives when living with in-laws are not found to be involved in decision-making and the majority of the decisions are made by in-laws as in non-migrants households (Thapa and Niehof, 2013).

The left-behind wives have more freedom of movement compared to the wives of non-migrants. This might be perhaps because the left-behind wives have to take all the household responsibilities inside and outside the home which was done by their husbands before migration and involves work outside the home, for example, going to the children’s school to pay school fees, shopping, searching for work etc. increases their freedom of movement.

#### Social and political autonomy

This study also found that an almost equal number of the left-behind wives and the wives of non-migrants (Appendix 7) were found to be involved in social activities. No significant difference was observed in social and political autonomy. Women form a communication network mainly through natter between friends which may perhaps help them to participate in social and political events (Dyson and Moore, 1983). Left-behind wives who were interviewed answered that they have freedom to participate in social events such as a wedding ceremony etc. organised in their neighbourhoods. If there is no other person available, then they have the chance to participate (Section 5.4.10). Women mostly get the chance to participate in social and political events when the other women either from the neighbourhood or from the family are also participating.

## Relationship between depression and autonomy

This study found that left-behind wives had both high levels of depression and autonomy when their husbands were abroad. This is interesting and important. No significant association was observed between depression in the left-behind wives and their autonomy (Table 4.43). Similar types of study have not been conducted elsewhere and cannot be compared. However, findings from Bojorquez and colleagues (2009) in Mexico suggest that higher depression is associated with economic autonomy among the left-behind wives while the other autonomy variables, for example, decision-making autonomy, social and political autonomy and movement autonomy were not significantly associated with depression. In this study, the autonomy variables were not analysed separately with depression.

The wives whose husbands lived abroad were found more depressed and experienced greater autonomy compared to the wives of non-migrants. Individual analysis of depression and women’s autonomy among the left-behind wives revealed that a higher level of depression and greater autonomy were found in left-behind wives. For instance, the association of higher depression and autonomy in this study can be expected and important. However, the statistical analysis did not confirm the association between depression and women’s autonomy in left-behind wives in the quantitative analysis.

The relationship between depression in women and their autonomy is not clear or contradictory. A survey among women in India by Patel and colleagues (2006) reported that women with higher mental disorders had less decision making power. Similarly, a study by Bojorquez *et al.* (2009) in Mexico reported that women with a higher depression score experienced higher economic autonomy but low decision making autonomy. The findings of this study are a little different. The left-behind wives have a higher depression level but they experience more autonomy.

The possible reasons for such findings are: the women left behind were more autonomous because they have to take a number of decisions by themselves (Section 5.4.11) and receiving remittances regularly (Section 4.2.7.2) and have more access to and control over financial matters (Section 5.4.9.1-2). At the same time, they are more depressed because of worries about the husbands’ situation abroad as they hear of more work place casualties and adverse working conditions abroad in the mass media (Section 5.3.1.7), long-term separation (Section 5.3.1.8), increased physical workloads and responsibility (Section 5.3.1.12) and poor relationship with in-laws (Section 5.3.1.5).

In this study, more autonomy was experienced by left-behind wives with a higher depression level. Women in this study reported that they have to take all household responsibilities in the absence of their husbands (Section 5.3.1.12) and they do not have any other choice even though they suffer from stress and depression. The husbands’ migration seems to be an indicator of greater autonomy but also a provoking factor for depression in left-behind wives. Similar observations were reported in Mexico (Bojorquez *et al.*, 2009). For example, added responsibility or separation could be both a possible risk factor for depression and an indicator of greater autonomy. From this perspective, women with added responsibility can experience more autonomy by managing remittances and making household decisions in their husbands’ absence (Roy and Nangia, 2005). At the same time, it increases the stress on them while doing this work alone. The husbands’ migration seems to be protective of their autonomy but endangering their depression.

Bojorquez *et al.* (2009) in Mexico reported that higher depression was associated positively with financial autonomy and negatively associated with decision making autonomy. The relationship between depression and autonomy might not be always opposite and straightforward. The risk factors for depression and conditions for experiencing autonomy are related to the circumstances developed by the husbands’ migration. The changes in family structure and the increase of nuclear families by male migration (Brown, 1983; UN-ESCAP, 2009), the majority of left-behind wives who live in nuclear families must bear overall responsibility of the home alone in the absence of their husbands. From this perspective, they have more autonomy but for those who are living in extended families with a male household head did not experience higher autonomy (Section 5.3.1.5 & Section 5.4.5). On the other hand, with a long-term separation from their husbands and fulfilling household responsibilities, there is always a risk of being depressed when facing such a situation alone. Husbands’ migration has a positive effect on autonomy and a negative effect on depression in left-behind wives but a direction of relationship between the greater autonomy and a higher level of depression in left-behind wives was not conformed statistically.

## Health service utilisation

### Health service utilisation for minor illnesses

This study aimed to glimpse the types of health service used for minor illnesses. Fever, cough and diarrhoea are the leading minor illnesses in Nepal (MoHP, 2010). To date, none of the studies has investigated the types of health service utilisation by the left-behind wives for their health problems. Thus, it is difficult to compare the findings of this study with other similar studies. An attempt was made to compare the results of this study with other relevant studies.

Women’s education, household head’s education and occupation, and the number of family members were found to be significantly associated with the types of health service utilisation of minor illnesses by the wives left behind. Many studies have pointed out that women’s education has significant effects on health service utilisation (Bloom *et al.*, 2001; Matsumura and Gubhaju, 2001; Dhakal *et al.*, 2007; Zaho *et al.*, 2012). Nevertheless, not only individual characteristics but also household characteristics are also equally important because most of the decisions about health service utilisation are made at the household level (Matsumura and Gubhaju, 2001). The other household characteristics, for example, household head’s education (Ahmed *et al.*, 2000); number of family members (Matsumura and Gubhaju, 2001; Majumder, 2006) showed significant association with the wives left behind’s health service utilisation for minor illnesses. The left-behind wives with higher autonomy may be the influential factor for making decisions to use and choosing the health facilities (Section 4.4.7 & 5.4.11) (Matsumura and Gubhaju, 2001).

No significant difference was found between the left-behind wives and the wives of non-migrants in using health services for minor illnesses within the last four weeks. In both households, a higher percentage of women used private health facilities for fevers, coughs and diarrhoea (Table 4.54-55). The possible explanation may be that the Chitwan district has more private health facilities, medical colleges, doctor’s clinics and nursing homes and these facilities have been linked to good roads and are quickly reachable. Public health services are also perceived to be of poor quality in the study district (Regmi *et al.*, 2010)

In the study area, almost two-thirds of left-behind wives (75.7%) and the wives of non-migrants (71.4%) utilised private health services for minor illnesses. However, less than one-fifth of the left-behind wives (19.3%) and the wives of non-migrants (17.7%) used government health facilities. In both households, they were less likely to use government health facilities for minor illnesses than private health facilities. In Nepal, the private pharmacies along with doctor’s clinics are more common practices to deliver health services to the people (Hotchkiss *et al.*, 1998). Thus, this might be the reason for the higher utilisation of private health facilities in both households. The higher utilisation of private health facilities may be because these facilities are located near their homes, for example, a private pharmacy with doctor’s clinics, nursing homes and easy access. The use of a pharmacy for health care is also the cheapest one as compared to others in Nepal and they provide health services free of cost in a short waiting time and in return, patients have to buy medicines from the pharmacy (Kafle *et al.*, 1992). The other possible reason may be due to the timely unavailability of health professionals and the lack of health facilities at the government health and sub-health posts and the distance to a government hospital.

Qualitative data revealed that women often neglect to use the health service for their minor illnesses and mostly depend upon self-care, home remedies and a pharmacy nearby their home (Section 5.5.1). Similarly, Hunte and Sultana (1992) also reported that women in Pakistan also use more self-care and home-based indigenous medicines for their illnesses. Women’s perceptions about minor illnesses, household work and limited decision-making power for their health care utilisation could delay their use of the health services (Section 5.5.2). Subedi (1989) and Hotchkiss *et al.* (1998) also reported that household decisions were not made in a timely way for women’s health service utilisation. These diseases are also considered the root causes of other types of major and chronic diseases and if not cured in time, can cause a serious health problem (Section 5.5.1).

### Health service utilisation for any health problems within last 12 months

This study found that the left-behind wives were more likely to use the private health service facilities for any health problems than the wives of non-migrants. There was a significant difference in the type of health services used within 12 months for any health problems between the left-behind wives (p < 0.001) and the wives of non-migrants (Table 4.56). More than half (52.5%) the left-behind wives used to seek health services from the private health providers. The reasons may be that the husbands who are living abroad were familiar with good health care in the migrated country and may also encourage and transfer ideas and advice to their left-behind wives to use the appropriate health facilities for their health problems (Lindstrom and Munoz-Franco, 2006; Gyenwali *et al.*, 2013). Ghimire and colleagues (2011) also reported that women who lived separately are more likely to use private health facilities. Furthermore, the migrant families could benefit from remittances and the increased household income may be the other reason that they can also afford the high cost of private health facilities (Hotchkiss *et al.*, 1998). They further argue that the choice of health facilities depends upon the household income and health expenditure (Hotchkiss *et al.*, 1998). The other possible explanation for using private health facilities is that the left-behind wives have more autonomy in making decisions for their own health care (Section 5.5.2).

For example: “*My husband always advised not to compromise to seek health services in good places.*” (Section 5.5.2)

Due to the husband’s migration, there have been varieties of change in households, for example, the household head or income (Subedi, 2003). Thus, women’s health service utilisation can be affected by many factors. The women who bear full household responsibility in the absence of their husbands as household head have more access and control over household resources in the absence of their husbands and are more likely to use their health service for their health problems.

Health service utilisation by women is also affected by their position in the household. Husband migration increases women’s status and position within households and women have more decision-making power and control over financial resources. Thus, the left-behind wives can utilise private health services more often than the wives of non-migrants.

Cost, accessibility, poor quality, good behaviour of health professionals towards service user, lack of a health specialist have been seen as a barrier to women’s health service utilisation in Nepal (Subedi, 2003; Simkhada *et al.*, 2006a; 2007). The higher cost of a doctor’s fee, pathological tests and medical are also restricted for women who are living in economic hardship to use health care in time (Subedi, 2003). Furthermore, women are often accustomed to the health facilities located in their geographical area and within their economic scope (Subedi, 2003). However, qualitative data revealed that money was not a problem and they were also more conscious of their health and their husbands also encouraged them to use the private health facilities. They believe that private health facilities are far better than the government ones. Most of the left-behind wives preferred to use private health facilities. The possible explanations may be; women can get service quickly when they approach the health facilities, the easy availability of health professionals and other services which is not the case with government health facilities. They are also encouraged by their husbands to use private health facilities even if they are expensive. Government health facilities are poorly managed and delay their service delivery. The other reason might be that the left-behind wives have to do plenty of housework and care for children in the absence of their husbands (Roy and Nangia, 2005).

## Strength and Limitation of the study

The main strength of this study is that this study is the first research study in Nepal and the study group (left-behind wives) also has a comparable reference group (wives of non-migrants). This study covers the effects of male international migration on the left-behind wives regarding depression, autonomy and health service utilisation. This research is based on primary data so that it can help to bridge the research gap in past and present. Male international migration is a global issue, so combining the past information in this study can help better understand the effects of male international migration on the left-behind wives so that the findings of this study can be useful for those countries or areas in formulating a plan and programme for the left-behind women. This study utilises a mixed-methods approach and no previous studies in Nepal have employed a similar approach to international migration and the left behind. This approach utilised both quantitative and qualitative data collection techniques which can help to examine the effect of the husband’s migration on the wives left behind and the associated factors and explore the reason behind these associations.

However, there are some limitations to this study. This study is based entirely on the self-reported symptoms of depression and due to financial constraints and the time limitations of a PhD study, only one self-reported tool was used and no clinical assessments were conducted to verify the depression. This study measures the depression level within the last week. This can minimize the recall bias. However, this study did not capture the episodes of depression beyond that period. Future research should give priority to these issues. Secondly, this study excludes the effects of the internal and seasonal migration and also international migration for less than a year and the migrant who visits their family more than once a year and the visit being limited to one month only. Another limitation of the study, women’s joint decisions (either with their husband or someone else) are excluded from the study and only a woman’s self-involvement responses are included. The purpose of excluding the joint decisions is to measure how women can make decisions independently in the household during the period of a husband’s migration and in the meantime, it is equally important to compare this with the women who reside with their husbands. In addition, this research study did not examine the situation of a women’s autonomy after the return of their husband. Thus, we would recommend to the researchers who will be planning to conduct research on migration and women’s autonomy to include the joint decisions and women’s autonomy after the return of the husband in future research.

Generalisability refers to the degree of generalisation of the findings to the other contexts. External validity and theoretical generalisation are often used to describe the generalisation of the findings in quantitative and qualitative research respectively (Barbour, 2001). Similarly, the number of samples is often a debatable issue for the generalizing of the findings in the studies, for example, in quantitative study, a large number of sample size is considered to produce the reliable results that can be applicable to the other context. And also in qualitative study, the information is collected until no further new information will be captured, called theoretical saturation. This thesis utilised mixed-methods sampling i.e. probability and purposive sampling. Therefore, the findings of this study are only representative but not conclusive.

The findings of this study are based on the one VDC in Nepal which has experienced high male international migration. This VDC has a good mixture of socio-cultural population and is one of the largest VDCs of Chitwan district. Thus, the findings of this study may be applicable to the other areas of a similar context in Nepal and elsewhere. The results of this study may also provide the reliable baseline information for future research. However, the results and the conclusions drawn from this study may not be fully representative of the whole of Nepal and elsewhere. This is because the circumstances of migrant households, rate of international migration and other socio-cultural variations of the population may differ from one place to another. Furthermore, the duration and the distance of husbands’ migration are also more likely to influence the responses from the respondents in the study issues, for example, the easy access and cost to transport facilities, the husbands migrated to India may visit more frequently to their families than husbands migrated to other countries.

## Summary

This discussion chapter deliberates on the major findings of this study and compares them with the findings of other studies including the possible explanations of the results. Male international migration provides economic benefits for the families who stay behind in the country of origin, side by side it also becomes a major challenge for the wives who stay behind to manage the home and children.

This study covered three aspects of international migration on the left-behind wives: i) depression in the left-behind wives; ii) autonomy; iii) types of health service utilisation, which are discussed below.

### Depression and left-behind wives

A husband’s international migration is one of the major challenges faced by the left-behind wives in their life. This study reveals that the husband’s international migration is a major contributory factor for the depression in left-behind wives due to their separation and the other circumstances arising from the husband’s migration. Not only the separation, but equally the husband’s migration increases the physical workload and responsibilities which potentially increase their depression. The physical workload and the burden of managing the family and regular household chores and other duties outside the home in the absence of their husbands have impacted on their physical as well as mental health. To cope with the situation arising from the migration of husbands, and the added household responsibilities falling on the wives have put them at high risk of depression.

A higher prevalence of depression was found in the left-behind wives compared to the wives of non-migrants. The results of this study revealed that 79.0 percent of the wives left behind were found to be depressed due to the husband’s migration. This study also revealed that left-behind wives are at almost 11 times higher risk of developing depression due to the migration of husbands compared to the wives who are living with their counterparts.

The husband’s migration affects any age of left-behind wives compared with the wives of non-migrating husbands. Furthermore, the left-behind wives in nuclear households may have to bear all the household responsibilities on their own shoulders and in extended families, and their situation may worsen because of maintaining family obligations and obeying social and cultural norms under controlled circumstances by in-laws in the absence of their husbands. Furthermore, left-behind wives are also found to be more depressed due to the lack of physical and moral help and support. Finally, apart from individual factors; spousal separation coupled with the increasing household burden, care of children and the elderly, fulfilling household obligations, existing economic hardship, gender disparities within the house or in society have been found to be contributory factors for depression in the left-behind wives.

### Women’s autonomy and husbands’ migration

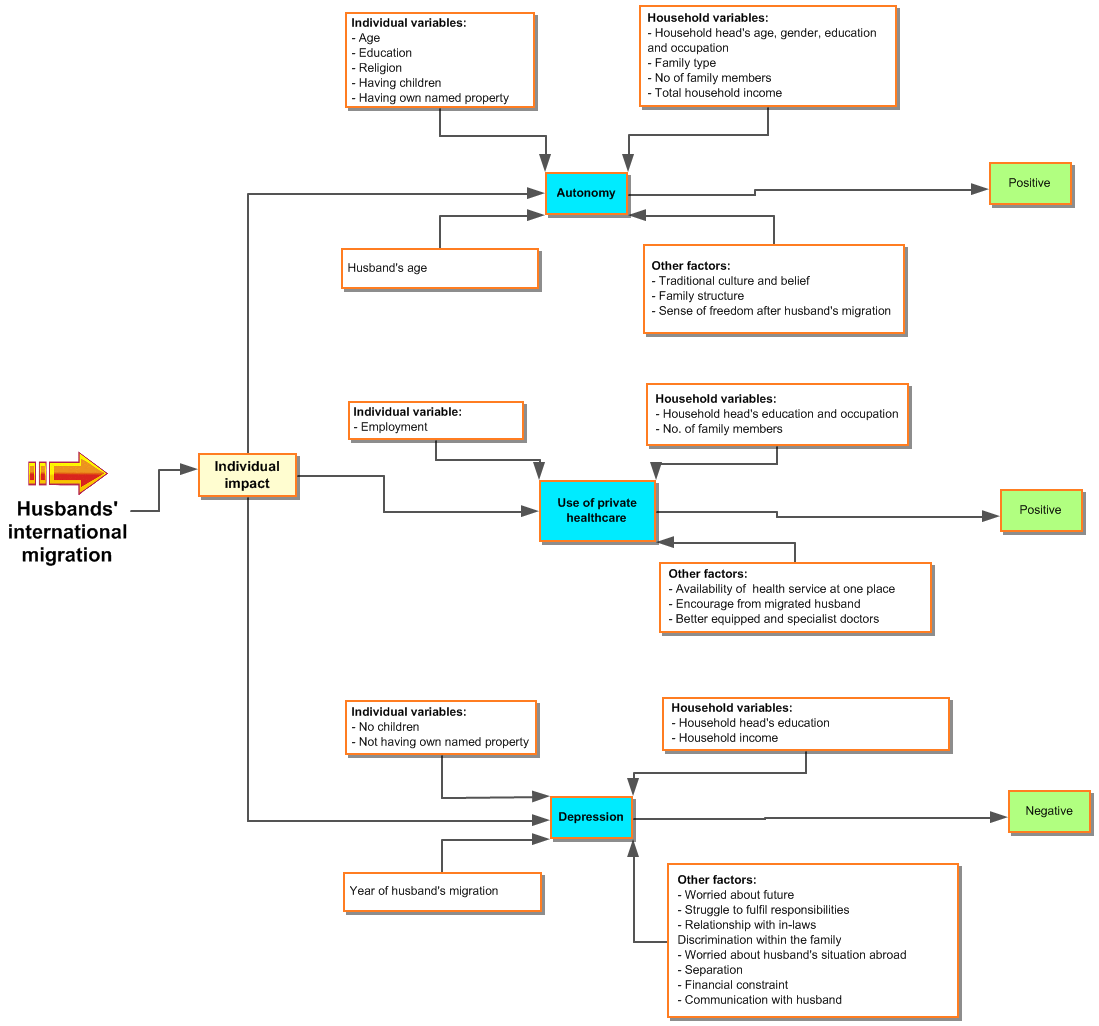
This study found that a husband’s international migration has a significant positive association with the autonomy of left-behind wives. Women left behind were more likely to experiencing higher autonomy when their husbands were abroad for all measures of autonomy. The left-behind wives were more likely to experience higher autonomy for control over their own (OR: 8.35, p < 0.001) and their husband’s earnings (OR: 18.63, p < 0.001), decisions for their own health care (OR: 14.99, p < 0.001), major household purchases (OR: 13.28, p < 0.001), daily household purchases (OR: 9.12, p < 0.001) and more freedom of movement (OR: 19.22, p < 0.001) compared to wives of non-migrants. This study found a significant difference in the overall autonomy between the left-behind wives and wives of non-migrants. The status of women in Nepal largely depends on patrilineal descent, religious and culturally accepted norms and beliefs. However, this study reveals that left-behind wives experience higher autonomy during the period of their husband’s stay abroad. Additionally, the left-behind wives experience higher autonomy in a nuclear family as a household head whereas only limited or no autonomy when living under the headship of in-laws in extended families. In the case of the wives of non-migrants, husbands or in-laws are the main decision makers and have less or no autonomy.

