IMPACT OF OUT-MIGRATION OF HUSBANDS ON LEFT BEHIND WIVES- A STUDY OF RURAL GARHWAL

Ph.D. THESIS

by

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INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
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CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the thesis entitled **"IMPACT OF OUT-MIGRATION OF HUSBANDS ON LEFT BEHIND WIVES- A STUDY OF RURAL GARHWAL"** in partial fulfilment of the requirements for the award of the Degree of Doctor of Philosophy and submitted in the Department of Humanities & Social Sciences of the Indian Institute of Technology Roorkee, Roorkee, is an authentic record of my own work carried out during a period from January, 2009 to May, 2015 under the supervision of Dr. Babita Sinha, Former Asst. Professor, and Prof. D. K. Nauriyal, Professor, Department of Humanities & Social Sciences, Indian Institute of Technology Roorkee, Roorkee.

The matter presented in this thesis has not been submitted by me for the award of any other degree of this or any other Institute.

(NALIN SINGH NEGI)

Dated: May 13, 2015

This is to certify that the above statement made by the candidate is correct to the best of our knowledge.

(D. K. Nauriyal)
Supervisor

(Babita Sinha)
Supervisor

ABSTRACT

Migration as a phenomenon is not a new event, rather, it has been seen and felt since the beginning because humans have always moved from one place to another in search of a better or improved livelihood which is indeed one of the key features of the history of human evolution. Like elsewhere, in India too, there has been a significant rise in rural out-migration to urban areas during the last several decades because of the presence of better economic conditions in urban areas. Uttarakhand, a state in India, is primarily characterised by its sparse population, and engagement of the people in predominantly primary economic activities, coupled with inadequate infrastructure and negligible presence of secondary and tertiary sectors especially in the hilly part of the state. Bereft of any employment opportunities and credible source of earning, the hill population has been migrating to plains for a long time. An overwhelming majority of the migrants work in the informal sector with low paid jobs. Out-migration, thus, is seen by most households primarily as a way for survival than an accumulation strategy. However, the heavy out-migration of the male work force from Garhwal has had serious implications for local development. While this permanent kind of migration has resulted in the remittances inflows, not regular and substantial by any standard, it has also led to the collapse of agricultural and many other economic activities. Besides, it has given rise to many socio-economic and psychological problems that are generally associated with the left-behind elderly people, wives and children.

The broad objective of the study is to examine the socio-economic, physical and psychological welfare aspects of the wives of out-migrants by taking wives of non-migrants, as the reference group. Besides examining the socio-economic characteristics of households, the study attempts to find out the impact of out-migration on the farm/ non-activities, general and reproductive health status, work and decision making process in such households. It also endeavours to capture the perception of the wives of out-migrants about the migration of their husbands.

The primary data for this study was collected in 2011 from nine villages from three development blocks, enumerated in 2001 Census, located in Pauri Garhwal district of Uttarakhand. Considering that the impact of migration is strongly felt only after certain period of time by the families and communities, a minimum period of 3 years of out-migration was

considered to determine the status of the household as migrant/non-migrant. The total sample size comprised of 518 households (252 households with non-migrant husbands and 266 households with out-migrant husbands).

While analysing the data on socio-economic characteristics of the sample population, it was found that out-migration households have higher household savings, income and monthly per capita expenditure (MPCE) as compared to the reference group. Out-migrants are also younger, and better educated than their counterparts. However, though educated, most of the out-migrants did not possess any professional skills to get engaged in skilled jobs at destinations. The migrants in the cities are basically engaged in occupational categories of transport, production and related works and other services. They are mostly engaged in low-skilled, generally low paid jobs. Employment in the Indian Armed Forces is reported to be a great attraction among the youths of Garhwal. The outflow of people is mostly to the state of Delhi. The left-behind wives are relatively younger, and have lower duration of marriage, less age gap with their spouses, higher age at marriage, more educated, and have fewer numbers of living children than the wives of non-migrants. Most of the left-behind wives are found to be living in non-nuclear households as compared to the reference group. This, however, may be attributed to relatively younger age group of the wives of out-migrants when there is a higher probability of parents-in law living with the families. Also, it may be migration strategy of the husbands that their wives and children continue to stay with their parents, firstly to look after their aged parents in their absences and secondly their wives and children to get support from the other household members to cope up the out-migrants' absence.

The study has not found any statistically significant impact of male out-migration on the cereal production and investment in farming. Though, the operating expenditure in agriculture is found to be higher among the out-migrant households due to the fact that they have to hire labour to compensate for the loss of labour due to out-migration of the male members from the households. No statistically significant impact of husbands' out-migration on the general and reproductive health has been found among the wives of out-migrants as compared to the reference group. It was assumed that the left-behind wives would enjoy better health condition as compared to the wives of non-migrants. However, the former has more awareness of the RTI/STDs than the latter. With regard to the stress level of the wives, the left-behind wives are found to be far more stress prone than the reference group. These wives have reported the

feelings of loneliness and depression due to the long absence of their husbands. No statistically significant impact of husbands' out-migration could be found on the left behind wives regarding participation in wage labour market. Also, no statistically significant impact of husbands' out-migration could be seen on the number of working hours as compared to the reference group. The study, however, did not find any evidence of the statistically significant impact of husbands' out-migration on the decision making power of the left behind wives vis-a-vis agriculture. Though the women are actively involved in agricultural activities, they are not necessarily involved in decision making. The households lease in or lease out the land to prevent the land from becoming barren. It has been found that 'lease in' land is particularly prevalent among the households with non-migrant husbands, while 'lease out' land is common among the households with out-migrant husbands. However, higher proportion of left-behind wives is found to own bank/post office accounts than the reference group, indicating the compulsion to operate bank/post accounts in the absence of their husbands. It also suggests more autonomy whether out of choice or compulsion. Also, it can be concluded that the wives of out-migrants have higher mobility than the wives of non-migrants. Comparing the costs and benefits associated with migration, the respondents have emphasized larger benefits when it comes to current survival strategy and future financial security of the family. It appears that they have accepted the reality and are content to be left behind. Even the reference group favoured migration as it is perceived to be bringing greater financial security. The appreciation of migration as an attractive economic strategy is further corroborated by well expressed desire of almost all the respondents to encourage their children to migrate either by seeking employment outside the place of origin or through marriage. However, they also insist that their sons, if out-migrate, should not leave their wives behind implying their well concealed grief about the long conjugal separation.

Although in the academic and policy making domains, the measures to de-incentivise migration of work force have gained far more prominence, there is a need to understand and recognise the centrality of out-migration, as a survival and growth strategy for the local inhabitants of Garhwal. Given that the formation of Self Help Group (SHG) interventions in different parts of India have played a critical role in transforming lives of women in the rural areas and is considered as one of the most significant tools in participatory approach for the economic empowerment of women and improving various aspects of the social structure, the experiment is worth undertaking in this part of India as well. Further, the existing public outreach services

and ‘information education and communication’ (IEC) activities need to be strengthened by reworking on the village-level health workers and primary health centres. The region, due to its agro-climatic conditions, does have great potential for generating high income per unit of land by diversifying agriculture into horticulture, production of cash crops like soyabean and high value off-season vegetables and floriculture. This, however, requires resurrection of extension services and effective promotion along with the required infrastructure facilities in the form of soil and water conservation measures, irrigation facilities and credit and marketing support.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Migration is one of the key features of human evolution because humans have always moved from one place to another in search of a better or improved livelihood (Srivastava and Sasikumar, 2003). A recent study (Zanker, 2008) found migration to be as old as humanity itself, arising out of various reasons such as epidemics, diseases, famine, disaster, exploration of new lands in search of a better life etc. Thus, intra and inter-national migration have not only arisen out of the quest for livelihood diversification and search for greener pastures but also because of wars, ethnic cleansing, religious and political persecution, environment, policies, slave trade etc., which could be termed as involuntary migration. In fact, over a period of time a vast amount of literature on migration has been generated giving rise to many theories which then have been used to explain the phenomena of intra and inter-national migration and factors causing initiation and continuation of migration (Massey *et al.,* 1993, 1998; Schoorl, 1995). The contemporary literature has very well documented and applied the existing theoretical framework from the oldest neoclassical theory to dual labour market, relative deprivation, network, institutional theories etc., to construct a commonly accepted theoretical framework of migration (Jennissen, 2007). Each perspective provides an insight into altogether different dimensions of migration. For instance, while dual labour market theory attributed migration to the pull factors in other regions (Piore, 1979; Massey *et al.,* 1993), new economics of labour migration theory holds that when households act upon insufficient household income by sending their members to other regions to earn and supplement household resources, migration takes place (Stark and Bloom, 1985). Relative deprivation theory holds significant income differences across regions as an important factor encouraging migration (Stark and Taylor, 1989). The network theory, on the other hand, spells out the factors that lead to the continuance of the migration. It argues that the large flow of migrants facilitate the formation of a network that links them to their places of origin and destinations. These linkages may help other potential migrants by providing support and social protection in the initial phase of migration which may considerably reduce the risk and problems associated with migration to an alien area (Esveldt *et al.,* 1995; Banerjee, 1986). These perspectives are not mutually exclusive and may in fact help in discovering various facets of migration irrespective of the type i.e., intra or inter-national.

In a way, the phenomenon of migration refers to the movement of persons from aboriginal space to another with an explicit desire of permanent change in the residence which is triggered by more than one factors like social, cultural and economic and non-economic (Das and Murmu, 2010). In other words, it can be said that migration is the temporary or permanent move of individuals or groups of people from one geographic location to another for various reasons ranging from better employment possibilities to persecution. It may, nevertheless, be pointed out here that inter-regional migration within a nation is generally found to be far greater than the international migration due to ease, ethnic-language-cultural affinity and social cohesion (UNICEF, 2012). These migrants generally belong to heterogeneous socio-economic strata resulting in differing levels of vulnerability and discrimination at the destinations.

Existing literature on migration holds that this phenomenon is, by and large, a result of 'push' and 'pull' factors. Push factors like poverty, lack of employment opportunities drive to migrate from the place of origin. This kind of migration can also be termed as distress migration or migration out of desperation. Pull factors, on the other hand, cite availability of higher wages, superior employment opportunities and better promise of life as important factors in alluring workforce from low developed areas to relatively high developed regions (Ayuwat, 1997; Bahuguna and Belwal, 2013). Migration, in both the cases, provide 'direct and immediate benefits' to the families back home which receive remittances, and helps them to overcome their poverty, increase and diversify otherwise fragile household income, provide insurance against risk, and facilitates capacity building of the household members through education and access to health care facilities (Ishtiaque and Ullah, 2013; World Bank, 2006). The other side of the migration, whether arising out of push or pull or both the factors, is that it deprives the source region of its active workforce which may get reflected in decline in traditional occupations, making households far more dependent on the remitted money and pulls the remaining members to the urban areas. This further reduces any attraction to the migrants to return to their places of origin, leaving no room for any investment from migrants in the native places.

However, in real life, these two factors together work in prompting migration which is deeply embedded into the unequal economic and social development (Das and Murmu, 2010; Amimtham, 2008; Boyle *et al.,* 1998). Typically, migrants are not a random sample of the overall population but have some kind of human capital and risk taking abilities different from people staying put (Sjaastad, 1962; Todaro, 1980). For instance, human capital migration

theory stresses on education, skill, age, risk taking capacity, capacity to face and bear with new situations, and entrepreneurship as important factors influencing the probability of migration. This is so because these individual characteristics increase the discounted income (or expected-income) differential between migration and non-migration status, thereby increasing the propensity to move out (Taylor and Martin, 2001). In modern times, migration often occurs in conjunction with some transition in the life course, such as entry into college, livelihood, change of job, healthy climate, retirement and rehabilitation (Preston *et al.,* 2000). Remarkably, the phenomenon of migration has speeded up in modern time for the fact that movement of people, on account of accelerated industrialisation and urbanisation, has now been facilitated by vastly improved technologies in transport system substantially cutting down time for commuting, hazards, and uncertainties and risks associated with such movement. For example, territorial mobility has remained a fundamental part of the traditional societies such as Nepal. Changes have taken place in the context and extent of people's participation in mobility over time as households routinely respond to challenges, constraints and obligations of rural living (Subedi, 2000).

It may be pointed out here that migration, *per se*, is not an issue concerned only with the families and implications for the source area development; but it has much wider connotation. For instance, uninterrupted and unregulated migration may also pose serious threats to the civic amenities, health, and other infrastructure in the destination areas, including creation and expansion of slums. Since the urban areas generally do not have the capacity to absorb a larger influx of migrants, at times, it may also give rise to serious social tensions as a consequence of change in demographic composition, failure of migrants to integrate with the local populace, reduction in employment opportunities, and conflict of interest with the local community etc. At the same time, migrants, especially at the lower level of income, may be deprived of even the bare minimum economic entitlements, social security and legal protection, face social exclusion, and may have to contend with the settlements in the urban slums which have worse manifestations than the poverty, at the places of destination. Poor earnings in the informal sector due to low skills and obligations to send remittances back home may further expose them to inadequate nutrition, poor housing conditions, hazardous occupational conditions, and poor access to health care services (UNESCO, 2012).

1.2 Recent Trends in Migration in India

Like elsewhere, in India too, there has been a significant rise in rural out-migration to urban areas during the last several decades (IFAD, 2007) for the existence of better economic conditions in the urban areas than the rural areas (Desai and Banerji, 2008). This type of migration involves the movement of a large number of people from their usual residence (rural) to live, work and earn in urban areas for a long period of time. The two major sources of data on migration, the Census of India and the National Sample Survey (NSS) have been employed in almost all studies of migration. According to Census of India, migrants are defined by two methods. Firstly, "migrants by place of birth are those who are enumerated at a village/town at the time of census other than their place of birth" and secondly "a person is considered as migrant by place of last residence, if the place in which he is enumerated during the census is other than his place of immediate last residence". By capturing the latest of the migrations in cases where persons have migrated more than once, this concept would give a better picture of current migration scenario. As per the 2001 Census, the internal migration (by place of last residence) in India constitutes around 31 per cent of population which stands at 314.5 million. While 67 per cent of these migrants comprised rural population, it was 33 per cent for urban areas. Further, Table 1.1 reveals intra-state (85 per cent) and intra-district (72 per cent) migration is higher than inter-state (13 per cent) and inter-district (18 per cent) migration implying the preference for short distance migration.

Table 1.1: Number of migrants by place of last residence – India

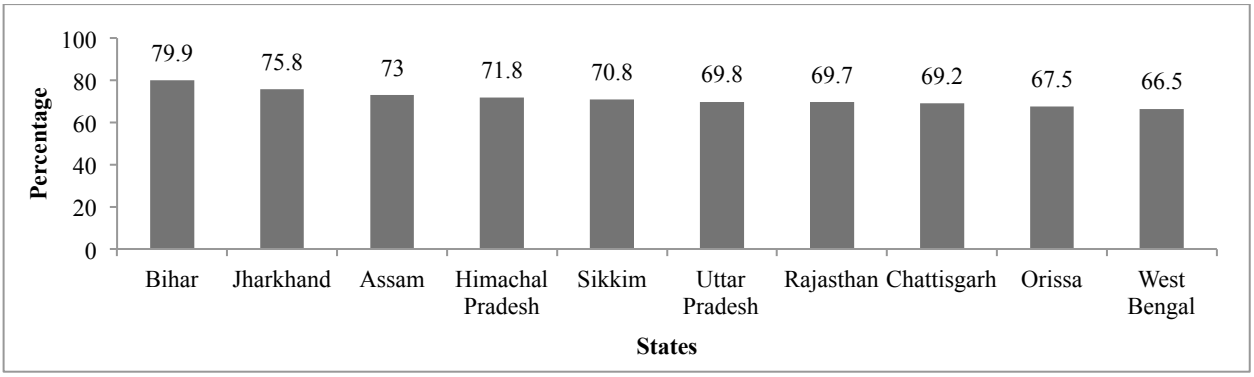
Sl. No.	Category	Migrations by place of last residence	Percentage
A.	Total Population	10286.10	-
B.	Total Migrations	3145.41	30.6
B.1	Migrants within the state of enumeration	2682.20	85.3
B.11	Migrants within the districts	1935.93	72.2
B.12	Migrants from other districts of the state	746.26	17.8
B.2	Migrants from other states in India	411.66	13.1
B.3	Migrants from other countries	51.55	1.6

Source: Census of India, 2001,
All the figures are in lakhs.

Contrary to general expectations, most of the migration (69 per cent) in 2001 was from rural to rural areas, whereas only 14 per cent of the migration took place between rural to urban areas. The rural to rural migration was far more evident in the case of Bihar (80 per cent), Jharkhand

(76 per cent), Assam (73 per cent), Himachal Pradesh (72 per cent), Sikkim (71 per cent), Uttar Pradesh (70 per cent), Rajasthan (70 per cent), Chhattisgarh (69 per cent), Orissa (68 per cent) and West Bengal (67 per cent). Most of it was part of the intra-state migration. Moreover, when we look at the share of the migrants across the million plus cities, it is quite evident that this share is closely related to the economic position and vibrancy of cities (Prasad *et al.,* 2009).

Figure 1.1: Migration streams for top ten states for intra-state migration by last residence (duration 0 to 9 years) – India 2001 (excludes Union Territories)



Source: Census of India, 2001.

Reasons for migration are different for the male and female migrants, as summed up in Table 1.2. For instance, while 63 per cent of the males migrated for the reasons of 'work/employment' and 'moved with the household', 84 per cent of the migrant women cited 'marriage' and 'moved with the households' as the reasons for migration from their places of origin in 2001. Migration on account of marriage suggests that a larger proportion of females either move from the place of their parental homes to join the husbands' families, as part of the long-established cultural practices of Indian society or join their migrant husbands at the places of their employment. Since women are bound to migrate on account of marriage, they, therefore, are likely to be far more migratory than men. However, there are probabilities that though the women might have primarily migrated along with the husbands, they may have also joined the workforce at the place of destinations.

Table 1.2: Reasons for migration by last residence with duration (0-9 years) – India

Reason for migrations	Number of migrants			Percentage of migrants		
	Persons	Males	Females	Persons	Males	Females
2001						
Work/Employment	143.72	123.09	20.63	14.7	37.6	3.2
Business	11.32	9.47	1.85	1.2	2.9	0.3
Education	29.02	20.29	8.73	3.0	6.2	1.3
Marriage	429.26	6.75	422.51	43.8	2.1	64.9
Moved after birth	65.69	34.24	31.45	6.7	10.5	4.8
Moved with households	204.83	82.10	122.73	20.9	25.1	18.8
Other	94.53	51.25	43.28	9.7	15.7	6.6
1991						
Total migrants	821.07	272.55	548.52	100.0	100.0	100.0
Work/Employment	99.37	82.86	16.51	12.1	30.0	3.0
Business	22.45	18.10	4.36	2.7	6.6	0.8
Education	34.53	24.40	10.13	4.2	9.0	1.8
Marriage	368.57	7.18	361.39	44.9	2.6	65.9
Moved after birth	Not available					
Natural calamities	4.25	2.48	1.77	0.5	0.9	0.3
Other	107.39	54.80	52.59	13.1	20.1	9.6

Source: Table D3, Census 2001 and 1991, Excluding J& K,
All the figures are in lakhs.

When the data for 2001 are compared to the Census data of 1991, it can be found that there has been an increase in the male migration on account of work/employment during the decade. There has, however, been a marginal reduction in the migration of females on account of marriage in 2001 over 1991. High unemployment rate, low income, high population growth, unequal distribution of land, demand for higher schooling, previous migration patterns and displeasure with housing have been identified as a number of the prominent determinants of rural out migration (Sekher, 1997; Subedi, 2010).

As highlighted by Table 1.3, there are quite discernible migration corridors within the country from low-income states to high-income states. The Census of India 2001 information reveal that while most of the out-migration from Bihar converged towards Delhi, Haryana and Punjab, migrants from Uttar Pradesh favoured Maharashtra as their most important destination. Out-migration from Odisha, on the other hand, was largely confined to Gujarat, Andhra Pradesh and Rajasthan.

Table 1.3: Total inter-state migrants by place of birth in major states – India

States	Total population	Total in-migrants (Inter-state and from abroad)	Per cent in-migrants to total population	Share of total migrants
India	10286.10	485.09	4.7	100.0
Maharashtra	968.79	79.54	8.2	16.4
Delhi	138.51	56.46	40.8	11.6
West Bengal	801.76	55.82	7.0	11.5
Uttar Pradesh	1661.98	29.72	1.8	6.1
Haryana	211.45	29.52	14.0	6.1
Gujarat	506.71	26.03	5.1	5.4
Madhya Pradesh	603.48	23.06	3.8	4.8
Karnataka	528.51	21.52	4.1	4.4
Punjab	243.59	21.31	8.7	4.4
Rajasthan	565.07	18.46	3.3	3.8
Jharkhand	269.46	17.98	6.7	3.7
Bihar	829.99	17.94	2.2	3.7
Andhra Pradesh	762.10	10.52	1.4	2.2
Chhattisgarh	208.34	10.20	4.9	2.1
Rest	1986.39	67.00	3.4	13.8

Source: Census of India 2001,
All the figures are in lakhs.

The states where massive migration has taken place include Uttar Pradesh, Bihar, Jharkhand, Andhra Pradesh, Madhya Pradesh, Odisha, Rajasthan etc. These are the states which do not have much employment opportunities and this drives workforce to seek employment elsewhere, preferably in other states, as is evident from Tables 1.3 and 1.4. The two most important states which shared 23 per cent and 13 per cent of the total out-migration in India were Uttar Pradesh and Bihar respectively. Overall, Maharashtra tops as migrants' most favoured destination. Almost half of the entire interstate migrants have moved to Maharashtra. The interstate migration to Maharashtra saw massive influx of the migrants (80 per cent) to urban areas alone. Around 73 per cent and 79 per cent of the migrants who moved from Uttar Pradesh and Bihar respectively to Maharashtra had mentioned employment as the primary reasons for migration (Data Highlights – Table D1, D2 & D3; Census of India 2001). These two states have also contributed to the male dominated interstate migration to Punjab, and 75 per cent of them citing the same reason for migration. Similarly, interstate migration to Delhi aimed at work/employment and was heavily male dominated. For instance, sex ratio of net migrants in Delhi was only 673 females per 1000 males (Data Highlights – Table D1, D2 & D3, Census of India 2001). Other preferred destinations are Gujarat and Haryana where around 30 per cent of the migrants have moved. These three states together pulled 80 percent of all interstate migrants

during the inter-census period 1991-2001.The interstate migration in almost all the states was heavily male dominated and was undertaken primarily for the reason of work/employment. The bulk of migrants comprise disadvantaged communities such as the Scheduled Castes, Scheduled Tribes and Other Backward Castes (Deshingkar and Akter, 2009).

Table 1.4: 1991 Population, 2001 Census data on inter-state migration based on last residence (0-9), migration rate and growth rate of population – States/UTs

States/Uts	Population (1991)	In-migrants from other states (2001)	Out-migrants (2001)	From other countries (2001)	Net In-migrants (2001)	Migration Rate (per 100) 1991-01	Growth rate of population 1991-01
India	8463.88	168.27	168.27	7.41	7.41	0.1	21.5
A & N Islands	2.81	0.30	0.08	0.01	0.22	7.9	26.9
Andhra Pradesh	665.08	4.22	6.37	0.06	-2.09	-0.30	14.60
Arunachal Pradesh	8.65	0.72	0.13	0.03	0.62	7.20	27.00
Assam	224.14	1.22	2.82	0.05	-1.55	-0.70	18.90
Bihar	645.31	4.61	22.41	0.58	-17.23	-2.70	28.60
Chandigarh	6.42	2.39	1.07	0.05	1.38	21.40	40.30
Chhattisgarh @	176.15	3.39	4.45	0.03	-1.03	-0.60	18.30
Dadra & Nagar	1.38	0.48	0.03	0.01	0.45	32.60	59.20
Damen & Diu	1.02	0.48	0.05	0.02	0.45	44.10	55.70
Delhi	94.21	21.73	4.58	0.49	17.64	18.70	47.10
Goa	11.70	1.21	0.33	0.05	0.93	8.00	15.20
Gujarat	413.10	11.26	4.51	0.15	6.89	1.70	22.70
Haryana	164.64	12.31	5.88	0.27	6.70	4.10	28.40
Himachal Pradesh	51.71	1.88	1.66	0.28	0.51	1.00	17.50
J&K @	77.19	0.87	1.22	0.03	-0.32	-0.40	30.00
Jharkhand @	218.44	5.03	6.16	0.02	-1.11	-0.50	23.40
Karnataka	449.77	8.79	7.69	0.21	1.31	0.30	17.50
Kerala	290.99	2.35	4.32	0.32	-1.65	-0.60	9.40
Lakshadweep	0.52	0.04	0.01	0.0002	0.03	6.40	17.20
Madhya Pradesh	485.66	8.15	8.43	0.07	-0.21	0.00	24.30
Maharashtra	789.37	32.32	8.97	0.48	23.83	3.00	22.70

Contd/--

States/UTs	Population (1991)	In-migrants from other states (2001)	Out-migrants (2001)	From other countries (2001)	Net In-migrants (2001)	Migration Rate (per 100) 1991-01	Growth rate of population 1991-01
Manipur	18.37	0.05	0.31	0.002	-0.26	-1.4	24.6
Meghalaya	17.75	0.34	0.20	0.01	0.14	0.8	30.7
Mizoram	6.90	0.23	0.32	0.08	-0.007	-0.1	28.8
Nagaland	12.10	0.34	0.52	0.02	-0.17	-1.4	64.5
Orissa	316.60	2.30	4.41	0.04	-2.07	-0.7	16.3
Pondicherry	8.08	1.05	0.36	0.01	0.71	8.8	20.6
Punjab	202.82	8.11	5.01	0.27	3.37	1.7	20.1
Rajasthan	440.06	7.24	9.97	0.12	-2.62	-0.6	28.4
Sikkim	4.06	0.23	0.06	0.08	0.24	5.9	33.1
Tamil Nadu	558.59	2.70	6.74	0.26	-3.78	-0.7	11.7
Tripura	27.57	0.40	0.24	0.11	0.28	1.0	16.0
Uttar Pradesh	1320.62	10.79	38.11	0.32	-27.00	-2.0	25.9
Uttarakhand[@]	70.51	3.52	3.55	0.29	0.27	0.4	20.4
West Bengal	680.78	7.25	7.30	2.59	2.54	0.4	17.8

Source: Table D2, Census of India 2001,
Note: @ - Population of new states for 1991 Census is recast from the states from which they are formed. For Jammu & Kashmir estimated population is shown,
All the figures are in lakhs.