### Types of health service utilisation

Regarding the types of health service utilisation, there was no significant difference in the type of health service utilisation between the left-behind wives and the wives of non-migrants for minor illnesses (fever, coughs and diarrhoea) within the last four weeks. However, left-behind wives were more likely to use private health facilities for any kind of health problems within the last 12 months compared to wives of non-migrants. More than half (52.5%) of the left-behind wives used private health facilities for their health problems whereas only one quarter of wives of non-migrants used private health facilities within the last 12 months.

Finally, a summary of the effect of husbands’ migration is presented in figure 6.3. The following chapter offers the summary, conclusions, recommendations and implication of the study which are made based on the study results.

Figure 6.3 Effects of husbands' international migration on left-behind wives



# CHAPTER SEVEN: CONCLUSIONS AND RECOMMENDATIONS

## Introduction

This chapter outlines conclusions drawn from the both quantitative and qualitative data and the following sections deal with the strategies and implications of the study.

## Conclusion

There has been a long history of male international migration from Nepal (Section 1.4.2). However, to establish the relationship between male international migration and the left-behind wives is difficult due to the lack of systematic research into migration and being left behind. This study revealed that husbands’ migration has both positive and negative impacts on left-behind wives in the study area. This study mainly focuses on the effects of the husband’s migration on wives with regard to depression, autonomy and health service utilisation and comparing the results of left-behind wives with the results of the wives of non-migrants. This study has set up four objectives i) prevalence of depression on wives left behind ii) situation of autonomy of wives left behind iii) types of health service utilisation by left-behind wives iv) comparison of the results of left-behind wives with the wives of non-migrants.

This study was based on a total of 800 survey samples of migrant and non-migrant households and 14 semi-structured interviews with left-behind wives and the wives of non-migrants and the conclusion was drawn from the main findings which are listed above (Section 6.9).

This study included the wives left behind whose husbands were migrated for at least one year or more regardless of the country of their husbands’ migration. Thus, the findings of this study may not be conclusive for those left-behind wives whose husbands are migrated to a particular country, for example, India, Gulf countries and developed countries. Furthermore, the left-behind wives also have high prevalence of depression and greater autonomy in the absence of husbands. However, this study did not find any significant relationship between depression and the autonomy of left-behind wives. This study only examine the relationship between depression and overall autonomy and unable to measure the association of each indicator of autonomy with depression. Migration is related to economic aspect and low economic status is found to be associated with depression in the literature (Nolen-Hoeksema, 2001). However, this thesis is unable to examine the relationship between the economic factors and depression and its explanation.

Furthermore, the left-behind wives of internal migrants are not included in this study. The level of depression and autonomy, worries about husbands’ condition and other circumstances could be different for left-behind wives of internal migrants than those of the left-behind wives of international migrants. Migrants within the country might be more likely to visit their home regularly, also regular in touch with their wives. Therefore, the outcome or effect of internal migration may be different from the outcome of international migration. The conclusions drawn from this study may not represent the left-behind wives of internal migrants. Likewise, this study was carried out in high migrancy area and the findings of this study may not be conclusive or representative for the population of the areas of high internal migrants.

This study also did not find any significant association of types of health service utilisation for minor illnesses. However, left-behind wives utilised private health service for their other health problems within the last twelve month period. When comparing the results with wives of non-migrants, wives left behind were more likely to be depressed and experience greater autonomy and use private health services than the wives of non-migrants.

### Depression in women

Husband’s international migration has a negative effect on the mental health of the left-behind wives. A 79.0 percent prevalence rate of depression was found in left-behind wives. In contrast, only a 26.3 percent prevalence rate of depression was found in the wives of non-migrants. This finding indicates that left-behind wives are at high risk of being depressed as a result of their husband’s migration and the circumstances that develop from the migration of their husbands contribute to their depression. The relationship of husbands’ international migration and depression emerge as a major challenge and serious threat for the women who are left behind at home. This study found that the left-behind wives were more likely to be depressed than the wives of non-migrants. An almost three times higher prevalence of depression was found in left-behind wives than in the wives of non-migrants.

A higher prevalence of depression in left-behind wives than the wives of non-migrants may be accounted for by not only the separation from their husbands and the burden of responsibility but is equally associated with their exposure to poor socio-cultural and economic conditions after the husband’s migration. In addition, the existing traditional family system, living arrangements and discrimination against left-behind wives within the family or community in the absence of their husbands may not be ignored as a contributory factor in their depression.

Thus, the higher prevalence rate in left-behind wives suggests that mental illness is one of the major health problems for left-behind wives in the absence of their husbands. To tackle this problem, this study suggests and identifies the key strategies that should be addressed to improve the mental health of left-behind wives in Nepal.

#### Strategies concerned with individual and socio-cultural factors

Individual and socio-cultural factors have greater influence on the depression in women. The following strategies have been suggested to reduce depression in left-behind wives (a) discrimination against women (b) increasing women’s assets and property rights (c) education

A patriarchal family system, deep rooted religious and superstitious beliefs in the family and society and poor education are the common factors in the discrimination against women so that these factors have a great impact on the mental health of the women. Women who are facing discrimination in the absence of their husbands suffer from depression. Any kind of discrimination against women must be completely avoided at any level so that depression in women can be minimised. In order to reduce prejudice and discrimination against women, focus should be given to gender related awareness and an educational and interactive programme for the families and communities, especially males and household heads to avoid discrimination against women and also empower the women to tackle discrimination against them.

Furthermore, by providing the opportunity for the sharing of resources, creating an environment of female participation in household activities within the family and moral and physical help and support from family members and peers may help to reduce depression in left-behind wives while living in the absence of husbands. Additionally, caste-based discrimination exists in the society. There is a gap between the upper and lower castes in society which should be completely eliminated by organising awareness programmes to reduce caste-based discrimination and encourage people of lower castes to claim their rights so that a harmonious environment can be created to minimise depression in women.

Furthermore, the majority of left-behind wives must have to bear their traditional roles in addition to the added responsibilities. The lack of family help and support may have a greater impact on both the physical and mental health of the left-behind wives. In this context, their education plays a vital role in coping with the situation and preventing them from experiencing depression. It is not only a woman’s education but equally important is that of other family members as well. The women with educated family members may get ample moral and physical support which can help to minimise depression in left-behind wives.

Furthermore, migrants sent remittances to their families. The receiving and control of husband’s remittances by other family members can increase stress and depression in left-behind wives. Sometimes, there might be conflict surrounding the sharing of remittances between the migrant’s wife and other family members. The women with financial hardship suffer from depression. The cause of depression in left-behind wives may be their lack of control over financial resources. The women who receive remittances can have control over their husband’s earnings and can control expenditure and save some extra money for the future and side by side they can buy fixed assets in their own name. Therefore, left-behind wives may feel financially better off which also helps to reduce depression and stress relating to money matters.

A single factor may not be sufficient to explain depression in left-behind wives, thus, the effect may be the synergism of all the factors which need to be considered when explaining depression in left-behind wives.

#### Strategies concerned with financial factors

Economic hardship is always related to depression. To overcome the existing economic hardship, males have to take a decision to migrate. Having a higher income would make life easier and release the pressure of financial difficulty. Struggle against financial problems can lead to depression. Getting remittances from the migrant husband would help to improve the economic status in migrant households but the remittances may not be sufficient to fulfil the desires and will of the family members who are living in poverty or in economic hardship before migration. The findings of this study suggest that migrant households have a good income as compared to non-migrant households. Thus, household strategies should be adopted to focus on future saving. Having good savings helps to reduce depression when suffering from financial problems in the future.

#### Strategies concerning separation

The duration of separation is also found to be a contributing factor for depression in the left-behind wives. The husband’s migration creates a situation; leaving their wife at home and the long term separation from the husband may have an impact on the mental health of the left-behind wives. Separation from the loved one is always painful and the wives who stay at home also face many problems including financial when taking household responsibility in the absence of their husbands. The left-behind wives who face such a situation may be depressed. The findings of this study also revealed that left-behind wives are depressed due to separation arising from the husbands’ migration. Thus, the intervention should be targeted for the migrants and encouraging them to visit their homes regularly which could help to reduce depression in the left-behind wives.

The findings of this study and evidence from past research also show that poverty and economic hardship are the driving factors in international migration (Section 1.4) which is also considered as one of the major factors in depression on those left behind, especially the wives. Therefore, the government should have a long term plan to create jobs and employ Nepalese people which would potentially reduce international migration to seek employment and also help to reduce depression in those left behind.

### Women’s autonomy

The findings of this study revealed that the left-behind wives were experiencing higher autonomy as compared to the wives of non-migrants. However, the left-behind wives who reside in extended families experience less autonomy as compared to the left-behind wives who are living in nuclear families. The husband’s migration has a positive effect on the wives’ autonomy. Due to the husband’s migration, women’s involvements in economic and household activities have increased and they also have gained more decision-making power.

Left-behind wives are found to experience more freedom of access and control over their own and their husband’s earnings and also the financial resources of the household compared to the wives of non-migrants. The left-behind wives are also found to be more independent in making decisions for their health care, household purchases and having freedom to visit in the absence of their husbands.

There are many factors, for example, individual, socio-economic and cultural factors which affect the women’s ability to participate in the decision-making process. The findings of this study also suggest that women’s autonomy is mainly shaped by their living arrangements and patriarchal descent. The women as household heads may have more freedom and autonomy but when living with in-laws or husbands, women experience less or no autonomy. In addition, the left-behind wives and the wives of non-migrants also have limited or restricted freedom of mobility when living in extended families under the headship of in-laws or husbands but women as household heads experience greater freedom of mobility when living in nuclear families. Therefore, women’s overall autonomy is mainly affected by the family structure and their position and status in the family.

In this context, rapid change and quick results to empower women living in extended households is not an easy task in Nepalese society which is bounded by strong patriarchal descent. Improving women’s position and status within the family and society could have a positive impact on their autonomy. However, educating the in-laws and husbands and also encouraging them in the participation of women in decision-making activities, giving power and access for women to economic resources and decisions, protecting women’s rights by making strong laws and having regular supervision, monitoring of women’s issues and addressing them would help to gain women’s freedom and autonomy within the family. Apart from this, the government should encourage the awareness of women’s rights through the mass media, educational and empowerment programmes for women so that they can achieve greater autonomy. In addition, the plan and policies should be formulated to empower the women in decision-making, access and control over economic resources which could help their independence and to be more autonomous in decision-making.

### Types of health service utilisation

This PhD study showed that there is no significant difference in the type of health service utilisation for minor illness between the left-behind wives and the wives of non-migrants. However, there was a tendency for the left-behind wives to use more frequently the private health services for their health problems but the wives of non-migrants used the government health facilities more regularly. In the absence of husbands, the left-behind wives are more autonomous in making their own decisions for the use of private health services whereas the decision for the use of health facilities by the wives of non-migrants depends upon the decision of their husbands or household heads. The left-behind wives benefit from the remittances from the migrant husbands which can be used by them to seek health service from private health centres. Freedom to make their own decisions, encouragement from the migrant husband, lack of trust in and the facilities at government health centres and the long waiting time also motivated them to use private health facilities. Poor economic conditions appear to be a problem for the wives of non-migrants and they use more government health facilities where the health services are offered either freely or at nominal cost.

#### Strategies to improve the health service utilisation

The fast and rapidly growing private health centres with trained health professionals and better facilities and shorter waiting time motivates the people who have the capacity to pay the expensive cost of health services to use the private health services. Most of the left-behind wives expressed the opinion that the poor facilities and management, timely unavailability of the health professionals, lack of trust in the treatment system, long waiting times and bad past experiences at the government health facilities motivated them to use the private health facilities. Thus, the government should address these issues by strengthening the health facilities, recruiting sufficient trained staff and improving the quality of service. The government should also have a plan and policy to regulate the higher cost of health services in private health centres and also improve the facilities in government health centres, so that there is no significant difference in using any health facilities.

The privatisation of health facilities and only establishing health centres are not a long term solution. But emphasis should be given to providing efficient health services for all people through trained health professionals with well-equipped facilities. The government should motivate the people to use government health facilities rather than the costly private health facilities.

Hence, the policy makers and health service providers should keep in mind to make comprehensive strategies to maximise the utilisation of the government health system by addressing the barriers and encouraging the women to use it.

## Implication and policy attention towards male international migration and left-behind wives

Male international migration has been increasing day by day in Nepal. The increasing pattern of male international migration has greatly impacted left-behind women. This study attempts to contribute new knowledge and information to the current research in the field of international migration and highlights the key issues of husbands’ migration concerning the left-behind wives regarding depression, autonomy and the type of health service utilisation in Nepal and similar contexts elsewhere. Therefore, the findings of this study can provide a new direction for migration researches and perhaps be important for clinicians, researchers and policy makers as well as NGOs/INGOs in that it requires great multi-disciplinary intervention strategies to address the effects of migration on those left behind.

Furthermore, international migration has contributed about 25% to national GDP. Despite the huge migratory contribution to the national and household economy, the Nepal government has neglected to formulate and implement a migratory and planned policy to pay attention to both the negative and positive aspects of male international migration on those left behind. Migration is a complex, multi-dimensional and dynamic process that changes over time and other factors such as the social, political and economic should be considered when formulating plans and policies for migration in Nepal. Much attention has been given to migrants and their health as well as working conditions, which is essential but less attention has been given to left-behind wives. Left-behind wives are almost ignored. Therefore, there are specific interventions or support mechanisms needed for left-behind wives. The government and other agencies for example, NGOs/INGOs, have to pay great attention in due time towards the possible effects of male international migration on left-behind wives. In addition, the government also has to formulate a policy that addresses the health and other problems of the left-behind wives and encourages them to utilise the proper health care facilities and also make them aware of the sensible use of the remittances and their autonomy.

The government should formulate and implement the intervention programmes to address the issues of left-behind wives to reduce the depression level. In addition, INGOs/NGOs working for women should develop intervention programmes which enable the women to be aware of obtaining property rights and access to and control over the economic resources and also encourage them to be involved in income generating activities so that they may obtain higher autonomy.

Finally, the findings of this study may not necessarily be equally applicable to the entire country of Nepal which has cultural, economic and geographical diversity. But the findings may be relevant to areas of similar conditions, for example, high migrancy areas.

## Recommendations

The following recommendations are made based on the findings of the study. In this chapter, recommendations are made for left-behind wives, wives of non-migrants, planners and policy makers and suggestions for future research into migration in Nepal and elsewhere.

### Recommendation for migrant-sending households

1. Family support- Depression in left-behind wives are related to factors such as, bearing heavy workloads and responsibilities, worries and fear about their husbands’ situation and the possible casualties abroad, and separation from husbands. Therefore, family members should provide moral and physical help and support to left-behind wives to minimise depression.
2. Family relationship: The relationship between the left-behind wives and other family members especially in-laws should be improved. Good relationships always create the environment to obtain higher autonomy resulting in less stress.
3. Husband-wife relationship: The migrants should be encouraged to be in touch with their left-behind wives regularly and update husbands’ situation. The family members also encourage the migrants to visit their home regularly.
4. Networking and social support: Develop the network among left-behind wives which helps to share the problems and support each other.
5. Use of health service: Women are paying more in private health care than the government health facilities for the same service. Family members should encourage left-behind wives for the use of available health service in their health problems in the early stage.

### Recommendation for planners and policy makers

The findings of this research study of the effect of male international migration on left-behind wives are important for policy makers and the following recommendations are suggested for planners and policy makers.

1. Service provision: Government should plan mobile psychological consultation clinics and awareness programmes in high migrancy areas especially for left-behind women to minimise depression.
2. Intervention: Worries about husbands’ conditions and fear of casualties abroad are found to be the reasons for depression in wives left behind. The government should implement an awareness and consultation programme for migrants and their families concerning the possible negative consequences of migration.
3. The government should strengthen the health centres in terms of infrastructure and health professional wise and encourage the women to use government health centres.
4. Support mechanism and network Programme for left-behind wives: Government should start networking programme for left-behind wives so that problems can be share.

### Recommendation for future research

Efforts have been made to demonstrate the effects of husband’s international migration on left-behind wives regarding depression, autonomy and type of health service utilisation. However, this research study itself is not able to cover the overall impact of international migration on left-behind wives. The following suggestions are made for future research.

1. Use of tools: This study used the Center for Epidemiological Studies-Depression Scale to measure the depressive symptoms within the last week of the interview therefore a longitudinal study with the multiple depression screening tools for example, Major Depression Inventory (MDI), The Beck Depression Inventory (BDI) etc. is suggested for future research.
2. Study group: This study included only the left-behind wives of international migrants. Therefore, future research should include the left-behind wives of all types of migrants for example, internal or international.
3. Use of methods/study: The cross-sectional studies at different points of time or longitudinal study are suggested for future migration study. A longitudinal study can capture observations from the same subject over a long period of time. For example, depression episodes may vary over time and depression in women left behind may be high at the first few months or years of separation.
4. Multi-location study: This study covered only one VDC, therefore, the future research should cover more than one VDC or district in different location of the country.

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**Appendices**

**Appendix 1 Household screening questionnaire**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Study Title: Effects of International male migration on wives left-behind in Nepal. | | | | | | | | | | | | | | | | | | | | | | | | |  | |  | | |  | |  | | |  |
| Household Screening Questionnaire | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  |  | | | | |  | | |  | |  | |  |  | |  |  | |  |  | | |  | | |  | | |  | |  | |  | | | |  |  | | |
| District………………. Village Development Committee……………………. Ward No:…………… Village:……………….  Interviewer's code:………… Time of Interview………………. Date of Interview……………… | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Household ID | Name of the household head | Address | Number of household members | | | | 1.1 Does any male member of your family migrated? | | | 1.2 Where is he migrated? | | | | | 1.3 When was he migrate abroad? | | | 1.4 How many times and days did migrant come home last year? | | | 1.5 Is the migrant's wife (15-49 years) living in this household? | | | 1.6 Does any married female (15-49 years) currently living with their husband at least one year | | | | | | | | | | Eligible household | | | | |
|  |  |  | Male | Female | Total | | Yes | No  (go to question 1.6) | | Abroad (Country) | | Within the country  (do not ask further question) | | | Years  (if duration is less than 1 = 0) | | | None: 0 One visit for a month or less: 1 More than one visit: 2 | | | Yes | No | | Yes | | | | No | | | | | | International migrant: 1 Non-migrant: 2 Other: 3 | | | | |
|  |  |  |  |  |  | |  |  | |  | |  | | |  | | |  | | |  |  | |  | | | |  | | | | | |  | | | | |

**Appendix 2**

**Survey Questionnaire**

**(Effects of International male migration on wives left-behind)**

District: VDC: Ward no: Village:

Household ID (Listing): Household code: Date of Interview:

1. Personal and family information

|  |  |  |  |
| --- | --- | --- | --- |
| Q No | Questionnaire | Response | Code |
| 1.1 | How old are you? | .................... Years |  |
| 1.2 | What is your religion? | Hindu  Buddhist  Muslim  Christian  Other (Specify) | 1  2  3  4  5 |
| 1.3 | What is your caste/ethnicity? | Brahman/Chhetri  Newar  Tamang  Gurung  Tharu  Magar  Vishokarma (VK)  Sunar  Praja  Thakali  Other (Specify) | 1  2  3  4  5  6  7  8  9  10  11 |
| 1.4 | How would you describe your educational status? | Illiterate  Literate/Non-formal education  Primary education (up to grade 5)  Secondary (6-10 grades)  Higher Secondary (11-12 grades)  Undergraduate  Postgraduate | 1  2  3  4  5  6  7 |
| 1.5 | Apart from your own housework, have you done any work? | Yes  No (go to question 1.8) | 1  0 |
| 1.6 | What is your occupation, that is what kind of work do you mainly do? | Housewife  Farmer/farming  Service/Job  Business  Student  Unemployed  Animal Husbandry  Other (Please specify) | 1  2  3  4  5  6  7  8 |
| 1.7 | How much money did you earn last month? | Rs……….. |  |
| 1.8 | What is your relationship to the household head? | Respondent self  Father-in-Law  Mother-in-Law  Husband  Other (Specify) | 1  2  3  4 |
| 1.9 | Do you have any property in your own name? | None  Land  House  Both Land & House  Cash/Bank balance  Land+Cash  Land+House+Cash  Other (Specify) | 0  1  2  3  4  5  6  7 |
| 1.10 | Do you have any property jointly with someone else? | Yes  No (go to Q no 1.12) | 1  0 |
| 1.11 | What kinds of property do you have jointly with someone else? | Land  House  Both (Land & House)  Other (Specify) | 1  2  3  4 |
| 1.12 | Do you have your own mobile phone? | Yes  No | 1  0 |
| 1.13 | Do you have any children? | Yes  No (Go to Q no 1.18) | 1  0 |
| 1.14 | How many children do you have? | Under 16: Boys..... Girls......  Above 16: Boys..... Girls......  Total: ……. |  |
| 1.15 | How many children are going to school? | Boys........... Girls............ Total |  |
| 1.16 | Which type of school are they (children) studying in? | Private  Public  Both | 1  2  3 |
| 1.17 | How many children are not going to school? | Boys........... Girls............... |  |
| 1.18 | How old was your husband on his last birthday? | ………….. years |  |
| 1.19 | What is/was the highest level of education of your husband? - | Illiterate  Literate/Non-formal education  Primary education (up to grade 5)  Secondary (6-10 grades)  Higher Secondary (11-12 grades)  Undergraduate  Postgraduate | 1  2  3  4  5  6  7 |
| 1.20 | What is/was the occupation of your husband?  (ask migrant’s household, before migration) | Farmer  Service/Job  Business  Student  Unemployed  Animal Husbandry  Other (Specify) | 1  2  3  4  5  6  7 |
| 1.21 | What is your family type? | Nuclear  Extended  Other (Specify) | 1  2  3 |
| 1.22 | How many family members are in your household? | Male  Female  Total |  |
| 1.23 | How many hectares of land do your household own? | ………… hectare |  |

1. Dwelling and household facilities information:

|  |  |  |  |
| --- | --- | --- | --- |
| 2.1 | What is the tenancy of your house? | Owned  Rented  Other (Specify) | 1  2  3 |
| 2.2 | What is the type of your house? | Permanent (Pucca)  Semi-permanent (Semi-pucca)  Temporary (Kachha)  Other (Specify) | 1  2  3  4 |

|  |  |  |  |
| --- | --- | --- | --- |
| 2.3 | Which of the following facilities are there in your household? (Multiple answer possible) | Yes No  Electricity 1 2  Radio/Tape 1 2  Mobile phone 1 2  Landline telephone 1 2  Television 1 2  Refrigerator 1 2  Computer 1 2  Internet 1 2 | 1  2  3  4  5  6  7  8 |
| 2.4 | What type/s of transportation facilities do you have in your household? (Multiple answer possible) | Yes No  Bicycle 1 2  Motor-bike 1 2  Car 1 2  Animal-drawn cart 1 2  Other (specify)……. 1 2 | 1  2  3  4  5 |

1. Access to facilities:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Facilities | How long does it take to get from your home to the closest facilities | | What is the mode of transportation  (Foot 1; Bicycle 2; Motor-bike 3; Auto-rickshaw 4; Car 5; Bus 6; Mixed (Foot+Bicycle 7; Foot+Vehicles 8) |  |
| Distance (Kilometre) | Time taken (Hours-Minutes) |
| Primary School |  |  |  |  |
| Secondary School |  |  |  |  |
| Sub-health post |  |  |  |  |
| Health post |  |  |  |  |
| Hospital |  |  |  |  |
| Nursing home |  |  |  |  |
| Pharmacy |  |  |  |  |
| Bus stop |  |  |  |  |
| Vehicle passable road |  |  |  |  |

1. Household income and expenditure:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 4.1 | What is the main income source of the household?  (if there is more than one source of income, write the highest earning source) | | Farming  Business  Employment/Job  Remittance (Migrant’s household only)  Pension  Other (Please specify) | 1  2  3  4  5  6 |
| 4.2 | Are there other sources of income apart from Q No. 4.1 | | Farming  Business  Employment/Job  Remittance (Migrant’s household only)  Other (Please specify) | 1  2  3  4  5 |
| 4.3 | What is the total income of your household including all sources in a year? | | Rs.................. |  |
| 4.4 | Were any kind of following items purchased over the past 12 months? | | House  Land  Vehicles  Other (Please specify) | 1  2  3  4 |
| 4.5 | How much money did you spend on food last month for your family? (Food expenditure including rice, meat, vegetables, cooking oils, spices, cooking gas) | | Rs............ |  |
| 4.6 | How much money did you spend to purchase following in-kind for your household during the last month? | |  |  |
|  | 4.6.1 | Entertainment (Cable TV, Cinema, Cassette/CD) | Rs................... |  |
| 4.6.2 | Education for children | School fee Rs..........  Transportation Rs.........  School breakfast for children Rs...  Tuition fee Rs.........  School dress Rs.......  Books and Stationery Rs.....  Total Rs…… |  |
| 4.6.3 | Modern medicine and health services | Doctor’s fee Rs……  Medicine Rs………  Hospital charge Rs…..  Transportation Rs……  Laboratory test fees Rs…  Others Rs……  Total Rs……… |  |
|  | 4.6.4 | Traditional medicine and health services (Traditional healers, Dhami/Jhakries, homemade medicines) | Rs.......... |  |
| 4.7 | Others (Religious work, donations, transportation, electricity, water, toilet facility, payment to wages for labour, etc.) | | Rs.......... |  |

1. Health service utilisation:

|  |  |  |  |
| --- | --- | --- | --- |
| 5.1 | Did you have the following minor illness within the last 4 weeks? | Cough….(go to Q No. 5.2)  Fever……(go to Q No. 5.4)  Diarrhoea…(go to Q No. 5.6)  None……(go to Q No 5.8) | 1  2  3  0 |
| 5.2 | Did you see anyone for Cough within the last 4 weeks? | Yes………  No……… (go to Q no 5.4)  Don’t Know… (go to Q no 5.4) | 1  0  2 |
| 5.3 | Where did you seek advice or treatment for the Cough within last 4 weeks? | Government health service  Private clinic/Nursing home  Traditional healers  Other (Specify) | 1  2  3  4 |
| 5.4 | Did you see anyone for fever within the last 4 weeks? | Yes  No (go to Q no 5.6)  Don’t Know (go to Q no 5.6) | 1  0  2 |
| 5.5 | Where did you seek advice or treatment for the fever within the last 4 weeks? | Government health service  Private clinic/Nursing home  Traditional healers  Other (Specify) | 1  2  3  4 |
| 5.6 | Did you see anyone for diarrhoea within the last 4 weeks? | Yes  No (go to Q no 5.8)  Don’t Know (go to Q no 5.8) | 1  0  2 |
| 5.7 | Where did you seek advice or treatment for the diarrhoea within the last 4 weeks? | Government health service  Private clinic/Nursing home  Traditional healers  Other (Specify) | 1  2  3  4 |
| 5.8 | Have you received any health care within the last 12 months? (including visit to hospital and other alternative health care providers for any reason) | Yes  No (Go to question no. 5.14 )  Don’t Know (Go to Q no. 5.14) | 1  0  2 |
| 5.9 | What types of health care facilities did you use to seek care for your health within last 12 months?  (Multiple answer possible and rate most visited from 1, 2, 3, 4… to least visited:8) | Government hospital  Health post  Sub-Health post  Private clinic  Nursing home  Pharmacy  Traditional healer  Medical college  Others (Please specify) | 1  2  3  4  5  6  7  8  9 |

1. Autonomy:

|  |  |  |  |
| --- | --- | --- | --- |
| 6.1 | Who usually decides how the money that you earned will be used? | Respondent  Household head  Husband  Both (Respondent and Husband)  No earning  Other (Specify) | 1  2  3  4  5  6 |
| 6.2 | Who usually decides how your husband’s earnings will be used? | Respondent  Household head  Husband  Both (Respondent and Husband)  Other (Specify) | 1  2  3  4  5 |
| 6.3 | Who usually makes decisions about health care for yourself and your children? | Respondent  Household head  Husband  Both (Respondent and Husband)  Other (Specify) | 1  2  3  4  5 |
| 6.4 | Who usually makes decisions about making major household purchases? | Respondent  Household head  Husband  Both (Respondent and Husband)  Other (Specify) | 1  2  3  4  5 |
| 6.5 | Who usually makes decisions about making purchases for daily household needs? | Respondent  Household head  Husband  Both (Respondent and Husband)  Other (Specify) | 1  2  3  4  5 |
| 6.6 | Who usually makes decisions about visits to your family or relatives? | Respondent  Household head  Husband  Both (Respondent and Husband)  Other (Specify) | 1  2  3  4  5 |
| 6.7 | Are you actively involved in any political party? | Yes  No  Don’t Know | 1  0  2 |
| 6.8 | Are you a member of any social group?  (e.g. women’s group; co-operative) | Yes  No  Don’t Know | 1  0  2 |

1. Depression questionnaire:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | During the past week | | | |
| Rarely or none of the time (less than 1 day) | Some or a little of the time (1-2 days) | Occasionally or a moderate amount of time (3-4 days) | All of the time (5-7 days) |
| 1 | I was bothered by things that usually don’t bother me. |  |  |  |  |
| 2 | I did not feel like eating; my appetite was poor. |  |  |  |  |
| 3 | I felt that I could not shake off the blues even with help from my family or friends. |  |  |  |  |
| 4 | I felt I was just as good as other people. |  |  |  |  |
| 5 | I had trouble keeping my mind on what I was doing. |  |  |  |  |
| 6 | I felt depressed. |  |  |  |  |
| 7 | I felt that everything I did was an effort. |  |  |  |  |
| 8 | I felt hopeful about the future. |  |  |  |  |
| 9 | I thought my life had been a failure. |  |  |  |  |
| 10 | I felt tearful. |  |  |  |  |
| 11 | My sleep was restless. |  |  |  |  |
| 12 | I was happy. |  |  |  |  |
| 13 | I talked less than usual. |  |  |  |  |
| 14 | I felt lonely. |  |  |  |  |
| 15 | People were unfriendly. |  |  |  |  |
| 16 | I enjoyed life. |  |  |  |  |
| 17 | I had crying spells. |  |  |  |  |
| 18 | I felt sad. |  |  |  |  |
| 19 | I felt that people dislike me. |  |  |  |  |
| 20 | I could not get “going”. |  |  |  |  |

1. Household head information:

|  |  |  |  |
| --- | --- | --- | --- |
| 8.1 | Who is your household head of your house? | Respondent self (Go to section 9)  Husband (Go to section 9)  Other (Specify) | 1  2  3 |
| 8.2 | What is the sex of the household head? | Male  Female | 1  2 |
| 8.3 | What is the age of the household head? | ……… years (Complete year) |  |
| 8.4 | What is the religion of the household head? | Hindu  Buddhist  Muslim  Christian  Other (Specify). | 1  2  3  4  5 |
| 8.5 | What is the caste/ethnicity of the household head? | Brahman/Chhetri.  Newar  Gurung  Tamang  Tharu  Magar  Vishokarma  Sunar  Praja  Thakali  Other (Specify) | 1  2  3  4  5  6  7  8  9  10  11 |
| 8.6 | What is the present marital status of the household head? | Married  Divorced  Separated  Widow  Single |  |
| 8.7 | How would you describe the education level of the household head? | Illiterate  Literate/Non formal education..  Primary education (upto grade 5)  Secondary (6-10 grade)  Higher secondary (11-12 grade)  Undergraduate  Postgraduate | 1  2  3  4  5  6  7 |
| 8.8 | What is the occupation of the household head? | Farmer  Service/job  Business  Unemployment  Other (Specify) | 1  2  3  4  5 |

1. Migration (Ask only in migrant’s household)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 9.1 | How many years has your husband been abroad? | | | ……… Years | |  |
| 9.2 | Where did your husband migrate to? | | | ………….. | |  |
| 9.3 | What is the main reason for his migration? | | | Employment  Business  Education  Political  Other (Specify) | | 1  2  3  4  5 |
| 9.4 | Does the migrant send money? | | | Yes…  No… (go to Q no 9.9) | | 1  0 |
| 9.5 | Who receives the remittance? | | | Household head  Migrant’s wife  Parents  Other (Specify) | | 1  2  3  4 |
| 9.6 | Can you say how much money your husband sent to you within the last 12 months? | | | Rs…… | |  |
| 9.7 | How many family members are dependent on the remittance? | | | 3 and less  4-5  6-10  More than 10 | | 1  2  3  4 |
| 9.8 | For what purposes are remittances used by family members? (Multiple answer possible) | | | Family maintenance (Food and wellbeing)  Education of Children  Medical treatment  Reconstruction of existing house  Purchasing land  Building new house  Repayment of loans  Investment in business  Others (Please specify) | | 1  2  3  4  5  6  7  8  9 |
| 9.9 | How do you communicate with your husband? (Multiple response possible) | | | Letter  Phone  Email  Internet chats  Other (Please specify)  None | | 1  2  3  4  5  0 |
| 9.10 | How often do you and your husband communicate with each other? (Multiple response possible) | | | | |  |
|  | Daily | Often (at least once a week) | | Sometimes (at least once a month) | None |
| Letter |  |  | |  |  |
| Phone |  |  | |  |  |
| Email |  |  | |  |  |
| Internet Chat |  |  | |  |  |
| Other (Specify) |  |  | |  |  |

**Appendix 3 Checklists for semi-structured interview**

Interviewee code: Date of Interview: Start time: End time:

**Health service utilisation**

1. Can you please tell me your present health condition and would you find any differences before and after your husband migration and what were they? (living with husband/without husband) (Probe: ask about minor illnesses, cough, fever and diarrhoea)
2. Can you please tell me, what do you do when you are suffering from these (above listed) minor illnesses? (Probe: ask about the type of health facilities used: traditional healers, government and private health facilities and reasons for using them)
3. Could you please tell me beside minor illnesses, what types of health facilities you used within the last 12 months and why? (Probe: ask most frequently used)
4. Please tell me, how decisions are made for your health? (Probe: who decides and your role in decision making related to your health)
5. Could you please tell me any barriers that you faced while using health services for your health problem? (Probe: access, availability, financial matters etc.)

**Women’s autonomy**

1. Could you please tell me about your autonomy (living with husband/without husband). (Probe: any differences in autonomy before and after husband’s migration?)
2. Can you please describe how the decisions are made in your house?

(Probe: related financial matters, household purchases, movement and your role and participation)

1. In your opinion, do these factors impact on your autonomy and how?

Your age and living with children?

Having any property in your name?

1. Can you describe how the household head’s gender, age and education affect your autonomy? (Probe: personal, financial, movement, decision making and social and political autonomy)
2. Can you please share your experiences about your autonomy living in a nuclear or extended family with few or many family members? (Probe: ask the type of family, personal, financial, decision making and movement autonomy)
3. Are you participating in any social clubs/groups, political and social activities in your community? (Probe: nature of social groups and any barriers)

**Depression:**

1. Could you please tell me about your experience with depression? How did it develop? And what did you think were the main causes of the depression? (Probe: For wives left behind, ask about the feelings of their experience of depression before and after husband’s migration)
2. Could you please tell me the other factors that relate to your depression? (Probe: ask about caste, relationship with other family members, employment and house type)
3. Could you please tell me what types of feelings or symptoms of depression you experience? (Probe: fear, lack of sleep, loss of appetite, dislike of people, friends and relatives, sadness, loneliness, depression etc.)
4. In your opinion, did you experience depression because you were left behind? (Probe: does it relate to husband’s migration?)
5. Could you please tell me your feeling of depression when living with an aged and educated household head?
6. Have there been any major problems related to household income that could impact on your depression and how? (Probe: low or high household income and receiving remittances)
7. In your opinion, does having property in your name or not relate to your depression and how?

**Migration: (Migrant’s household only)**

1. Where did your husband migrate to? How many years has he been away?
2. What is the reason for his migration?
3. Does your husband send money? Who receives the remittance?
4. What impacts or changes you feel in your household after receiving remittances?
5. For what purposes are the remittances used by you?
6. Are they used for health or treatment?
7. Do you feel any effects on your health before and after your husband’s migration? How? And what are the impacts on your health?
8. Did you feel more responsibility or workload after migration?

9. What are the positive and negative effects on women and the household after your husband’s migration?

10. In your opinion, how do you find people’s attitude towards migrants’ women and households?

11. How would you describe your life before and after your husband’s migration?

**Appendix 4**

**Effects of International migration on left-behind wives: A mixed-methods study in Nepal**

**Consent Form**

*(Consent form is produced in Nepali language)*

Good Morning/Afternoon!

My name is Yagya Murti Bhurtyal and I am studying PhD in School of Health and Related Research in The University of Sheffield, Sheffield, England. You are being asked to take part in my research study about effects of international migration on left-behind. The interview will take about one to two hours to complete. You will be asked to give your opinion and understanding of various issues related to study subject. I would appreciate your participation in the study. This information will help to understand the impact of international migration on women and children in Nepal. The finding of this study may be useful for developing policies and research into migration from Nepal.

Whatever information you provide will be kept strictly confidential and will not be shown to other persons. No individual will be identified at any stage of the research.

Participation in this study is voluntary and if you do not want to answer any question 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 because your views are important.

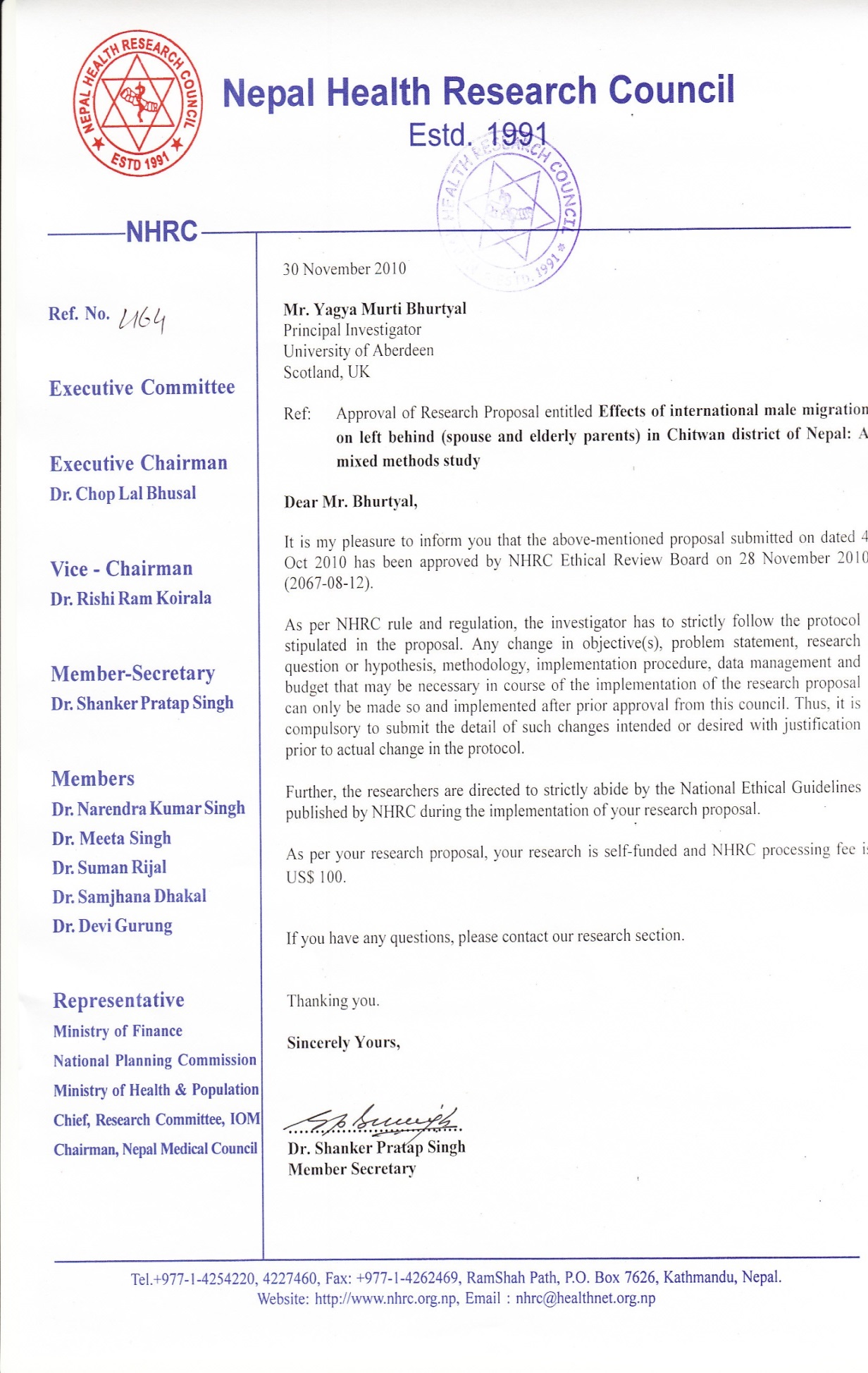
At this time, would you like to ask me any question about the study?