Since more than 80 per cent of migrants either did not have any formal education or dropped out before secondary school (Census 2001, D series, D7), they were generally employed in domestic work, hospitality services (small hotels and roadside restaurants/tea shops etc.), security services, small scale industry (leather accessories, diamond cutting etc.) construction, brick-kilns, transportation, mines, textile, stone quarries, fish and prawn processing and agriculture (crop transplantation, and harvesting - sugarcane harvesting, plantations), street vending etc. (Deshingkar and Akter, 2009). The continuation of mass migration from these states also suggests that these states have left others perpetually behind in terms of socio-economic development. In this regard, it may also be noted that the places of destination have swelling urban population but without much urbanization which has policy implications in terms of development and demand for urban amenities (Das, 2012).

1.3 Dynamics of Migration from Uttarakhand

Uttarakhand, as a geographical region, is primarily characterised by its sparse population, and engagement of the people in predominantly primary economic activities, coupled with inadequate infrastructure and negligible presence of secondary and tertiary sectors especially in the hilly part of the state. Subsistence based rain-fed agriculture has been the primary source of

livelihood for the hill population. Bereft of employment opportunities and any credible source of earning, hill population have been migrating to plains for a long time and most of them have been serving the Indian defence forces for sustenance of their families. An overwhelming majority of the migrants work in the informal sector with low paid jobs. Out-migration, thus, is seen by most households primarily as a survival, rather than an accumulation strategy. The Dependency Model and Migration, Remittance, Aid and Bureaucracy (MIRAB) also highlights that the major reason of migration is the need to increase income and to reduce labour surplus within the extended households (Amimtham, 2008). In fact, the 'push' factors have been more forceful than the promise of a good life in the cities (Jetly, 1987). Belwal (2007) has found that one-third of the population of Garhwal has moved out for better opportunities of livelihood. Migration in due course of time has also been encouraged by the promise of better life, desirable occupation and sufficient accessibility to various services including education and health (Amimtham, 2008). The NSSO round 64 reveals that 844 out-migrants (per 1000 population) from rural areas have moved out for employment.

As is evident from Table 1.4, there has been more out-migration from Uttarakhand than in-migration in 2001, if migration from other countries is excluded. The reasons for migration from Uttarakhand do not seem to be different from the rest of the country, as could be discerned from Table 1.5. In the case of Uttarakhand too, 65 per cent of males out-migrated due to employment seeking and movement of the household to other places. An overwhelming proportion of females i.e., 66 per cent moved out due to marriage.

Table 1.5: Reasons for migration from Uttarakhand to Delhi and Uttar Pradesh

Migrants	**Migrants (duration 0-9)**			**Percent migrants (duration 0-9)**		
	Persons	**Males**	**Females**	**Persons**	**Males**	**Females**
Uttarakhand's total out-migration	30.71	10.10	20.61	100.0	100.0	100.0
Work/Employment	4.21	3.83	0.38	13.7	37.9	1.9
Business	0.13	0.11	0.02	0.4	1.1	0.1
Education	0.51	0.37	0.14	1.7	3.6	0.7
Marriage	13.70	0.08	13.62	44.6	0.8	66.1
Moved after birth	0.23	0.14	0.09	0.8	1.4	0.5
Moved with households	6.59	2.71	3.87	21.4	26.9	18.8
Other	5.34	2.86	2.48	17.4	28.3	12.1
Uttarakhand's out-migration to Delhi	1.14	0.62	0.52	100.0	100.0	100.0
Work/Employment	0.41	0.39	0.02	35.9	62.8	3.7
Business	0.004	0.003	0.001	0.4	0.5	0.2
Education	0.04	0.03	0.008	3.1	4.4	1.5

Marriage	0.17	0.001	0.17	14.6	0.2	31.9
Moved after birth	0.02	0.01	0.01	1.8	1.8	1.9
Moved with households	0.42	0.14	0.28	37.2	23.0	54.1
Other	0.08	0.05	0.03	7.1	7.3	6.7
Uttarakhand's out-migration to Uttar Pradesh	1.03	0.35	0.68	100.0	100.0	100.0
Work/Employment	0.18	0.16	0.02	17.7	47.0	2.7
Business	0.004	0.003	0.002	0.4	0.8	0.2
Education	0.03	0.02	0.007	2.8	6.1	1.0
Marriage	0.44	0.005	0.43	42.2	1.3	63.2
Moved after birth	0.006	0.003	0.003	0.6	1.0	0.4
Moved with households	0.31	0.12	0.19	30.2	33.6	28.5
Other	0.06	0.04	0.03	6.0	10.2	3.9

Source: Data Highlights – Table D1, D2 & D3, Census of India 2001,
All the figures are in lakhs.

As per the census of 2001, Delhi and Uttar Pradesh account for 32 per cent and 29 per cent respectively of the total out-migration from the state of Uttarakhand, probably because of proximity, marriages, and availability of job opportunities. Thus, Delhi and Uttar Pradesh together account for 62 per cent of the total out-migration. Tables 1.5 and 1.6 provide relevant information in regard of the migration from Uttarakhand to Uttar Pradesh and Delhi.

Table 1.6: Migration profile (Duration 0-9 years) to Delhi and Uttar Pradesh

Migrants	**Total**			**Rural**			**Urban**		
	Persons	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**
Total Out-migrants	30.71	10.10	20.61	-	-	-	-	-	-
Uttarakhand to Delhi	1.14	0.62	0.52	0.08	0.042	0.035	1.06	0.58	0.48
Uttarakhand to U. P.	1.03	0.35	0.68	0.44	0.09	0.35	0.59	0.26	0.33

Source: Census of India 2001,
All the figures are in lakhs.

Interestingly, while a much larger proportion of males have migrated to Delhi, the more favoured destination for females is Uttar Pradesh (Table 1.6). Thus in case of both these states, while male migration can be attributed to employment, marriage appears to be the main reason behind female out-migration (Table 1.5). It shall also be relevant to look at the age profile of migrants. The relevant information in this regard is provided in Table 1.7.

Table 1.7: Age-wise number of migrants from Uttarakhand

Age at migration	Number of migrants	Percentage
0-9	1.24	11.7
10-19	1.93	18.2
20-29	4.47	42.2
30-39	1.54	14.6
40-49	0.73	6.9
50-59	0.35	3.3
60-69	0.20	1.9
70-79	0.087	0.8
80+	0.037	0.4
Other	0.012	0.1

Source: Census of India 2001,
All the figures are in lakhs.

As could be discerned from Table 1.7, maximum migration occurs among the young adult people in the age group of 20-29 years, reflecting movements by young job seekers. There is also a steep decline in migration after the age of 39 years. Dependent population (age group 0-19 years), aggregating 30 per cent of the migrants, also form a sizeable chunk, suggesting migration with parents.

An examination of social break-up of the population of the out-migrants reveal that socially dominant groups such as Rajputs and Brahmins have overwhelming share in the out-migration, while the socially marginalized groups such as scheduled castes generally have not shown much tendency to move out (Jain, 2010). This difference could largely be attributed to economically and socially destitute conditions of the scheduled castes. Another factor that influences the out-migration decision is the connectivity of the potential migrants to informal channels such as friends and relatives, already living outside their place of origin, to seek/receive job information, recommendation and initial logistic support. In this regard, people from the upper part of the social hierarchy are better placed than those at the lower part of it (Jain, 2010).

Another important factor that needs mention here is the educational characteristics of the migrants from Uttarakhand. Only around 14 per cent of the out-migrants have been found to have received education up to graduate and postgraduate level. It implies that an overwhelming majority of the migrants have not moved beyond intermediate level of education, which leaves them ill-equipped to get good jobs. As a consequence, most of them either try to find jobs in defence/para-military forces or accept low paid jobs in the informal sector (Jain, 2010).

The marital status reveal that around 82 per cent of the out-migrants have migrated before getting married (Jain, 2010). The migrants prefer to settle down in their jobs before getting married. However, because they are mainly involved in informal sectors, their incomes do not support to take their wives to the place of destinations. The studies have shown that most of the rural out-migrants are not accompanied by their wives (Singh *et al.,* 1981; Singh, 1985; Sajjad, 1998). The prevalence of conjugal separation is observed mainly among migrants from rural areas (Banerjee, 1984). The proportions that have left their wives in their places of origin are highest among new arrivals and are progressively lower among older cohorts (Banerjee, 1984). But few studies have also found that migrants who plan to settle in the city are not likely to leave their wives in their places of origin (Banerjee, 1984). Kothari (2002) reports how potential migrant workers require wives to stay behind and look after their children, land, house and livestock.

It may also be pointed out here that male-dominated migration has led to a demographic imbalance in society, because only the aged, women and children are left behind to look after agricultural work, cattle etc. (Nautiyal, 2003). This has given a very deserted look to most of the villages in Uttarakhand which once bustled with activities.

1.4 Impact of Male Out-migration on Socio-economic and Demographic Characteristics

Migration has been a catalyst in bringing about substantial change in the social and demographic structure of a given area as well as in population growth, improving socio-economic condition of the people. Inter-state migration from the 'poor' to the 'developed' states has multidimensional effects on both the sending and the receiving communities (Hadi and Kamal, 1997). A close observation of the complex structure of migration reveals that a major portion of the migrants move on a short term basis which may be for a number of years or migrating each year for a certain period of time (IOM, 2005). In India, this short term migration like temporary, circular, and seasonal migration, or the temporary movement of the people in search of opportunities for agricultural work, or for off–farm rural employment in construction and services, has been an integral part of the lives of the poor people (Rogali *et al.,* 2002).

Among many consequences of male migration in a given geographical region is the change in age and sex structure of the sending communities (Davin, 1996). Prasad *et al.* (2009) have

found out that the median age of migrants to Greater Mumbai Urban Agglomeration (GMUA) has been 19.4 years and a significant number of the migrants have been married. Most of the migrants have moved from the rural areas and they maintain regular contact with their family members and relatives in their native land and in most of the cases send remittances.

Migration, in the urban area has a shaping impact on the lives of people migrating to the urban areas in terms of family structures, a shift from extended to nuclear families, a weakening of traditional family obligations and rituals, and a tendency towards having fewer rather than more children (Khan, 2005). However, the family structures are also affected by the absence of family members either on a permanent or temporary basis, both in destination and origin areas (Hugo, 1987). Migration has pushed the extended households to focus on the nuclear household structures resulting in the emotional nucleation of the family, reducing effective protection for elderly parents and leading to serious psychological problems (Hugo, 2000). Interestingly, the data from the India Human Development Survey (2005) indicate that the household size does not differ by husbands' presence in the households. It seems that other family members, particularly older relatives, fill the gap. This suggests that the left-behind wives live in extended households in the absence of their husbands. In contrast, widows/divorced/separated women live in nuclear households (Desai and Banerji, 2008), although it is considered unusual for women to live alone. However, husbands' migration may be feasible only if young women are able to live with other family members (Haan, 2006).

The after-effects of migration may also indicate that there has been a significant shift in the dependency burden of the families from younger to older generations due to migration. There have been changes in the age composition of the family, with a skewed effect in the direction of a larger proportion of older persons in the families (UNESCO, 1982; De Silva, 1994). Also, some major sociological changes occur in the family structures of the households like family composition, family separations and the abandonment of old people, outcomes related to children in terms of labour, health and education (Markova, 2010).

The two major causes of rural migration have been the absence of non-farm employment and low agricultural production which has resulted in a dynamic growth of seasonal migration (Rogaly *et al.,* 2001). However, a decisive factor behind male migration has been the availability of other family members to care for the families they leave behind (Haan, 2006). There is also a sharp distinction between the families living with salaried or professional

income and the families surviving on retirement income or remittances (Desai and Banerji, 2008). Labour migration is always associated with certain kind of uncertainties. For instance, when it is successful, it brings economic benefits and adds to the economic stability of the families. The lack of good employment, on the other hand, may result in greater economic hardship for the families (Sadiqi and Ennaji, 2004). As migrant workers are working in private sectors in the cities, largely on contract basis, the nature of their work profile is quite temporary and uncertain.

The changes in the patterns of expenditure and investments of households, having migrant members, are some major impacts of migration and remittances in the rural areas (Katz and Stark, 1986; Lucas and Stark, 1988; Lucas, 1997). Migrant remittances have been instrumental in uplifting the credit constraints of the family in rural areas to invest in creative and productive activities (Woodruff and Zenteno, 2007) or in the human capital of the next generation (Beine *et al.,* 2008; Yang, 2008). Remittances from the migrants have essentially been used for social and familial purposes like consumption, repayment of loans and meeting other social obligations which are the prime concerns of migrant income. International Fund for Agricultural Development (IFAD) has observed that the migrants' remittances have been a significant source of fund which fulfils immediate needs of the migrants' families in home countries and which further enables the families to save, and invest in education and health. In addition to that, the remittances may also act as a catalyst in poverty reduction and spurring economic growth in the developing countries (IFAD, 2007, Durand *et al.,* 1996; Taylor *et al.,* 1996; Zachariah *et al.,* 2000). While Shrestha *et.al.* (2012) found that the impact of remittance at the individual and household level has been established its impact at the national level remains inconclusive. It has further been observed that the remittance of the migrants has essentially been used as an additional income for meeting consumption expenditure and to invest in productive activities (Mendola, 2006; Amimtham, 2008). However, remittances from the migrants did not seem to have made much impact of the savings and consequently capital formation precisely for the reason that they are irregular and smaller (Krishna, 2002).

Remittances from the migrants have had a significant role in increasing consumption in the rural areas (Afsar, 2003). However, remittances are generally considered by the economists as a conventional measure of the economic impact of migration (Asis, 2004). A comparative analysis of the migrant households and non-migrant household suggests that there is a considerable difference in the income and consumption level of the households (Sharma, 1997;

Krishnaiah, 1997). It appears that the income and consumption levels of migrant households are generally higher than that of similarly placed non-migrants (Sharma, 1997; Krishnaiah, 1997). Thus, remittances seem to change the household consumption levels and may also affect the patterns. However, unlike plethora of research studies which have emphasized that rural income and consumption increases because of out-migration, Essang and Mabawonku (2007) are of the opinion that rural areas are unable to receive the same amount of economic or capital return from the migrants which is normally invested in the out-migrants in the form of their education. It is considered to be so because migrants often get engaged in low earning jobs making it very tough for them to remit sizeable amounts of money. The evidence on investment is, however, mixed. While, some of the migrants had reported to have invested in housing, land and consumer durables; others have shown greater interest in investing in agriculture. It may be noted here that although there has been a dearth of investment in productive farm or non-farm activities, a number of studies do report such investments by a small percentage of migrant households (Oberai and Singh, 1983; Krishnaiah, 1997; Sharma, 1997; Rogaly *et al.,* 2001).

The remittances of the migrants have a considerable impact not only on the individuals or families but also on the communities especially, when the high level of remittance flows to the left-behind families (Lu and Treiman, 2006). The remittances have also been the reason of growth of the income, as well as, the prime reason of increasing inequality in the rural areas (Adams, 1989). Since, this phenomenon is truer of international migration, it would be interesting to see whether it also happens in case of internal migration as well. Taking cognizance of the research studies which have reported that remittances sent by migrants have not been sufficient enough to improve the households' well-being or in pushing economic development (Parinduri and Thangavelu, 2008), it appears that remittance may not play a significant and decisive role in the lives of the left-behind and/ or their healthcare (Parinduri and Thangavelu, 2008). Generally, the contemporary discourse on migration has presented a positive picture of migration as it has a significant role to enhance the incomes, asset holdings, and poverty levels of household members left behind (Adams, 2007).

1.5 Impact of Out-migration on Agriculture

A large section of rural Indian households still perceives agriculture as a main source of income, as it continues to offer employment and subsistence to a sizeable number of households (Desai *et al.,* 2010). However, due to inevitable reasons, in contemporary times,

agricultural employment has been decreasing as most of the rural areas are undergoing a process of 'de-agrarianization', with younger workers seeking to move out of agriculture (IFAD, 2007). Therefore, in recent times, the rural workforce has been observed to have significantly greater stake in non-farm sector (Jha, 2011). Where the concentration of the agricultural population is low, migration may cause reduction in agricultural output unless compensatory yield-increasing innovations are introduced or the vacuum created by urban migrants is filled by rural-rural migrants (Udoh, 1970).

Interestingly, while poverty and continued deterioration of rural agricultural economy appears to be the main causes of rural-urban migration, it is also true that rural-urban migration accelerates the deterioration of rural agricultural economy (Chilimampunga, 2006; Mini, 1998 and 2001). The deterioration of rural economy and resultant poverty and food insecurity has occurred in the rural areas mainly because of the drain of youth from the rural populace and concentration of older and aged members to constitute the labour force of the rural areas (Olayiwola, 2009). The labour shortage may have been the reason of the abandonment of farm lands, introduction of machinery, adoptions of labour-saving technologies, lower cropping intensity, changes in tenancy arrangements, environmental degradation etc. (Amimtham, 2008). In fact, the household members left behind, participate in subsistence agriculture and require the labour of all of their members during peak production periods (Bever, 2002). Hence, out-migration, per se, has far more implications such as the feminization of agriculture and an increase in women's workload as the male migration brings significant shift in the gender division of labour (Croll and Huang, 1997), than the simple analysis of remittances flow to the places of origin. It has also been reported that in many different parts of South Asia and Africa, persistent drought and structural problems have pushed rural wages and work availability in agriculture sector to quite low levels, and hence the remittance from urban to rural has overtaken the income from agricultural sector (Deshingkar, 2004). In the context of the region under study i.e., Garhwal, the situation is remarkably different as the cultivable land comprises sub-divided and fragmented mostly rain-fed small terraced fields wherein modern agricultural implements cannot be used. As a result, women's workloads swell tremendously for the want of out-migrated able-bodied male members who otherwise would have undertaken a majority of the agriculture related tasks, especially men-specific works. Agriculture, in this kind of topography, requires hard labour and is less productive and thus migration becomes a tempting route to overcome drudgery and misery of life (Nautiyal, 2003). Taking cognizance of these

tough ground realities, it has been suggested that the most consistent policy for decreasing rural–urban migration should be built upon the improvement of agricultural per capita earnings (Stiglitz, 1969; Todaro, 1976; Byerlee, 1974; Goldsmith *et al*., 2004).

1.6 Living Arrangements and Familial Lives of the Left-behind Wives

Existing literature has also documented several negative impacts of men's migration on the women who remain behind (Roy and Nangia, 2005). For instance, women have reportedly been left with greater stress and vulnerability, an increased workload and a high chance of extended family intervention. It increases women's workload as men's responsibilities and tasks are automatically transferred to their wives or to other women (Boehm, 2008; Nautiyal, 2003; Khaled, 1995; Grawert, 1992; Zachariah *et al.,* 2000). For instance, families have to make adjustments in their lifestyles and shoulder greater responsibilities as a consequence of the migration of a male member (Das and Murmu, 2010; Gulati, 1993). In absence of male members, the women are left on their own to adjust in the changing circumstances; as a result, their role and status often undergo change (Hugo, 1997). For example, Nautiyal (2003) in his study has reported that women's workload actually came to around 17 hours per day. A few studies undertaken on Uttarakhand have reported that when men migrate to cities, apart from the domestic chores of cooking, childcare, fetching fuel, fodder and water; the tasks of caring for livestock and agricultural work also fall on women's shoulders (Bora, 1996; Mathur, 1983; Swarup, 1993). In the hilly areas, the women are estimated to contribute between 55 and 60 percent of the total labour, except for ploughing of the land and transporting the final produce to markets, as these jobs are primarily considered male tasks. However, women perform almost all other agricultural work (Mathur, 1983). It has also been reported that in rural areas, the independence and autonomy of the left-behind women does not mean much because of their poor status and ignorance (Nautiyal, 2003). If a man leaves his wife in an extended household and sends remittances to his parents, the mother and father-in-law dominate family affairs (Lokshin and Glinskaya, 2008). The studies have found that migration does not bring any change in women's position and women's autonomy and de facto headship is a fiction (Dawson, 1995). There also appears to be a consensus that being separated from one's husband for long periods is not easy: emotionally, physically, for daily life arrangements and in terms of the relationships with in-laws in the (common) case of shared residence (Mondain *et al.,* 2009). Therefore, it may be concluded that a husband's migration can have a mixed effect on gender relations between his wife and other members of the sending households.

A significant effect of migration on the family is the conjugal separation, though this dimension has remained much less explored and under-researched, though migration has been a key factor in affecting families, households and communities, bringing changes in the gender division of labour and increasing women's workload. The social, physical, psychological, and emotional issues involve not only the permanent or temporary absence of the migrant but also the influences of remitted earnings, goods, ideas, attitudes, behaviour and innovations transmitted back to them by the out-migrant. While the remitted earnings might relax financial constraints of the households and improve their capacity to invest in the health, education of the children (Alcaraz *et al.,* 2012; Yang, 2008; Cox-Edwards and Ureta, 2003), the long absence of the out-migrant male member (father) may also have negative impact on the child outcomes, in terms of health care, academic and emotional accomplishments, that may overshadow the positive effects of improved financial leverages (Giannelli and Mangiavacchi, 2010; Lahaie *et al.,* 2009). Similarly, conjugal separation due to out-migration of husband, may adversely affect the physical, emotional, and social well-being of the wives left-behind (Kishtwaria, 2007; Sekher, 1997). Many studies have supported the view that migration also changes relations at household and community levels (Srivastava and Sasikumar, 2003), although wife and children, generally, are left in the care of parents or in some cases other relatives (Parasuraman, 1986). In the long term, however, successful male labour migration may lead to residential independence from these extended family members by establishing a household separate from in-laws and relatives (Yabiku *et al.,* 2010). The absence of husband may also enlarge the role and responsibilities of the left-behind wives in the households (Desai and Banerji, 2008). There are, however, diverse views regarding the change of women's status in the family due to male out-migration. It is usually believed that women get more authority and power in decision-making (Findley and Williams, 1991), though studies about little change in the status of women, after migration of the husband, are not scant (Shaheed, 1981). For instance, it has been reported that in the absence of senior-most/majorly earning male authority, the autonomy and decision-making power may be usurped by the other male members or older female family members (Desai and Banerji, 2008). Thus, male migration from the poor peasant or landless households by itself neither leads to greater autonomy for women nor pulls the family out of its poverty (Jetley, 1987). However, the studies in Morocco (Sadiqi and Ennaji, 2004), Armenia and Guatemala (Menjivar and Agadjanian, 2007), and Bangladesh (Hadi, 2001), have supported the view that the left-behind women have greater decision-making power, management duties and autonomy.

Similarly, it has also been reported that male out-migration has been instrumental in influencing women's position as they appear to be directly participating in the productive sphere of the economy as workers and decision-makers and increase the level of their interaction with the outside world (Srivastava, 1999; Ghosh and Sharma, 1995). Further, due to increased male out-migration, wives reportedly become 'de-facto' heads of the households; more so if they reside in nuclear households. Hence, migration has the potential to change the household composition by increasing the women-headed households (Zachariah *et al.,* 1999).

Khaled (1995) has compared the labor force participation rates across wives of migrants and non-migrants in Jordan. He found that the wives of migrants had higher labor force participation than non-migrant wives, even after controlling for education. It was further reported that these women had to take employment out of financial needs due to insufficient remittances, rather than aspirations for becoming financially self-dependent (as cited in Yabiku *et al.*, 2010). These findings were further supported by other studies undertaken in other parts of the world (Ganguly and Negi, 2010; Durand and Massey, 2004). Some studies, on the other hand, could not find a relationship between labour migration and women's employment. For instance, Agadjanian *et al.*, (2007) did not find a difference in employment rates between women married to migrant men and those married to non-migrant men in Armenia. The mixed findings related to men's labour migration and women's employment may emerge from the fact that all studies are normally context specific. Thus, it can be opined that men's migration lead to women's employability only when employment activities are available, when women have skills to match these opportunities, and when their employment is positively encouraged or at least tolerated (Yabiku *et al.*, 2010).