May I begin the interview now? Yes No (Circle one)

Thank you.

Signature or thumbprint of participant………………………… Date:

**Appendix 5 Nepal Health Research Council Ethical Approval Letter**



**Appendix 6**

**Codes of explanatory variables:**

|  |  |  |
| --- | --- | --- |
| **Variables** |  | **Final code** |
| **Women’s age** | 32 years and below  Above 32 years | 0  1 |
| **Religion** | Hindu  Others (Buddhist, Muslim and Christian) | 0  1 |
| **Caste** | Upper (Brahman/Chhetri)  Lower (Other all castes) | 0  1 |
| **Education** | Illiterate  Literate | 0  1 |
| **Own named property** | No  Yes | 0  1 |
| **Own mobile phone** | No  Yes | 0  1 |
| **Having children** | No  Yes | 0  1 |
| **Husband’s age** | 36 years and below  Above 36 years | 0  1 |
| **Occupation** | Unemployed  Employed | 0  1 |
| **Household head** | Male  Female | 0  1 |
| **Age of household head** | 40 years and below  Above 40 years | 0  1 |
| **Family type** | Nuclear  Extended | 0  1 |
| **Number of family member** | 5 and below  Above 5 | 0  1 |
| **House type** | Permanent  Others (semi and temporary) | 0  1 |
| **Year of husband’s migration** | 5 and below years  Above 5 years | 0  1 |

**Appendix 7 Frequency and percentage of women’s participation in social and political activities**

**Table 7.1 Women’s Participation in social and political activities.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Participation | Wives left-behind  (N = 400) | | Wives of non-migrants  (N = 400) | | p |
| **Yes** |  | **Yes** |  |
|  | **N** | **%** | **N** | **%** |
| Social activities | 182 | 45.5 | 183 | 45.8 | 1.0 |
| Political activities | 30 | 7.5 | 22 | 5.5 | 0.318 |

**Appendix 8: Spearman’s bivariate correlation matrix (N = 400, Wives left behind)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | Women’s age | Women’s religion | Women’s caste | Women’s education | Women’s employment | Own named property | Having children | Husband’s age | Husband’s occupation | HH’s gender | HH’s age | HH’s education | HH’s occupation | Family type | House type | Number of family member | Total annual household income | Year of husband’s migration |
| Women’s age | 1 | 0.046 | 0.087 | -0.199 | 0.130 | 0.250 | 0.207 | 0.615 | 0.161 | 0.260 | -0.152 | 0.039 | -0.058 | -0.275 | -0.024 | -0.033 | 0.006 | 0.216 |
| Women’s religion |  | 1 | 0.580 | -0.055 | -0.002 | 0.036 | 0.138 | 0.079 | 0.028 | -0.024 | 0.111 | -0.117 | -0.033 | 0.062 | 0.013 | 0.054 | 0.062 | 0.009 |
| Women’s caste |  |  | 1 | -0.105 | 0.028 | -0.028 | 0.095 | 0.084 | -0.082 | -0.040 | 0.086 | -0.149 | 0.035 | 0.040 | -0.001 | 0.066 | 0.097 | 0.049 |
| Women’s education |  |  |  | 1 | -0.089 | 0.123 | -0.087 | -0.186 | -0.089 | -0.062 | -0.019 | 0.581 | -0.024 | 0.061 | -0.171 | -0.039 | 0.192 | -0.052 |
| Women’s employment |  |  |  |  | 1 | 0.123 | 0.075 | 0.100 | 0.197 | 0.018 | 0.010 | -0.001 | 0.575 | -0.047 | -0.004 | 0.095 | 0.116 | -0.042 |
| Own named property |  |  |  |  |  | 1 | 0.108 | 0.225 | 0.059 | 0.212 | -0.182 | 0.224 | -0.052 | -0.233 | -0.207 | -0.175 | 0.161 | 0.206 |
| Having children |  |  |  |  |  |  | 1 | 0.203 | 0.205 | 0.171 | -0.168 | 0.089 | -0.236 | -0.200 | 0.010 | -0.027 | 0.000 | 0.055 |
| Husband’s age |  |  |  |  |  |  |  | 1 | 0.209 | 0.252 | -0.129 | 0.018 | -0.114 | -0.282 | -0.024 | -0.044 | -0.016 | 0.271 |
| Husband’s occupation |  |  |  |  |  |  |  |  | 1 | 0.067 | -0.085 | 0.029 | 0.008 | -0.117 | -0.002 | 0.081 | 0.021 | 0.093 |
| HH’s gender |  |  |  |  |  |  |  |  |  | 1 | -0.713 | 0.114 | -0.434 | -0.615 | 0.112 | -0.513 | -0.198 | 0.112 |
| HH’s age |  |  |  |  |  |  |  |  |  |  | 1 | -0.271 | 0.384 | 0.650 | -0.100 | 0.501 | 0.124 | -0.022 |
| HH’s education |  |  |  |  |  |  |  |  |  |  |  | 1 | -0.138 | -0.186 | -0.134 | -0.192 | 0.133 | 0.067 |
| HH’s occupation |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0.337 | -0.061 | 0.032 | 0.168 | -0.134 |
| Family type |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0.026 | 0.575 | 0.086 | -0.161 |
| House type |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0.021 | -0.297 | -0.168 |
| Number of family member |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0.055 | -0.038 |
| Total annual household income |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 0.025 |
| Year of husband’s migration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |

**Appendix 9 Multicollinearity checks**

| Checked variable | Other variable | Collinearity statistics | |
| --- | --- | --- | --- |
| Tolerance | VIF |
| Women’s age | Women’s religion | .630 | 1.587 |
|  | Women’s caste | .625 | 1.599 |
|  | Women’s education | .572 | 1.748 |
|  | Women’s employment | .506 | 1.978 |
|  | Own name property | .795 | 1.258 |
|  | Having children | .808 | 1.238 |
|  | Husband’s age | .752 | 1.330 |
|  | Husband’s occupation | .854 | 1.171 |
|  | Household head’s gender | .364 | 2.748 |
|  | Age of household head | .368 | 2.716 |
|  | Household head’s education | .543 | 1.841 |
|  | Household head’s occupation | .410 | 2.441 |
|  | Family type | .418 | 2.394 |
|  | House type | .829 | 1.206 |
|  | Number of total family members | .565 | 1.770 |
|  | Average annual household income | .819 | 1.220 |
|  | Year of husband’s migration | .845 | 1.183 |
|  |  |  |  |
| Women’s religion | Women’s age | .313 | 3.191 |
|  | Women’s caste | .926 | 1.080 |
|  | Women’s education | .563 | 1.777 |
|  | Women’s employment | .505 | 1.979 |
|  | Own name property | .792 | 1.262 |
|  | Having children | .810 | 1.234 |
|  | Husband’s age | .313 | 3.200 |
|  | Husband’s occupation | .859 | 1.164 |
|  | Household head’s gender | .361 | 2.770 |
|  | Age of household head | .372 | 2.689 |
|  | Household head’s education | .540 | 1.853 |
|  | Household head’s occupation | .408 | 2.454 |
|  | Family type | .418 | 2.394 |
|  | House type | .830 | 1.205 |
|  | Number of total family members | .561 | 1.783 |
|  | Average annual household income | .818 | 1.222 |
|  | Year of husband’s migration | .847 | 1.181 |
|  |  |  |  |
| Women’s caste | Women’s age | .313 | 3.191 |
|  | Women’s religion | .933 | 1.072 |
|  | Women’s education | .563 | 1.778 |
|  | Women’s employment | .505 | 1.979 |
|  | Own name property | .792 | 1.263 |
|  | Having children | .806 | 1.240 |
|  | Husband’s age | .312 | 3.208 |
|  | Husband’s occupation | .873 | 1.146 |
|  | Household head’s gender | .361 | 2.774 |
|  | Age of household head | .369 | 2.712 |
|  | Household head’s education | .541 | 1.849 |
|  | Household head’s occupation | .407 | 2.459 |
|  | Family type | .417 | 2.397 |
|  | House type | .829 | 1.206 |
|  | Number of total family members | .561 | 1.782 |
|  | Average annual household income | .825 | 1.212 |
|  | Year of husband’s migration | .849 | 1.178 |
|  |  |  |  |
| Women’s education | Women’s age | .318 | 3.144 |
|  | Women’s religion | .629 | 1.589 |
|  | Women’s caste | .624 | 1.603 |
|  | Women’s employment | .509 | 1.963 |
|  | Own name property | .790 | 1.265 |
|  | Having children | .810 | 1.234 |
|  | Husband’s age | .312 | 3.208 |
|  | Husband’s occupation | .855 | 1.170 |
|  | Household head’s gender | .362 | 2.764 |
|  | Age of household head | .370 | 2.706 |
|  | Household head’s education | .822 | 1.216 |
|  | Household head’s occupation | .406 | 2.461 |
|  | Family type | .418 | 2.392 |
|  | House type | .835 | 1.197 |
|  | Number of total family members | .562 | 1.780 |
|  | Average annual household income | .828 | 1.208 |
|  | Year of husband’s migration | .850 | 1.177 |
|  |  |  |  |
| Women’s employment | Women’s age | .313 | 3.198 |
|  | Women’s religion | .628 | 1.591 |
|  | Women’s caste | .624 | 1.604 |
|  | Women’s education | .567 | 1.765 |
|  | Own name property | .792 | 1.262 |
|  | Having children | .830 | 1.205 |
|  | Husband’s age | .312 | 3.204 |
|  | Husband’s occupation | .871 | 1.148 |
|  | Household head’s gender | .379 | 2.641 |
|  | Age of household head | .368 | 2.715 |
|  | Household head’s education | .543 | 1.842 |
|  | Household head’s occupation | .718 | 1.392 |
|  | Family type | .421 | 2.373 |
|  | House type | .831 | 1.203 |
|  | Number of total family members | .563 | 1.775 |
|  | Average annual household income | .822 | 1.217 |
|  | Year of husband’s migration | .846 | 1.183 |
|  |  |  |  |
| Own name property | Women’s age | .316 | 3.167 |
|  | Women’s religion | .633 | 1.580 |
|  | Women’s caste | .628 | 1.594 |
|  | Women’s education | .565 | 1.771 |
|  | Women’s employment | .509 | 1.965 |
|  | Having children | .805 | 1.242 |
|  | Husband’s age | .312 | 3.208 |
|  | Husband’s occupation | .853 | 1.172 |
|  | Household head’s gender | .362 | 2.762 |
|  | Age of household head | .368 | 2.715 |
|  | Household head’s education | .541 | 1.847 |
|  | Household head’s occupation | .406 | 2.463 |
|  | Family type | .417 | 2.397 |
|  | House type | .846 | 1.183 |
|  | Number of total family members | .563 | 1.777 |
|  | Average annual household income | .829 | 1.206 |
|  | Year of husband’s migration | .859 | 1.164 |
|  |  |  |  |
| Having children | Women’s age | .314 | 3.188 |
|  | Women’s religion | .633 | 1.580 |
|  | Women’s caste | .625 | 1.601 |
|  | Women’s education | .566 | 1.766 |
|  | Women’s employment | .521 | 1.918 |
|  | Own name property | .787 | 1.270 |
|  | Husband’s age | .312 | 3.208 |
|  | Husband’s occupation | .866 | 1.154 |
|  | Household head’s gender | .361 | 2.771 |
|  | Age of household head | .368 | 2.715 |
|  | Household head’s education | .543 | 1.843 |
|  | Household head’s occupation | .436 | 2.291 |
|  | Family type | .419 | 2.389 |
|  | House type | .829 | 1.206 |
|  | Number of total family members | .565 | 1.769 |
|  | Average annual household income | .819 | 1.222 |
|  | Year of husband’s migration | .846 | 1.182 |
|  |  |  |  |
| Husband’s age | Women’s age | .754 | 1.327 |
|  | Women’s religion | .630 | 1.587 |
|  | Women’s caste | .624 | 1.604 |
|  | Women’s education | .562 | 1.779 |
|  | Women’s employment | .506 | 1.977 |
|  | Own name property | .787 | 1.271 |
|  | Having children | .805 | 1.243 |
|  | Husband’s occupation | .864 | 1.158 |
|  | Household head’s gender | .360 | 2.774 |
|  | Age of household head | .370 | 2.701 |
|  | Household head’s education | .539 | 1.856 |
|  | Household head’s occupation | .409 | 2.446 |
|  | Family type | .419 | 2.384 |
|  | House type | .829 | 1.206 |
|  | Number of total family members | .561 | 1.783 |
|  | Average annual household income | .819 | 1.221 |
|  | Year of husband’s migration | .860 | 1.163 |
|  |  |  |  |
| Husband’s occupation | Women’s age | .313 | 3.193 |
|  | Women’s religion | .634 | 1.578 |
|  | Women’s caste | .638 | 1.567 |
|  | Women’s education | .564 | 1.774 |
|  | Women’s employment | .516 | 1.936 |
|  | Own name property | .787 | 1.270 |
|  | Having children | .818 | 1.223 |
|  | Husband’s age | .316 | 3.166 |
|  | Household head’s gender | .361 | 2.772 |
|  | Age of household head | .370 | 2.706 |
|  | Household head’s education | .539 | 1.856 |
|  | Household head’s occupation | .407 | 2.460 |
|  | Family type | .419 | 2.389 |
|  | House type | .829 | 1.206 |
|  | Number of total family members | .571 | 1.752 |
|  | Average annual household income | .819 | 1.221 |
|  | Year of husband’s migration | .847 | 1.181 |
|  |  |  |  |
| Household head’s gender | Women’s age | .316 | 3.169 |
|  | Women’s religion | .630 | 1.588 |
|  | Women’s caste | .624 | 1.603 |
|  | Women’s education | .564 | 1.772 |
|  | Women’s employment | .531 | 1.883 |
|  | Own name property | .790 | 1.265 |
|  | Having children | .806 | 1.241 |
|  | Husband’s age | .312 | 3.207 |
|  | Husband’s occupation | .853 | 1.172 |
|  | Age of household head | .475 | 2.106 |
|  | Household head’s education | .551 | 1.815 |
|  | Household head’s occupation | .440 | 2.271 |
|  | Family type | .422 | 2.372 |
|  | House type | .832 | 1.201 |
|  | Number of total family members | .584 | 1.713 |
|  | Average annual household income | .834 | 1.199 |
|  | Year of husband’s migration | .847 | 1.180 |
|  |  |  |  |
| Age of household head | Women’s age | .312 | 3.200 |
|  | Women’s religion | .635 | 1.575 |
|  | Women’s caste | .624 | 1.602 |
|  | Women’s education | .564 | 1.773 |
|  | Women’s employment | .505 | 1.979 |
|  | Own name property | .787 | 1.271 |
|  | Having children | .805 | 1.243 |
|  | Husband’s age | .313 | 3.190 |
|  | Husband’s occupation | .855 | 1.169 |
|  | Household head’s gender | .465 | 2.152 |
|  | Household head’s education | .564 | 1.772 |
|  | Household head’s occupation | .407 | 2.456 |
|  | Family type | .467 | 2.140 |
|  | House type | .836 | 1.196 |
|  | Number of total family members | .562 | 1.780 |
|  | Average annual household income | .819 | 1.221 |
|  | Year of husband’s migration | .857 | 1.167 |
|  |  |  |  |
| Household head’s education | Women’s age | .315 | 3.172 |
|  | Women’s religion | .630 | 1.588 |
|  | Women’s caste | .626 | 1.597 |
|  | Women’s education | .858 | 1.165 |
|  | Women’s employment | .509 | 1.963 |
|  | Own name property | .791 | 1.265 |
|  | Having children | .811 | 1.234 |
|  | Husband’s age | .312 | 3.207 |
|  | Husband’s occupation | .853 | 1.173 |
|  | Household head’s gender | .369 | 2.712 |
|  | Age of household head | .386 | 2.591 |
|  | Household head’s occupation | .409 | 2.444 |
|  | Family type | .417 | 2.398 |
|  | House type | .830 | 1.205 |
|  | Number of total family members | .565 | 1.771 |
|  | Average annual household income | .819 | 1.221 |
|  | Year of husband’s migration | .849 | 1.177 |
|  |  |  |  |
| Household head’s occupation | Women’s age | .315 | 3.171 |
|  | Women’s religion | .631 | 1.585 |
|  | Women’s caste | .624 | 1.601 |
|  | Women’s education | .563 | 1.777 |
|  | Women’s employment | .894 | 1.118 |
|  | Own name property | .787 | 1.271 |
|  | Having children | .865 | 1.156 |
|  | Husband’s age | .314 | 3.186 |
|  | Husband’s occupation | .853 | 1.172 |
|  | Household head’s gender | .391 | 2.559 |
|  | Age of household head | .369 | 2.709 |
|  | Household head’s education | .543 | 1.843 |
|  | Family type | .419 | 2.384 |
|  | House type | .830 | 1.204 |
|  | Number of total family members | .561 | 1.782 |
|  | Average annual household income | .819 | 1.221 |
|  | Year of husband’s migration | .848 | 1.179 |
|  |  |  |  |
| Family type | Women’s age | .313 | 3.194 |
|  | Women’s religion | .629 | 1.589 |
|  | Women’s caste | .624 | 1.603 |
|  | Women’s education | .564 | 1.774 |
|  | Women’s employment | .511 | 1.958 |
|  | Own name property | .787 | 1.271 |
|  | Having children | .808 | 1.238 |
|  | Husband’s age | .313 | 3.190 |
|  | Husband’s occupation | .856 | 1.169 |
|  | Household head’s gender | .364 | 2.745 |
|  | Age of household head | .413 | 2.424 |
|  | Household head’s education | .539 | 1.857 |
|  | Household head’s occupation | .408 | 2.449 |
|  | House type | .836 | 1.196 |
|  | Number of total family members | .647 | 1.545 |
|  | Average annual household income | .819 | 1.221 |
|  | Year of husband’s migration | .852 | 1.174 |
|  |  |  |  |
| House type | Women’s age | .312 | 3.200 |
|  | Women’s religion | .629 | 1.590 |
|  | Women’s caste | .623 | 1.604 |
|  | Women’s education | .566 | 1.766 |
|  | Women’s employment | .506 | 1.975 |
|  | Own name property | .802 | 1.247 |
|  | Having children | .805 | 1.243 |
|  | Husband’s age | .312 | 3.208 |
|  | Husband’s occupation | .852 | 1.173 |
|  | Household head’s gender | .362 | 2.765 |
|  | Age of household head | .371 | 2.694 |
|  | Household head’s education | .539 | 1.856 |
|  | Household head’s occupation | .407 | 2.460 |
|  | Family type | .420 | 2.378 |
|  | Number of total family members | .561 | 1.781 |
|  | Average annual household income | .862 | 1.160 |
|  | Year of husband’s migration | .860 | 1.163 |
|  |  |  |  |
| Number of total family members | Women’s age | .315 | 3.175 |
|  | Women’s religion | .629 | 1.590 |
|  | Women’s caste | .624 | 1.603 |
|  | Women’s education | .563 | 1.776 |
|  | Women’s employment | .508 | 1.970 |
|  | Own name property | .789 | 1.267 |
|  | Having children | .811 | 1.232 |
|  | Husband’s age | .312 | 3.208 |
|  | Husband’s occupation | .868 | 1.152 |
|  | Household head’s gender | .375 | 2.666 |
|  | Age of household head | .369 | 2.711 |
|  | Household head’s education | .542 | 1.843 |
|  | Household head’s occupation | .406 | 2.461 |
|  | Family type | .481 | 2.077 |
|  | House type | .830 | 1.204 |
|  | Average annual household income | .820 | 1.220 |
|  | Year of husband’s migration | .847 | 1.181 |
|  |  |  |  |
| Average annual household income | Women’s age | .313 | 3.196 |
|  | Women’s religion | .628 | 1.591 |
|  | Women’s caste | .629 | 1.590 |
|  | Women’s education | .569 | 1.758 |
|  | Women’s employment | .507 | 1.971 |
|  | Own name property | .797 | 1.255 |
|  | Having children | .805 | 1.243 |
|  | Husband’s age | .312 | 3.207 |
|  | Husband’s occupation | .853 | 1.172 |
|  | Household head’s gender | .367 | 2.723 |
|  | Age of household head | .368 | 2.715 |
|  | Household head’s education | .539 | 1.856 |
|  | Household head’s occupation | .406 | 2.460 |
|  | Family type | .417 | 2.397 |
|  | House type | .874 | 1.145 |
|  | Number of total family members | .562 | 1.780 |
|  | Year of husband’s migration | .844 | 1.184 |
|  |  |  |  |
| Year of husband’s migration | Women’s age | .313 | 3.197 |
|  | Women’s religion | .630 | 1.587 |
|  | Women’s caste | .627 | 1.596 |
|  | Women’s education | .566 | 1.768 |
|  | Women’s employment | .506 | 1.976 |
|  | Own name property | .801 | 1.249 |
|  | Having children | .806 | 1.240 |
|  | Husband’s age | .317 | 3.151 |
|  | Husband’s occupation | .855 | 1.170 |
|  | Household head’s gender | .362 | 2.766 |
|  | Age of household head | .374 | 2.676 |
|  | Household head’s education | .542 | 1.846 |
|  | Household head’s occupation | .408 | 2.451 |
|  | Family type | .421 | 2.378 |
|  | House type | .845 | 1.184 |
|  | Number of total family members | .562 | 1.778 |
|  | Average annual household income | .818 | 1.222 |