1.7 Nutrition and Health status of the Left-Behind Household Members

The impact of migration on nutrition and health care of the left-behind household members has received attention of the researchers and policy makers world-wide (Amuedo-Dorantes and Pozo, 2009; Acosta *et al.* 2007; Bruyn and Kuddus, 2005; World Bank, 2006; Richard, 1998). Most of the literature has theoretically postulated and found empirical evidences to suggest a positive association between remittances and increased household investment in nutrition and health (Valero-Gil, 2008; Frank and Hummer, 2002). Nevertheless, such an association is not uniform across the migrant groups for the diversity in the importance and predictability of remittances relative to other sources of household income, as well as the awareness and

sensitivity towards health care needs (Amuedo-Dorantes and Pozo, 2009). Some studies have also found evidences of negative impact of migration on the nutrition and health care of the left-behind families (D'emilio *et al.* 2007; Deshingkar, 2006; Kanaiaupuni and Donato, 1999; Levitt, 1997; Perez-Stable *et al.,* 1986). It is also affected by the nature of employment. For instance, if the out-migrants are employed in the formal sector in general and public sector/government departments in particular, the dependent family members are likely to get better health care through their visits to the places of residence of out-migrants during ailments. Such families are also likely to have better nutrition due to predictability of the remittances as compared to those who are employed in the informal sector. Prima facie, the left-behind families of out-migrants (employed in formal sector) are likely to enjoy better and regular income, therefore, their likelihood of spending more on the health care, as compared to their counterparts working in the informal sector, is higher (Dorantes and Pozo, 2009). The health care of the recipient households of higher and regular remittances may also be promoted by their improved capacity to invest in other constituents that promote and sustain good health viz., better nutrition, housing, potable water etc. (Duryea *et al.,* 2005). There is also a high probability that out-migrants may also make their families aware of the importance of health and nutrition through their exposures to the outside world (IFAD, 2007). The contemporary literature also suggests that households' investments in improvements of their living conditions (e.g. better housing) and medical care are the concerns directly addressed by remittances from migrants that tend to affect mortality rate indirectly (D'emilio *et al.,* 2007). Although, the bulk of remittances are still used for consumption (Islam, 1991; Afsar, 2003), this, yet, may not be a cause of concern as long as additional income is invested to improve the nutrition and health status of the households (Deshingkar and Akter, 2009). Migration can be instrumental in affecting the health care through different channels (Amuedo-Dorantes *et al*., 2007; Kanaiaupuni and Donato, 1999). The first channel may be the alleviation of household's income constraints and its improved capacity to access healthcare facilities (Wagstaff, 2005; Gertler and Gruber, 2002). The second may be that the out-migrant may function as a source of information which could motivate households to adopt healthier lifestyles or better health seeking behaviour (Hilderbrandt and McKenzie, 2005). The out-migrants, through a frequent and regular contact with the left-behind family members, disseminate their acquired knowledge effecting a modification in the health care seeking behaviour of the migrant households (Hadi,

1999; Brittain, 1990). Similarly, Parasuraman (1986) in his study has observed that migrant households have lower morbidity in comparison to other households.

The women living in the hilly regions of Uttarakhand, in general, have been facing a perennial problem of under-nutrition due to subsistence agriculture, poor food intake, and very demanding physical work. The women who were engaged in agricultural activities in Uttarakhand are reported to be experiencing bigger prevalence of anaemia and are more underweight than the women who are working in non-farm sector. Added to this is the poor access to the health care facilities which are either highly inadequate or are inaccessible due to tough terrain, poor ability to pay for the services, and unavailability of qualified medical professionals especially in remote areas. The small and scattered nature of rural settlements make the matter worse as improvement in the access to health care facilities in these areas become a major challenge for policy makers and service providers (Agrawal and Negi, 2012). In the light of the existing literature and ground realities in the area under study, it would, therefore, be interesting to examine the impact of remittances on the health care seeking behaviour of left-behind families.

1.8 Need for the Study

While migration has been treated more as a survival strategy for poor households where employment opportunities are either meager or totally absent, it has far reaching implications for the households in general and wives, children and other family members in particular. All are affected differently and, therefore, migration may mean different things to different family members. The magnitude of these effects is being increasingly examined, though they are yet to be fully understood. Amongst all of them, most affected are the left-behind wives who are traditionally expected to accept the long absence of husbands without much murmuring, provide care to the elders and rear and ensure schooling of the children. The noteworthy fact in this regard is that younger wives of the migrants are more likely to stay back than the older ones. At the same time, there is a high probability that these younger women would live in an extended household which may quite reduce the positive effects of husbands' migration (Desai and Banerji, 2008). Although there are fair number of studies exploring these aspects, yet given the fact that such studies are context specific (due to diversity of gender relations across the world, and cultural and social attitude towards migration), and, therefore, may have limited scope for generalization, it would be pertinent to examine the issue in the backdrop of a

hill economy which has a long tradition of migration, coupled with positive social attitude towards the same to the effect that the issue became part of the general proverb '*Pahad ka paani aur jawani uske kam nahin aate'* (the water and youth of hills do not stay back).

In migration research, focus has been mainly on women migrants (Pedraza, 1991; Hondagneu-Sotelo, 1992; Reshmi, 2008). The available literature does not really sketch the impact of male out-migration on the left behind wives in terms of empowerment (Connell, 1984; Pessar and Mahler, 2003; Mahler and Pessar, 2006). A number of sociological studies have noted the prevalence of conjugal separation, but studies which identify important empirical determinants of conjugal separation, are rare (Banerjee, 1984). In examining the impact of labour migration on the family, it is important to establish that most of such movement is non-permanent and that most involves the conjugal separation (Hugo, 2000). Indeed, given the focus on migrants and narrow ways in which migration processes have been defined, the migration literature can be said to have thus far 'left-behind' the 'left-behind' (Toyota *et al.,* 2007; Roy, 2003; Desai and Banerji, 2008). Hence, an attempt has been made in this study to understand dimensions related to conjugal separation and the differences in the lives of wives of out-migrants and those of non-migrants, if any.

1.9 Objectives of the Study

The broad objective of the study is to examine the socio-economic, physical and psychological welfare aspects of the wives of out-migrants by taking wives of non-migrants, as the reference group. In pursuance of this, the study aims:

1) To study the socio-economic characteristics of households with out-migrant and non-migrant male members in order to examine if there exists any difference in these characteristics.
2) To study the difference in the pattern of farm and non-farm activities between households with out-migrant and non-migrant male members.
3) To examine the difference, if any, between wives of out-migrant and non-migrant husbands in the context of the general and reproductive health status.
4) To examine the change in living arrangements, the extent of familial support, and intra-family conflicts, work and decision making participation as a consequence of the migration of husbands.
5) To examine as to how the wives of out-migrant husbands perceive the phenomenon of migration and how they respond to it.

1.10 Hypotheses of the Study

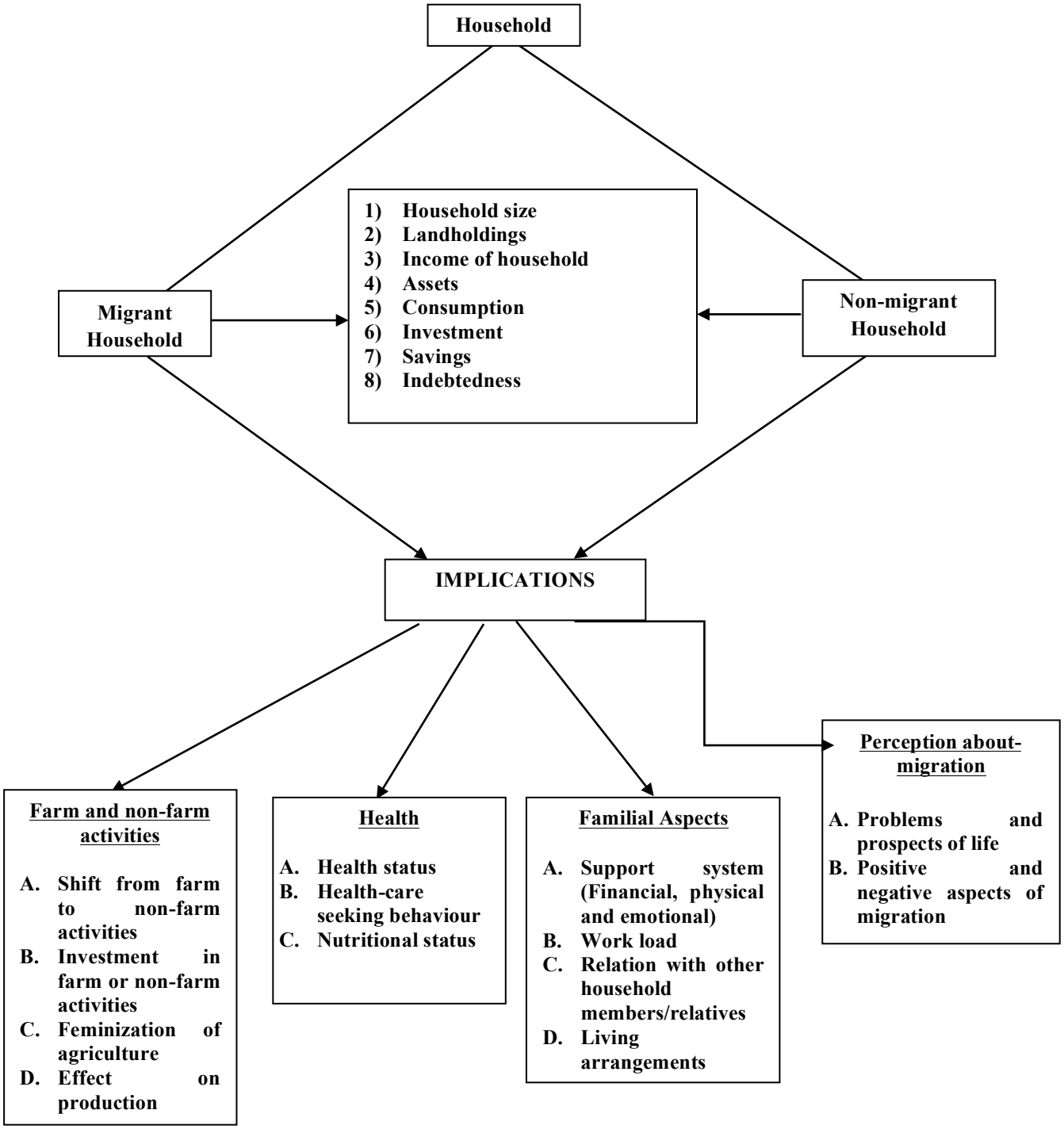
1) There are significant socio-economic differentials among households with out-migrant and non-migrant husbands.
2) Husband's out-migration has significant impact on the cereal production in farm lands as compared to non-migrant households.
3) Husband's out-migration entails significant impact on investments in farm activities as compared to non-migrant households.
4) Husbands' out-migration has significant impact on the general and reproductive health of the left-behind wives.
5) Husbands' out-migration has significant impact on the stress level of the left behind wives.
6) Husbands' out-migration has significant impact on agriculture related decision making among the left-behind wives.
7) Husbands' out-migration has significant impact on women's participation in wage labour market.
8) Husbands' out-migration exercises significant impact on the number of working hours (including daily chores) of the left-behind wives.

1.11 Conceptual Framework

Although people migrate for many reasons, this study focuses primarily on one particular type of migration known as the long term migration of the male work force, which eventually results in the relocation of an individual or household (UNICEF, 2012) to the place of destination. This conceptual framework focuses on much under-explored area of research i.e., left-behind wives of the migrants, which was always overshadowed by what is more glaring i.e., causes and consequences of migration, taking migrants as the central figure. Since migration is rampant or pervasive of Uttarakhand, it widely impacts socio-economic-psychological welfare of the left-behind population comprising wife, children and others who might have access to more financial resources owing to remittances, but at the same time may stand deprived of critical emotional support from the migrants. This study takes household as the study unit and has included both kinds of households i.e., households comprising of a migrant member and households where no migration took place. The latter acts more as a reference group. However, including them may reveal much vital information which otherwise would have not been possible. The impact of migration on the migrant household is studied on four broader

parameters: Farm and non-farm activities, health care seeking behaviour, familial aspects, and how the migrants' household members perceive the migration in terms of its economic outcomes and, quality of life of the family members, in particular that of the wife and children of the migrant. The same is summed up in Figure 1.2.

Figure 1.2: Conceptual framework for the study



1.12 Organization of the Thesis

The thesis has been organised into eight chapters as per the details given below:

Chapter one: Introduction, Review of literature, Need for the Study, Objectives.

Chapter two: Data and Methodology.

Chapter three: Profile of Sample Population.

Chapter four: Pattern of Farm Activities.

Chapter five: Health status and Treatment Seeking Behaviour.

Chapter six: Familial Life and Work Participation.

Chapter seven: Perception about Husbands' Out-migration.

Chapter eight: Conclusion and Policy Implication.

CHAPTER 2: DATA AND METHODOLOGY

2.1. Introduction

In India, the studies on the migrants and their assimilation at the place of destination are generally abundant. The studies are focussed on how the migrants cope up with their new environment and their livelihood strategies. However, the studies on those left behind in the villages (or at the places of origin) are few. Hence, the present study focuses on the left-behind wives due to their husbands' out-migration.

This chapter discusses the data sources and methods of analyses used to accomplish the objectives of the present work. It provides information on the selection procedure of the study area, sampling design, respondents, and other relevant aspects. Main contents of the questionnaire used during the survey to collect data pertaining to the households and individuals are also discussed. This chapter, in addition, provides comprehensive information on the research design, and different statistical tools used during data analyses. It finally discusses limitations of the data.

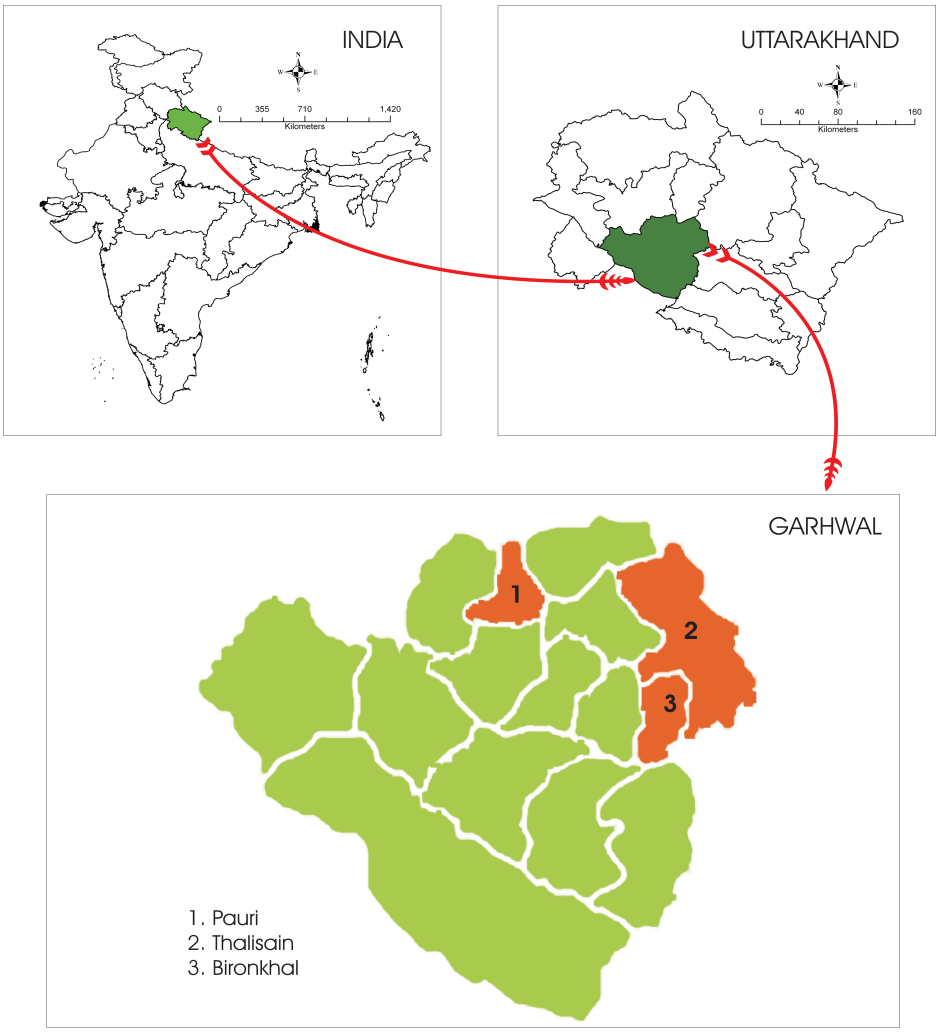
2.2. Data Sources

The primary data for this study was collected in 2011 from nine villages located in the Pauri Garhwal district of Uttarakhand. It may be mentioned here that the state of Uttarakhand, with Dehradun as its capital, was carved out of the parent state of Uttar Pradesh on 9th November 2000, and became the 27th state of the Republic of India. The state has a total geographical area of 53,483 square kilometres, of which 93 per cent is mountainous. About 34,650 square kilometres area is under forest cover. The recorded forest area constitutes around 65 per cent of the total reported area, though the actual cover based on remote sensing and satellite imagery information is reported to be only 44 per cent[1]. As per the 2011 Census, the population density of the state is 189 persons per square kilometre. For administrative purposes, the state has been divided into two sub-divisions, i.e., Kumaon and Garhwal divisions. The former includes six districts, namely, Almora, Bageshwar, Champawat, Nainital, Pithoragarh, and Udham Singh Nagar; while the latter comprises seven districts, viz., Dehradun, Haridwar, Pauri Garhwal, Rudraprayag, Tehri Garhwal, and Uttarkashi. The Pauri Garhwal district is one of the districts

[1]Uttarakhand State: Perspective and Strategic Plan 2008-2027, Watershed Management Directorate, Dehradun, Uttarakhand.

in Uttarakhand, which has recorded consistently higher out-migration rates than other districts in Uttarakahnd. This study concentrates on the rural part of this district, situated in the central-northern part of the state, as rural-urban migration is more prevalent form of migration. The location map of the study area is presented in Figure 2.1.

Figure 2.1: Location map of study area



2.2.1. Features of the study area

Pauri Garhwal, a district of Uttarakhand state, encompasses a geographical area of 5,230 square kilometre and situated between 29° 45’ to 30°15’ latitude and 78° 24’ to 79° 23’ E

longitude[2]. The total population of the district is 6,86,527, in which the male population constitutes 3,26,406 and the female population comprises 3,60,121 (Census, 2011). This district is surrounded by the districts of Chamoli, Rudraprayag and Tehri Garhwal in the north, Bijnor and Udham Singh Nagar in the south, Almora and Nainital in the east, and Dehradun and Haridwar in the west. The Pauri Garhwal district is administratively divided into six *tehsils/*talukas, viz., Pauri, Lansdown, Kotdwar, Thalisain, Dhumakot and Srinagar, and fifteen developmental blocks, viz., Kot, Kaljikhal, Pauri, Pabo, Thalisain, Bironkhal, Dwarikhal, Dugadda, Jaihrikhal, Ekeshwer, Rikhnikhal, Yamkeswar, Nainidanda, Pokhra and Khirsu. Between 2001 and 2011 Census, the change in the population growth of the district is estimated to be -1.51%. As per the Census 2011, the density of Pauri Garhwal district is estimated to be 129 persons per square kilometre. The sex ratio of the district is 1103 females per 1000 male population (Census, 2011), while the child sex ratio is 899 girls per 1000 boys. The better female to male ratio is more indicative of considerable out-migration of male work force from the region.

2.2.2. Rationale behind the selection of the study area

One of the most dramatic changes that have occurred in Uttarakhand in the past few decades is a considerable surge in the rural out migration. According to Census 2001, total male out-migration for work/employment/business was around 83 per 1000 male population above 15 years of age and the same was 101 per 1000 male population above 19 years of age. Rural male out-migration for work/employment/business was 86 per 1000 rural males above 15 years of age and 105 per 1000 rural males above 19 years of age. Uttarakhand is among the states in India where male out-migration for work/employment/business is the highest. An in-depth exploration of socio-economic characteristics of those who move and those who stay and the processes by which they are compelled to or excluded from adopting migration as a livelihood strategy, is plausible (Kothari, 2002). As per the Census of 2001, Pauri Garhwal district of Uttarakhand has the highest male out-migration, as is evident from the fact that while Haridwar has only 34 male out-migrants per 1000 population (Haridwar), it is 239 per 1000 population for district Pauri Garhwal (Table 2.1).

[2]http://pauri.nic.in/

Table 2.1: Out-migration of rural males from Uttarakhand according to Census 2001

Districts	Population (per 1,000)	Districts	Population (per 1,000)
Almora	183	Rudraprayag	96
Pithoragarh	145	Bageshwar	93
Nainital	91	Champawat	91
Uttarkhashi	75	Uddham Singh Nagar	38
Chamoli	147	Haridwar	34
Tehri-Garhwal	134	Dehradun	58
Pauri-Garhwal	239		

*Migration rates for four newly formed districts have not been calculated as they are formed in year 2011.

Since this study focuses on migration, hence district Pauri Garhwal has been selected for this study.

2.2.3. Sampling design

This study broadly aims to examine the effect of male out-migration on the left behind households focussing mainly on wives. Therefore, the place of origin has been selected for conducting the research for the fact that it may give more accurate information on the circumstances responsible for migration. Further, it also provides the context in which migration takes place. Another equally important aspect of origin-based approach is its potential to include non-migrants from the same community. During the pilot testing of the questionnaire, it was found that most of the respondents (wives of out-migrants) reported out-migration of their husbands well before their marriage. Hence, it was difficult to examine the impact of out-migration of husbands on wives in terms of their health, welfare, living arrangements and perception about out-migration of their husbands. Considering these issues, this study has included wives of both migrant and non-migrant husbands so that both the groups can be compared and analysed.

2.2.4. Sampling procedure

This study involve intensive fieldwork and depends mainly upon primary data as the Census of India and NSSO records do not provide data for such an investigation. Under these circumstances, individual investigator is either forced to select a very small area or take the help of a sample survey in order to economise on the resources and time involved. In view of these constraints, it was decided to use the multistage sampling to select household in rural areas. A three stage sampling procedure was used to select a sample of 522 married women.

Out of the 15 blocks in the Pauri Garwhal district, three blocks i.e., Pauri, Thalisain and Birokhal were selected randomly in the first stage, to cover for heterogeneity in the population for the present investigation. The primary sampling units (PSU) were the 2001 Census villages in the study area which were listed in descending order based on male population growth rate and sex ratio, which served as proxy indicators for villages with high female population. Hence, high sex ratios and low male growth rate between 1991 and 2001 have been used as the base for selection of the villages.

At the second stage, three villages were randomly selected from each block based on the pre-defined criteria (male population growth rate and sex ratio), followed by a random selection of households within each PSU in the third stage. Nine villages were selected from the three blocks. In each development block, household listing task was carried out in each selected village which provided the necessary frame for selecting households at the third stage. The household listing task involved preparing up-to-date household listing and recording names of the heads of all the households in residential structures. The households, to be interviewed, were selected with equal probability from the household list in each area using systematic sampling. In order to get the total required sample, 58 households from each of the selected village were selected through a systematic random sampling procedure. Further, these 58 households were stratified into two third stage strata (TSS) as given below:

TSS 1: households that have at least one out-migrant

TSS 2: other households

These two lists were used as sampling frames: from each of them, 29 households were randomly selected. In each selected household, a wife was interviewed (in household classified as migrant, the wife of the migrant was interviewed). A comparable number of non-migrant households were randomly selected from the same villages for the study. The procedure resulted in a total sample size of 522 households. However, due to non-response and refusal, the total sample size comprised of 518 households (252 households with non-migrant husbands and 266 households with out-migrant husbands).

The sampling procedure used in the survey was not meant to produce a district or village-level representative sample of women married to migrants and non-migrants; rather it was chosen to

afford comprehensive comparisons between the rural women of migrant and non-migrant households.

2.2.5. Structure and content of the schedule/questionnaire

The interview schedule was prepared to collect both quantitative data as well as qualitative information. A semi-structured interview schedule was administered for the collection of quantitative data, while a check list was used to collect relevant qualitative information. The interview schedule contained two major parts, i.e. the Household Questionnaire (Schedule I), and the Questionnaire for wife (Schedule II). A complete version of the interview schedule is presented in Appendix. The schedule was first translated into the local language, and then used in the study area.

2.2.5.1. The questionnaire for household

The household questionnaire was designed to collect study-relevant household level information as well as complete information of husbands and children of women who were interviewed in migrant or non-migrant households. This schedule was divided into nine sections. The preliminary section of the schedule was structured to collect general information such as the name of the block, village, head of the household, religion and castes etc. Section 2 of the schedule focuses on information about characteristics of the household population. This section listed all usual residents in each sample household of the study area. For each person listed, information on age, sex, marital status, relationship with the head of the household, and education etc. were collected. Questions were also asked about school/college attendance for household members aged 4-25 years. Information on primary and secondary occupation was collected for members aged above 4 years. Section 3 is designed to collect information mainly related to the national and international migration of married male member(s) of the household including all major information about the individual such as age, education, occupation, income and remittances. The information collected in Section 4 was structured to assess the socio-economic condition of the household. This section was intended to collect information on the type and ownership of the house, number of rooms, availability of separate kitchen, type of cooking fuel, source of lighting, the main source of drinking water, type of toilet facility, ownership of livestock, household income, detailed information on the loan taken, and ownership of other selected items in the house. Section 5 was aimed at procuring comprehensive information on the educational aspects (such as educational status, reason for

not attending any educational institution, type of educational institution, and expenditure on education and related aspects) of the children. Section 6, 7, and 8 were meant to collect information on the consumer expenditure, household savings and investments respectively. Information on agricultural and non-agricultural activities of the household viz., total agricultural land, land given on lease, total agricultural production, investment in agriculture etc. were intended to be collected through questions listed in Section 9. A few of these questions were designed to capture the perception of the household related to agriculture, such as the decline in agricultural production over a period of time.

The basic information on household characteristics were arranged in the schedule mainly to find out the causes of out-migration, and what socio-economic factors have been more forceful in motivating people to move out from the place of origin. For instance, whether caste and other social elements have played any significant role in the pattern of out-migration or it is simply the economic constraints experienced by the household. Assessments of the different economic status of the migrant and non-migrant households and to what extent the process of out-migration has accelerated the economic well-being of the family were the key concerns while structuring the questionnaire. For this purpose, migrant and non-migrant households were intensively surveyed keeping in view their socio-economic conditions to ascertain the impact of out-migration. In order to fulfil this objective, the specific variables such as land share, household items, family income, per capita income, domestic budgeting etc. were taken into consideration

2.2.5.2. The questionnaire for woman

The questionnaire for woman was structured to interview the woman (in the migrant and non-migrant sample households), who was usual resident of the sample households. This schedule comprised nine (Section 10 to 18) sections. Section 10 was designed to compile primary information about the woman, including her reproductive history such as age at first childbirth, survival status of all births, the case of still births, child deaths and sex composition of the children. The next section (Section 11) procured information on nutritional status of woman in regard to the food intake (daily, weekly, fortnightly, monthly, or never) of selected eatables. Section 12 aimed at collecting information about the health care practices of woman and her children in the household, including information on any health (physical, mental and sexual) problem or issues of woman and her children, use of private/public health facilities, medical

consultation, and expenditure on health. Much more comprehensive information on issues related to the reproductive health of woman and her level of awareness about the related health problems was collected through questions listed in Section 13. Further, Section 14 contained questions on living arrangements of the woman and familial support including the issues related to conflicts among family members. The information on the major household responsibilities and workload of the woman was collected through questions structured for Section 15, while Section 16 was designed to procure information on stress to the woman. Section 17 was organized to get information on her perception about the migration of her husband. The questions in the last section (Section 18) of the schedule were focused on the income of the husband and remittances obtained per month from the out-migrant husband, and also about woman's level of satisfaction with the current life, particularly in the absence of her husband etc.

2.2.6. Definition of major terms used in the schedule/study

The specific definitions of major terms and concepts, which are used to collect information in the interview schedule, are presented in this section.

Type of the household: There are two types of household considered in this study. First, the household that comprises male out-migrant(s) who has/have left his/their wife/wives and other household member(s) in the village (at the place of origin) and he/they himself/themselves out-migrated to other place outside his/their village. Second, the non-migrant household in whose case the couple stays together at the place of origin.

a. *Out-migrant household:* Based on the definition of migrant household mentioned above, all households reporting migration of at least one of the household members, who happened to be married and left his wife behind in the village, is defined as out-migrant household. Accordingly, all those households who do not report migration of any of the household member is categorised as 'non-migrant households'.
b. *Out-migrant:* Any married male member of a household who left the household, any time in the past (at least for 3 years), to stay outside the village/ town is considered as out-migrant, provided he is alive on the date of survey.

Nuclear household: A nuclear household is defined in this study as a household that comprises a married couple or a woman living alone or with unmarried children (biological, adopted, or fostered), with or without unrelated individuals (Definition adopted from NFHS 3).

Household size: The number of members living in a household.

Usual resident: Usual residents are those members of the households, enumerated irrespective of their stay/non-stay on the previous night to the survey.

Household income: This implies the summation of the total income of all members of the household, including the income earned by out-migrant at the place of his destination.

Kutcha house: The house that has walls made up of stone/bricks and mud, and roofs made up of stones/bricks and wood/ mud is regarded as a *kutcha* house.

Pucca house: A *pucca* house is one, which has walls and roofs made up of pucca materials such as cement, concrete, oven-burnt bricks, hollow cement/ash bricks, stone, stone blocks, jack boards (cement plastered reeds), iron, zinc or other metal sheets, timber, tiles, slate, corrugated iron, asbestos cement sheet, veneer, plywood, artificial wood of synthetic material and poly vinyl chloride (PVC) material (NSSO 65th round).

Semi-pucca house: The house, which cannot be classified as a pucca, or a kutcha house as per definition is a *semi-pucca* structure. Such a house will have either the walls or the roof but not both, made of *pucca* materials. Generally, in rural Garhwal one will find *semi-pucca* houses consisting of walls made up of stones with mud and roofs made up of *pucca* materials.

Primary occupation: The primary occupation relates to the activity status of a person, in which the person spends a relatively longer time (major time criterion).

Secondary occupation: A person whose primary occupation is determined on the basis of the major time criterion may have pursued any other activity. The secondary occupation is considered as that occupation in which a person is spending less time than the primary occupation. In case of multiple subsidiary activities, the major activity and status based on the relatively longer time spent criterion is considered.

Agricultural labourer: A person is considered to be an agricultural labourer, if he/she is engaged in any kind of occupation related to agriculture and allied activities such as dairy farming, horticulture, and livestock.

Education: The term 'education' generally refers to a process of pursuing knowledge and skills, or character of individuals through a process of learning such as self-study, attendance in formal or informal educational institutions, etc. In most of the countries, government spends substantial amounts on the establishment as well as the functioning of the educational infrastructure. However, for availing such facilities, individuals also incur expenditure in the form of tuition fee, examination fee, charges for stationeries, books, etc. Although information is available on the expenditure incurred by the governments through budget documents, the data on expenditure by individuals are collected through specialised surveys. The main objectives of including this section in the survey is to collect information on (a) participation in education of persons aged 4-25 years in the education system, and (b) private expenditure incurred on education.

Education Level: It refers to the highest level of education, a person has completed successfully. It may be noted that if a person has successfully completed the final year of a given level, only then he/she is considered to have attained that level of education. For example, for a person studying in Class IX, the educational level of that person is recorded as the middle, not the secondary level.

Type of Educational Institution: This refers to the type of management by which the institution is administered. For instance, the educational institutions may be administered by the Government or a private body. Thus, there are broadly two types of educational institution: (a) Government, and (b) Private. All schools/ institutions run by central and state governments, public sector undertakings or autonomous organisations completely financed by the government are treated as government educational institutions. A private aided institution is one which is being operated by an individual or a private organisation and not receiving any maintenance grant either from the government or from a local body.

Castes/Tribes Group: The Central Government of India classifies some of its citizens, based on their social and economic conditions, as Scheduled Castes (SC), Scheduled Tribes (ST), Other Backward Classes (OBCs), and General/Others. Scheduled Castes and Scheduled Tribes are

groups of Indian population that are explicitly recognized by the Constitution of India, previously called the 'depressed classes' by the British[3]. In the Constitution, OBCs are described as 'socially and educationally backward classes', and the government is committed to ensuring their social and educational development[4]. All others are classified as Others or General population. In India, General or upper castes, denotes people, communities and castes from any religion who do not currently qualify for Government of India Reservation benefits (i.e. set quotas for education benefits, government jobs and political representation)[5].

Land owned: A piece of land is considered to be owned by the household if permanent heritable possession with or without the right to transfer the title vests in a member or members of the household. The total land area possessed by the household as on the date of survey is taken into account.The area of land possessed (in *Beegha*[6]) includes land owned, leased in, and land leased out.

Remittances: These are the transfers, in either cash or kind, to the households by out-migrant husband. However, if such transfers are in the form of loans, they are not considered as remittances. It is, moreover, to be noted that amount of remittances may be arrived at considering both the remittances received through formally recorded channels as well as remittances sent through informal channels.

2.2.7. Respondents in the survey

The respondents for the two types of schedules, used in the study, were heads of their household and the wives of migrant and non-migrant husbands. Considering that the impact of migration is strongly felt only after sometime by the families and communities, a minimum period of 3 years of out-migration was considered to determine the status of the household as migrant/non-migrant (Silver, 2006). Consequently, the left-behind wives meant those women, whose husbands had been out-migrant for at least last three years, and that the duration of marriage was at least three years at the time of survey. If a selected household did not meet these criteria, it was replaced randomly by another household. If there were more than one woman in the household who fitted the selection criteria, only one was selected for the study. In

[3]http://en.wikipedia.org/wiki/Scheduled_castes_and_scheduled_tribes

[4]http://en.wikipedia.org/wiki/Other_Backward_Class

[5]http://en.wikipedia.org/wiki/Forward_caste

[6] The measurement of land in Pauri Garhwal and one *beegha* is equal to 8100 sq. feet.

this case, to select one left-behind wife (respondent) in the household, a Kish Table[7] (Kish, 1949) was used. For reference purposes, a group of wives of non-migrants were selected from the sampled villages. The criteria for selecting these women were similar, i.e., currently married with at least three years' marital status. In total, 262 left-behind wives of migrants and 256 wives of non-migrants were interviewed by using a pretested questionnaire.

In the surveyed households, personal interviews were conducted with both the male/female head of the household, wherever required. If the head of the household was absent at the time of the survey, another adult household member was interviewed instead.

2.2.8. Field arrangements for the data collection

The questionnaire has a section on reproductive health which may have been difficult for the male investigators to ask the women. Also, the women may have felt reluctant to answer the male investigators. Therefore, a team of two trained female interviewers were hired to complete the entire survey. On several occasions, the researcher helped with the household questionnaire, while the female investigators interviewed the women.

Prior to carrying out the main survey in the villages, I (the researcher) introduced myself and my team members to the head of the village, known as *Pradhan*, and received his/her permission and required support to undertake the survey in the sample households. Being familiar with the particular dialect (*Garhwali*) spoken by the majority, especially women, in the village(s) helped me considerably to develop a quick rapport and make them aware of my objectives of undertaking the survey. This procedure was followed in all the sample villages in the study area. The survey instruments were administered in the local language, using local terminologies. Before initiating the interview with a woman (if any) in the household, a verbal consent was taken from each interviewee regarding her participation in the survey. On an average, one interview lasted from forty-five minutes to an hour. Therefore, prior appointments were sought, before the actual interview started, in order to ensure that the interviews did not interfere much with their routine. Most part of the survey was, thus, operated in the second half (post-lunch) of the day, when the women in the villages are relatively free from their major domestic chores. The interviews centred on the following themes: perception about migration,

[7]The Kish grid or Kish selection table is a method for selecting members within a household to be interviewed. It uses a pre-assigned table of random numbers to find the person to be interviewed. It was developed by statistician Leslie Kish in 1949.

impact of out-migration on agriculture, familial life of left behind wives, economic condition and other dimensions related to conjugal separation. For focus group discussion (FGD) too, women were found to be very much enthusiastic and they discussed, at length, the various issues relevant to the study. With the permission of each participant, FGDs were recorded using a digital voice recorder. While there was a prepared pre-structured list of issues to be discussed, interviewees were encouraged to speak at length on topics that were relevant to this work.

The entire survey of the sampled households took around four months to be completed. The surveyed schedules were rechecked and supervised in the evening of the survey in order to correct for vagueness/ oversight, by revisiting the concerned household.

2.3. Methodology

The information collected through the particular schedules was entered electronically by using statistical software, i.e., SPSS (Statistical Package for Social Sciences) version 16. The household information and the information collected for each individual in the household were entered separately using household and individual level files, and then required information were recoded/reclassified, computed in the form of new variables (combining several information together), or the files were merged as per the requirements of the statistical analyses using relevant commands in the statistical package. The important variables, which are used in the analyses, are discussed in Section 2.3.1. Further, the specific models or the statistical analyses used to accomplish the objectives of this study are presented in the Section 2.3.2.

2.3.1. Measures

The study accomplished most of its proposed objectives using quantitative analyses, while some of the parts also dealt with plausible interpretation using qualitative information emanating from the FGDs and based on the unstructured responses and informal discussions with the interviewees. This study essentially attempted to find out differences in regard of the socio-economic, health, conjugal status and perceptions about the life status between the migrant and non-migrant wives of the sample besides examining the impact of migration on the households in terms of their socio-economic wellbeing. In order to do so, the plausible measures/indicators were developed by using collected information. Sections 2.3.1.1 and 2.3.1.2 present major outcomes and exposure variables/indicators used in the entire study.

2.3.1.1. Outcome variables

A. Measures of household agricultural status

Cereal production: The data has been collected on various types of crops and their volume of production (measured in kilograms) grown by the sample household in a year.

Investment in agriculture: It is measured by the amount of money invested in agriculture during last two years prior to the date of survey.

B. Measures of women's health care status

Sickness in the last 6 months: Assessment of health care status of women is based on the information collected through the following question: "Was there any ailment/accident/injury/aches etc. during the last 6 months?" The index category of the dependent variable in this analysis is "Suffered any ailment/accident/injury/aches etc." The value of the dependent variable is 0 for a person who did not suffer any ailment/accident/injury/aches etc. in the last six months and 1 for those who did.

Symptoms of RTI/STD: Women were asked if they suffer from any of the symptoms of RTI/STDs and were coded as 1 if they reported yes, 0 otherwise.

Self-reported measure of good health: This indicator is based on information collected from the following question: "What do you think about your health status now – "unhealthy, somewhat healthy, somewhat unhealthy, healthy"? Based on this question, "poor health status" is selected as the index category of dependent variable to analyze the health status of women. A person with good health is defined as a person who reported that their health was somewhat unhealthy or healthy. The variable is coded as '1' if the person is in good health, '0' otherwise.

Stress level: Twenty three questions (4.34.1 to 4.34.23) were asked to assess the mental well-being of the wives (See Appendix A2). To prepare a composite index of stress level, factor analysis was performed using principal component method.

C. Measures of women's familial life status

Agriculture related decision making: This variable provides information about the active participation of the wives in decision making with regard to matters pertaining to the agricultural operations.

Participation in wage labour: Participation of wife in the agricultural/non-agricultural works on payment basis: (0=No, 1=casual wage work or regular salaried work).

Number of working hours: It is assumed that a woman works more during agricultural season than non-agricultural season. Hence, the working hours of women were calculated for both the seasons. The total number of working hours were calculated by asking the respondent about the time spent by them in different activities like fetching drinking water, collecting fuel/wood, cleaning and mopping the house, cooking, milking animals, domestic animals care, agriculture related works like weeding, harvesting, and threshing (in the fields and the house), child care, and other domestic chores.

2.3.1.2. Exposure variables

A. Demographic and socioeconomic characteristics of the household

For different sets of multivariate analyses, a range of demographic and socioeconomic indicators, in regard of the household, are used as covariates or predictors. The social status (i.e., caste status) of the family, type of household (nuclear or non-nucear), household size (total number of household members), age of the head of the household (in years), total number of household members in working age group, total land used for agriculture (in *beegha*), plans for existing agriculture as a primary occupation in future (no/yes), ownership of bullocks for agricultural purposes (no/yes), hired labour (no/yes), households having facilities such as toilet, separate kitchen etc. are frequently used as covariates in multivariate analyses in the entire study. The economic status of the household measured by the household income (in rupees), investments in the last 2 years (in rupees), savings in the last 1 year (in rupees), and monthly per capita expenditure (in rupees) were used in the multivariate analyses wherever required. A detailed description of some of such household measures or indices is as follows;

Monthly per capita expenditure (in rupees): Monthly per capita expenditure (MPCE) is the household's expenditure on consumption over a period of 30 days divided by the household size.

Household's consumption expenditure is measured as the expenditure incurred by a household on domestic account during a specified period, called reference period. It also includes the imputed values of goods and services, which are not purchased but procured otherwise for

consumption. In other words, it is the sum total of monetary values of all the items (i.e. goods and services) consumed by the household on domestic account during the reference period. The imputed rent of owner-occupied houses is excluded from the consumption expenditure. Any expenditure incurred towards the productive enterprises of the households is also excluded from the household consumer expenditure.

Wealth index: The wealth index is a summary measure of the economic status of a household, which in general term, represents the value of a number of assets belonging to the particular household. The information on a range of household assets or belongings was collected during the household survey. The household schedule covered information on household ownership of a number of consumer items, such as car, motorcycle, sewing machine, TV, CD player, computer, sofa set, watch, dish antenna, camera, heater, electricity, radio, television, refrigerator, ownership of agricultural land and size, ownership of farm animals by types and numbers, telephone (fixed and mobile) and cooking fuel, as well as dwelling characteristics, such as source of drinking water, sanitation facilities and type of material used for flooring. A cumulative or composite index representing all such household assets is constructed using the factor analysis.

While constructing a wealth index from a set of variables, a decision is to be made about the weights to be assigned to each indicator. Towards this end, Principal Component Analysis (PCA) is used for determining weights for components of a wealth index (Filmer and Pritchett, 2001). PCA is a 'data reduction' procedure which involves replacing a set of correlated variables with a set of uncorrelated 'principal components' which represent unobserved characteristics of the population. The principal components are linear combinations of the original variables; the weights are derived from the correlation matrix of the data or the covariance matrix if the data have been standardized prior to PCA. The first principal component explains the largest proportion of the total variance. If the first few principal components explain a substantial proportion of the total variance, they can be used to represent the original items, thus reducing the number of variables required in models (Bartholomew *et al.,* 2002). For constructing a wealth index, the first principal component is taken to represent the household's wealth. The weights for each indicator from the first principal component are used to generate a household score. Assets that are more unequally distributed across the sample tend to have a higher weight in the first principal component (Vyas and Kumaranayake,

2006). The relative rank of households using the score generated from the first principal component is then used as a measure of relative socio-economic position (SEP), enabling calculation of a single estimate of the effect of wealth (Abeyasekera, 2005).

The factor analysis process is used as follows: First, the indicator variables are standardized (normalized); then the factor loadings is calculated using the PCA; and finally, for each household, the indicator values are multiplied by the loadings and summed to produce the household's index value. In this process, only the first of the factors produced is used to represent the wealth index. The cut-off points in the wealth index at which to form the quintiles are calculated by obtaining a weighted frequency distribution of households. The households are then ordered by the score (ranked), and the distribution is divided into three equal sections (as tertile; 33.3 per cent - for each division). The tertile is represented in the variable as the low (the lowest 33.3 per cent of the asset score), medium (the middle 33.3 per cent of the asset score), and the high (the highest 33.3 per cent of the asset score), thus, representing the economic status of the household in three categories. A detailed description of the factor analysis method is presented in the section 2.3.2.4.

B. Demographic and socio-economic characteristics of the women/wives and husbands

For the multivariate analyses related to the issues of women/wives of the migrant and non-migrant persons/husbands, a range of demographic and socio-economic indicators at individual level are used as predictors and covariates. The individual indicators, such as, age of the women (in years), the age difference between spouses, duration of the marriage, age at first child birth, total number of children ever born to the women, women's years of education/schooling, husband's education, whether the woman/wife was the head of the household, whether the woman/wife was employed, duration of husband's migration, number of husband's visits to the house, awareness about the RTI/STD etc. are used as covariates in the multivariate analyses, wherever required. A few indicators or indices are also used in the study, the separate descriptions for which are as follows:

Health seeking behaviour: It not only depends on financial capacity but also on the perceptions of the household members about illnesses and their remedies. The respondents were asked to report the measures taken by them at the time of illness of any household member during the previous one year period. The use of modern health care facilities such as seeking advice from

qualified physicians or certified rural medical practitioners is considered "modern" and seeking help from spiritual healers, quacks etc. was considered "traditional" health seeking behaviour.

Economic support Index: To make the economic support index five questions were put to wives of both the groups (See question number 4.26.1 to 4.26.5 in the questionnaire Appendix A2). It provides information about the wives of both the groups (migrant and non-migrant husbands) getting economic support from their parents-in-law and parents as well. The index is categorized into three groups, i.e., low, medium and high. This implies that wives, who fell in low category, did not get much economic support from both parents-in-law and parents, whereas the high category indicates that women did get support from both of them.

Physical support Index: The physical support index is based on six questions, which were put to wives of both the groups (See question number 4.26.6 to 4.26.11 in the questionnaire Appendix A2). It provides information about physical support obtained from their parents-in-law and parents as well. The index is categorized into three groups, i.e., low, medium and high, implying that wives, who fell in low category, did not get much physical support from both parents-in-law and parents, whereas the high category indicates that women did get support from both of them.

Emotional support Index: The emotional support index is based on four questions, which were put to the wives of both the groups (See question number 4.26.11 to 4.26.14 in the questionnaire Appendix). It provides information about the emotional support that the wives of both the groups get from their parents-in-law and parents as well. The index is categorized into three groups, i.e., low, medium and high. This implies that wives, who fell in low category, did not get much emotional support from both parents-in-law and parents, whereas the high category indicates that women did get significant support from both of them.

2.3.2. Statistical analyses

In a randomized experiment, the differences or comparison of socioeconomic and demographic characteristics of the families belonging to migrant and non-migrant persons could be statistically tested by using appropriate bivariate analysis such as t-test and Mann Whitney test. These tests are applied to test the significance of differences in means or proportions of socioeconomic and demographic characteristics of both types of households (migrant vs. non-migrant). Similarly, to accomplish other objectives of this study, appropriate multivariate

regression models have been applied. To evaluate the independent influence of husband's out-migration and other predictor variables on cereal production, investment in agriculture and total number of working hours of wives, a multiple linear regression is performed at the household level. The analysis is also done separately for migrant and non-migrant households. To smoothen and normalize distribution of variables like the income of husband, household income, savings per month, savings in a year and investment in a year, the values are transformed into log.

In order to examine the health status and familial life of women/wives of the migrant and non-migrant husbands, several dichotomous indicators are used such as 'fallen sick in the last 6 months', 'symptoms for RTI/STDs', 'self-reported good health', 'agriculture related decision-making' and 'participation in wage labour'. These outcome variables are in the form of binary responses, for example if the woman reported to participate in wage labour, the numerical value of that particular woman is referred as 1, and 0 otherwise. Similarly, if women/wives reported to have taken agriculture related decisions in the family, the women are represented by the numeric value of 1, and 0 otherwise. Thus, the form of such outcome/dependent variables are dichotomous in nature, i.e., 0=No and 1=Yes. Dealing with such dichotomous variables in the regression analysis leads to the application of linear probability models. The logistic regression model is one of those models widely used for examining such categorical outcome and exposure variables. For ordered categorical variables, such as the status of stress level, which has more than two categories i.e. low, medium and high, and since such categories could be considered as ordered in nature, the ordered logit regression model is performed as appropriate alternative. Prior to the selection of the ordered logit model over the multinomial logistic regression model, the parallel regression assumption is tested. The parallel regression assumption leads to the elegant interpretation of the odds of higher and lower outcomes. Score, LR (Likelihood Ratio), and Wald tests of the assumption are also available for the purpose. Essentially these tests compare the Ordinal Logit Model (OLM) estimates to those from binary logits where the β's are not constrained to be equal.

All the statistical models adopted or applied to the present study including the factor analysis method used to construct several indices are discussed in the following sub-sections.

2.3.2.1 t-test

First objective of the thesis is to see whether there exists any socio-economic and demographic difference among both the groups' i.e. migrant household and non-migrant household. Hence, this test is applied to test the socio-economic and demographic differences between the two groups. The t-test has also been applied to test the significant difference between the two groups for other variables, such as cereal production, investment in agriculture etc. This is a statistical examination of two population means. A two-sample t-test examines whether two samples are different and is commonly used when the variances of two normal distributions are unknown and when an experiment uses a small sample size. The test statistic in the t-test is known as the t-statistic. The t-test looks at the t-statistic, t-distribution and degrees of freedom to determine a p value (probability) that can be used to determine whether the population means differ. The t-test is one of the hypothesis tests used in this work.

Assumptions for the t-test:

- ✓ Bivariate independent variable (A, B groups)
- ✓ Continuous dependent variable
- ✓ Each observation of the dependent variable is independent of the other observations of the dependent variable (its probability distribution is not affected by their values)[8]. Exception: For the paired t-test, we only require that the pair-differences (A_i - B_i) be independent from each other (across i).
- ✓ Dependent variable has a normal distribution, with the same variance, σ^2, in each group.

Estimation Procedure:

1. Assume the null hypothesis is that the two population means are equal to each other. To test the null hypothesis, we need to calculate the following values:$\bar{x}_1, \bar{x}_2$ (the means of the two samples), s_1^2, s_2^2 (the variances of the two samples),n_1, n_2(the sample sizes of the two samples), and *k* (the degrees of freedom).

$$\bar{x} = \frac{1}{n(x_1 + x_2 + x_3 \dots \dots \dots . + x_n)} = (\frac{1}{n}) \sum x_i$$

[8]Here, 'independent' and 'dependent' are used in two different senses. Just think of a "dependent variable" as one thing, and "observations that are dependent" as another thing.

$n = samplesize$

$s^2 = 1/(n-1)[(x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \ldots\ldots + (x_n - \bar{x})^2]$

$s^2 = 1/(n-1)[\sum x_i^2 - \left(\frac{1}{n}\right)(\sum x_i)^2$

$k = n_1 - 1 \; or \; n_2 - 1, whichever \; is \; less \; (if \; n_1 \neq n_2)$

$k = n_1 + n_2 - 2 \; (if \; n_1 = n_2)$

2. Now, the *t*-statistic can be calculated as:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{(\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2})}}$$

3. Further, the calculated *t*-value, with *k* degrees of freedom is compared with the critical *t* value from the *t* distribution table at the chosen confidence level, and then it is decided whether to accept or reject the null hypothesis. We reject the null hypothesis when: calculated *t*-value > critical *t*-value.

2.3.2.2 Mann Whitney test

This test is also applied to fulfil the first objective i.e. to check if mean difference exists between the two groups. The Mann-Whitney U test is used to compare differences between two independent groups when the dependent variable is either ordinal or interval/ratio, but not normally distributed. The Mann-Whitney U test is the nonparametric alternative to the independent t-test.

Assumptions for the Mann Whitney *test*:

- ✓ The dependent variable is measured at the ordinal or interval/ratio level.
- ✓ Independent variable should consist of two categorical, independent groups.
- ✓ Independence of observations, which means that there is no relationship between the observations in each group or between the groups themselves.

- ✓ The samples have the same shapes and spreads, though they do not have to be symmetric.

Estimation Procedure:

1. Assume the null hypothesis that the two populations are the same.
2. To test for significance we calculate an expected score:

$$E(U) = n_U(N + 1)/2$$

where, $E(U)$ is the expectation of U, n_U is the size of the sample being tested, and N is the total sample size $N = n_1 + n_2$.