VIF: Variable Inflation Factor

**Appendix 10 Outputs of multivariate logistic regression models**

**Depression in left-behind wives**

**Table 10.1 Multiple logistic regression model for the outcome variable ‘depression’ with respondent’s socio-demographic variables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Model** | **Variables in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| **Initial model** | Women age | 1.37 | 0.81 | 2.33 | 0.238 |
|  | Religion | 1.09 | 0.55 | 2.13 | 0.809 |
|  | Caste | 1.47 | 0.80 | 2.72 | 0.215 |
|  | Education | 2.77 | 0.80 | 9.64 | 0.109 |
|  | Employment | 1.06 | 0.63 | 1.79 | 0.819 |
|  | Own named property | 1.49 | 0.86 | 2.59 | 0.159 |
|  |  |  |  |  |  |
| **2nd model** | Women age | 1.37 | 0.81 | 2.32 | 0.243 |
|  | Religion | 1.08 | 0.55 | 2.12 | 0.816 |
|  | Caste | 1.48 | 0.80 | 2.73 | 0.212 |
|  | Education | 2.80 | 0.81 | 9.71 | 0.105 |
|  | Own named property | 1.48 | 0.85 | 2.55 | 0.164 |
|  |  |  |  |  |  |
| **3rd model** | Women age | 1.37 | 0.81 | 2.32 | 0.241 |
|  | Caste | 1.54 | 0.94 | 2.52 | 0.084 |
|  | Education | 2.80 | 0.81 | 9.72 | 0.104 |
|  | Own named property | 1.47 | 0.85 | 2.54 | 0.168 |
|  |  |  |  |  |  |
| **4th model** | Caste | 1.50 | 0.92 | 2.45 | 0.103 |
|  | Education | 2.46 | 0.72 | 8.34 | 0.149 |
|  | Own named property | 1.62 | 0.96 | 2.73 | 0.068 |
|  |  |  |  |  |  |
| **Final model** | Caste | 1.56 | 0.96 | 2.53 | 0.073 |
|  | Own named property | 1.71 | 1.01 | 2.87 | 0.042 |

**Table 10.2 Husband’s background characteristics:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Model** | **Variables in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| Initial model | Husband’s age | 1.13 | 0.68 | 1.86 | 0.645 |
|  | Husband’s occupation | 1.08 | 0.62 | 1.88 | 0.798 |
|  |  |  |  |  |  |
| Final model | Husband’s age | 1.14 | 0.70 | 1.87 | 0.599 |

**Table 10.3 Household characteristics**

| **Variables retained in the model** | **OR** | **95% CI** | | **p** |
| --- | --- | --- | --- | --- |
| **Lower** | **Upper** |
| **Initial model** |  |  |  |  |
| Household head | 1.60 | 0.67 | 3.86 | 0.294 |
| Age of household head | 0.81 | 0.37 | 1.80 | 0.607 |
| HH\* education | 2.78 | 1.16 | 6.66 | 0.022 |
| HH occupation | 1.69 | 0.96 | 2.96 | 0.068 |
| Family type | 1.39 | 0.69 | 2.82 | 0.359 |
| House type | 1.36 | 0.76 | 2.41 | 0.301 |
| Total family members | 0.76 | 0.38 | 1.50 | 0.428 |
| Average annual household income | 1.81 | 0.97 | 3.38 | 0.062 |
|  |  |  |  |  |
| **2nd model** |  |  |  |  |
| Household head | 1.44 | 0.66 | 3.13 | 0.363 |
| HH education | 2.66 | 1.13 | 6.23 | 0.025 |
| HH occupation | 1.67 | 0.96 | 2.93 | 0.072 |
| Family type | 1.47 | 0.75 | 2.88 | 0.261 |
| House type | 1.39 | 0.78 | 2.45 | 0.263 |
| Total family members | 0.75 | 0.38 | 1.48 | 0.399 |
| Average annual household income | 1.81 | 0.97 | 3.38 | 0.062 |
|  |  |  |  |  |
| **3rd model** |  |  |  |  |
| Household head | 1.32 | 0.62 | 2.81 | 0.470 |
| HH education | 2.56 | 1.10 | 5.97 | 0.029 |
| HH occupation | 1.64 | 0.94 | 2.86 | 0.084 |
| Family type | 1.63 | 0.87 | 3.05 | 0.125 |
| House type | 1.37 | 0.78 | 2.42 | 0.279 |
| Average annual household income | 1.81 | 0.97 | 3.37 | 0.063 |
|  |  |  |  |  |
| **4th model** |  |  |  |  |
| HH education | 2.55 | 1.10 | 5.94 | 0.030 |
| HH occupation | 1.74 | 1.02 | 2.97 | 0.041 |
| Family type | 1.44 | 0.85 | 2.45 | 0.179 |
| House type | 1.33 | 0.76 | 2.34 | 0.318 |
| Average annual household income | 1.76 | 0.95 | 3.28 | 0.073 |
|  |  |  |  |  |
| **5th model** |  |  |  |  |
| HH education | 2.61 | 1.12 | 6.05 | 0.026 |
| HH occupation | 1.72 | 1.01 | 2.92 | 0.046 |
| Family type | 1.41 | 0.83 | 2.39 | 0.202 |
| Average annual household income | 1.91 | 1.05 | 3.48 | 0.035 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| HH education | 2.42 | 1.05 | 5.56 | 0.038 |
| HH occupation | 1.54 | 0.93 | 2.55 | 0.092 |
| Average annual household income | 1.93 | 1.06 | 3.52 | 0.032 |

\*: Household head

**Table 10.4 Multivariate logistic regression model of outcome variable ‘depression’ on women left-behind with the all explanatory variables.**

| **Variables retained in the model** | **OR** | **95% CI** | | **p** |
| --- | --- | --- | --- | --- |
| **Lower** | **Upper** |
| **Initial Model** |  |  |  |  |
| Women’s age | 1.72 | 0.70 | 4.20 | 0.235 |
| Women’s religion | 1.09 | 0.54 | 2.20 | 0.882 |
| Women’s caste | 1.59 | 0.84 | 3.01 | 0.159 |
| Women’s education | 1.44 | 0.32 | 6.58 | 0.632 |
| Women’s employment | 1.48 | 0.73 | 3.01 | 0.277 |
| Own named property | 1.24 | 0.68 | 2.26 | 0.479 |
| Husband’s age | 1.53 | 0.62 | 3.75 | 0.357 |
| Husband’s occupation | 1.01 | 0.55 | 1.83 | 0.979 |
| Household head’s gender | 1.24 | 0.48 | 3.19 | 0.655 |
| Age of household head | 1.14 | 0.50 | 2.58 | 0.761 |
| Household head’s education | 1.97 | 0.70 | 5.53 | 0.199 |
| Household head’s occupation | 2.25 | 1.07 | 4.73 | 0.032 |
| Family type | 1.66 | 0.79 | 3.48 | 0.179 |
| House type | 1.23 | 0.68 | 2.23 | 0.503 |
| Family members | 1.89 | 0.58 | 2.45 | 0.643 |
| Average annual household income | 1.79 | 0.93 | 3.43 | 0.080 |
| Year of husband migration | 1.56 | 0.87 | 2.81 | 0.138 |
| **2nd model** |  |  |  |  |
| Women’s age | 1.72 | 0.70 | 4.18 | 0.234 |  |
| Women’s religion | 1.09 | 0.54 | 2.19 | 0.819 |  |
| Women’s caste | 1.58 | 0.84 | 2.99 | 0.156 |  |
| Women’s education | 1.45 | 0.32 | 6.57 | 0.630 |  |
| Women’s employment | 1.48 | 0.74 | 2.98 | 0.272 |  |
| Own named property | 1.24 | 0.68 | 2.26 | 0.479 |  |
| Husband’s age | 1.53 | 0.63 | 3.73 | 0.353 |  |
| Household gender | 1.24 | 0.48 | 3.19 | 0.655 |  |
| Age of household head | 1.14 | 0.50 | 2.58 | 0.760 |  |
| Household head’s education | 1.97 | 0.70 | 5.52 | 0.199 |  |
| Household head’s occupation  Family type | 2.25  1.66 | 1.08  0.79 | 4.72  3.48 | 0.032  0.178 |  |
| House type | 1.23 | 0.68 | 2.23 | 0.502 |
| Family members | 1.19 | 0.58 | 2.42 | 0.641 |  |
| Average annual household income | 1.79 | 0.93 | 3.42 | 0.080 |  |
| Year of husband migration | 1.56 | 0.87 | 2.81 | 0.138 |  |
|  |  |  |  |  |
| **3rd model** |  |  |  |  |
| Women’s age | 1.73 | 0.71 | 4.21 | 0.229 |
| Women’s caste | 1.66 | 0.99 | 2.76 | 0.053 |
| Women’s education | 1.44 | 0.32 | 6.54 | 0.633 |
| Women’s employment | 1.48 | 0.74 | 2.98 | 0.272 |
| Own named property | 1.23 | 0.68 | 2.24 | 0.489 |
| Husband’s age | 1.54 | 0.63 | 3.75 | 0.346 |
| Household gender | 1.23 | 0.48 | 3.16 | 0.663 |
| Age of household head | 1.13 | 0.50 | 2.55 | 0.774 |
| Household head’s education | 1.98 | 0.71 | 5.55 | 0.194 |
| Household head’s occupation | 2.24 | 1.07 | 4.68 | 0.032 |
| Family type | 1.66 | 0.79 | 3.47 | 0.180 |
| House type | 1.23 | 0.67 | 2.23 | 0.503 |
| Family members | 1.19 | 0.58 | 2.42 | 0.640 |
| Average annual household income | 1.78 | 0.93 | 3.42 | 0.081 |
| Year of husband migration | 1.57 | 0.88 | 2.82 | 0.127 |
|  |  |  |  |  |
| **4th model** |  |  |  |  |
| Women’s age | 1.72 | 0.71 | 4.19 | 0.230 |
| Women’s caste | 1.65 | 0.99 | 2.76 | 0.054 |
| Women’s education | 1.47 | 0.33 | 6.62 | 0.617 |
| Women’s employment | 1.49 | 0.74 | 3.00 | 0.266 |
| Own named property | 1.23 | 0.68 | 2.24 | 0.491 |
| Husband’s age | 1.52 | 0.63 | 3.68 | 0.356 |
| Household gender | 1.15 | 0.50 | 2.64 | 0.736 |
| Household head’s education | 1.92 | 0.70 | 5.24 | 0.205 |
| Household head’s occupation | 2.23 | 1.07 | 4.67 | 0.033 |
| Family type | 1.71 | 0.85 | 3.45 | 0.132 |
| House type | 1.24 | 0.68 | 2.25 | 0.478 |
| Family members | 1.19 | 0.59 | 2.43 | 0.625 |
| Average annual household income | 1.78 | 0.93 | 3.40 | 0.082 |
| Year of husband migration | 1.59 | 0.89 | 2.84 | 0.114 |
|  |  |  |  |  |
| **5th model** |  |  |  |  |
| Women’s age | 1.75 | 0.73 | 4.24 | 0.212 |
| Women’s caste | 1.65 | 0.99 | 2.76 | 0.054 |
| Women’s education | 1.50 | 0.33 | 6.71 | 0.599 |
| Women’s employment | 1.53 | 0.77 | 3.02 | 0.225 |
| Own named property | 1.25 | 0.69 | 2.26 | 0.463 |
| Husband’s age | 1.52 | 0.63 | 3.69 | 0.353 |
| Household head’s education | 1.89 | 0.70 | 5.12 | 0.213 |
| Household head’s occupation | 2.33 | 1.16 | 4.67 | 0.017 |
| Family type | 1.65 | 0.85 | 3.21 | 0.142 |
| House type | 1.22 | 0.68 | 2.19 | 0.506 |
| Family members | 1.15 | 0.58 | 2.29 | 0.681 |
| Average annual household income | 1.75 | 0.92 | 3.32 | 0.088 |
| Year of husband migration | 1.59 | 0.89 | 2.83 | 0.115 |
|  |  |  |  |  |
| **6th model** |  |  |  |  |
| Women’s age | 1.77 | 0.73 | 4.27 | 0.205 |
| Women’s caste | 1.66 | 0.99 | 2.76 | 0.053 |
| Women’s education | 1.50 | 0.33 | 6.73 | 0.597 |
| Women’s employment | 1.54 | 0.78 | 3.04 | 0.217 |
| Own named property | 1.23 | 0.68 | 2.22 | 0.486 |
| Husband’s age | 1.50 | 0.62 | 3.64 | 0.365 |
| Household head’s education | 1.86 | 0.69 | 5.04 | 0.222 |
| Household head’s occupation | 2.29 | 1.15 | 4.56 | 0.019 |
| Family type | 1.76 | 1.01 | 3.12 | 0.047 |
| House type | 1.22 | 0.68 | 2.19 | 0.509 |
| Average annual household income | 1.75 | 0.92 | 3.33 | 0.086 |
| Year of husband migration | 1.60 | 0.90 | 2.85 | 0.108 |
|  |  |  |  |  |
| **7th model** |  |  |  |  |
| Women’s age | 1.71 | 0.72 | 4.10 | 0.227 |
| Women’s caste | 1.66 | 1.00 | 2.77 | 0.052 |
| Women’s employment | 1.50 | 0.76 | 2.96 | 0.239 |
| Own named property | 1.25 | 0.70 | 2.25 | 0.453 |
| Husband’s age | 1.50 | 0.62 | 3.63 | 0.366 |
| Household head’s education | 2.14 | 0.90 | 5.11 | 0.086 |
| Household head’s occupation | 2.26 | 1.13 | 4.50 | 0.020 |
| Family type | 1.78 | 1.02 | 3.13 | 0.044 |
| House type | 1.23 | 0.68 | 2.20 | 0.494 |
| Average annual household income | 1.78 | 0.94 | 3.38 | 0.076 |
| Year of husband migration | 1.59 | 0.89 | 2.82 | 0.115 |
|  |  |  |  |  |
| **8th model** |  |  |  |  |
| Women’s age | 1.69 | 0.71 | 4.03 | 0.237 |
| Women’s caste | 1.66 | 0.99 | 2.77 | 0.052 |
| Women’s employment | 1.49 | 0.76 | 2.93 | 0.252 |
| Own named property | 1.29 | 0.72 | 2.30 | 0.387 |
| Husband’s age | 1.49 | 0.62 | 3.59 | 0.374 |
| Household head’s education | 2.17 | 0.91 | 5.16 | 0.081 |
| Household head’s occupation | 2.21 | 1.11 | 4.40 | 0.023 |
| Family type | 1.77 | 1.01 | 3.10 | 0.047 |
| Average annual household income | 1.88 | 1.01 | 3.50 | 0.048 |
| Year of husband migration | 1.63 | 0.93 | 2.88 | 0.091 |
|  |  |  |  |  |
| **9th model** |  |  |  |  |
| Women’s age | 1.75 | 0.74 | 4.12 | 0.203 |
| Women’s caste | 1.67 | 1.01 | 2.79 | 0.047 |
| Women’s employment | 1.54 | 0.78 | 3.01 | 0.211 |
| Husband’s age | 1.48 | 0.62 | 3.52 | 0.382 |
| Household head’s education | 2.29 | 0.97 | 5.40 | 0.059 |
| Household head’s occupation | 2.25 | 1.13 | 4.46 | 0.021 |
| Family type | 1.71 | 0.98 | 2.97 | 0.059 |
| Average annual household income | 1.96 | 1.06 | 3.63 | 0.033 |
| Year of husband migration | 1.68 | 0.96 | 2.95 | 0.072 |
|  |  |  |  |  |
| **10th model** |  |  |  |  |
| Women’s age | 1.29 | 0.76 | 2.20 | 0.344 |
| Women’s caste | 1.68 | 1.01 | 2.79 | 0.047 |
| Women’s employment | 1.51 | 0.78 | 2.96 | 0.225 |
| Household head’s education | 2.32 | 0.98 | 5.46 | 0.055 |
| Household head’s occupation | 2.17 | 1.10 | 4.28 | 0.025 |
| Family type | 1.71 | 0.99 | 2.98 | 0.057 |
| Average annual household income | 1.96 | 1.06 | 3.63 | 0.032 |
| Year of husband migration | 1.63 | 0.93 | 2.85 | 0.086 |
|  |  |  |  |  |
| **11th model** |  |  |  |  |
| Women’s caste | 1.64 | 0.99 | 2.72 | 0.056 |
| Women’s employment | 1.55 | 0.80 | 3.00 | 0.196 |
| Household head’s education | 2.32 | 0.98 | 5.45 | 0.054 |
| Household head’s occupation | 2.19 | 1.12 | 4.31 | 0.023 |
| Family type | 1.63 | 0.95 | 2.81 | 0.079 |
| Average annual household income | 1.98 | 1.07 | 3.66 | 0.029 |
| Year of husband migration | 1.72 | 0.99 | 2.97 | 0.054 |
|  |  |  |  |  |
| **12th model** |  |  |  |  |
| Women’s caste | 1.63 | 0.98 | 2.70 | 0.059 |
| Household head’s education | 2.34 | 1.00 | 5.51 | 0.051 |
| Household head’s occupation | 1.68 | 0.98 | 2.88 | 0.060 |
| Family type | 1.50 | 0.88 | 2.58 | 0.137 |
| Average annual household income | 2.01 | 1.09 | 3.71 | 0.026 |
| Year of husband migration | 1.69 | 0.98 | 2.92 | 0.059 |
|  |  |  |  |  |
| **13th model** |  |  |  |  |
| Women’s caste | 1.60 | 0.97 | 2.65 | 0.065 |
| Household head’s education | 2.15 | 0.92 | 4.99 | 0.076 |
| Household head’s occupation | 1.48 | 0.89 | 2.46 | 0.133 |
| Average annual household income | 2.03 | 1.10 | 3.75 | 0.023 |
| Year of husband migration | 1.62 | 0.94 | 2.79 | 0.081 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| Women’s caste | 1.60 | 0.97 | 2.64 | 0.067 |
| Household head’s education | 2.33 | 1.01 | 5.37 | 0.048 |
| Average annual household income | 1.86 | 1.02 | 3.38 | 0.042 |
| Year of husband migration | 1.71 | 1.00 | 2.92 | 0.050 |

**Appendix 11 Women’s autonomy and total number of children**

**Table 11.1 Total number of children and women’s autonomy**

|  |  |  |
| --- | --- | --- |
| Number of children | Women’s autonomy | |
| **Low** | **High** |
|  | **N (%)** | **N (%)** |
| 0 | 22 (73.3) | 8 (26.7) |
| 1-2 | 76 (31.4) | 166 (68.6) |
| 3+ | 24 (18.7) | 104 (81.3) |

**Appendix 12 Codes for women’s autonomy responses of autonomy variables**

**Table 12.1 Description and coding of women’s autonomy**

|  |  |  |
| --- | --- | --- |
| Measures | Coding | Final coding |
| Women’s own earnings | 1: Respondent alone  2: Respondent and husband  3: Husband alone  4: Someone else | 1: Respondent alone  2: Someone else |
| Husband’s earnings | 1: Respondent alone  2: Respondent and husband  3: Husband alone  4: Someone else | 1: Respondent alone  2: Someone else |
| Decision for own health care | 1: Respondent alone  2: Respondent and husband  3: Husband alone  4: Someone else | 1: Respondent alone  2: Someone else |
| Decision for major household purchases | 1: Respondent alone  2: Respondent and husband  3: Husband alone  4: Someone else | 1: Respondent alone  2: Someone else |
| Decision for daily household purchases | 1: Respondent alone  2: Respondent and husband  3: Husband alone  4: Someone else | 1: Respondent alone  2: Someone else |
| Decision for visit | 1: Respondent alone  2: Respondent and husband  3: Husband alone  4: Someone else | 1: Respondent alone  2: Someone else |
| Participation in social activities | 1: Respondent alone  2: Respondent and husband  3: Husband alone  4: Someone else | 1: Respondent alone  2: Someone else |
| Participation in political activities | 1: Respondent alone  2: Respondent and husband  3: Husband alone  4: Someone else | 1: Respondent alone  2: Someone else |

**Appendix 13 Outputs of multivariate logistic regression of Women’s autonomy of left-behind wives**

**Table 13.1 Multivariate regression analysis of autonomy and socio-demographic variables of left-behind wives**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variables retained in the model** | **OR** | **95% CI** | | **p** |
| **Lower** | **Upper** |
| **Initial model** |  |  |  |  |
| Age | 3.76 | 2.09 | 6.77 | <0.001 |
| Religion | 1.87 | 1.00 | 3.47 | 0.049 |
| Caste | 1.04 | 0.57 | 1.90 | 0.903 |
| Education | 1.27 | 0.50 | 3.26 | 0.618 |
| Occupation | 1.17 | 0.70 | 1.94 | 0.545 |
| Own named property | 3.72 | 1.87 | 7.42 | <0.001 |
| Having children | 5.44 | 2.23 | 13.27 | <0.001 |
|  |  |  |  |  |
| **2nd model** |  |  |  |  |
| Age | 3.75 | 2.09 | 6.75 | <0.001 |
| Religion | 1.91 | 1.15 | 3.16 | 0.012 |
| Education | 1.27 | 0.49 | 3.24 | 0.623 |
| Occupation | 1.17 | 0.71 | 1.95 | 0.542 |
| Own named property | 3.73 | 1.88 | 7.43 | <0.001 |
| Having children | 5.44 | 2.23 | 13.28 | <0.001 |
|  |  |  |  |  |
| **3rd model** |  |  |  |  |
| Age | 3.878 | 2.19 | 6.88 | <0.001 |
| Religion | 1.898 | 1.15 | 3.14 | 0.013 |
| Occupation | 1.160 | 0.70 | 1.92 | 0.566 |
| Own named property | 3.663 | 1.85 | 7.27 | <0.001 |
| Having children | 5.50 | 2.26 | 13.40 | <0.001 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| Age | 3.81 | 2.16 | 6.74 | <0.001 |
| Religion | 1.90 | 1.15 | 3.14 | 0.012 |
| Own named property | 3.59 | 1.82 | 7.09 | <0.001 |
| Having children | 5.44 | 2.23 | 13.26 | <0.001 |

**Table 13.2 Multivariate logistic regression of women’s autonomy and household characteristics of left-behind wives**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variables retained in the model | OR | 95% CI | | p |
| **Lower** | **Upper** |
| **Initial model** |  |  |  |  |
| HH\* gender | 5.72 | 2.16 | 15.15 | <0.001 |
| HH age | 8.74 | 2.93 | 26.11 | <0.001 |
| HH education | 1.69 | 0.67 | 4.29 | 0.271 |
| HH occupation | 2.65 | 1.11 | 6.31 | 0.028 |
| Family type | 19.40 | 4.13 | 91.13 | <0.001 |
| House type | 1.28 | 0.53 | 3.08 | 0.580 |
| Total family members | 1.55 | 0.67 | 3.55 | 0.304 |
| Average annual household income | 1.02 | 0.39 | 2.68 | 0.971 |
|  |  |  |  |  |
| **2nd model** |  |  |  |  |
| HH gender | 5.71 | 2.19 | 14.89 | <0.001 |
| HH age | 8.74 | 2.93 | 26.10 | <0.001 |
| HH education | 1.69 | 0.67 | 4.28 | 0.269 |
| HH occupation | 2.65 | 1.11 | 6.30 | 0.028 |
| Family type | 19.39 | 4.13 | 91.12 | <0.001 |
| House type | 1.26 | 0.55 | 2.96 | 0.572 |
| Total family members | 1.55 | 0.67 | 3.56 | 0.304 |
|  |  |  |  |  |
| **3rd model** |  |  |  |  |
| HH gender | 5.87 | 2.26 | 15.24 | <0.001 |
| HH age | 9.04 | 3.04 | 26.83 | <0.001 |
| HH education | 1.67 | 0.66 | 4.21 | 0.281 |
| HH occupation | 2.62 | 1.11 | 6.23 | 0.029 |
| Family type | 18.95 | 4.05 | 88.71 | <0.001 |
| Total family members | 1.55 | 0.67 | 3.55 | 0.304 |
|  |  |  |  |  |
| **4th model** |  |  |  |  |
| HH gender | 6.44 | 2.52 | 16.46 | <0.001 |
| HH age | 8.92 | 3.01 | 26.41 | <0.001 |
| HH education | 1.73 | 0.68 | 4.36 | 0.247 |
| HH occupation | 2.65 | 1.12 | 6.24 | 0.026 |
| Family type | 22.16 | 4.86 | 101.13 | <0.001 |
|  |  |  |  |  |
| **Final Model** |  |  |  |  |
| HH gender | 5.63 | 2.28 | 13.90 | <0.001 |
| HH age | 10.52 | 3.69 | 29.99 | <0.001 |
| HH occupation | 2.73 | 1.16 | 6.40 | 0.021 |
| Family type | 22.48 | 4.95 | 102.06 | <0.001 |

\*: HH = Household head

**Table 13.3 Multivariate logistic regression of women’s autonomy and all explanatory variables.**

| Variables in the model | OR | 95% C.I. | | p |
| --- | --- | --- | --- | --- |
| Lower | Upper |
| **Initial model** |  |  |  |  |
| Age  Religion | 5.22 | 0.72 | 37.99 | 0.103 |
| 2.92 | 0.87 | 9.77 | 0.082 |
| Caste | 2.28 | 0.66 | 7.86 | 0.190 |
| Education | 1.13 | 0.18 | 7.18 | 0.900 |
| Employment | 1.52 | 0.56 | 4.08 | 0.409 |
| Own named property | 2.54 | 0.74 | 8.74 | 0.140 |
| Having children | 2.91 | 0.48 | 17.75 | 0.247 |
| Husband age | 1.34 | 0.19 | 9.27 | 0.768 |
| Husband occupation | 1.77 | 0.57 | 5.53 | 0.324 |
| HH gender | 4.76 | 1.60 | 14.16 | 0.005 |
| Age of HH | 10.97 | 2.98 | 40.34 | <0.001 |
| HH education | 1.13 | 0.36 | 3.59 | 0.837 |
| HH occupation | 2.69 | 0.94 | 7.69 | 0.065 |
| Family type | 7.64 | 1.44 | 40.55 | 0.017 |
| House type | 1.35 | 0.50 | 3.61 | 0.554 |
| Total family members | 3.10 | 1.13 | 8.50 | 0.028 |
| Average annual household Income | 1.50 | 0.49 | 4.61 | 0.484 |
| Year of husband migration | 1.18 | 0.37 | 3.79 | 0.784 |
|  |  |  |  |  |
| **2nd model** |  |  |  |  |
| Age | 5.12 | 0.72 | 36.69 | 0.104 |
| Religion | 2.90 | 0.87 | 9.62 | 0.083 |
| Caste | 2.27 | 0.66 | 7.79 | 0.192 |
| Employment | 1.50 | 0.57 | 4.00 | 0.414 |
| Own named property | 2.55 | 0.75 | 8.75 | 0.136 |
| Having children | 2.88 | 0.48 | 17.42 | 0.249 |
| Husband age | 1.34 | 0.19 | 9.32 | 0.766 |
| Husband occupation | 1.77 | 0.57 | 5.52 | 0.325 |
| HH gender | 4.77 | 1.60 | 14.17 | 0.005 |
| HH age | 10.91 | 2.98 | 40.03 | <0.001 |
| HH education | 1.16 | 0.39 | 3.41 | 0.787 |
| HH occupation | 2.70 | 0.94 | 7.70 | 0.064 |
| Family type | 7.67 | 1.45 | 40.69 | 0.017 |
| House type | 1.34 | 0.50 | 3.56 | 0.560 |
| Total family members | 3.08 | 1.13 | 8.38 | 0.028 |
| Average annual household Income | 1.48 | 0.48 | 4.56 | 0.489 |
| Year of husband migration | 1.19 | 0.37 | 3.79 | 0.768 |
|  |  |  |  |  |
| **3rd model** |  |  |  |  |
| Age | 5.32 | 0.75 | 37.58 | 0.094 |
| Religion | 2.90 | 0.87 | 9.61 | 0.082 |
| Caste | 2.22 | 0.66 | 7.49 | 0.200 |
| Employment | 1.52 | 0.57 | 4.03 | 0.403 |
| Own named property | 2.64 | 0.79 | 8.85 | 0.117 |
| Having children | 2.93 | 0.49 | 17.69 | 0.242 |
| Husband age | 1.37 | 0.20 | 9.50 | 0.748 |
| Husband occupation | 1.75 | 0.56 | 5.41 | 0.335 |
| HH gender | 4.63 | 1.59 | 13.47 | 0.005 |
| HH age | 11.45 | 3.27 | 40.13 | <0.001 |
| HH occupation | 2.72 | 0.95 | 7.76 | 0.062 |
| Family type | 7.61 | 1.44 | 40.22 | 0.017 |
| House type | 1.33 | 0.50 | 3.55 | 0.564 |
| Total family members | 3.09 | 1.14 | 8.39 | 0.027 |
| Average annual household Income | 1.47 | 0.48 | 4.47 | 0.502 |
| Year of husband migration | 1.18 | 0.37 | 3.77 | 0.776 |
|  |  |  |  |  |
| **4th model** |  |  |  |  |
| Age | 5.14 | 0.74 | 35.72 | 0.098 |
| Religion | 2.87 | 0.87 | 9.48 | 0.084 |
| Caste | 2.16 | 0.65 | 7.23 | 0.210 |
| Employment | 1.51 | 0.57 | 4.00 | 0.406 |
| Own named property | 2.55 | 0.78 | 8.38 | 0.123 |
| Having children | 2.98 | 0.50 | 17.79 | 0.231 |
| Husband age | 1.39 | 0.20 | 9.60 | 0.738 |
| Husband occupation | 1.73 | 0.56 | 5.35 | 0.341 |
| HH gender | 4.57 | 1.58 | 13.22 | 0.005 |
| HH age | 11.63 | 3.33 | 40.63 | <0.001 |
| HH occupation | 2.69 | 0.94 | 7.65 | 0.064 |
| Family type | 7.45 | 1.42 | 39.18 | 0.018 |
| House type | 1.36 | 0.52 | 3.58 | 0.528 |
| Total family members | 3.10 | 1.14 | 8.45 | 0.027 |
| Average annual household income | 1.45 | 0.48 | 4.43 | 0.513 |
|  |  |  |  |  |
| **5th model** |  |  |  |  |
| Age | 3.87 | 1.44 | 10.40 | 0.007 |
| Religion | 2.90 | 0.88 | 9.59 | 0.080 |
| Caste | 2.19 | 0.66 | 7.29 | 0.203 |
| Employment | 1.50 | 0.57 | 3.97 | 0.411 |
| Own named property | 2.55 | 0.78 | 8.37 | 0.122 |
| Having children | 3.01 | 0.50 | 17.95 | 0.227 |
| Husband occupation | 1.70 | 0.56 | 5.24 | 0.352 |
| HH gender | 4.53 | 1.57 | 13.06 | 0.005 |
| HH age | 11.83 | 3.40 | 41.11 | <0.001 |
| HH occupation | 2.62 | 0.93 | 7.35 | 0.068 |
| Family type | 7.35 | 1.40 | 38.55 | 0.018 |
| House type | 1.34 | 0.51 | 3.51 | 0.548 |
| Total family members | 3.08 | 1.13 | 8.35 | 0.027 |
| Average annual household income | 1.47 | 0.48 | 4.47 | 0.501 |
|  |  |  |  |  |
| **6th model** |  |  |  |  |
| Age | 3.86 | 1.44 | 10.34 | 0.007 |
| Religion | 2.89 | 0.87 | 9.55 | 0.083 |
| Caste | 2.21 | 0.67 | 7.31 | 0.195 |
| Employment | 1.56 | 0.60 | 4.08 | 0.362 |
| Own named property | 2.52 | 0.77 | 8.26 | 0.128 |
| Having children | 3.16 | 0.52 | 19.16 | 0.211 |
| Husband occupation | 1.63 | 0.54 | 4.95 | 0.390 |
| HH gender | 4.65 | 1.62 | 13.33 | 0.004 |
| HH age | 12.12 | 3.50 | 41.89 | <0.001 |
| HH occupation | 2.57 | 0.92 | 7.15 | 0.071 |
| Family type | 7.12 | 1.37 | 36.98 | 0.020 |
| Total family members | 3.12 | 1.15 | 8.45 | 0.025 |
| Average annual household income | 1.59 | 0.54 | 4.66 | 0.398 |
|  |  |  |  |  |
| **7th model** |  |  |  |  |
| Age | 3.85 | 1.44 | 10.27 | 0.007 |
| Religion | 2.82 | 0.85 | 9.29 | 0.089 |
| Caste | 2.08 | 0.64 | 6.79 | 0.225 |
| Employment | 1.53 | 0.59 | 3.98 | 0.381 |
| Own named property | 2.26 | 0.71 | 7.26 | 0.170 |
| Having children | 2.91 | 0.50 | 17.04 | 0.237 |
| Husband occupation | 1.57 | 0.52 | 4.76 | 0.426 |
| HH gender | 5.19 | 1.87 | 14.40 | 0.002 |
| HH age | 12.37 | 3.60 | 42.57 | <0.001 |
| HH occupation | 2.53 | 0.91 | 6.98 | 0.074 |
| Family type | 7.29 | 1.41 | 37.66 | 0.018 |
| Total family members | 2.96 | 1.11 | 7.88 | 0.030 |
|  |  |  |  |  |
| **8th model** |  |  |  |  |
| Age | 3.96 | 1.49 | 10.55 | 0.006 |
| Religion | 2.60 | 0.80 | 8.43 | 0.112 |
| Caste | 1.85 | 0.59 | 5.82 | 0.293 |
| Employment | 1.65 | 0.65 | 4.20 | 0.295 |
| Own named property | 2.26 | 0.72 | 7.15 | 0.165 |
| Having children | 3.56 | 0.66 | 19.23 | 0.141 |
| HH gender | 5.17 | 1.88 | 14.23 | 0.001 |
| HH age | 12.26 | 3.57 | 42.05 | <0.001 |
| HH occupation | 2.48 | 0.90 | 6.82 | 0.079 |
| Family type | 7.76 | 1.51 | 39.92 | 0.014 |
| Total family members | 2.69 | 1.05 | 6.90 | 0.040 |
|  |  |  |  |  |
| **9th model** |  |  |  |  |
| Age | 3.96 | 1.49 | 10.52 | 0.006 |
| Religion | 2.49 | 0.78 | 7.93 | 0.122 |
| Caste | 1.88 | 0.60 | 5.85 | 0.275 |
| Own named property | 2.45 | 0.78 | 7.73 | 0.125 |
| Having children | 3.89 | 0.74 | 20.35 | 0.108 |
| HH gender | 5.40 | 1.99 | 14.69 | 0.001 |
| HH age | 12.41 | 3.64 | 42.39 | <0.001 |
| HH occupation | 2.16 | 0.81 | 5.72 | 0.123 |
| Family type | 8.76 | 1.71 | 44.82 | 0.009 |
| Total family members | 2.46 | 0.99 | 6.13 | 0.054 |
|  |  |  |  |  |
| **10th model** |  |  |  |  |
| Age | 3.87 | 1.47 | 10.16 | 0.006 |
| Religion | 1.67 | 0.67 | 4.13 | 0.269 |
| Own named property | 2.35 | 0.75 | 7.35 | 0.141 |
| Having children | 4.29 | 0.82 | 22.44 | 0.084 |
| HH gender | 5.21 | 1.94 | 14.00 | 0.001 |
| HH age | 12.01 | 3.56 | 40.44 | <0.001 |
| HH occupation | 2.08 | 0.79 | 5.48 | 0.139 |
| Family type | 8.94 | 1.75 | 45.57 | 0.008 |
| Total family members | 2.43 | 0.98 | 6.04 | 0.055 |
|  |  |  |  |  |
| **11th model** |  |  |  |  |
| Age | 3.88 | 1.48 | 10.21 | 0.006 |
| Own named property | 2.37 | 0.76 | 7.38 | 0.136 |
| Having children | 3.70 | 0.73 | 18.72 | 0.114 |
| HH gender | 4.79 | 1.81 | 12.66 | 0.002 |
| HH age | 13.51 | 4.08 | 44.72 | <0.001 |
| HH occupation | 2.06 | 0.78 | 5.41 | 0.143 |
| Family type | 8.64 | 1.71 | 43.54 | 0.009 |
| Total family members | 2.39 | 0.97 | 5.89 | 0.059 |
|  |  |  |  |  |
| **12th model** |  |  |  |  |
| Age | 3.94 | 1.51 | 10.26 | 0.005 |
| Own named property | 2.14 | 0.71 | 6.52 | 0.179 |
| Having children | 5.09 | 1.05 | 24.69 | 0.043 |
| HH gender | 5.86 | 2.30 | 14.92 | <0.001 |
| HH age | 13.48 | 4.10 | 44.30 | <0.001 |
| Family type | 9.41 | 1.84 | 48.05 | 0.007 |
| Total family members | 2.58 | 1.05 | 6.31 | 0.039 |
|  |  |  |  |  |
| **Final model** |  |  |  |  |
| Age | 4.04 | 1.56 | 10.42 | 0.004 |
| Having children | 5.61 | 1.19 | 26.48 | 0.029 |
| HH gender | 5.88 | 2.32 | 14.88 | <0.001 |
| HH age | 13.43 | 4.15 | 43.49 | <0.001 |
| Family type | 10.61 | 2.13 | 52.85 | 0.004 |
| Total family members | 2.57 | 1.06 | 6.26 | 0.038 |