3. The difference between the observed and expected value is best approximated through the use of a normal distribution; the area under the curve of a z-distribution. The z-score can be calculated as:

$$z = \frac{U - E(U)}{\sqrt{n_1 n_2 (N + 1)/12}}$$

4. The resulting z-score is then looked up in the statistical table, keeping in view the adjustment for one or two tails.

2.3.2.3 Reliability test (Chronbach Alpha)

Three indices i.e. economic, physical and emotional support index are made (for detail see 2.3.1.2.B). Cronbach alpha is applied to test whether the variables used to construct the indices are statistically good enough to be part of the indices. Before constructing a number of uni-dimensional and multi-dimensional indices in order to present the summative impact of and on a number of inter-related household aspects related to the study objectives, reliability tests are applied on a series of household and individual indicators. Chronbach Alpha is used to test the reliability of the variables. Alpha is a commonly used index of reliability, which was developed by Cronbach (1951) to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1. Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test. Internal consistency should be determined before a test can be employed for research or examination purposes to ensure validity. In addition, reliability

estimates show the amount of measurement error in a test. In other words, this interpretation of reliability is the correlation of test with itself.

2.3.2.4 Factor analysis method

Factor analysis is a 'data reduction' method. It involves replacing a set of correlated variables with a set of uncorrelated factors, which represent unobserved characteristics of the population. Factor analysis is a method for investigating whether a number of variables of interest $Y_1, Y_2, \ldots \ldots, Y_l$, are linearly related to a smaller number of unobservable factors $F_1, F_2, \ldots \ldots, F_k$. It is assumed that each Y variable is linearly related to a certain number of factors, as follows:

$$Y_1 = \beta_{10} + \beta_{11}F_1 + \beta_{12}F_2 + e_1$$

$$Y_2 = \beta_{20} + \beta_{21}F_1 + \beta_{22}F_2 + e_2$$

$$Y_3 = \beta_{30} + \beta_{31}F_1 + \beta_{32}F_2 + e_3$$

The error terms e_1,e_2, and e_3, serve to indicate that the hypothesized relationships are not exact.

In the special vocabulary of factor analysis, the parameters of these linear functions are referred to as *loadings*. For example, β_{12} is called the loading of variable Y_1 on factor F_2. Under certain conditions[9], the theoretical variance of each variable and the covariance of each pair of variables can be expressed in terms of the loadings and the variance of the error terms. The variance of Y_i, consists of two parts:

$$Var(Y_i) = \underbrace{\beta_{i1}^2 + \beta_{i2}^2}_{\text{communality}} + \underbrace{\sigma_i^2}_{\text{specific variance}}$$

The first, the *communality* of a variable, is the part of its variance that is explained by the common factors (e.g., F_1andF_2). The second, the *specific variance*, is the part of the variance of the variable (Y_i) that is not accounted by the common factors. If the two factors are perfect predictors of grades, then $e_1 = e_2 = e_3 = 0$ always, and $\sigma_1^2 = \sigma_2^2 = \sigma_3^2 = 0$.

[9]The error terms e_i are independent of one another, and such that $E(e_i) = 0$ and $Var(e_i) = \sigma_i^2$.The unobservable factors F_j are independent of one another and of the error terms, and are such that $E(F_j) = 0$ and $Var(F_j) = 1$.

The loadings are not unique. There exist an infinite number of sets of loadings yielding the same theoretical variances and covariances.

Factor analysis usually proceeds in two stages. In the first, one set of loadings is calculated which yields theoretical variances and covariances that fit the observed ones as closely as possible according to a certain criterion. These loadings, however, may not agree with the prior expectations, or may not lend themselves to a reasonable interpretation. Thus, in the second stage, the first loadings are “rotated" in an effort to arrive at another set of loadings that fit equally well the observed variances and covariances, but are more consistent with prior expectations or more easily interpreted.

A method widely used for determining the first set of loadings is the principal component method[10]. It is also known as principal component analysis (PCA). This method seeks values of the loadings that bring the estimate of the total communality as close as possible to the total of the observed variances. When the variables are not measured in the same units, it is customary to standardize them prior to subjecting them to the principal component method so that all have mean equal to zero and variance equal to one.

When the first factor solution does not reveal the hypothesized structure of the loadings, it is customary to apply rotation in an effort to find another set of loadings that fit the observations equally well but can be more easily interpreted. As it is impossible to examine all such rotations, computer programs carry out rotations satisfying certain criteria.

Perhaps the most widely used of these is the *varimax criterion*. It seeks the rotated loadings that maximize the variance of the squared loadings for each factor; the goal is to make some of these loadings as large as possible, and the rest as small as possible in absolute value. The varimax method encourages the detection of factors each of which is related to few variables. It discourages the detection of factors influencing all variables. The *quartimax criterion*, on the other hand, seeks to maximize the variance of the squared loadings for each variable, and tends to produce factors with high loadings for all variables.

[10]This is not the only method of factor analysis. Among others are the principal factor (also called principal axis) and maximum likelihood methods. See, for example, Johnson and Wichern (1992, Ch. 9), Rencher (1995, Ch. 13).

There is considerable subjectivity in determining the number of factors and the interpretation of these factors. There are several methods for obtaining first and rotated factor solutions, and each such solution may give rise to a different interpretation.

2.3.2.5 Multiple linear regression model

This model is used to test whether or not migration has impact on the cereal production, investment in agriculture, and number of working hours of wives. As some of the dependent variable(s) such as cereal production and investment in agriculture are continuous variables, multiple regression has been applied in these cases. In a simple linear regression model, a single response measurement *Y* is related to a single predictor (covariate, regressor) *X* for each observation. The critical assumption of the model is that the conditional mean function is linear: $E(Y|X) = \alpha + \beta X$.

However, in most cases, we have to deal with more than one predictor variable. This leads to the following "multiple regression" mean function:

$$E(Y|X) = \alpha + \beta_1 X_1 + \ \ldots\ldots\ldots + \beta_n X_n,$$

where α is called the *intercept* and the β_j are called *slopes* or *coefficients*.

We can specify how the responses vary around their mean values. This leads to a model of the form:

$$Y_i = \alpha + \beta_1 X_{i,1} + \ \ldots\ldots\ldots + \beta_n X_{i,n} + \epsilon_i$$

which is equivalent to writing $Y_i = E(Y|X_i) + \epsilon_i$.

We write $X_{i,j}$ for the j^{th} predictor variable measured for the i^{th} observation.

The main assumptions for the errors ϵ_i is that $E(\epsilon_i) = 0$ and $var(\epsilon_i) = \sigma^2$ (all variances are equal). Also the ϵ_i should be independent of each other.

For small sample sizes, it is also important that the ϵ_i has an approximately normal distribution.

Model Building

Model building, or variable selection is the process of building a model that aims to include only the relevant predictors. One approach is "all subsets" regression, in which all possible

models are fit (if there are n predictors then there are 2^n different models). A critical issue is that if more variables are included, the fit will always be better. Thus, if we select the model with the highest F statistic or proportion of explained variation (PVE), we will always select the full model. Therefore, we adjust by penalizing models with many variables that do not fit much better than models with fewer variables. One way to do this is using the Akaike Information Criterion (AIC):

$$AIC = n\,log\left(\frac{SSE}{n}\right) + 2(p+1).$$

Lower AIC values indicate a better model. So, examining the AIC and p value, we can fit the appropriate model with the inclusion of appropriate predictors using *forward selection* or *backward selection* method. In the former, we start with one predictor, and keep on adding other predictors as per their relevant contribution in the model. On the other hand, in the backward selection method, we start with the full model, and then consider all possible models obtained by dropping one predictor.

Diagnostics

Graphically, we can easily assess a good fit of the model by considering the following characteristics:

- The residuals on fitted values plot should show no pattern.
- The standardized residuals should be approximately normal.
- There should be no pattern when plotting residuals against each predictor variable.

2.3.2.6 Logistic regression model

This model is used to test whether out-migration of husbands has impact on variables such as agriculture related decision making, participation of wives in wage labour, sick in the last 6 months, suffering from RTI/STDs and self-reported good health. Logistic regression analysis (LRA) extends the techniques of multiple regression analysis to research situations in which the outcome variable is categorical or dichotomous. The model for logistic regression analysis assumes that the outcome variable, Y, is categorical (e.g., dichotomous), but LRA does not model this outcome variable directly. Rather, LRA is based on probabilities associated with the values of Y. For simplicity, and because it is the case most commonly encountered in practice,

we assume that Y is dichotomous, taking on values of 1 (i.e., the positive outcome, or success) and 0 (i.e. the negative outcome, or failure). In theory, the hypothetical, population proportion of cases for which $Y = 1$ is defined as $p = P(Y = 1)$. Then, the theoretical proportion of cases for which $Y = 0$ is $1–p = P(Y = 0)$. In the absence of other information, we would estimate p by the sample proportion of cases for which $Y = 1$. However, in the regression context, it is assumed that there is a set of predictor variables, X related to Y and, therefore, provide additional information for predicting Y. For theoretical, mathematical reasons, LRA is based on a linear model for the natural logarithm of the odds (i.e., the log-odds) in favor of $Y = 1$.

$$Log_e\left[\frac{P(Y=1|X_1,\ldots..,X_k)}{1-P(Y=1|X_1,\ldots..,X_k)}\right] = Log_e\left[\frac{\pi}{1-\pi}\right] = \alpha + \beta_1 X_1 + \ldots..+\beta_n X_k = \alpha + \sum_{j-1}^{p}\beta_j X_j$$

Note that in the LRA model, π is a conditional probability of the form $P(Y=1|\ X_1,...,X_n)$. That is, it is assumed that "success" is more or less likely depending on combinations of values of the predictor variables. The log-odds, as defined above are also known as the logit transformation of π and the analytical approach described here is sometimes known as logit analysis.

The LRA model above is identical to the MRA (Multiple Regression Analysis) model except that the log-odds in favor of $Y = 1$ replaces the expected value of Y. There are two basic reasons underlying the development of the model above. First, probabilities and odds follow multiplicative, rather than additive, rules. However, taking the logarithm of the odds allows for the simpler, additive model since logarithms convert multiplication into addition. Second, there is a (relatively) simple exponential transformation for converting log-odds back to probability. In particular, the inverse transformation is the logistic function of the form:

$$P(Y=1|X_1,\ldots\ldots,X_k) = \frac{e^{\alpha+\sum_{j=1}^{n}\beta_j X_j}}{1+e^{\alpha+\sum_{j=1}^{n}\beta_j X_j}}$$

Due to the mathematical relationship, $\frac{e^a}{1+e^a} = \frac{1}{1+e^{-a}}$, the logistic function for LRA is sometimes presented in the form:

$$P(Y=1|X_1,\ldots..,X_k) = \frac{1}{1+e^{-\alpha-\sum_{j=1}^{n}\beta_j X_j}}$$

Due to the mathematical relationship, $\frac{1-e^{\alpha}}{1+e^{\alpha}} = \frac{1}{1+e^{\alpha}}$, the probability for a 0 response is:

$$P(Y=0|X_1,\ldots\ldots,X_k) = 1 - P(Y=1|X_1,\ldots\ldots,X_k) = \frac{1}{1+e^{\alpha+\sum_{j=1}^{n}\beta_j X_j}}$$

Fitting the LRA Model to Data

In MRA, the parameter estimates are obtained using the least-squares principle and assessment of fit is based on significance tests for the regression coefficients as well as on interpreting the multiple correlation coefficient. The process is analogous to LRA. The parameters that must be estimated from the available data are the constant, α, and the logistic regression coefficients, β_j. Because of the nature of the model, estimation is based on the maximum likelihood principle rather than on the least-squares principle. In the context of LRA, maximum likelihood estimation (MLE) involves the following. First, we define the likelihood, L, of the sample data as the product, across all sampled cases, of the probabilities for success or for failure:

$$L = \prod_{i=1}^{n} P\left(Y_j|X_{i1},\ldots\ldots,X_{ik}\right) = \prod_{i=1}^{n} \left[\left(\frac{e^{\alpha+\sum_{j=1}^{k}\beta_j X_j}}{1+e^{\alpha+\sum_{j=1}^{k}\beta_j X_j}}\right)^{Y_i} \mathrm{X} \left(\frac{1}{1+e^{\alpha+\sum_{j=1}^{k}\beta_j X_j}}\right)^{1-Y_i} \right]$$

Note that Y is the 0/1 outcome for the i^{th} case and, $X_{i1},\ldots\ldots,X_{ik}$ are the values of the predictor variables for the i^{th} case based on a sample of n cases. The use of Y_i and $1-Y_i$ as exponents in the equation above includes in the likelihood the appropriate probability term dependent upon whether $Y_i=1$ or $Y_i=0$ (note that $F^0 = 1$ for any expression, F). Using the methods of calculus, a set of values for α and the β_j can be calculated that maximize L and these resulting values are known as maximum likelihood estimates (MLE's). This maximization process is somewhat more complicated than the corresponding minimization procedure in MRA for finding least-square estimates. However, the general approach involves establishing initial guesses for the unknown parameters and then continuously adjusting these estimates until the maximum value of L is found. This iterative solution procedure is available in popular statistical procedures such as those found in SPSS, STATA, and SAS.

To distinguish them from parameters, we denote the MLE's as α and β_j. Given that these estimates have been calculated for a real data set, tests of significance for individual logistic regression coefficients can be set up as in MRA. That is, for the hypothesis, H: $\beta_j = 0$, a statistic

of the form $z = \beta_j/S_j$ can be calculated based on the estimated standard error, S_j for β_j (SPSS and SAS report $\chi_1^2 = z^2$and label these values as Wald statistics).

Similarly, the usefulness of the model as a whole can be assessed by testing the hypothesis that, simultaneously, all of the partial logistic regression coefficients are 0; i.e., H: $\beta_j = 0$ for all j. In effect, we can compare the general model given above with the restricted model $Log_e\left(\frac{\pi}{1-\pi}\right) = \alpha$. This test, that is equivalent to testing the significance of the multiple R in MRA, is based on a chi-squared statistic (SPSS labels this value as "Model Chi-Square").

Finally, different LRA models fitted to the same set of data can be compared statistically in a simple manner if the models are hierarchical. The hierarchy principle requires that the model with the larger number of predictors include among its predictors all of the predictors from the simpler model (e.g., predictors X_1 and X_2 in the simpler model and predictors X_1, X_2, $X_3$and X_4 in the more complex model). Given this condition, the difference in model chi-squared values is (approximately) distributed as chi-squared with degrees of freedom equal to the difference in degrees of freedom for the two models (e.g., for the above example, the degrees of freedom would be 2). In effect, this procedure tests a conditional null hypothesis that, for the example, would be:$H: \beta_3 = \beta_4 = 0|\beta_1, \beta_2$. That is, the values of the logistic regression coefficients associated with X_1 and X_2 are unrestricted, but the logistic regression coefficients associated with X_3 and X_4 are assumed by hypothesis to be 0. If the models are specified in a series of "blocks" in SPSS, an "Improvement" in chi-square value is computed for each successive model and this can be used to test whether or not the additional predictors result in significantly better fit of the model to the data.

We may interpret the results from a LRA at three different levels. First, in terms of contributions to estimated log-odds; thus, for each unit increase (decrease) in X_j, there is predicted to be an increase (decrease) of β_j units in the log-odds in favour of Y = 1. Second, the LRA equation can be transformed to odds by exponentiation. With respect to odds, the influence of each predictor is multiplicative. Thus, for each one unit increase in X_j, the predicted odds is increased by a factor of $\exp(\beta_j)$. If X is declined by one unit, the multiplicative factor is $\exp(-\beta_j)$. Note that $\exp(c) = e^c$. Similarly, if all predictors are set equal to 0, the predicted odds are exp(a). Finally, the results can be expressed in terms of probabilities by use of the logistic function. The results of the LRA in this study are interpreted in terms of the odd-ratio.

2.3.2.7 Ordered logit regression model

This model was used to test whether out-migration of husbands has any impact on mental health. For ordinal outcomes, the most common and recommended analysis tool is well known as the ordinal regression model. There are various approaches, such as the use of mixed models or another class of models, probit for example, but the ordinal logistic regression models have been widely publicized in the statistical literature (Ananth and Kleinbaum 1997; Anderson 1984; Bender and Grouven 1997; Lall *et al.,* 2002). The probit version was introduced by McKelvey and Zavoina (1975). Mc Cullagh (1980) presented the logit version called the proportional odds model, sometimes called the cumulative logit model. The model is so well known that it is often called simply the ordinal regression model (ORM).

Consider the response variable *Y* (for example, status of mental health) with k categories coded in *1, 2,.....,k* and $\overset{x}{\rightarrow} = (x_1, x_2, \dots\dots, x_p)$ the vector of explanatory variables (co-variables). The k categories of Y conditionally to the values of co-variables occur with probabilities $p_1, p_2, \dots\dots, p_k$, that is, $p_j = \Pr(Y = j|\overset{x}{\rightarrow})$ for $j = 1, 2, \dots\dots, k$. Modeling of ordinal response data can use simple probabilities (p_j) or accumulated probabilities $(p_1 + p_2), (p_1 + p_2 + p_3), \dots\dots, (p_1 + p_2 + p_3 + \dots + p_k)$. In the first case, the probability of each category is compared to the probability of a reference category, or each category to the previous category, as in the adjacent categories model.

The proportional odds model (POM), also known as the cumulative logit model, is indicated when an originally continuous response variable is later grouped (Ananth and Kleinbaum 1997; Lall *et al.,* 2002). This model compares the probability of a response less than or equal to a given category $(j = 1, 2, \dots\dots, k-1)$ to the probability of a response greater than this category. In addition, this model is composed of $k-1$ parallel linear equations. In the particular case of only two categories $(k = 2)$, the POM corresponds exactly to the traditional binary logistic regression model.

$$\lambda_j\left(\overset{x}{\rightarrow}\right) = \ln\left\{\frac{\Pr\left(Y = 1\middle|\overset{x}{\rightarrow}\right) + \dots\dots + \Pr\left(Y = j\middle|\overset{x}{\rightarrow}\right)}{\Pr\left(Y = j+1\middle|\overset{x}{\rightarrow}\right) + \dots\dots + \Pr\left(Y = k\middle|\overset{x}{\rightarrow}\right)}\right\} = \ln\left\{\frac{\sum_1^j Pr\left(Y = j\middle|\overset{x}{\rightarrow}\right)}{\sum_{j+1}^k Pr\left(Y = j\middle|\overset{x}{\rightarrow}\right)}\right\}$$

$$\lambda_j\left(\overset{x}{\rightarrow}\right) = \alpha_j + (\beta_1 x_1 + \beta_2 x_2 + \dots\dots + \beta_p x_p), \qquad j = 1, \dots\dots, k-1$$

The model has $(k-1+p)$ parameters. The model's intercept varies for each of the equations and satisfies the condition $\alpha_1 \leq \alpha_2 \leq \ldots\ldots \leq \alpha_{k-1}$; furthermore, there are p beta coefficients (β) whose elements correspond to the effects of the co-variables on the response variable. For a binary explanatory variable, the β coefficient represents the logit of the OR (odds ratio) of response *Y* by association with *x*, controlled by the other co-variables. Note that β does not depend on *j*, meaning that the relationship between $\overset{x}{\rightarrow}$ and *Y* is independent of the category. This model provides a single odds ratio (OR) estimate for all the categories compared, which can be obtained by exponentiation of the β coefficient. This estimate is quite convenient in terms of the model's ease of interpretation and parsimony (Lall *et al.,* 2002).

The characteristics of the model resulted in the assumption that Mc Cullagh (1980) called proportional odds, hence the model's name. This assumption applies to each co-variable included in the model, it is always important to verify whether this assumption is met. Testing the homogeneity of the OR generally uses the score test (Brant, 1990), referred to by Hosmer and Lemeshow (2000) as the parallel regression test, and which can be used to evaluate the model's goodness-of-fit.

When the Y codes are inverted (i.e., Y_1 is coded as Y_k, Y_2 as $Y_{k-1}$and so on), only the signal inversion of the regression parameters occurs. This model also displays the property of invariance in relation to combining the response variable categories. This property means that when the *Y* categories are excluded or regrouped, the co-variables' coefficients (β) should remain unchanged, although the intercepts (α) are affected.

2.4. Limitation of the data

Some of the data used in this study have several limitations. For example there may be under reporting of data on investment and savings by both the groups. Although caution was exercised in order to extract the precise information, yet if there was any underreporting, it would be across the sample population, and therefore, not expected to significantly alter the overall picture.

The data on total number of working hours were calculated by asking the respondent about the time spent by them in different activities like fetching drinking water, cleaning and mopping the house, cooking, milking animals, domestic animals care, agriculture related works like

weeding, harvesting, and threshing (in the fields and the house), child care, other domestic chores and collecting fuel/wood. Due to overlapping nature of the variables, there was some difficulty in collecting data for this question. For example, making food and taking care of children can be done simultaneously. This can be assumed as another limitation of the study to capture the exact time spent on each activity including the activities done simultaneously.

CHAPTER 3: PROFILE OF THE SAMPLE POPULATION

3.1 Introduction

Migration is generally a selective process and it has been observed in India too that people of specific age and sex migrate. However, this demarcation is getting blurred in the 21st century. A closer examination of the available literature on migration has brought to the fore that migration has been one of the remarkable livelihood strategies for poor households in some regions of India (Mosse *et al.,* 2002) and this phenomenon is remarkable in situations in which the process of migration takes place from the land of bleak economic realities to regions of higher economic prospects. It is an established fact that the hilly region of Uttarakhand is not at all an exception to the aforementioned scenario. Migration here involves the taking up of a job at a distant place leaving their families behind at the place of origin. Although there may not be much difference in the household characteristics of out-migrant and non-migrant households, yet it is imperative to see the similarities and dissimilarities as they are assumed to have important implications for household decision-making and consequently on women empowerment. It is also important to see subsequently, how the income received through remittances from the out-migrant husbands is allocated between consumption and investment, and also how much migration contribute to the families' economic welfare. The information on household characteristics and housing conditions provide a context for understanding the demographic and socio-economic situations of the two groups under study. Most of the descriptive statistics and individual variables used in this chapter are self-explanatory, but discussion on them is expected to add to further understanding of the issues involved.

For the above purpose, the mean characteristics of both the groups of households and their individual members have been summarized. The diagnostic statistics for skewness and kurtosis of the variables have been used to find out if the variables are following a linear pattern (Peat and Barton, 2005). The t-test has also been applied to examine whether there exist significant differences in the socio-economic and demographic characteristics of the two groups under study. In regard to certain variables such as income, savings and investments which are understood not to be following normal distribution, non-parametric test i.e. Mann Whitney test has been applied to determine the mean differences.

3.2 Household Composition

3.2.1 Household population by age and sex

Age and sex are the basic demographic characteristics which have an important role in the study of a given population, as both of them have considerable impact on the population's current and future social and economic situations.

Table 3.1, Figures 3.1a and 3.1b display the distribution of the household population in five-year age groups by sex and type of households i.e. households with wives left behind and wives with non-migrant husbands. A total of 2268 residents have been enumerated in the sample of 518 households interviewed. The total household members enumerated among households with wives left-behind and wives with non-migrant husbands stand at 1084 and 1184 respectively.

Table 3.1: Percentage distribution of household members by age, sex and type of households

	Households with non-migrant husbands			**Households with out-migrant husbands**		
Age (in years)	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Above 0 to 4	7.8	7.1	7.4	20.0	9.7	13.4
5 to 9	11.9	10.1	11.0	17.7	8.5	11.8
10 to 14	12.9	10.2	11.6	14.6	7.4	10.0
15 to 19	12.8	13.9	13.3	12.6	6.2	8.5
20 to 24	2.9	4.9	3.9	3.1	10.5	7.8
25 to 29	2.0	10.1	6.1	0.5	13.4	8.8
30 to 34	10.4	6.7	8.5	0.8	8.2	5.5
35 to 39	7.7	7.9	7.8	0.3	4.6	3.0
40 to 44	7.1	6.0	6.6	0.5	3.8	2.6
45 to 49	6.5	6.5	6.5	0.3	3.0	2.0
50 to 54	6.1	3.7	4.9	3.3	5.3	4.6
55 to 59	4.6	3.7	4.1	4.9	6.5	5.9
Above 59	7.3	9.2	8.3	21.5	12.8	16.1
Total population	588	596	1184	390	694	1084

In the households with left-behind wives (out-migrant husbands), one can find fewer number of males than females in the age group 20 to 49 years. Among households with non-migrant husbands, approximately one-third of the population (30 per cent) is below 15 years of age and 8 per cent is above age 59, with the remaining 62 per cent in the 15-59 age group, whereas, for households with out-migrant husbands, it is 35, 16 and 49 per cent respectively (Table 3.1, Figure 3.1a and 3.1b).