\*: HH = Household head

**Appendix 14 Results univariate logistic regression of wives of non-migrants responses to control and decisions regarding earnings, health care, household purchases and visits**

**14.1 Control over women’s earnings**

**Table 14.1 Association between the control over women’s income and socio-demographic variables of respondents**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Persons who decide women’s earnings** | | | |  |  |
| Non-migrant households | | | |
| **Women** | | **Someone else** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  |  |  |  |  |  |
|  | 32 and below | 31 | 54.4 | 24 | 43.6 | 1.21 (0.63 to 2.30) |  |
|  | Above 32 | 60 | 51.7 | 56 | 48.3 | 1 | 0.570 |
| **Religion** | |  |  |  |  |  |  |
|  | Hindu | 72 | 54.1 | 61 | 45.9 | 1.18 (0.57 to 2.43) | 0.652 |
|  | Other | 19 | 50.0 | 19 | 50.0 | 1 |  |
| **Caste** | |  |  |  |  |  |  |
|  | Upper | 46 | 51.7 | 43 | 48.3 | 1 |  |
|  | Lower | 45 | 54.9 | 37 | 45.1 | 1.14 (0.62 to 2.08) | 0.676 |
| **Education** | |  |  |  |  |  |  |
|  | Illiterate | 13 | 54.2 | 11 | 45.8 | 1.05 (0.44 to 2.49) | 0.920 |
|  | Literate | 78 | 53.1 | 69 | 46.9 | 1 |  |
| **Own named property** | | | |  |  |  |  |
|  | Yes | 17 | 45.9 | 20 | 54.1 | 1 |  |
|  | No | 74 | 55.2 | 60 | 44.8 | 1.45 (0.70 to 3.01) | 0.318 |
| **Having children** | | |  |  |  |  |  |
|  | Yes | 86 | 53.1 | 76 | 46.9 | 1 |  |
|  | No | 5 | 55.6 | 4 | 44.4 | 11.1 (0.29 to 4.26) | 0.885 |
| **Own mobile phone** | | |  |  |  |  |  |
|  | Yes | 57 | 55.3 | 46 | 44.7 | 1.24 (0.67 to 2.29) | 0.494 |
|  | No | 34 | 50.0 | 34 | 50.0 | 1 |  |

**Table 14.2 Association of husband’s characteristics and women’s control over their own earnings**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Control over women’s earnings** | | | |  |  |
| **Women** | | **Someone else** | |
|  | | **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Husband’s age** | |  |  |  |  |  |  |
|  | 36 and below | 36 | 57.1 | 27 | 42.9 | 1.25 (0.69 to 2.40) |  |
|  | Above 36 | 55 | 50.9 | 53 | 49.1 | 1 | 0.432 |
| **Husband’s education** | | |  |  |  |  |  |
|  | Illiterate | 11 | 57.9 | 8 | 42.1 | 1.24 (0.47 to 3.25) |  |
|  | Literate | 80 | 52.6 | 72 | 47.4 | 1 | 0.665 |
| **Husband’s occupation** | | |  |  |  |  |  |
|  | Unemployed | 1 | 25.0 | 3 | 75.0 |  |  |
|  | Employed | 90 | 53.9 | 77 | 46.1 |  | 0.282 |

**Table 14.3 Women’s control over their own income and household characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | | Control over women’s earnings | | | |  |  |
| **Women** | | **Someone else** | |
|  | | **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| Household head | |  |  |  |  |  |  |
|  | Female | 29 | 74.4 | 10 | 25.6 | 3.27 (1.48 to 7.26) |  |
|  | Male | 62 | 47.0 | 70 | 53.0 | 1 | 0.003 |
| Age of household head | | |  |  |  |  |  |
|  | 40 and below | 45 | 53.6 | 39 | 46.4 | 1.03 (0.56 to 1.88) |  |
|  | Above 40 | 46 | 52.9 | 41 | 47.1 | 1 | 0.927 |
| Household head’s education | | |  |  |  |  |  |
|  | Illiterate | 14 | 58.3 | 10 | 41.7 | 1.27 (0.53 to 3.05) |  |
|  | Literate | 77 | 52.4 | 70 | 47.6 | 1 | 0.588 |
| Household head’s occupation | | |  |  |  |  |  |
|  | Unemployed | 1 | 33.3 | 2 | 66.7 |  |  |
|  | Employed | 90 | 53.6 | 78 | 46.4 |  |  |
| Family type | |  |  |  |  |  |  |
|  | Extended | 27 | 54.0 | 23 | 46.0 | 1.05 (0.54 to 2.05) |  |
|  | Nuclear | 64 | 52.9 | 57 | 47.1 | 1 | 0.895 |
| House type | |  |  |  |  |  |  |
|  | Permanent | 38 | 48.7 | 40 | 51.3 | 1 |  |
|  | Semi and Temporary | 53 | 57.0 | 40 | 43.0 | 1.39 (0.76 to 2.55) | 0.280 |
| Family members | |  |  |  |  |  |  |
|  | 5 and below | 57 | 56.4 | 44 | 43.6 | 1.37 (0.74 to 2.53) |  |
|  | Above 5 | 34 | 48.6 | 36 | 51.4 | 1 | 0.311 |
| Total annual income | | |  |  |  |  |  |
|  | Above national average | 25 | 54.3 | 21 | 45.7 | 1.06 (0.54 to 2.10) |  |
|  | Below national average | 66 | 52.8 | 59 | 47.2 | 1 | 0.857 |

**14.2 Control over husband’s earnings**

**Table 14.4 Association between the controls over husband’s earnings and respondent’s socio-demographic characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Persons who decide husband’s earnings** | | | |  |  |
| Non-migrant households | | | |
| **Women** | | **Someone else** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  |  |  |  |  |  |
|  | 32 and below | 13 | 7.8 | 154 | 92.2 | 1 |  |
|  | Above 32 | 24 | 10.3 | 209 | 89.7 | 1.36 (0.67 to 2.76) | 0.393 |
| **Religion** | |  |  |  |  |  |  |
|  | Hindu | 30 | 10.4 | 258 | 89.6 | 1.74 (0.74 to 4.10) | 0.201 |
|  | Other | 7 | 6.3 | 105 | 93.8 | 1 |  |
| **Caste** | |  |  |  |  |  |  |
|  | Upper | 20 | 9.6 | 189 | 90.4 | 1.08 (0.55 to 2.14) | 0.818 |
|  | Lower | 17 | 8.9 | 174 | 91.1 | 1 |  |
| **Education** | |  |  |  |  |  |  |
|  | Illiterate | 6 | 13.0 | 40 | 87.0 | 1.56 (0.61 to 3.98) | 0.349 |
|  | Literate | 31 | 8.8 | 323 | 91.2 | 1 |  |
| **Employment** | |  |  |  |  |  |  |
|  | Unemployed | 18 | 7.9 | 211 | 92.1 | 1 |  |
|  | Employed | 19 | 11.1 | 152 | 88.9 | 1.47 (0.74 to 2.89) | 0.269 |
| **Own name properties** | | |  |  |  |  |  |
|  | Yes | 7 | 9.9 | 64 | 90.1 | 1.09 (0.46 to 2.59) | 0.845 |
|  | No | 30 | 9.1 | 299 | 90.9 | 1 |  |
| **Having children** | | |  |  |  |  |  |
|  | Yes | 35 | 9.5 | 355 | 90.5 | 1.46 (0.33 to 6.40) | 0.614 |
|  | No | 2 | 6.7 | 28 | 93.3 | 1 |  |
| **Own mobile phone** | | |  |  |  |  |  |
|  | Yes | 20 | 7.5 | 247 | 92.5 | 1 |  |
|  | No | 17 | 12.8 | 116 | 87.2 | 1.81 (0.91 to 3.58) | 0.089 |

**Table 14.5 Association between the women’s control over husband’s earnings and husband’s background characteristics**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Control over husband’s earnings** | | | | | |  | |  | |
| **Women** | | **Someone else** | | | |
| **N** | **%** | | **N** | | **%** | | **OR (95% CI)** | | **p** | |
| **Husband’s age** | |  |  | |  | |  | |  | |  | |
|  | 36 and below | 12 | 6.9 | | 162 | | 93.1 | | 1 | |  | |
|  | Above 36 | 25 | 11.1 | | 201 | | 88.9 | | 1.68 (0.82 to 3.45) | | 0.154 | |
| **Husband’s education** | | | |  | |  | |  | |  | |
|  | Illiterate | 8 | 27.6 | | 21 | | 72.4 | | 4.49 (1.83 to 11.03) | |  | |
|  | Literate | 29 | 7.8 | | 342 | | 92.2 | | 1 | | <0.001 | |
| **Husband’s occupation** | | | |  | |  | |  | |  | |
|  | Employed | 1 | 7.1 | | 13 | | 92.3 | | 1 | |  | |
|  | Unemployed | 36 | 9.3 | | 350 | | 90.7 | | 1.34 (0.17 to 10.53) | | 0.782 | |

**Table 14.6 Association between women’s control over husband’s earnings and household characteristics**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Control over husband’s earnings** | | | | |  |  |
| **Women** | | | **Someone else** | |
| **N** | | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Household head** | |  | |  |  |  |  |  |
|  | Female | 32 | | 42.1 | 44 | 57.9 | 46.4 (17.18 to 125.35) |  |
|  | Male | 5 | | 1.5 | 319 | 98.5 | 1 | <0.001 |
| **Age of household head** | | | |  |  |  |  |  |
|  | 40 and below | 26 | | 13.2 | 171 | 86.8 | 2.65 (1.27 to 5.53) | 0.009 |
|  | Above 40 | 11 | | 5.4 | 192 | 94.6 | 1 |  |
| **Household head’s education** | | | |  |  |  |  |  |
|  | Illiterate | | 5 | 9.6 | 47 | 90.4 | 1.05 (0.390 to 2.83) | 0.922 |
|  | Literate | | 32 | 9.2 | 316 | 90.8 | 1 |  |
| **Household head’s occupation** | | | |  |  |  |  |  |
|  | Unemployed | | 17 | 53.1 | 15 | 46.9 | 19.72 (8.62 to 45.12) | <0.001 |
|  | Employed | | 20 | 5.4 | 348 | 94.6 |  |  |
| **Family type** | | |  |  |  |  |  |  |
|  | Extended | | 9 | 6.6 | 128 | 93.4 | 1 |  |
|  | Nuclear | | 28 | 10.6 | 235 | 89.4 | 1.6 (0.78 to 3.70 | 0.186 |
| **House type** | | |  |  |  |  |  |  |
|  | Permanent | | 13 | 6.8 | 178 | 93.2 | 1 |  |
|  | Semi and Temporary | | 24 | 11.5 | 185 | 88.5 | 1.78 (0.88 to 3.60) | 0.107 |
| **Family members** | | |  |  |  |  |  |  |
|  | 5 and below | | 26 | 10.4 | 223 | 89.6 | 1.48 (0.71 to 3.10) | 0.293 |
|  | Above 5 | | 11 | 7.3 | 140 | 92.7 | 1 |  |
| **Total annual income** | | | |  |  |  |  |  |
|  | Above national average | | 0 | 0.0 | 94 | 100.0 |  |  |
|  | Below national average | | 37 | 12.1 | 269 | 87.9 |  |  |

**14.3 Decision for women's health care**

**Table 14.7 Association of the decision about the women’s health care by respondent’s socio-demographic characteristics.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Persons who decide women’s health care** | | | |  |  |
| Non-migrants’ households | | | |
| **Women** | | **Someone else** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  |  |  |  |  |  |
|  | 32 and below | 8 | 4.8 | 158 | 95.2 | 1 |  |
|  | Above 32 | 30 | 12.9 | 203 | 87.1 | 2.94 (1.31 to 6.58) | 0.009 |
| **Religion** | |  |  |  |  |  |  |
|  | Hindu | 30 | 10.4 | 258 | 89.6 | 1.52 (0.67 to 3.41) | 0.319 |
|  | Other | 8 | 7.1 | 104 | 92.9 | 1 |  |
| **Caste** | |  |  |  |  |  |  |
|  | Upper | 20 | 9.6 | 189 | 90.4 | 1.07 (0.52 to 1.99) | 0.961 |
|  | Lower | 18 | 9.4 | 173 | 90.6 | 1 |  |
| **Education** | |  |  |  |  |  |  |
|  | Illiterate | 6 | 13.0 | 40 | 87.0 | 1.51 (0.59 to 3.83) | 0.387 |
|  | Literate | 32 | 9.0 | 322 | 91.0 | 1 |  |
| **Employment** | |  |  |  |  |  |  |
|  | Unemployed | 18 | 7.9 | 211 | 92.1 | 1 |  |
|  | Employed | 20 | 11.7 | 151 | 88.3 | 1.55 (0.79 to 3.04) | 0.198 |
| **Own named property** | | |  |  |  |  |  |
|  | Yes | 8 | 11.3 | 63 | 88.7 | 1.27 (0.55 to 2.89) | 0.576 |
|  | No | 30 | 9.1 | 299 | 90.9 | 1 |  |
| **Having children** | |  |  |  |  |  |  |
|  | Yes | 36 | 9.7 | 334 | 90.3 | 1.51 (0.35 to 6.60) | <0.001 |
|  | No | 2 | 6.7 | 28 | 93.3 | 1 |  |
| **Own mobile phone** | | |  |  |  |  |  |
|  | Yes | 22 | 8.2 | 245 | 91.8 | 1 |  |
|  | No | 16 | 12.0 | 117 | 88.0 | 1.52 (0.77 to 3.01) | 0.226 |

**Table 14.8 Association between the women’s decision for their own health care and husband’s background characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Decision for women’s health care** | | | |  |  |
| **Women** | | **Someone else** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Husband’s age** | |  |  |  |  |  |  |
|  | 36 and below | 7 | 4.0 | 167 | 96.0 | 1 |  |
|  | Above 36 | 31 | 13.7 | 195 | 86.3 | 3.79 (1.63 to 8.84) | 0.001 |
| **Husband’s education** | | |  |  |  |  |  |
|  | Illiterate | 8 | 27.6 | 21 | 72.4 | 4.33 (1.77 to 10.61) | 0.001 |
|  | Literate | 30 | 8.1 | 341 | 91.9 | 1 |  |
| **Husband’s occupation** | | |  |  |  |  |  |
|  | Unemployed | 1 | 7.1 | 13 | 92.9 |  |  |
|  | Employed | 37 | 9.6 | 349 | 90.4 |  |  |

**Table 14.9 Women’s decision for their own health and household characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Decision for own health care** | | | |  |  |
| **Women** | | **Someone else** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Household head** | |  |  |  |  |  |  |
|  | Female | 31 | 40.8 | 45 | 59.2 | 31.20 (12.97 to 75.03) |  |
|  | Male | 7 | 2.2 | 317 | 97.8 | 1 | <0.001 |
| **Age of household head** | | |  |  |  |  |  |
|  | 40 and below | 25 | 12.7 | 172 | 87.3 | 2.12 (1.05 to 4.28) | 0.035 |
|  | Above 40 | 13 | 6.4 | 190 | 93.6 | 1 |  |
| **Household head’s education** | | |  |  |  |  |  |
|  | Illiterate | 5 | 9.6 | 47 | 90.4 | 1.02 (0.38 to 2.73) | 0.976 |
|  | Literate | 33 | 9.5 | 315 | 90.5 | 1 |  |
| **Household head’s occupation** | | |  |  |  |  |  |
|  | Unemployed | 15 | 46.9 | 17 | 53.1 | 13.24 (5.87 to 29.83) | <0.001 |
|  | Employed | 23 | 6.3 | 345 | 93.8 | 1 |  |
| **Family type** | |  |  |  |  |  |  |
|  | Extended | 11 | 8.0 | 126 | 92.0 | 1 |  |
|  | Nuclear | 27 | 10.3 | 236 | 89.7 | 1.31 (0.69 to 2.73) | 0.470 |
| **House type** | |  |  |  |  |  |  |
|  | Permanent | 14 | 7.3 | 177 | 92.7 | 1 |  |
|  | Semi and Temporary | 24 | 11.5 | 185 | 88.5 | 1.64 (0.82 to 3.72) | 0.160 |
| **Family members** | |  |  |  |  |  |  |
|  | 5 and below | 23 | 9.2 | 226 | 90.8 | 1 |  |
|  | Above 5 | 15 | 9.9 | 136 | 90.1 | 1.08 (0.55 to 2.15) | 0.818 |
| **Total annual income** | | |  |  |  |  |  |
|  | Above national average | 4 | 4.3 | 90 | 95.7 | 1 |  |
|  | Below national average | 34 | 11.1 | 272 | 88.9 | 2.81 (0.97 to 8.14) | 0.057 |

**14.4 Decision for major household purchases**

**Table 14.10 Women’s participation in the decision for major household purchases by their socio-demographic characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Persons who decide major household purchases** | | | |  |  |
| Non-migrants’ households | | | |
| **Women** | | **Someone else** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  |  |  |  |  |  |
|  | 32 and below | 7 | 4.2 | 160 | 95.8 | 1 |  |
|  | Above 32 | 19 | 8.2 | 214 | 91.8 | 2.03 (0.83 to 4.94) | 0.119 |
| **Religion** | |  |  |  |  |  |  |
|  | Hindu | 17 | 5.9 | 271 | 94.1 | 1 |  |
|  | Other | 9 | 8.0 | 103 | 92.0 | 1.39 (0.60 to 3.22) | 0.439 |
| **Caste** | |  |  |  |  |  |  |
|  | Upper | 11 | 5.3 | 198 | 94.7 | 1 |  |
|  | Lower | 15 | 7.9 | 176 | 92.1 | 1.53 (0.69 to 3.43) | 0.297 |
| **Education** | |  |  |  |  |  |  |
|  | Illiterate | 1 | 2.2 | 45 | 97.8 | 1 |  |
|  | Literate | 25 | 7.1 | 329 | 92.9 | 3.42 (0.45 to 25.85) | 0.234 |
| **Employment** | |  |  |  |  |  |  |
|  | Unemployed | 14 | 6.1 | 215 | 93.9 | 1 |  |
|  | Employed | 12 | 7.0 | 159 | 93.0 | 1.16 (0.52 to 2.57) | 0.717 |
| **Own named property** | | |  |  |  |  |  |
|  | Yes | 7 | 9.9 | 64 | 90.1 | 1.79 (0.72 to 4.42) | 0.211 |
|  | No | 19 | 5.8 | 310 | 94.2 | 1 |  |
| **Having children** | | |  |  |  |  |  |
|  | Yes | 25 | 3.3 | 345 | 93.2 | 2.10 (0.28 to 16.07) | 0.474 |
|  | No | 1 | 6.8 | 29 | 96.7 | 1 |  |
| **Own mobile phone** | | |  |  |  |  |  |
|  | Yes | 15 | 5.6 | 252 | 94.4 | 1 |  |
|  | No | 11 | 8.3 | 122 | 91.7 | 1.52 (0.68 to 3.40) | 0.313 |

**Table 14.11 Association between the women’s decision for major household purchases and husband’s background characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Decision for major household purchases** | | | |  |  |
| **Women** | | **Someone else** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Husband’s age** | |  |  |  |  |  |  |
|  | 36 and below | 6 | 3.4 | 168 | 96.6 | 1 |  |
|  | Above 36 | 20 | 8.8 | 206 | 91.2 | 2.79 ((1.07to 6.92) | 0.036 |
| **Husband’s education** | | |  |  |  |  |  |
|  | Illiterate | 3 | 10.3 | 26 | 89.7 | 1.75 (0.49 to 6.20) | 0.389 |
|  | Literate | 23 | 6.2 | 348 | 93.8 | 1 |  |
| **Husband’s occupation** | | |  |  |  |  |  |
|  | Unemployed | 1 | 7.1 | 13 | 92.9 |  |  |
|  | Employed | 25 | 6.5 | 361 | 93.5 |  |  |