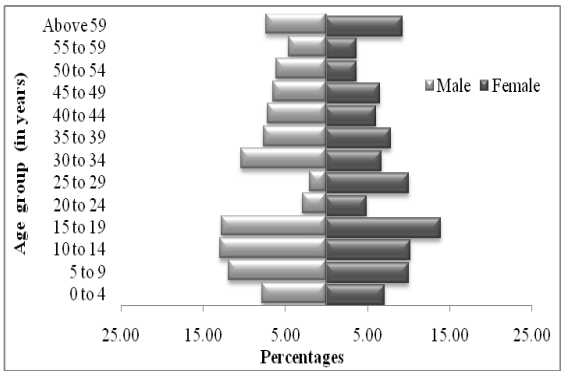


Figure 3.1a: Age-Sex pyramid of household members with non-migrant husbands

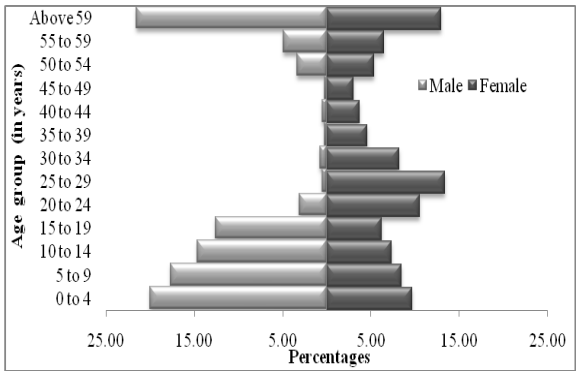


Figure 3.1b: Age-Sex pyramid of household members with out-migrant husbands

3.2.2 Marital status of the household members

In the study area, the percentage of currently married household members is approximately the same i.e. around 69 per cent for both the groups. Around 23 per cent of the members in the households with non-migrant husbands are never married, whereas, it is 18 per cent for households with out-migrant husbands. There are higher percentages of widow/widower in the latter category as compared to the former. Among both the groups, the percentages of divorced or separated have negligible presence in rural Garhwal (Table 3.2).

Table 3.2: Percentage distribution of the household members by marital status and type of households

Marital status	Households with non-migrant husbands	Households with out-migrant husbands	Total
Never married	22.7	17.9	20.5
Currently married	69.7	68.7	69.3
Widow/Widower	7.5	13.4	10.2
Divorced/Separated	0.1	0.0	0.1
Total Population	1184	1084	2268

3.2.3 Educational attainment of the household members

The matrix of human development indices is determined by more than one factor for identifying and elaborating upon some plausible markers of human development in which education occupies an important space as has also been espoused and developed by UNDP (Desai *et al.,* 2010). The survey has collected basic information on the educational attainment for the household members through questions about 'ever attending school', 'the ability to read and write', and 'years of schooling' in the sample of individuals aged above four years.

Table 3.3 exhibits the percentage distribution of the household members who could read and write and also displays the mean years of schooling by type of households. As could be discerned, higher percentage of household members with non-migrant husbands (87 per cent) could read and write than households with out-migrant husbands (84 per cent). The percentage distribution of the household members, across all the categories of levels of schooling, depicts that there is negligible difference across both the groups. The mean years of schooling completed for both the groups are, around eight years.

Table 3.3: Percentage distribution of the household members by level of education and type of households

Level of educational attainment	**Households with non-migrant husbands**	**Households with out-migrant husbands**	**Total**
Household members can read and write	87.0	83.7	85.5
Total Population	1184	1084	2268
Number of years of schooling			
Up to 8 years	46.1	47.9	46.9
Up to 10 years	30.0	24.4	27.5
Up to 12 years	21.0	23.6	22.2
More than 12 years	2.9	4.2	3.5
Mean number of years of schooling	8.4 (3.3)	8.4 (4.8)	8.4 (4.1)
Total Population	1098	939	2035

Note: The figures in parenthesis depict standard deviation.

3.2.4 Occupation of the household members

The occupation of household members was asked to those who were aged four years and above. Table 3.4 reveals that around 14 per cent of the household members in households with non-migrant husbands and 23 per cent in households with out-migrant husbands are engaged as agricultural labourers. 19 per cent of both the households are involved in unpaid family works. Further, it has been found that 12 per cent of the household members belonging to households with non-migrant husbands run their own businesses as shopkeepers, photographers, taxi drivers etc., while it is just two per cent for the households with out-migrant husbands.

Table 3.4: Percentage distribution of the household members by occupation and type of households

Occupation	Households with non-migrant husbands	Households with out-migrant husbands	Total
Primary occupation			
Government employee	2.3	0.5	1.5
Private/*Aaganwadi*[11] worker	2.2	0.2	1.3
Own business/shopkeeper/photographer	12.3	2.1	7.6
Unpaid family work	19.3	19.4	19.4
Agricultural labour in own/others land	14.1	23.0	18.2
Labour in non-agricultural sector	2.6	0.1	1.5
Student	38.5	37.9	38.2
Non-worker (Job seeker/pensioner/job not required)	6.9	16.0	11.1
Others[#]	1.8	0.7	1.3
Secondary occupation			
None	34.6	35.7	35.1
Unpaid family work	34.1	45.3	39.3
Agricultural labour in own/others land	30.3	18.1	24.6
Non-worker (Job seeker/pensioner/job not required)	0.4	0.2	0.3
Others (business/labour in non-agricultural sector/student)	0.6	0.7	0.7
Total Population	1096	939	2035

Note:# Work as a priest.

The survey also gathered information on the secondary occupation of every household member. Around 35 per cent household members of both the groups have responded with 'no secondary occupation'. Apart from this, it has been found that most of the household members are involved in unpaid household works followed by working as agricultural labour in their own/others' land (Table 3.4).

3.3 Characteristics of the Heads of the Households

In the study area (Table 3.5), 35 per cent of the households surveyed are headed by females. The proportion of female-headed households is higher in the households with out-migrant husbands (56 per cent) than the households with non-migrant husbands (13 per cent).

[11] Aanganwadi is a government sponsored child-care facility in India. It caters to children in the 0-6 age group. The word means "courtyard shelter" in Hindi. They were started by the Indian government in 1975 as part of the Integrated Child Development Studies program to combat child hunger and malnutrition. The Aanganwadi system is mainly managed by the Aanganwadi worker. She is a health worker chosen from the community and given 4 months training in health, nutrition and child-care. She is in-charge of an Aanganwadi which covers a population of 1000.

Table 3.5: Percentage distribution of head of households by socio-demographic characteristics and type of households

Characteristics of the heads of the households	Households with non-migrant husbands	Households with out-migrant husbands	Total
Sex			
Male	87.3	44.0	65.1
Female	12.7	56.0	34.9
Age			
20 to 30 years	4.8	12.8	8.9
31 to 40 years	26.6	11.3	18.7
41 to 50years	26.6	12.0	19.1
Above 50 years	42.1	63.9	53.3
Mean age (in years)* **	49.6 (13.0)	54.7 (15.9)	52.2 (14.7)
Current marital status			
Currently married	84.5	69.2	76.6
Widowed	15.5	30.8	23.4
Can read and write	87.7	71.4	79.3
Number of years of schooling			
Up to 8 years	19.9	33.2	26.0
9-10 years	49.3	46.3	47.9
More than 10 years	30.8	20.5	26.0
Mean number of years of schooling * **	10.0 (2.1)	9.3 (2.2)	9.7 (2.2)
Primary occupation			
Government employee	6.7	1.9	4.2
Private	4.4	0.4	2.3
Own business	34.1	4.5	18.9
Unpaid family work	4.8	19.2	12.2
Agricultural labour in own/others land	14.3	17.7	16.0
Labour in non-agricultural sector	7.9	0.0	3.9
Pensioner	22.6	55.3	39.4
Others[#]	5.2	1.1	3.1
Secondary occupation			
None	25.0	20.0	22.4
Unpaid family work	29.0	47.0	38.2
Agricultural labour in own land	41.0	28.0	34.4
Others (business/labour in non-agricultural sector/student)	5.0	5.0	5.0
Total Sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
***p<0.01,
#Job seeker and job not required.

In the latter category (households with non-migrant husbands), 42 per cent heads of the households are above 50 years of age, whereas, for the households in the former category (households with out-migrant husbands), it is 64 per cent. The marital status of the heads of the

households reveals that 84 and 69 per cent of them are currently married in the households with non-migrant husbands and households with out-migrant husbands respectively.

Higher percentage of heads of the households with non-migrant husbands could read and write than the heads of the households with out-migrant husbands. The heads of the households in the former category have higher mean number of years of schooling (10 years) as compared to the latter (9 years). The heads of the households with non-migrant husbands are largely found to be running/owning petty businesses i.e. shops etc. while among households with out-migrant husbands, heads are found to be largely pensioners (Table 3.5). Thus, the heads of the households with out-migrant husbands are comparatively older, female dominated, widow/widower, illiterate and mostly pensioners.

3.4 Socio-economic and Demographic Characteristics of Non-migrant and Out-migrant Husbands

Tables 3.6a, 3.6b, 3.6c and 3.6d provide information on the socio-economic and demographic characteristics of the non-migrant and out-migrant husbands. The information provided comprises a comprehensive outline of the distribution of non-migrant and out-migrant husbands by age, education level, type of job and income. The husbands, who have left the households at any time in the past for staying outside the village for work and continued living outside the village on the survey date, have been referred to as out-migrant husbands. For such out-migrant husbands, information has been collected on specific characteristics such as age at first migration, cause of migration, marital status at the time of first migration, place of employment, number of years of migration, amount of remittances sent to the households and frequency of home visits.

It can be observed from Table 3.6a that most of the out-migrants are young males who have left their wives behind, in the villages. Nearly two-thirds of the out-migrants (62 per cent) are aged below 35 years, whereas the distribution of population is almost similar across different age groups for the non-migrants. The mean age of the non-migrant and out-migrant husbands stands as 41 years and 35 years respectively, which is statistically significant at one per cent level ($p<0.01$).

There is almost universal literacy across both the groups i.e. 100 per cent out-migrants can read and write, whereas, for non-migrants, it is 98 per cent. Most of the out-migrants (75 per cent)

have attained 12 years of schooling, while 10 per cent have attained more than 12 years of schooling. The percentage distribution of the non-migrants, across different levels of years of schooling, shows that almost half of the non-migrant husbands have attained 10 years of schooling. The mean number of years of schooling of non-migrants and out-migrants are 11 and 12 years respectively suggesting that out-migrant husbands are more literate than their counterparts as this mean difference is statistically significant (Table 3.6a).

Table 3.6a: Percentage distribution of the husbands' characteristics

Husbands' characteristics	**Non-migrant husbands**	**Out-migrant husbands**	**Total**
Current age (in years)			
Below 35 years	36.5	62.4	49.8
36 to 45 years	31.3	27.1	29.2
46 and above	32.1	10.5	21.0
Mean current age (in years)***	41.4 (9.0)	35.4 (7.0)	38.2 (8.5)
Can read and write	98.4	100.0	99.2
Number of years of schooling			
Up to 8 years	12.5	0.8	6.4
9-10 years	47.2	14.7	30.4
Up to 12 years	36.3	74.8	56.2
More than 12 years	4.0	9.8	7.0
Mean number of years of schooling ***	10.6 (2.1)	12.0 (1.5)	11.4 (1.9)
Occupation			
Government employee	7.9	23.7	16
Private	7.1	71.8	40.3
Own business/self-employment (shop, photographer)	49.6	2.3	25.3
Semi government employee	0.0	1.9	1.0
Agricultural labour in own/others land	15.1	0.0	7.3
Labour in non-agricultural sector	9.5	0.0	4.6
Others[#]	6.0	0.4	3.1
Non-workers (job seeker, pensioner, job not required)	4.8	0.0	2.3
Total Sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
#work as a priest,
***p<0.01.

As could be observed from Table 3.6a, around 72 per cent of the migrants have reported to be working in the private sector as unskilled labourers without sticking to any specific occupation. The migrants have reported to be working under a contractor for a fixed duration of time ranging between 6 months to 1 year with the provision of unpaid break for 1 to 2 months, before re-joining. The migrant workers are also free to join any other mode of employment, if they wished to during this unpaid break. Very few migrants have reported to have any

specialized trade or occupation for the reason that they are reported to be semi-skilled/ short of employable skills. Consequently, they generally found employment in low paid jobs such as watchmen, factory workers, drivers and bus conductors depending upon their educational qualifications. For instance, only 8 and 24 per cent of non-migrant and out-migrant husbands respectively reported to have found employment in the government sector. Since, most of the out-migrants are employed in the Indian armed / para-military forces, leaving their families back home becomes a compulsion, especially in the beginning of the job, and later on at the time of field postings.

Interestingly, the distribution of non-migrant husbands across different types of occupation indicates that half of the non-migrants have their own businesses (Table 3.6a), suggesting that improvement in the self-employment opportunities at local levels could arrest the mass scale migration of male workforce.

Table 3.6b reveals that around 61 per cent of the migrants have migrated at the age of 20 years, which again proves that people are migrating from rural Garhwal at a very young age. This young age structure of migrants also implies that almost all the migrants (97 per cent) were unmarried at the time of their out-migration. This is further corroborated by the fact that almost all women have reported that their husbands were already working in urban areas at the time of marriage. The considerable out-migration of very young adults is part of a strong manifestation of lack of gainful employment opportunities in and around the native places in Garhwal. The direct consequence is lack of adult working male population with the high probability that these out-migrants shall never return to their native places for investing the acquired skills, resources and pro-development approach. During the survey, it also emerged that non-availability of job opportunities in the villages has been the major compelling reason for out-migration of males. Many heads of the households asserted that survival from farming alone is not ensured. As there is scarcity of employment at the local level, household members (generally men) have to find work outside the village or they have to migrate to urban areas. It indicates that young people and others will keep migrating unless there are more employment opportunities in rural Garhwal. The contemporary reality of rural Garhwal also bears testimony to the fact that the out-migration in this region is primarily triggered by factors associated with the absence of employment opportunities such as the general backwardness of the economy, high population pressure on extremely limited land, stark poverty and decline in agricultural production (Bora,

2000). The examination of available data also highlights the fact that it is not the pull of the cities that tempts the rural people; it is rather the gross economic deprivation and the misery of the people that forces them to move to the cities. Interestingly, it is also reported that some of the migrants are also driven by the self-esteem factor that goes along with the prospects of earning a better income. As one of the out-migrants reported:

"Mai Delhi mein naukari karta hoon…main kya kaam karta hoon isse koi farak nahi padta lekin sach ye hai ki main saher mein kaam karta hoon aur is ki wajeh se meri gaon mein izzat hoti hai".

(I am employed in Delhi.....the type of work doesn't matter but the fact that I am working in a city raises my prestige in the village and I am respected in the village for this reason).

-Age 36 years, working in Delhi.

For each of the out-migrant from the selected household, information has been collected regarding the current place of residence. Most of the male out-migrants are attracted to the capital of India i.e. New Delhi as it provides better opportunities to the unskilled, semi-skilled and skilled work force. Apart from New Delhi, migrants prefer to out-migrate to the urban areas of Uttarakhand for employment. These destinations are reported to have been preferred as they not only promise job opportunities but are also located closer to their villages and make it possible for them to visit their homes during holidays. The states of Punjab, Jammu and Kashmir (J & K), Assam, Uttar Pradesh, Kolkata in West Bengal, and Maharashtra are the other places where young males of rural Garhwal have migrated for jobs. Only two migrants out of the entire sample are reported to be working outside India.

Most migrants have to leave their households for several years, although there is considerable variation in the duration of their stay, away from their villages. Around 64 per cent of the husbands have out-migrated for more than 10 years from their native villages. The mean duration of out-migration from their first spell of migration is around 15 years (Table 3.6b).

Table 3.6b: Percentage distribution of the husbands' characteristics

Husbands' characteristics	Non-migrant husbands	Out-migrant husbands	Total
Age at first migration			
Below 20 years	NA	16.5	16.5
At 20 years	NA	60.9	60.9
Above 20 years	NA	22.6	22.6
Mean age at migration (in years)	NA	20.2 (1.8)	20.2 (1.8)
Marital status at the time of migration			
Married	NA	3.4	3.4
Unmarried	NA	96.6	96.6
Reason for migration			
Job	NA	100.0	100.0
Place of current residence			
Delhi	NA	47.4	47.4
Punjab, Haryana & Chandigarh	NA	16.5	16.5
Uttarakhand	NA	18.4	18.4
Others (Maharashtra, J& K, Assam, West Bengal etc.)	NA	17.7	17.7
Duration of migration			
3 to 10 years	NA	36.1	36.1
11 to 20 years	NA	43.6	43.6
More than 20 years	NA	20.3	20.3
Mean duration of migration (in years)	NA	14.8 (7.0)	14.8 (7.0)
Total Sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
NA=Not Applicable.

Three-fourth of the non-migrants have income up to `5000, whereas, more than 90 per cent out-migrants have income higher than `5000. This shows that out-migrants have higher income than their counterparts back home. The mean salary of non-migrant husbands is `4955 and for out-migrant husbands it is `10554. The difference in salary is statistically significant at one per cent level ($p<0.01$) (Table 3.6c).

A primary impact of migration on rural Garhwal is conceived in terms of remittances. The data also include detailed module on remittances received by the households: whether the households receive remittances either in cash or in kind, and the total amount of remittances received in the last 6 months preceding the survey (Table 3.6c).

In the study area, the remittances received are both in the form of cash and kind, and their periodicity varies. Almost every household receives some remittances from the city. The amount of remittances received during the last 6 months has been divided by 6 to get an average monthly remittance received by the households. Six out of ten households receive

`2000 to `4000 per month from the out-migrants, depending on the earnings of the out-migrants. On an average, the amount of monthly remittances sent by the out-migrants to rural areas is nearly `3193 (Table 3.6c). The results of this study are in line with Shrestha *et.al,* (2012). In his study he found that all of the workers regularly remit their income to their families in Nepal. Majority of the workers (51 per cent) observed that they remit their income once in three months 24 per cent remit every month.

Table 3.6c: Percentage distribution of the husbands' characteristics

Husbands' characteristics	**Non-migrant husbands**	**Out-migrant husbands**	**Total**
Income (in rupees)			
Up to 5000	74.6	8.4	37.1
5001 to 10000	20.4	62.7	44.4
Above 10000	5.0	28.9	18.5
Mean income of husband (in rupees)* **	4955 (3674.6)	10553.7 (5674.7)	8196 (5621.8)
Remittances received			
None	NA	0.4	0.4
Cash	NA	19.9	19.9
Cash and kind both	NA	79.7	79.7
Amount of remittances per month (in rupees)			
Up to 2000	NA	22.6	22.6
2001 to 4000	NA	58.1	58.1
4001 to 6000	NA	12.8	12.8
More than 6000	NA	6.4	6.4
Mean amount of remittances per month (in rupees)	NA	3193.4 (1606.2)	3193.4 (1606.2)
Total Sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
***p<0.01,
NA=Not Applicable.

In addition to cash receipt, a few percentages of the out-migrants bring electronic items like CD player, camera, mobile with them whenever they visit home. During their visits to the villages at the time of occasions, migrants bring clothes, utensils, soap, hair oil and miscellaneous items (data not shown in the table). Thus in the trade-offs between living together and living separately, it is the latter that wins as it is associated with the most sought after economic support through remittances from the out-migrants. It may, however, be pointed out that remittances are also to be supplemented by subsistence farm produce. The net impact of this combined income is perceptible in the change in their lifestyle, household amenities, quality of food and better education for children, as well as better health care. It is evident from the aforementioned discussion that all these factors are not only supportive in improving the

condition of the households of the out-migrants but also helps them in investing in human capital for the future, though with debatable quality, which may eventually improve their social status. On the contrary, the pragmatic realities of the non-migrant households narrates a different yet miserable tale of their economic deprivation because they are mostly observed to be engaged in petty businesses and whatever they earn is utilised towards the maintenance of the household, without much hope for the future.

Since the visits by the out-migrants to their homes back in Garhwal, are important, as they bring with them the values, ethos, culture, and life-styles of the cities of current residence, it may be interesting to find out the frequency of the visits, as higher frequency of these visits may indicate more exposure of the households and others associated, to the city life. Visits to the village are the strongest and most obvious physical and emotional contacts that the migrants maintain with their respective villages. As could be discerned from Table 3.6d, three-fourth of the migrants visits their homes at least thrice a year.

Table 3.6d: Percentage distribution of the husbands' characteristics

Husbands' characteristics	Non-migrant husbands	Out-migrant husbands	Total
Number of visit to home in a year			
1 to 2 visits	NA	23.3	23.3
3 visits	NA	49.6	49.6
More than 3 visits	NA	27.1	27.1
Mean number of visits	NA	3 (0.7)	3 (0.7)
Total Sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
NA=Not Applicable.

Another important dimension of home visits of the out-migrants is that their flaunting of the new life-style may also induce others in the villages to migrate either independently or by seeking their support to not only find jobs in the cities but also support them there in situations where they are yet to find jobs.

3.5 Socio-economic and Demographic Characteristics of the Wives of Non-migrant and Out-migrant Husbands

A few characteristics of women with out-migrant husbands, compared to their counterparts who have co-resident husbands are noteworthy. Table 3.7a indicates that there is almost equal distribution of wives with non-migrant husbands across different age groups, whereas, most of the left-behind wives are young i.e. 62 per cent of the left-behind wives are in the age group of

20-30 years. The difference in the mean age of both the groups is found to be statistically significant implying that younger wives are more likely to be living away from their husbands than older wives. This is reflective of labour migration being highly selective in favour of younger men. It also seems to suggest that older wives probably migrate with their husbands once the children grow up and need to go out for higher education/employment. By that time, other household responsibilities of migrant husbands such as looking after the older household members are also likely to be over (Desai and Banerji, 2008).

Table 3.7a indicates that though the legal minimum age at marriage for women is 18 years, 33 per cent wives of non-migrants and 18 per cent left-behind wives are married before the legal age at marriage. The mean age at marriage is lower for the wives of non-migrants as compared to the wives of out-migrants. This delay is due to the fact that the mean age at out-migration of their husbands is around 20 years and they (out-migrants) get married after couple of years i.e. after attaining some financial stability. Due to these cumulative factors, the duration of marriage is lower for the wives of out-migrants than wives of non-migrants. More than half the wives of out-migrants have a marriage of less than 10 years duration while for non-migrants; the duration of marriage is more evenly distributed across the different time categories. The mean duration of marriage for wives of non-migrants is 17 years and for the wives of out-migrants is 11 years and this difference is also found to be statistically significant ($p<0.01$). From Table 3.7a it is also apparent that 35 per cent of the wives in both the groups are younger to their husbands by more than 5 years.

Table 3.7a: Percentage distribution of the women by characteristics

Women's characteristics	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Current age			
20 to 30 years	38.9	62.0	50.8
31 to 40 years	32.9	30.5	31.7
Above 40 years	28.2	7.5	17.6
Mean age of women (in years)*	35.5 (8.8)	30.3 (6.7)	32.8 (8.3)
Age at first marriage			
Below 18 years	33.3	18.4	25.7
18 to 21 years	56.7	72.6	64.9
Above 21years	9.9	9.0	9.5
Mean age at marriage (in years)*	18.0 (2.2)	19.1 (1.7)	19.0 (1.9)
Duration of marriage			
Up to 10 years	34.1	57.5	46.1
10 to 20 years	29.8	30.1	29.9
Above 20 years	36.1	12.4	23.9

Mean duration of marriage (in years)* **	16.7 (9.2)	11.1 (7.3)	13.8 (8.7)
Age gap among spouse			
< than 3 years	25.0	26.7	25.9
4 to 5 years	38.9	38.3	38.6
More than 5 years	36.1	35.0	35.5
Mean age gap among spouse (in years)* **	5.6 (3.3)	5.1 (2.8)	5.3 (3.1)
Household structure			
Nuclear	61.9	26.7	43.8
Non-nuclear	38.1	73.3	56.2
Can read and write	80.6	98.1	89.6
Number of years of schooling			
Up to 8 years	49.8	17.2	31.5
Up to 10 years	31.0	35.6	33.6
Up to 12 years	15.8	40.2	29.5
More than 12 years	3.4	6.9	5.4
Mean number of years of schooling * **	9.0 (2.4)	10.6 (2.2)	9.9 (2.4)
Bank/Post Office account	61.1	88.0	74.9
Currently employed	33.7	33.8	33.8
Total Sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
***p<0.01.

Three-fourths of the left-behind wives are living with their in-laws (non-nuclear households) as compared to 38 per cent of the wives of non-migrants. There are two possibilities here. One is to live with the in-laws as a part of the non-nuclear households while another is to live separately forming other nuclear households. Which living arrangement will be worked out is dependent upon the strength of the family bonding between the out-migrant husband and his immediate family. While the non-nuclear household structure curtails freedom and autonomy of the left-behind wives considerably, it also provides them protection from other possible risks and health hazards. The nuclear households, on the other hand, empower them while exposing them to many other uncertainties which they may have to face on their own in the absence of their husbands. Which way the trade-off will work out would depend on a host of factors, including risk assessment on the part of out-migrant husbands and left-behind wives and on how strongly do they relate to other household members (Table 3.7a).

During the interactions with respondents it has emerged that if parents of the out-migrant husbands are alive, there is a much higher possibility of left-behind wives staying with them, which is borne out by the fact that a higher percentage of the wives of out-migrants are staying with their in-laws than the wives of non-migrants. It can be further seen from Table 3.5 that

higher percentages of the heads of the households are above the age of 50 years in the out-migrant households than their counterparts.

From Table 3.7a, it can also be discerned that almost all the wives of out-migrants are educated, albeit with varying levels, right from elementary education to post-graduation. Higher percentage of the wives of out-migrants can read and write (98 per cent) as compared to the wives of non-migrants (81 per cent). Around 40 per cent left-behind wives have attained 12 years of schooling, while 50 per cent wives of non-migrants have attained around 8 years of schooling. This indicates that wives of out-migrants are more educated than the wives of non-migrants. The mean number of years of schooling for the wives of non-migrants stands at 9 years, while for left-behind wives at 11 years and the difference is found to be statistically significant ($p<0.01$, Table 3.7a). This difference appears to be plausible in view of the fact that out-migrants are reported to be more educated than non-migrants. May be the comparatively highly educated out-migrants (than non-migrants) prefer to marry educated girls assuming that they are intelligent and will be able to take care of the households in their absences (than less educated girls).

It is further found that 88 per cent left-behind wives have their accounts in banks or post offices, whereas only 61 per cent wives of non-migrants have reported to have accounts in banks or post offices. This could be indicative of more autonomy of women in out-migrant households as compared to their counterparts, although such bank accounts could be opened in order to facilitate and manage remittances from out-migrants. Further, customs and traditions did not appear to forbid out-door work for females in rural Garhwal. The proportion of women working for wages is equal among both the groups of women (34 per cent) as highlighted in Table 3.7a. All the women are found to be involved in agricultural works as well.

Apart from these demographic and social aspects, it has been found in the study area that ~~a~~t the age of 22 to 25 years, around 27 per cent wives of non-migrants, and 36 per cent left-behind wives have given birth to their first child (Table 3.7b). The mean age at first child birth for both groups of women stands at 21 years.

Table 3.7b: Percentage distribution of the women by fertility characteristics

Women's characteristics	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Age at first birth			
Below 18 years	4.0	2.0	3.0
18 to 21 years	65.1	59.4	62.2
22 to 25 years	26.9	36.3	31.6
Above 25 years	4.0	2.4	3.2
Mean age at first birth (in years)	20.7 (2.5)	21.0 (2.2)	20.9 (2.3)
Total number of live births			
1 to 2 births	44.6	69.4	56.9
3 to 4 births	47.0	28.2	37.6
More than 4 births	8.4	2.4	5.4
Mean number of total live births* **	2.8 (1.2)	2.2 (1.05)	2.5 (1.2)
Still births	8.8	6.4	7.6
Child died after live birth	12.0	10.0	11.0
Number of living children			
1 to 2 children	48.8	75.4	62.1
More than 2 children	51.2	24.6	37.9
Mean number of living children* **	2.7 (1.1)	2.1 (0.9)	2.5 (1.1)
Total Sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
***p<0.01.

Further, it has been found that 55 per cent wives of non-migrants have given birth to more than 2 children, whereas 31 per cent left-behind wives have given birth to more than 2 children. The mean number of total live births amongst wives of non-migrants is around three and among left-behind wives is around two. This difference is statistically significant ($p<0.01$). Above results suggest that fertility is lower among left-behind wives as compared to their counterparts. An interesting anomaly that becomes apparent in this study is that though the mean age at marriage for the wives of non-migrants is lower than the wives of out-migrants, then the age at first birth should have been lower for the former than the latter. However, the study reveals that age at first birth is around the same for the wives of both the categories. The results from FGDs reveal that it may be because, there can be some sort of social-cultural pressures on the wives of out-migrants to have children immediately after marriage as their husbands are out-migrants, while the wives of non-migrants are not under such obligations.

There also appears to be an evidence of small family norm among left-behind wives as compared to the wives of non-migrants, as the number of living children per couple is quite low with regards to the former category as compared to the latter. For instance, three-fourths of the

left-behind wives, as compared to 49 per cent non-migrants' wives, have 1 to 2 living children. Again the mean number of living children for wives of non-migrants is around three and for the left-behind wives is around two and the difference is statistically significant ($p<0.01$). There is a slight difference among both the groups of women in experiencing still births but the left-behind wives have lower percentages of still births as compared to their counterparts. Somewhat similar result is evident for child loss. A lower proportion of the left-behind wives have experienced child loss (10 per cent), compared to the wives of non-migrants (12 per cent) (Table 3.7b).

3.6 Household Characteristics

This section discusses the distribution of the surveyed households by various socio-economic and demographic characteristics such as religion, caste, number of household members, type of household structure, income, savings and investments of the household, for both categories of women. The distribution of the households by religion (determined here by the religion of the household's head) has a very peculiar characteristic i.e. all households in the study area are found to be following Hinduism.

Table 3.8: Percentage distribution of the households by religion, caste and other characteristics

Household characteristics	Households with non-migrant husbands	Households with out-migrant husbands	Total
Religion			
Hindu	100.0	100.0	100.0
Non-Hindu	0.0	0.0	0.0
Caste			
General	79.8	91.4	85.7
SC/ST/OBC	20.2	8.6	14.3
Number of household members[#]			
1 to 3 members	19.0	27.8	23.6
4 to 5 members	55.6	62.8	59.3
6 to 11 members	25.4	9.4	17.2
Mean household members* **	4.7 (1.4)	4.1 (1.1)	4.4 (1.3)
Total Sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
***$p<0.01$,
[#]Exclude out-migrant husbands.

Fourteen per cent of all the households in the study area belong to the Scheduled Castes (SC)/Schedule Tribes (ST) and Other Backward Classes (OBC) (as determined by the caste status of the household head). A higher proportion of the households with non-migrant husbands (20 per cent) belong to SC/ST/OBC categories as compared to 9 per cent for their

counterparts, as indicated in Table 3.8. This clearly indicates that those higher in the caste hierarchy are educationally and logistically better equipped to migrate. The network of the higher caste out-migrants might also be supportive in helping them to find jobs in their respective cities and also providing them temporary shelter during the transition period. Such support and logistics may not be available to the people of other castes lower in the social hierarchy.

As is highlighted by information contained in Table 3.8, the size of household is larger among the non-migrants as compared to out-migrant households. The mean differences in the household size for both the groups are also found to be statistically significant ($p<0.01$).

The distribution of the households by income, savings and investment is presented in Table 3.9 for the study area by the status of migration of husbands.

Table 3.9: Percentage distribution of the households' characteristics

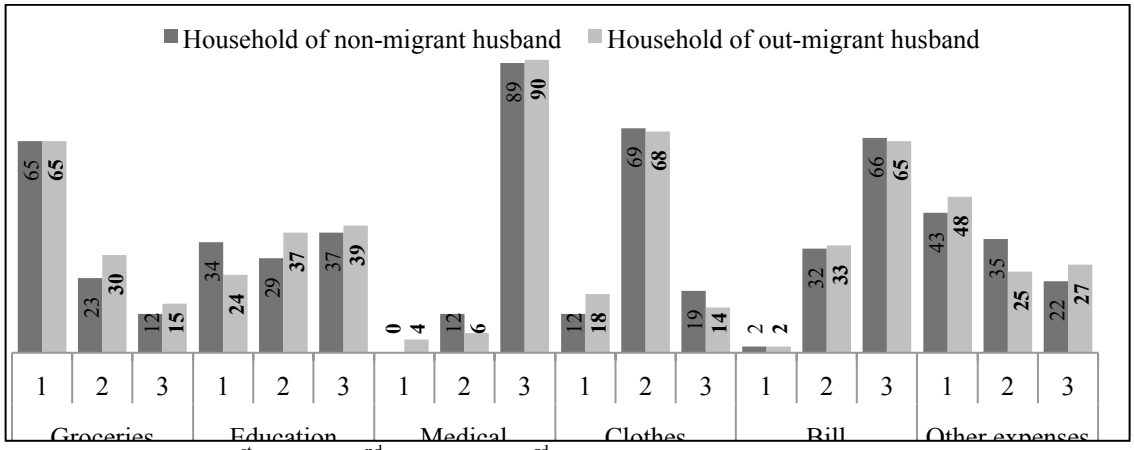
Household characteristics	Households with non-migrant husbands	Households with out-migrant husbands	Total
Household income per month (in rupees)			
Up to 6000	74.2	7.5	40.0
6001 to 12000	19.8	53.6	37.1
More than 12000	6.0	38.9	22.8
Mean household income ***	5801.2 (3889.5)	13123.3 (6337.0)	9561.2 (6430.2)
Savings per month (in rupees)			
No savings	18.7	2.3	10.2
Up to 1000	50.8	47.7	49.2
1001 to 2000	19.4	27.4	23.6
2001 and above	11.1	22.6	17.0
Mean savings (last month)***	946.4 (1274.2)	1478.6 (1539.0)	1219.7 (1439.9)
Savings (last year) (in rupees)			
No savings	18.3	2.3	10.0
Up to 5000	21.8	15.8	18.7
5001 to 10000	23.4	23.7	23.6
10001 to 20000	20.6	32.0	26.4
20001 and above	15.9	26.3	21.2
Mean savings (last year)***	10544.4 (13087.4)	16197.7 (14754.9)	13447.4 (14238.8)
Investment (last 2 years) (in rupees)			
No investment	73.8	71.4	72.6
Up to 5000	16.3	16.5	16.4
More than 5000	9.9	12.0	11.0
Mean investment (last 2 year)	2911.5 (11189.8)	6305.3 (37081.9)	4654.2 (27721.7)
Total sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
While calculating "household income" out-migrant's income has been added,
***$p<0.01$.

As is indicated in Table 3.9, there is a vast difference between both types of households in terms of income. The households with out-migrant husbands have a higher average monthly income than the households with non-migrant husbands. Around 74 per cent of the households with non-migrant husbands have income up to `6000, whereas 93 per cent households with out-migrant husbands have income more than `6000. The mean household income of the households with non-migrant husbands is at `5801 as compared to `13123 for households with out-migrant husbands. This difference is also found to be statistically significant at one per cent level. This difference is also reflected in savings of both the groups of households. During the last month (preceding the survey), 19 per cent households with non-migrant husbands did not post any savings in comparison to only 2 per cent for households with out-migrant husbands. During the same month, 11 per cent of the former categories of households are able to save more than `2000, as compared to 23 per cent for households with out-migrant husbands. The mean savings in a month (preceding the survey) is `946 for households with non-migrant husbands and `1479 for households with out-migrant husbands. This difference is found to be statistically significant at one per cent level ($p<0.01$). Around 16 per cent households with non-migrant husbands are able to save more than `20000 in a year (preceding the survey), whereas 26 per cent households with out-migrant husbands have saved more than `20000. The mean saving in a year (preceding the survey) is `10544 for households with non-migrant husbands and `16198 for households with out-migrant husbands which is statistically significant at one per cent level ($p<0.01$). The investment across both the groups shows similar pattern, though the differences are not statistically significant. Building a house, improving housing conditions, and/or purchasing housing equipment and durables are major issues in investment.

It would also be interesting to find out for what the incomes (whether remitted money received by the households with out-migrant husbands or the income earned by households with non-migrant husbands) is utilised. The idea is to find out if there is any difference in the income utilisation patterns. On surface level, there should not be much difference as the incomes are barely sufficient to meet the basic needs. Even in case of remitted money, there is not much of a cushion available for using the surplus somewhere else.

Figure 3.2: Percentage distribution of the use of income/remittances according to the priorities



Note: 1, 2, 3 depicts 1st priority, 2nd priority and 3rd priority respectively,
Bill: Electricity bill, Mobile bill etc., other expenses: social obligations

Since, households were not found to be keeping a record of their expenditure, the entire data, on this count, is based upon memory recall. In order to minimise the errors, the households were asked for three most important uses (or priorities) of the income/remittances. As indicated by Figure 3.2, for both types of households, 65 per cent of the income earned/remittances received are used for buying the groceries for the households. It is also obvious that remittances/income has been used primarily 'on food items' in the rural area with nearly 65 per cent of the households reporting use of the remittances/income 'on food items' as a first purpose. A high percentage of households in both the groups have reported that the second most important use of remittances/income is 'buying of clothes'. The third most important use of remittances/income in both the groups has been for 'health care'. 'Education of household members' also has featured as one of the main uses of remittances/income (nearly 37 per cent of the households with non-migrant husbands and 39 per cent of the households with out-migrant husbands) (Figure 3.2). Although this study does not analyse possible changes in the expenditure behaviour with or without remittances from out-migrants, the data appears to suggest no perceptible difference in the expenditure behaviours of the two types of households.

3.7 Consumption-expenditure and Nutrition Level of the Household Members

For understanding the differences in consumption between the two groups, the households' expenditure on major items are used (Parinduri and Thangavelu, 2008). Table 3.10 shows that 40 percent household with non-migrant husbands and 27 per cent households with out-migrant husbands have monthly per capita expenditure (MPCE) up to `1000. The number of households with MPCE greater than `1000 is more for those with migrant husbands (73

percent) than those with non-migrants (60 percent) and the mean differences are significant at one per cent level ($p<0.01$).

Out of the total monthly expenditure done by the households, the average amount of rupees spent on the staple food is higher for the households with non-migrant husbands as compared to their counterparts. This may be because the households with out-migrant husbands are spending more money in cereals and cereal products. The average amount of money spent on cereals and its products (monthly) is `7 by households with non-migrant husbands and `8 by households with out-migrant husbands, though the difference is not significant. The average amount of money spent on milk and milk products (monthly) is `42 by households with non-migrant husbands and `45 by households with out-migrant husbands.

Table 3.10: Percentage distribution of the households by consumer expenditure and type of households

Household characteristics	Households with non-migrant husbands	Households with out-migrant husbands	Total
Monthly per capita expenditure (MPCE) (in `)			
Up to 1000	40.1	26.7	33.2
1001 to 2000	54.0	68.0	61.2
More than 2000	6.0	5.3	5.6
Mean MPCE (in `)****	1177.8 (411.3)	1297.7 (554.6)	1239.3 (493.3)
Mean amount invested in food when `100 is spend			
	76.4 (8.7)	73.4 (9.3)	74.8 (9.1)
Mean amount invested in cereal & cereal product when `100 is spend			
	7.4 (4.5)	8.1 (6.3)	7.8 (5.5)
Mean amount invested in milk and milk products when `100 is spend			
	41.8 (15.5)	45.0(14.8)	43.3 (15.2)
Mean quantity of cereal and cereal product consumed (in kg)			
	1.0 (2.5)	1.3 (2.5)	1.2 (1.9)
Mean quantity of milk consumed (in litres)			
	15.8 (8.9)	16.0 (10.3)	16.0 (9.6)
Consumption of vegetables	100.0	100.0	100.0
Consumption of Milk			
Never	2.4	0.8	1.5
Weekly	2.0	0.0	1.0
Daily	95.6	99.2	97.5
Consumption of Fruits			
Never	1.6	0.0	0.8
Seasonal	0.8	0.4	0.6
Monthly	13.9	8.6	11.2
Weekly	63.5	71.8	67.8
Daily	20.2	19.2	19.7
Total Sample	252	266	518

Note: The figures in parenthesis depict standard deviation,
***$p<0.01$.

In terms of quantity, the study reveals that the cereals consumed (monthly) by each household member with non-migrant husbands (1 kg) is less than households with out-migrant husbands (1.33 kg). The vegetables are consumed by every individual in both the households. There is negligible difference in the consumption of milk between both the groups. The households with out-migrant husbands are reported to be consuming fruits more frequently than households with non-migrant husbands. Thus, the data reveals that food consumption patterns have changed somewhat/marginally due to the husbands' out-migration.

3.8 Housing Characteristics

It is commonly believed that the access to basic amenities, such as proper housing, safe drinking water and sanitation, and clean cooking fuel, are not only important measures of the socio-economic status of the households but are also fundamental necessities for better health. This study furnishes information on several housing characteristics that affect the living conditions in rural Garhwal. The Table 3.11a presents the percentage distribution of the households by type of house, ownership of house, ownership of any other house, number of rooms, type of fuel used for cooking and place for cooking. Information on other housing characteristics such as the source of lighting, the source of drinking water, the distance to obtain drinking water (for households that do not have water on the premises) and the type of toilet facility available to the households are shown in Table 3.11b.

Overall, 9 per cent of the households live in *kutcha*[12] houses, 56 per cent live in semi-*pucca*[12] houses, and the remaining 35 per cent live in *pucca*[12] houses. A large majority of the households with out-migrant husbands live in *pucca* houses (41 per cent), whereas the majority of the households with non-migrant husbands live in *semi-pucca* houses (58 per cent). The vast majority of the households (99 per cent) own a house. Seven per cent households with out-migrant husbands and only three per cent households with non-migrant husbands have a second house as well. Seven out of ten households with non-migrant husbands and six out of ten among those with out-migrant husbands have two to five rooms in their houses but a larger proportion of households with out-migrant husbands have houses with more than 5 rooms than households with non-migrants.

[12] See the definition of *Kutch*, *Semi-pucca* and *Pucca* house in Chapter 2.

Solid cooking fuels include coal/lignite, charcoal, wood, straw, shrubs, grass, agricultural crop waste and dung cakes and it has been observed and verified from empirical facts that the smoke emanating from such fuels is seriously hazardous for health (IIPS and Macro International, 2007). To study the potential for exposure to cooking smoke from solid fuels, the study has collected information on the type of fuel used for cooking and the place where the cooking is done. It is a peculiar characteristic that among solid fuels only wood is used in the study area. The study reveals that most of the households use both i.e. Liquefied Petroleum Gas (LPG) and wood to prepare food. Around 98 per cent of the households with out-migrant husbands cook food with both LPG and solid fuel, whereas the percentage for the households with non-migrant husbands is lower at 88 per cent. Among households with out-migrant husbands, only 2 per cent households are cooking with only solid fuels, whereas for the households with non-migrant husbands, it is 12 per cent. Additionally, in the study area, only 3 per cent of the households have reported to be cooking their food in the houses, without a separate room for cooking. Among both the groups, 4 and 2 per cent of the households with non-migrant husbands and households with out-migrant husbands respectively do not have a separate room for cooking.

Table 3.11a: Percentage distribution of the households by housing characteristics

Household characteristics	Households with non-migrant husbands	Households with out-migrant husbands	Total
Type of house			
Kutcha	12.7	5.3	8.9
Semi-Pucca	57.9	54.1	56.0
Pucca	29.4	40.6	35.1
Ownership of house			
Own	98.8	100.0	99.4
Rent	1.2	0.0	0.6
Any other house	2.8	7.1	5.0
Number of rooms			
2 to 5 rooms	67.5	60.5	63.9
More than 5 rooms	32.5	39.5	36.1
Mean number of rooms	5.1 (1.6)	5.2 (1.4)	5.1 (1.5)
Fuel used for cooking			
LPG & wood both	88.1	97.7	93.1
Only Wood	11.9	2.3	6.9
Separate room for cooking	95.6	98.1	96.9
Total sample	252	266	518

Note: The figures in parenthesis depict standard deviation.

Table 3.11b presents information on the per cent distribution of the households by source of lighting, type of water facility and type of toilet facilities. The set of figures further illustrate that electricity provision is near-universal now in rural Garhwal among both the groups. More than 96 per cent of households have electricity among both the groups. In the absence of electricity, kerosene is used as a source of lighting among the households of both the groups.

An improved source of drinking water is primarily characterised by water piped into the dwelling, yard or plot, water available from a public tap or standpipe, a tube well or borehole, a protected dug well, a protected spring, and rainwater (IIPS and Macro International, 2007). Table 3.11b indicates that 9 out of 10 households in both the groups have access to clean source of drinking water. Other sources from where the households get water for cooking food or drinking is natural spring, river etc. The households with out-migrant husbands are more likely to have a source of drinking water in their premises (43 per cent) than the households with non-migrant husbands (37 per cent). In the present study, households that did not have access to water in their residential premises were quizzed about the distance of the water source from their residences. Around 60 per cent of the households reported not to have water within their residential premises and the mean distance to the water source is reported to be around 13 meters. This implies that those households which do not have source of drinking water within their household premises, they don't have to go too far to fetch drinking water.

A minority of the households (10 per cent) in the study area have no toilet facility. The proportion of the households without any toilet facility is much greater among households with non-migrant husbands (15 per cent) than among households with out-migrant husbands (6 per cent). Overall, 88 per cent of the households have toilet facilities that are improved and not shared with any other households. The improved toilet facilities primarily are characterized by toilet facilities with a flush or a pour flush that is connected to a sewer system, septic tank or pit latrine and a pit latrine with slab. The situation in which the households do not possess any of such toilet facilities but shares it with some other households cannot be considered to have an improved toilet facility (IIPS and Macro International, 2007). Higher percentages of the households with out-migrant husbands have access to improved toilet facilities as compared to the households with non-migrant husbands (93 vs. 84 per cent respectively).

Table 3.11b: Percentage distribution of the households by housing characteristics

Household characteristics	Households with non-migrant husbands	Households with out-migrant husbands	Total
Source of lighting			
Electricity	96.8	99.6	98.3
Kerosene	2.8	0.4	1.5
Gas Lantern	0.4	0.0	0.2
Source of drinking water			
Tap (Inside residency)	36.5	42.5	39.6
Tap (Shared/public)	54.4	49.2	51.7
Others (natural spring, river)	9.1	8.3	8.7
Mean distance from where they get water (in meters)	12.6 (9.7)	14.3 (12.9)	13.4 (11.4)
Type of toilet facility			
Own pit toilet	83.7	92.9	88.4
Shared toilet	1.6	0.8	1.2
Open air defecation	14.7	6.4	10.4
Total sample	252	266	518

Note: The figures in parenthesis depict standard deviation.

3.9 Household Possessions

In order to further assess the living standard of the households, the study has collected information on household ownership of 19 different types of durable goods and 3 different means of transportation. In addition to this, information has also been collected whether household has taken loan and has a bank account. Table 3.12 shows that a small proportion of both the types of households i.e. households with non-migrant husbands and households with out-migrant husbands possess a motor cycle/scooter or motor car. About 8 per cent of the households with non-migrant husbands own a motorcycle or a scooter, and 3 per cent own a car. By contrast, 7 per cent of the households with out-migrant husbands own a motorcycle or a scooter and none of the households own a car. Most of the households in both the groups do not possess any of the three means of transportation mentioned in the survey. This may be because of the hilly terrain that every village is not well connected with roads and due to which even if the households want to, they cannot buy any vehicle.

Table 3.12: Percentage distribution of the households by household assets

Household possessions	Households with non-migrant husbands	Households with out-migrant husbands	Total
Means of transport			
Motor car	3.0	0.0	1.4
Taxi/Truck/Lorry	0.4	0.0	0.2
Motor cycle/Scooter	8.3	7.5	7.9
Household goods			
Telephone/Mobile	96.4	98.1	97.3
Sewing machine	68.3	85.7	77.2
Television	87.0	96.0	92.0
MP3/DVD/CD	42.0	53.0	47.0
Refrigerator	12.0	15.0	13.0
Computer/Laptop	6.3	5.3	5.8
Sofa set	65.5	87.6	76.8
Mattress	96.0	99	97
Table	98.0	99	98.5
Chair	98.0	99.6	98.8
Cot/Bed	100.0	100.0	100.0
Clock/Watch	99.0	99.0	99.0
Electric fan	75.0	82.0	79.0
Dish antenna	84.0	96.0	90.0
Radio/Transistor/Tape	38.0	47.0	42.0
Camera	21.0	30.0	25.0
Heater	23.0	35.0	29.0
Domestic animal like cow/buffalo/bull/goat/hen etc.	94.0	96.0	95.0
Households having a bank account/post office account*	83.0	99.0	91.0
Households who have taken any loan*	14.0	9.0	11.0
Source of loan taken			
Bank	8.8	21.7	14.0
Employer/landlord	14.7	13.0	14.0
Shopkeeper	26.5	26.1	26.3
Relatives or friends	47.1	34.8	42.1
Self Help Group (SHG)	2.9	4.3	3.5
Total Sample	252	266	518

Note: *Any usual member of the household.

Various forms of communication like mobile/telephone are reported to be owned by a majority of the households. Some of the items listed i.e., mattress, table, chair, cot/bed and clock/watch are reported to be owned by a majority of the households in both the groups. Of the items asked about, differences in the percentages are found in only a few household assets: sewing machine, television, MP3/CD/DVD player, refrigerator, sofa set, dish antenna, radio/transistor/tape,

camera, heater and electric fan. In general, the households with non-migrant husbands are less likely to possess consumer items such as sewing machine, televisions, MP3/DVD/CD player, refrigerator, computer, sofa set, electric fan, dish antenna, radio/transistor/tape, camera and heater as compared to the households with out-migrant husbands. Table 3.12 also presents information on the possession of the farm animals by migration status. The farm animals mentioned in the questionnaire are cows, bulls, buffaloes, horses, donkeys, mules, goats, sheep and chicken. Very few households in rural Garhwal reported not to own any of the farm animals (5 per cent); although this proportion is little higher for the households with non-migrant husbands (6 per cent) than for the households with out-migrant husbands (4 per cent).

Nine in ten households reported to have a bank account or an account with the post office. The proportion of the households with a bank or post-office account is 83 per cent for the households with non-migrant husbands and 99 per cent for the households with out-migrant husbands. Further, the table reveals that the percentages of households that have taken loan are very low i.e. 14 and 9 per cent respectively for both the groups. Jetly (1987) has observed that generally the families avoid borrowing from relatives, because it may smirch their reputation and may result in a severe loss of prestige and honour. Keeping this in mind, the families generally approach their neighbours or friends for a small sum of money which may allow them to meet their ends. In rural Garhwal, very few households reported to have borrowed money from an institutional source; instead they mostly borrow from their relatives, shopkeepers and employers. Such loans are easily available.

3.10 Wealth Index

The study employs wealth index as the index of economic status of the households which may further underline the background of the study. The index in the context has been formulated by the analysis of household assets data and housing characteristics. Each household asset is assigned a weight (factor score) generated through principal component analysis, and the resulting asset scores are standardized in relation to a normal distribution with a mean of zero and standard deviation of one (Gwatkin *et al.,* 2000). Each asset in each household is assigned with a score which is further summed up for each household; and in consequence they are employed to bring out a systematic ranking of individuals in which they reside. The sample has then been divided into quintiles i.e. five groups comprising equal number of individuals in each

group. After the formation of those five groups, the wealth index then conveniently is divided into three categories which can be grouped as poor, medium and rich.