**Table 14.12 Association between women’s decision for major household purchases and household characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Decision for major household purchases** | | | |  |  |
| **Women** | | **Someone else** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Household head** | |  |  |  |  |  |  |
|  | Female | 24 | 31.6 | 52 | 68.4 | 74.31 (17.05 to 323.81) | <0.001 |
|  | Male | 2 | 0.6 | 322 | 99.4 | 1 |  |
| **Age of household head** | | | |  |  |  |  |
|  | 40 and below | 18 | 9.1 | 179 | 90.9 | 2.45 (1.04 to 5.78) | 0.040 |
|  | Above 40 | 8 | 3.9 | 195 | 96.1 | 1 |  |
| **Household head’s education** | | | |  |  |  |  |
|  | Illiterate | 1 | 1.9 | 51 | 98.1 |  |  |
|  | Literate | 25 | 7.2 | 323 | 92.8 | 3.95 (0.52 to 29.77) | 0.183 |
| **Household head’s occupation** | | | |  |  |  |  |
|  | Unemployed | 13 | 40.6 | 19 | 59.4 | 18.68 (7.62 to 45.08) | <0.001 |
|  | Employed | 13 | 3.5 | 355 | 96.5 | 1 |  |
| **Family type** | |  |  |  |  |  |  |
|  | Extended | 7 | 5.1 | 130 | 94.9 | 1 |  |
|  | Nuclear | 19 | 8.6 | 244 | 92.8 | 1.45 (0.59 to 3.53) | 0.418 |
| **House type** | |  |  |  |  |  |  |
|  | Permanent | 8 | 4.2 | 183 | 85.8 | 1 |  |
|  | Semi and Temporary | 18 | 8.6 | 191 | 91.4 | 2.16 (0.92 to 5.08) | 0.079 |
| **Family members** | |  |  |  |  |  |  |
|  | 5 and below | 15 | 6.0 | 234 | 94.0 | 1 |  |
|  | Above 5 | 11 | 7.3 | 140 | 92.7 | 1.23 (0.55 to 2.74) | 0.621 |
| **Total annual income** | | |  |  |  |  |  |
|  | Above national average | 3 | 3.2 | 91 | 96.8 | 1 |  |
|  | Below national average | 23 | 7.5 | 283 | 92.5 | 2.47 (0.72 to 8.40) | 0.149 |

**14.5 Decision for daily household purchases**

**Table 14.13 Women’s participation in the decision for daily household purchases by their socio-demographic characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Persons who decide daily household purchases** | | | |  |  |
| Non-migrants’ households | | | |
| **Women** | | **Someone else** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  |  |  |  |  |  |
|  | 32 and below | 23 | 13.8 | 144 | 86.2 | 1 |  |
|  | Above 32 | 54 | 23.3 | 179 | 76.8 | 1.89 (1.11 to 3.23) | 0.020 |
| **Religion** | |  |  |  |  |  |  |
|  | Hindu | 55 | 19.1 | 233 | 80.9 | 1 |  |
|  | Other | 22 | 19.6 | 90 | 80.4 | 1.04 (0.60 to 1.80) | 0.901 |
| **Caste** | |  |  |  |  |  |  |
|  | Upper | 41 | 19.6 | 168 | 80.4 | 1.05 (0.64 to 1.73) | 0.846 |
|  | Lower | 36 | 18.8 | 155 | 81.2 | 1 |  |
| **Education** | |  |  |  |  |  |  |
|  | Illiterate | 14 | 30.4 | 32 | 69.6 | 2.02 (1.02 to 4.01) | 0.044 |
|  | Literate | 63 | 17.8 | 291 | 82.2 | 1 |  |
| **Employment** | |  |  |  |  |  |  |
|  | Unemployed | 37 | 16.2 | 192 | 83.8 | 1 |  |
|  | Employed | 40 | 23.4 | 131 | 76.6 | 1.58 (0.96 to 2.61) | 0.071 |
| **Own named property** | | |  |  |  |  |  |
|  | Yes | 15 | 21.1 | 56 | 78.9 | 1.15 (0.61 to 2.17) | 0.658 |
|  | No | 62 | 18.8 | 267 | 81.2 | 1 |  |
| **Having children** | |  |  |  |  |  |  |
|  | Yes | 73 | 19.7 | 297 | 80.3 | 1.60 (0.54 to 4.72) | 0.397 |
|  | No | 4 | 13.3 | 26 | 86.7 | 1 |  |
| **Own mobile phone** | | |  |  |  |  |  |
|  | Yes | 45 | 16.9 | 222 | 83.1 | 1 |  |
|  | No | 32 | 24.1 | 101 | 75.9 | 1.56 (0.94 to 2.61) | 0.086 |

**Table 14.14 Association between the women’s decision for daily household purchases and husband’s background characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Decision for daily household purchases** | | | |  |  |
| **Women** | | **Someone else** | |
|  | | **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Husband’s age** | |  |  |  |  |  |  |
|  | 36 and below | 23 | 13.2 | 151 | 86.8 | 1 |  |
|  | Above 36 | 54 | 23.9 | 172 | 76.1 | 2.06 (1.21 to 3.52) | 0.008 |
| **Husband’s education** | | |  |  |  |  |  |
|  | Illiterate | 9 | 31.0 | 20 | 69.0 | 2.01 (0.88 to 4.60) | 0.100 |
|  | Literate | 68 | 18.3 | 303 | 81.7 | 1 |  |
| **Husband’s occupation** | | |  |  |  |  |  |
|  | Unemployed | 2 | 14.3 | 12 | 85.7 |  |  |
|  | Employed | 75 | 19.4 | 311 | 80.6 |  |  |

**Table 14.15 Association between women’s decision for daily household purchases and household characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Decision for daily household purchases** | | | |  |  |
| **Women** | | **Someone else** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Household head** | |  |  |  |  |  |  |
|  | Female | 39 | 51.3 | 37 | 48.7 | 7.93 (4.52 to 19.93) | <0.001 |
|  | Male | 38 | 11.7 | 286 | 88.3 | 1 |  |
| **Age of household head** | | |  |  |  |  |  |
|  | 40 and below | 44 | 22.3 | 153 | 77.7 | 1.48 (0.90 to 2.45) | 0.124 |
|  | Above 40 | 33 | 16.3 | 170 | 83.7 | 1 |  |
| **Household head’s education** | | | |  |  |  |  |
|  | Illiterate | 9 | 17.3 | 43 | 82.7 | 1 |  |
|  | Literate | 68 | 19.5 | 280 | 80.5 | 1.16 (0.54 to 2.50) | 0.704 |
| **Household head’s occupation** | | | |  |  |  |  |
|  | Unemployed | 18 | 56.3 | 14 | 43.7 | 6.73 (3.18 to 14.28) | <0.001 |
|  | Employed | 59 | 16.0 | 309 | 84.0 | 1 |  |
| **Family type** | |  |  |  |  |  |  |
|  | Extended | 16 | 11.7 | 121 | 88.3 | 1 |  |
|  | Nuclear | 61 | 23.2 | 202 | 76.8 | 2.28 (1.26 to 4.14) | 0.007 |
| **House type** | |  |  |  |  |  |  |
|  | Permanent | 37 | 19.4 | 154 | 80.6 | 1.02 (0.62 to 1.67) | 0.953 |
|  | Semi and Temporary | 40 | 19.1 | 169 | 80.9 | 1 |  |
| **Family members** | |  |  |  |  |  |  |
|  | 5 and below | 42 | 16.9 | 207 | 83.1 | 1 |  |
|  | Above 5 | 35 | 23.2 | 116 | 76.8 | 1.49 (0.90 to 2.46) | 0.122 |
| **Total annual income** | | |  |  |  |  |  |
|  | Above national average | 11 | 11.7 | 83 | 88.3 | 1 |  |
|  | Below national average | 66 | 21.4 | 240 | 78.4 | 2.08 (1.05 to 4.12) | 0.037 |

**14.6 Decision for visits to family or relatives**

**Table 14.16 Women’s decision for their visits to family or relatives by their socio-demographic characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Persons who decide visits to family or relatives** | | | |  |  |
| Non-migrants’ households | | | |
| **Women** | | **Someone else** | |  |  |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Age** | |  |  |  |  |  |  |
|  | 32 and below | 11 | 6.6 | 156 | 93.4 | 1 |  |
|  | Above 32 | 20 | 8.6 | 213 | 91.4 | 1.33 (0.62 to 2.86) | 0.463 |
| **Religion** | |  |  |  |  |  |  |
|  | Hindu | 21 | 7.3 | 267 | 92.7 | 1 |  |
|  | Other | 10 | 8.9 | 102 | 91.1 | 1.25 (0.57 to 2.74) | 0.583 |
| **Caste** | |  |  |  |  |  |  |
|  | Upper | 15 | 7.2 | 194 | 92.8 | 1 |  |
|  | Lower | 16 | 8.4 | 175 | 91.6 | 1.18 (0.57 to 2.46) | 0.654 |
| **Education** | |  |  |  |  |  |  |
|  | Illiterate | 2 | 4.2 | 44 | 95.7 | 1 |  |
|  | Literate | 29 | 8.2 | 325 | 91.8 | 1.96 (0.45 to 8.51) | 0.368 |
| **Employment** | |  |  |  |  |  |  |
|  | Unemployed | 16 | 7.0 | 213 | 93.0 | 1 |  |
|  | Employed | 15 | 8.8 | 156 | 91.2 | 1.28 (0.61 to 2.67) | 0.510 |
| **Own named property** | | |  |  |  |  |  |
|  | Yes | 7 | 9.9 | 64 | 90.1 | 1.39 (0.57 to 3.37) | 0.465 |
|  | No | 24 | 7.3 | 305 | 92.7 | 1 |  |
| **Having children** | | |  |  |  |  |  |
|  | Yes | 29 | 7.8 | 341 | 92.2 | 1.19 (0.27 to 5.25) | 0.818 |
|  | No | 2 | 6.7 | 28 | 93.3 | 1 |  |
| **Own mobile phone** | | |  |  |  |  |  |
|  | Yes | 18 | 6.7 | 249 | 93.3 | 1 |  |
|  | No | 13 | 9.8 | 120 | 90.2 | 1.50 (0.71 to 3.16) | 0.288 |

**Table 14.17 Association of women’s decision for visits to family or relatives and husband’s background characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Decision for visits to family or relatives** | | | |  |  |
| **Women** | | **Someone else** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Husband’s age** | |  |  |  |  |  |  |
|  | 36 and below | 7 | 4.0 | 167 | 96.0 | 1 |  |
|  | Above 36 | 24 | 10.6 | 202 | 89.4 | 2.84 (1.19 to 6.74) | 0.014 |
| **Husband’s education** | | |  |  |  |  |  |
|  | Illiterate | 3 | 10.3 | 26 | 89.7 | 1.41 (0.40 to 4.96) | 0.589 |
|  | Literate | 28 | 7.5 | 343 | 92.5 |  |  |
| **Husband’s occupation** | | |  |  |  |  |  |
|  | Unemployed | 1 | 7.1 | 13 | 92.9 |  |  |
|  | Employed | 30 | 7.8 | 356 | 92.2 |  |  |

**Table 14.18 Association between women’s decision for their visits to family or relatives and household characteristics**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Decision for visits to their family or relatives** | | | |  |  |
| **Women** | | **Someone else** | |
| **N** | **%** | **N** | **%** | **OR (95% CI)** | **p** |
| **Household head** | |  |  |  |  |  |  |
|  | Female | 25 | 32.9 | 51 | 67.1 | 25.98 (10.16 to 66.43) | <0.001 |
|  | Male | 6 | 1.9 | 318 | 98.1 | 1 |  |
| **Age of household head** | | |  |  |  |  |  |
|  | 40 and below | 21 | 10.7 | 176 | 89.3 | 2.30 (1.06 to 5.03) |  |
|  | Above 40 | 10 | 4.9 | 193 | 95.1 | 1 | 0.032 |
| **Household head’s education** | | |  |  |  |  |  |
|  | Illiterate | 1 | 1.9 | 51 | 98.1 | 1 |  |
|  | Literate | 30 | 8.6 | 318 | 91.4 | 4.81 (0.64 to 36.06) | 0.126 |
| **Household head’s occupation** | | |  |  |  |  |  |
|  | Unemployed | 13 | 40.6 | 19 | 59.4 | 13.30 (5.69 to 31.12) | <0.001 |
|  | Employed | 18 | 4.9 | 350 | 95.1 | 1 |  |
| **Family type** | |  |  |  |  |  |  |
|  | Extended | 11 | 8.0 | 126 | 92.0 | 1.06 (0.49 to 2.28) | 0.880 |
|  | Nuclear | 20 | 7.6 | 243 | 92.4 | 1 |  |
| **House type** | |  |  |  |  |  |  |
|  | Permanent | 9 | 4.7 | 182 | 95.3 | 1 |  |
|  | Semi and Temporary | 22 | 10.5 | 187 | 89.5 | 2.38 (1.07 to 5.01) | 0.034 |
| **Family members** | |  |  |  |  |  |  |
|  | 5 and below | 17 | 6.8 | 232 | 93.2 | 1 |  |
|  | Above 5 | 14 | 9.3 | 137 | 90.7 | 1.39 (0.67 to 2.92) | 0.377 |
| **Total annual income** | | |  |  |  |  |  |
|  | Above national average | 4 | 4.3 | 90 | 95.7 | 1 |  |
|  | Below national average | 27 | 8.8 | 279 | 91.2 | 2.17 (0.74 to 6.39) | 0.157 |

**Appendix 15 News published in national and international newspaper related to migrants situation abroad.**



**Figure: 1.1** Source: The Kathmandu Post, 3 September, 2013



**Figure: 1.2** Source: BBC (2013)

**Appendix 16: Literature Search Strategy**

Box 1: Terms used for Migration

Migration or male migration or male out migration or husband out migration or labour migration or husband’s labour migration or husband migration or partner migration or international migration or male international migration or international labour migration or husbands’ international migration or partner’s international migration

Box 2: Terms used for left-behind wives

Women or female or wife or wives or spouse or left-behind

Box 3: Terms used for left depression

Depression or Depressive disorders or depressive symptoms

Box 4: Terms used for autonomy

Autonomy or empowerment or freedom or personal autonomy or financial autonomy or social autonomy or decision-making autonomy or personal freedom or financial freedom or social freedom or decision-making freedom

Box 5: Terms used for health service utilisation

Health service utilisation or health care or health service or private health care or private health centre or private health facility or government health care or government health centre or government health facility or public health care or public health centre or public health facility

Box 6: Terms used for region/country

Nepal or India or South Asian Countries or South Asian Regions or Developing countries

Key terms used for literature search in database

**Literature Search Strategy**

1. Concept 1

Depression key terms

Left-behind wives key terms

International migration key terms

1. Concept 2

Autonomy key terms

Left-behind wives key terms

International migration key terms

1. Concept 3

International migration key terms

Left-behind wives key terms

Health service utilisation key terms

**Search strategies for MEDLINE via OVID**

Strategy 1 Migration Results

1. Migration.mp 163311
2. Male migration.mp 68
3. Male out migration.mp 6
4. Husband# out migration.mp 0
5. Labour migration 4
6. Husband# labour migration.mp 115
7. Husband# migration.mp 5
8. Partner# migration.mp 1
9. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 163311
10. 2 or 3 or 4 or 5 or 6 or 7 or 8 196
11. International migratin.mp 3076
12. Male international migration.mp 0
13. International labour migration.mp 18
14. Husbands’ international migration.mp 0
15. Partner’s international migration.mp 0
16. 11 or 12 or 13 or 14 or 15 3076
17. 10 and 16 3211

Strategy 2 Wives left-behind

1. Wom#n.mp 807277
2. Female/ 6531258
3. Wife.mp 4588
4. Wives.mp 4207
5. 18 or 19 or 20 or 21 6629016
6. 18 or 19 6626790
7. 20 or 21 8173
8. Left-behind.mp 1363
9. 22 and 25 479
10. 24 and 25 11

Strategy 3 Depression

1. Depression.mp 273740
2. Depressive symptom\* .mp 27058
3. Depressive disorder\*.mp 82956
4. 28 or 29 or 30 305775
5. 17 and 26 and 31 0
6. 17 and 22 and 31 1

Strategy 4 Autonomy

1. Autonomy.mp 36961
2. Personal autonomy.mp 15928
3. Financial autonomy.mp 40
4. Social autonomy.mp 27
5. Decision making autonomy.mp 84
6. Empowerment.mp 6294
7. Freedom/ or freedom.mp 37941
8. Personal freedom.mp 175
9. Financial freedom.mp 6
10. Social freedom.mp 4
11. Decision making freedom.mp 9
12. 34 or 35 or 36 or 37 or 38 or 39

or 40 0r 41 or 42 or 43 or 44 74188

1. 17 and 26 and 45 0
2. 17 and 22 and 45 1

Strategy 5 Health service utilisation

1. (health service utilisation or health service utilization).mp 1154
2. (health care$ or service$).mp 769146
3. (private health care$ or private health service$ or

private health centre$ or private health center$ or

private health facility or private health facilities).mp 860

1. (government health care$ or government health service$ or

government health centre$ or government health facility

or government health facilities).mp 455

1. (public health care$ or public health service$ or public health centre$

or public health facility or public health facilities).mp 9622

1. 48 or 49 769149
2. 50 or 51 or 51 10785
3. 53 and 54 10449
4. 16 and 22 and 55 2
5. 16 and 26 and 54 0
6. 16 and 22 and 53 78

Strategy 6 Regions or Country

1. Nepal.mp 6255
2. (India or Pakistan or Bangladesh or Bhutan or Sri Lanka or South Asian

Countr\* or South Asian Region$ or developing countr\*).mp 202969

1. 58 and 59 2
2. 58 and 60 43

**Search Strategy for CINHAL database**

S22: (S17 or S18 or S19) AND (S16 AND S20) AND (S2 AND S6 AND S21) 0

S21: (S17 or S18 or S19) AND (S16 AND S20) 9

S20: S17 OR S18 OR S19 5358

S19: AB public health care\* OR public health service\* OR

AB public health centre\* OR public health facility\* 4327

S18: AB government health care\* OR AB government health service\*

OR AB government health centre\* OR AB government health facility\* 684

S17: AB private health care\* OR AB private health service\* OR AB private health

centre\* OR AB public health facility\* 658

S16: TI health service utili?ation 198

S15: S3 AND S6 AND S14 1

S14: TI autonomy 1704

S13: S8 AND S11 754

S12: S6 AND S11 0

S11: TI depression 8972

S10: S2 AND S6 3

S9: S3 AND S8 0

S8: S6 AND S7 1

S7: TI left-behind 167

S6: S4 OR S5 37649

S5: TI wife 306

S4: TI wom?n OR TI female 37360

S3: S1 OR S2 598

S2: TI international migration (human) 20

S1: TI migration (human) 598

**Literature search strategy for PsycINFO and PsycARTICLES via OVID**

1. International migration.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 364
2. Wom#n.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 453037
3. Female.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 326796
4. Wife.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 24370
5. Wives.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 11427
6. Left-behind.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 5783
7. 2 or 3 or 4 or 5 679071
8. 1 and 6 and 7 5
9. Depression.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 300620
10. Depressive symptom\*.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 49245
11. Depressive disorder\*.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 32561
12. Depressed.mp. [mp=ti, ab, tx, ct, hw, tc, id, ot, tm] 77529
13. 9 or 10 or 11 or 12 329152
14. 1 and 7 and 13 26
15. 6 and 14 2

**JSTOR database search strategy**

For depression

((ti:(international migration) AND ti:(women)) AND ti:(depression))

AND (cty:(journal) AND ty:(fla)) AND la: (eng) 0

((ti:(international migration) AND (left-behind wives)) AND (depression)) 4

For autonomy

(((migration) AND (women)) AND (autonomy)) 16134

((ti:(migration) AND (women)) AND (autonomy)) 356

((ti:(international migration) AND (women)) AND (autonomy)) 31

((ti:(international migration) AND ti:(women)) AND ti:(autonomy)) 0

((ti:(international migration) AND ti:(left-behind wives) AND ti:(autonomy)) 0

((ti:(international migration) AND ti:(women left-behind) AND ti:(autonomy)) 0

For type of health service utilisation

((ti:(migration) AND ti:(women)) AND ti:(health service utilization)) 0

((ti:(migration) AND ab:(women)) AND ab:(health service utilization)) 0

(ti:(women) AND ti:(health service utilization)) 1