An asset-based approach is one of the appropriate alternatives which allow one to measure the income and consumption expenditure of the households. This approach has resulted from demographic studies such as Demographic Health Surveys, which, however, lack data on income or consumption expenditure, collect information on ownership of a range of durable assets (example car, refrigerator, television), housing which is characterized by material of dwelling floor and roof, toilet facilities etc., and finally access to basic services (e.g. electricity supply, source of drinking water) (Howe *et al.,* 2008). The empirical studies accomplished in the aforementioned domain explicates the fact that these assets may realistically be used as indicators of living standards and the studies which have been executed indicate that some plausible constructs have to be built to account for the wealth indices.

For the present study, based on the previous attempts to construct the wealth index, a number of items have been included and tested before preparing the final questionnaire. The items included are: car/jeep, taxi/truck/lorry, motorcycle/scooter, mobile/telephone, sewing machine, TV, CD player, refrigerator, computer, sofa set, mat, table, chair, watch, fan, dish antenna, radio, camera, electric heater and seven indicators of housing quality i.e. type of house, ownership of house, separate room for kitchen, electricity, fuel used for cooking, piped water flush toilet and domestic animals. The method of principal components analysis has been used to derive weights for each asset and construct a housing quality indicator and an overall score for household wealth.

Figure 3.3: Percentage distribution of wealth index among households with non-migrant and out-migrant husbands

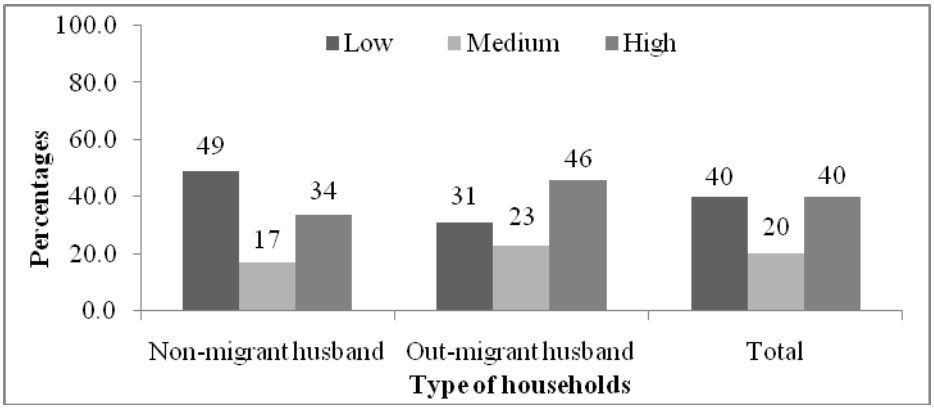


Figure 3.3 indicates that almost half of the households with non-migrant husbands are in low wealth category, whereas 23 and 46 per cent households with left-behind wives are in medium and high wealth categories respectively.

3.11 Summary

The study reveals different socio-economic and demographic characteristics of rural Garhwal by households with left-behind wives due to their husbands' out-migration and households with wives of non-migrants. In the study area, the population largely follows Hindu religion and belongs to general category of castes. Moreover, the age-sex pyramid clearly depicts that male out-migration has profound impact on the age-sex structure of the out-migrant households. The number of males in the reproductive and productive age groups i.e. 15-49 years is lower among the households of male out-migrants as compared to households with non-migrants. In the study area, around two-third of the household members in the study area are currently married. More than 80 per cent can read and write. However, the mean years of school attended are around eight years. Around one-third of the household members are students and another one-third of the household members are engaged in either unpaid jobs or working as agricultural labourers.

The households' heads in the study area are mostly males, above 50 years, currently married, and can read and write. However, a clear distinction can be seen in the households with out-migrant husbands and households with non-migrant husbands. In the former households, the heads are mostly females, comparatively older, higher percentages of them comprise widows, and lesser percentage can read and write as compared to the latter category. Further, it can be seen that out-migrant husbands are younger and better educated than the non-migrant husbands. The out-migrants have out-migrated for around 15 years and their common place of out-migration is Delhi and around two-third of them have reported to be working in private sectors. Moreover, the income of the out-migrants is higher than the non-migrants. The out-migrants have maintained close ties with their native villages as they visit their homes at least three times in a year. The left-behind wives are relatively younger, have lower duration of marriage, higher age at marriage, better educated, and living in non-nuclear households than the wives of non-migrants. Moreover, the former group has lesser number of children than the latter.

At the household level, the income, savings and investments are higher for the households with out-migrant husbands than households with non-migrant husbands. The remittances/income is mainly spent for purchasing grocery items. The mean monthly per capita expenditure is also found to be higher for the former category of the households than the latter. Higher percentages of households with out-migrant husbands live in *pucca* houses, have electricity, have sources of drinking water within their premises and own pit toilet than the non-migrant households. In line with the findings with housing and economic conditions, the wealth index reveals that the households with out-migrant husbands have better economic conditions as compared to the households with non-migrant husbands.

Thus at the household level, the study has found significant differences in terms of various socio-economic parameters such as the age of the head of the household, educational attainment of household heads, household income, household savings, monthly per capita expenditure (MPCE), and household size between the households with male out-migrants and the reference group. At the individual level, study has also found significant differences between the out-migrant husbands and the non-migrant husbands in terms of age, their level of educational attainment and income. Even in the case of wives, significant differences are found between the wives of out-migrants and the wives of the non-migrants with respect to their age, education, age at marriage, duration of marriage, age gap among spouses, and number of living children.

CHAPTER 4: PATTERN OF FARM ACTIVITIES

4.1 Introduction

The viable association between migration and its effect on agriculture has been extensively debated and discussed among academicians and policy makers alike. The contemporary research in the domain has highlighted that migration and agriculture have a dyadic relationship. In fact, the phenomenon of male migration has a remarkable effect on agriculture because it changes the gender division of labour by including the reality of the feminization of agriculture. On the other hand, it has been established through numerous empirical studies that the small holdings could not feed the vast population of small and marginal farmers in the rural areas and that migration is the way out either to earn a livelihood or supplement the meagre farm income. Migration studies, thus, need to emphasize not only on the livelihood strategies but also on the development prospects of those left behind. 'Male-only' is the migration which characterizes the internal migration in India, particularly from those regions where local employment opportunities are fewer. Another part of the story of the 'left-behind wives' is something that did not receive fair attention in the research studies (Jetley, 1987).

Migration as a phenomenon is always viewed as a strategy for human beings to solve their livelihood related problems or to capitalize upon the gainful employment opportunities wherever they are available (Boyle *et al.,* 1998). Generally, one or two members, particularly the males, out-migrate to cities, mostly leaving their families behind in the villages. However, these out-migrants maintain a close association with the areas of their origin and invest their savings in their villages rather than in the cities where they work (Haan, 1997). Adams (1991) encapsulates the fact that the remittances received by the migrant households are generally invested to enhance the agricultural productivity. In addition, Helweg (1983) has found the fact that the utility of remittances may change over a period of time, for example, it is observed that people in Punjab, in the first place, spend the received remittances on household maintenance and improving agriculture production. In the later stage, they are used to augment status of the household in the village. At even later stages, remittances are astutely used to begin commercial and non-agricultural activities. A close examination of the income transfer activities may exhibit the fact that the benefit of such transfers may depend upon their sizes and frequencies

which, in turn, are dependent on the level of income and urban employment, types of job, the cost of living etc.

Numerous studies have been conducted to examine whether the phenomenon of migration leads to productive or consumptive investment. While the former comprises investments in agricultural and non-agricultural activities and the latter include investments that directly improve the quality of life for members of the households, such as housing and durable goods. Using household data collected for rural China, a study found that in poor areas, migration increases consumptive investments by nearly 20 per cent (De Brauw and Rozelle, 2008), suggesting no evidence of any direct association between migration and productive investment. The withdrawal of the work force due to migration has been observed to have a negative effect on household income from crops in some areas; though it was not found to affect the crop yielding possibilities (De Brauw *et al.,* 2003). On the contrary, some empirical studies have reported that the phenomenon of migration fosters household investment in the home regions (Mendola, 2006).

Some empirical studies have closely examined several perspectives on remittances that the utility of remittances for household consumption and their investment towards raising agricultural productivity are not related. The most common use of the remittances is to pay for the maintenance of the household, as the poor farm incomes are grossly incapable of supporting them, followed by education of the next generation that indeed cannot be counted as an investment strategy in the short run, though it may be viewed as an investment in the long run (Mendola, 2006). Hence, the loss of labour due to male-out migration might reduce the agricultural production; but remittances might compensate for the same by reducing credit constraints. It may consequently enhance agricultural production and household incomes. Nevertheless, the phenomenon of migration is complex and is attached to several socio-economic and cultural factors which necessitate deeper investigation (Deshingkar, 2004).

The reception of remittances has also closely been linked to the empowerment of women, though the socio-economic condition of women may not necessarily improve with their far greater involvement in agricultural production and management of household activities. The narratives of Latin America and parts of Africa (i.e. Eritrea) display that although wives of migrants enjoy more powers in decision making in case of agricultural activities and investment of remittances but they seem to have been pushed to the marginal space when the men returned

to their respective homes (FAO, 1992). The pragmatic reality of sub-Saharan Africa again places the condition of women on the margin where they can enjoy only the secondary status because all major functions/decisions are generally performed/taken by the male members of the household, though the women are found to have been managing the farms (Palmer, 1985) in the absence of their husbands. On the other hand, the empirical study of Goa highlighted that the male migration from rural to urban areas for manual, skilled, and white collar jobs allow the women of the household to be *de facto* household heads which further encourage them to execute various responsibilities such as hiring and supervision of agricultural labour (Mascarenhas-Keyes, 1990). There is common knowledge that the responsibilities, outside the home, augment the work burden of women in some instances. For example, in case of the rice producing villages of eastern Uttar Pradesh in India, women have to work harder so that they are able to compensate for the absence of their husbands' farm labour, as the remittances by themselves may not be sufficient to sustain the family (Paris *et al.,* 2005). It has been further supported by evidences from other states (Jetley, 1987).

In regard to the state of Uttarakhand, returns from a very labour intensive agriculture are extremely low, specifically in the hilly parts of the state coupled with a complete lack of alternative employment opportunities. Despite the low and sometimes even the negative returns, agriculture remains the mainstay of the population for the fact that there is nothing else to fall back upon. This has also led to a large exodus of male work force from the mountain areas to the cities and towns all over the country, in search of gainful employment. It may be mentioned here that farming activities in the sample area do not involve cash income as agriculture is below-subsistence in nature. Nearby towns also do not offer much employment avenues. Out-migration, on the other hand, brings in cash to the household, which may not be substantial but it is still good enough to supplement the familial resources. It is on account of this that out-migration of people, especially able-bodied labour force from Uttarakhand has been a regular feature (Tiwari *et al.,* 2001). Since family labour is an important input in agricultural production, male migration certainly affects agricultural production for the fact that primitive technology based ploughing, levelling, repairing landslides, and all other tough jobs on the terraced fields are performed only by the male members of the household. Nevertheless, given the income uncertainty that below-subsistence farm households in Uttarakhand typically face, migration appears to be an insurance against the risks associated with complete dependence on the rain fed agriculture (Mendola, 2006).

Based on the aforementioned discussion, the objective for the present chapter is to understand the pattern of farm activities of households with out-migrated males vis-a-vis households with non-migrants. It further examines the hypothesis that migration adversely affects agricultural output and entails more investment in farm activities.

4.2 Size of Agricultural Land Holding

The involvement of the households in farm activities is considered by the size of the operational land holdings. The relevant information, with regard to sample population, is summed up in Table 4.1. The information highlights that agriculture is the main occupation in this area with approximately 95 per cent of the households in both the groups (households with non-migrant husbands and with out-migrant husbands) being involved in agriculture as it not only provides food security, at least for few months, but also serves as a source of fodder supply for the livestock. Besides, there does not seem to be any alternative to this form of employment and livelihood, especially in view of the findings that remittances constitute around 40 per cent of the income of the households with out-migrants (Khanka, 1988). Most households in rural Garhwal own agricultural land but the size of the land holdings are quite small for both the types of households. It does not exceed two *beegha*[13] per household and some are even smaller than one *beegha.* The total mean agricultural land owned by households with out-migrant husbands is 1.25 *beegha*, which is less than the households with non-migrant husbands (1.35 *beegha*). The mean differences are significant at five per cent level ($p<0.05$). It may be mentioned here that the operational holdings are not contiguous and each one of them may be of a very small size which makes agricultural operations formidable in this kind of difficult terrain. This also means that new/modern technology and new techniques of agricultural production cannot be applied, leading to stagnation in agricultural output and productivity.

When the households who have abandoned the agricultural activities (12 households with non-migrant husbands and 11 households with out-migrant husbands out of 518 households) were asked for the reason behind this, they cited the reason of negative returns from agricultural operations. On being quizzed for alternative occupations, the households of the non-migrants have stated that they have taken up temporary jobs as daily wage labourers in the government and non-government sectors/opened up petty shops/rented out private vehicles *etcetera*. The

[13]The measurement of land is taken in *beegha* and one *beegha* is equal to 8100 sq. feet.

left behind household members (households with out-migrants) have reported that they are currently engaged in doing household work only (data not shown).

Table 4.1: Percentage distribution of the households with non-migrant husbands and households with out-migrant husbands involved in agricultural activity

Background Characteristics	Households with non-migrant husbands	Households with out-migrant husbands	Total
Abandoned agricultural activity	4.8	4.1	4.4
Own agricultural land	99.6	100.0	99.8
Total agricultural land owned			
Upto 1 *beegha*	15.5	23.3	19.5
1 to 2 *beegha*	76.9	71.8	74.3
More than 2 *beegha*	7.6	4.9	6.2
Mean agricultural land owned (in *Beegha*)**	1.35 (0.55)	1.25 (0.50)	1.30 (0.52)
Agricultural land on which farming is done			
Up to 1 *beegha*	37.6	50.8	44.4
1 to 2 *beegha*	60.0	47.7	53.6
More than 2 *beegha*	2.4	1.5	2.0
Mean agricultural land on which farming is done (in *Beegha*)***	1.04 (0.50)	0.98 (0.46)	1.01 (0.47)
Agricultural land on which farming is not done			
Upto 0.5 *beegha* agricultural land abandoned	56.6	59.0	57.8
More than 0.5 *beegha* agricultural land abandoned	12.7	7.5	10.1
Farming on total agricultural land owned	30.7	33.5	32.1
Mean land on which farming is not done (in *Beegha*)**	0.32 (0.34)	0.27 (0.29)	0.29 (0.31)
Land given on lease	11.6	17.7	14.7
Land taken on lease	17.1	6.7	11.7
Total sample	252	266	518

Note: The figures in parentheses indicate standard deviation,
***p<0.01, **p<0.05.

A significant mean difference can be also seen in case of the land cultivated by both the groups of the households. Sixty per cent of the non-migrant households do farming on 1 to 2 *beegha* land whereas it is 48 per cent for households with out-migrants. Table 4.1 further reveals that on an average, 32 per cent of the households cultivate their entire agricultural landholding. It stands at 31 and 34 per cent for households with non-migrant husbands and with out-migrant husbands respectively. For both the categories of households (in the same order), around 57 and 59 per cent of the households respectively are not cultivating up to 0.5 *beegha* of their landholdings, while 13 and 8 per cent respectively are not cultivating more than 0.5 *beegha* of

their agricultural landholding. Stopping agricultural operations in a below-subsistence, terraced-fields based agricultural economy suggests the identification of better alternative income earning opportunities by the sample households, other than agriculture. The Focus Group Discussions (FGDs) have brought to the fore: extremely low returns in agriculture, exodus of able–bodied males, very high wage rates charged by hired male work force for performing male specific tasks, apathy of the educated young men to engage in agricultural and allied activities, as the reasons behind substantive reduction in the engagement of the sample population in agricultural activities.

High percentages of the households with out-migrant husbands have given their holdings, especially distantly located, to other households for farming, while high percentages of the households with non-migrant husbands have reported to have taken-in the land for farming purposes. These arrangements are done purely on informal basis without effecting transfer of any ownership right either on lease or permanent basis. This system can be termed as *"free leasing system"* and this system is the more common phenomenon in rural Garhwal. The simple understanding is that if the household is unable to look after their own agricultural land, then the land is given to the household(s) which is capable of maintaining their agricultural land, the basic idea being that the owner of the land prevents their land from becoming barren/unattended in a landslide prone area, by giving it to someone who can continue to do farming at his/her own cost.

It may be appropriate to mention that around 70 per cent of the land holdings in the state of Uttarakhand are marginal and 18 per cent are small (Mittal *et al.,* 2008). Clearly, agricultural productivity growth with such small size, rain-dependent and fragmented land holdings cannot be conceived as an instrument of poverty reduction in rural Garhwal. It has further been observed during the field survey that most of households with out-migrants have substantially reduced the number of livestock animals due to the shortage of manpower and difficulty in maintaining them (Mamgain, 2004). It may be pointed out here that among the livestock, the most prominent are locally bred cows, buffaloes and oxen. Out of these only buffalo is stall-fed, all others have to be taken for grazing to the forest land or the pastures. The milk yield is also very low and meant only for self-consumption (Mamgain, 2004). Thus the households are losing out on their only productive assets: land and livestock, making them further vulnerable to economic pulls and pressures. It may be further pointed out here that while remittances

arising out of migration may have provided some relief to such households, it has little impact on the production economy of the area, as the remittances are virtually spent on the goods not produced locally (Papola, 1996).

Table 4.2: Percentage distribution of the households with non-migrant husbands and households with out-migrant husbands by different types of crops grown

Crop production	Households with non-migrant husbands	Households with out-migrant husbands	Total
Cereals			
Rice	96.7	96.5	96.6
Wheat	100.0	99.6	99.8
Jhungaroo	98.3	99.6	99.0
Mandwa	100.0	99.2	99.6
Pulses			
Pulses	98.8	99.6	99.2
Vegetables, fruits and others			
Potato	28.3	29.5	28.9
Chilli	73.3	69.0	71.1
Onion	67.5	74.1	70.9
Garlic	70.4	77.3	73.9
Other vegetables	95.4	98.4	97.0
Fruits	49.2	54.9	52.1
Turmeric	12.1	11.4	11.7
Total sample	240	255	495

The survey has also gathered information on the types of crops grown. It may be pointed out here that agricultural activities in this part are essentially cereal-based. As is highlighted by Table 4.2, almost all the households of both the groups grow traditional crops viz., rice, wheat, *mandwa* (Ragi), *jhungaroo*[14], and pulses. More than half of the households also grow vegetables (except for potato), chilly, onion and garlic. It may be noted that the entire production of fruits and vegetables and others like cereals and pulses, is meant for self-consumption.

Table 4.3 shows the average production figures for different crops for both the groups i.e. households with out-migrant husbands and households with non-migrant husbands. It shows significant differences in the mean production figures especially with regard to rice, wheat and *mandwa* (Ragi) suggesting that average production for non-migrants' households is higher than that for out-migrants households. Given the fact that households with non-migrants have male members who act as family labour providing prompt and immediate services on the farms,

[14] *Mandwa* and *Jhungaroo* are kind of Millets which are grown in rural Garhwal, Uttarakhand.

tending and maintaining them, it is well expected that such households are likely to experience higher productivity as compared to out-migrants. The latter households, on the other hand, experience difficulties in hiring male labour, especially during the peak season, as they are hardly any available and those available, work only after performing their own occupation related tasks. It is because of this difficulty that households with out-migrants generally prefer to cultivate only those fields which are close-by, leaving the distant agricultural fields for others to cultivate, though retaining the ownership rights. During the field investigations, it was also observed that non-migrants maintain a larger size of livestock as compared to households with out-migrants (data not shown) which provide them enough manure to maintain the fertility of their agricultural holdings. This is important because of rapid and heavy loss of fertility due to heavy rains and consequent soil erosion and landslides in terraced fields on the slopes of mountains.

Table 4.3: Mean production (in kg.) of different crops among households with non-migrant husbands and households with out-migrant husbands

Crops produced	Households with non-migrant husbands	Households with out-migrant husbands	Total
Rice ***	63.1 (37.7)	56.5 (29.5)	59.7 (33.8)
Wheat**	72.2 (30.5)	69.1 (40.7)	70.6 (36.1)
*Mandwa** (Ragi)	60.6 (25.2)	57.2 (23.4)	58.8 (24.3)
Pulses	8.9 (8.3)	8.6 (5.2)	8.7 (6.9)
Jhungaroo	70.6 (29.8)	71.4 (27.8)	71.0 (28.8)

Note: The figure in parentheses indicate standard deviation,
***p<0.01, **p<0.05, *p<0.1.

No significant differences are found in the agricultural production for crops like pulses and *jhungaroo* among both the groups, as revealed by t-test used.

Table 4.4 presents the results of regression analysis wherein the determinants of cereal production are identified and it is examined if there is a significant difference in the cereal production with respect to the households with the migrant/non-migrant husbands. The explanatory variables comprised: migration status (households with non-migrant/out-migrants), size of land holding, number of male and female household members in working age group of 15-60 years, perception about leaving agriculture as an occupation, household income, age of the household head, hired labour or not, Monthly Per Capita Expenditure (MPCE) of the households and amount of investments made by the households during the last 2 years. Since animal power is an important input in the hill agriculture, their possession largely decides

whether the farms would be cultivated or not. In other cases, a pair of oxen has to be hired at premium prices as their availability becomes extremely difficult during the cultivation times.

Table 4.4: Determinants of cereal production in regard of the sample population

Variables	**B Coefficients**
Constant	323.36
Type of household: 1 if Household with out-migrant husbands, 0 otherwise	9.540
Total land used for agriculture (*in beegha*)	386.54***
Number of males in the households in working age group	-1.34
Number of females in the households in working age group	49.72**
Abandonment of agricultural activity: 1 if Yes, 0 otherwise	-18.86**
Have a pair of oxen: 1 if Yes, 0 otherwise	22.98**
Household income (in rupees)	-37.05**
Age of household head (in years)	0.69**
Hired labour: 1 if Yes, 0 otherwise	6.12
Monthly per capita expenditure (in rupees)	-0.10**
Investments in the last 2 years (in rupees)	3.69***
R^2 Adjusted	0.32

Note: Significance level ***p<0.01, **p<0.05.

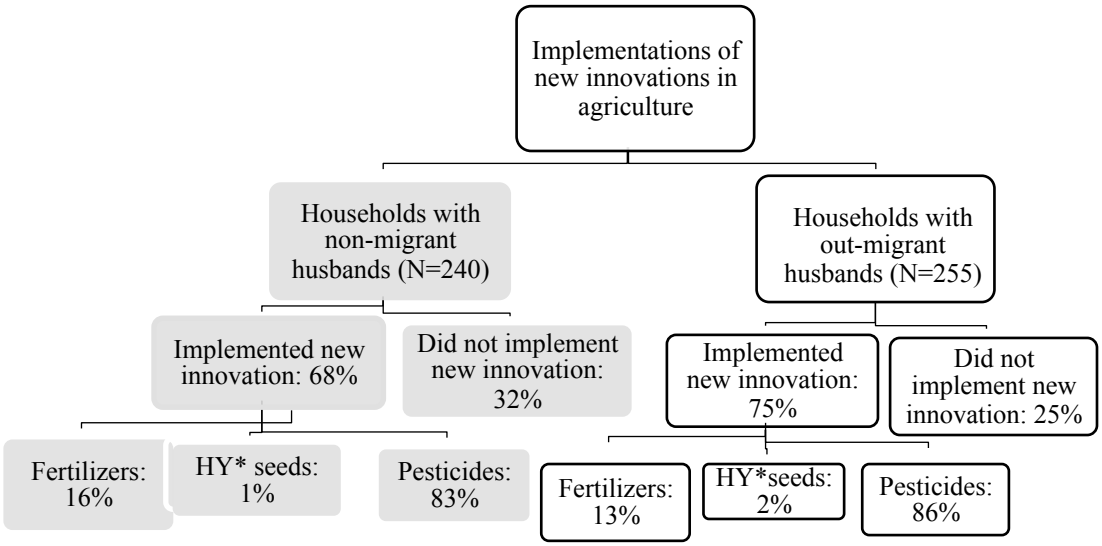
It can be seen from Table 4.4 that there is no significant difference in crop production between the households with migrant husbands and those with non-migrant husbands. This result appears to be contrary to the common belief that the absence of able-bodied male household members gets reflected in reduced agricultural output. One plausible explanation for this seemingly anomaly may be that the hiring of labour allowed the household members of migrants to continue with the crop production without experiencing any significant reduction in the same. It may be pointed out here that except for few basic tasks such as ploughing, levelling etc. all other tasks are carried out by the female household members in the hilly tracts of the state of Uttarakhand. In such circumstances, the effect of male out-migration on agricultural output may not be significantly noticeable, although the absolute returns/net income from agricultural activities would certainly be affected. Results are in line with De Brauw *et al.,* 2003 who in their study found that in China the loss of labour to migration does not negatively affect crop yields. This is also corroborated by the fact that while the 'number of male members in the household' is not statistically significant, the 'number of female members in the household' has come up as significant. In fact, except for the variables such as 'hired labour' and the 'number of male members in the household', all the variables have emerged as statistically significant. While the negative impact of 'abandonment of agricultural activity' on the agricultural output is expected, the adverse relationship of 'household income' and 'monthly per capita expenditure' on the agricultural output appears to be contrary to popular perception. The only plausible

explanation may be that relatively higher household income indicates that the household is engaged in alternative occupation, mainly because agriculture barely provides for even the basic subsistence needs. Such an engagement would certainly affect the allocation of time among the competing livelihood options, with the more remunerative economic activity gaining in the allocation of time and attention. All other variables have expected signs.

4.3 Implementation of New Technologies in Agriculture

New agricultural technology here refers to the use of high yielding variety (HYV) seeds, pesticides and fertilizers and tools, which is a rather recent introduction in the hill region which has been more of a primitive nature. There are three reasons behind this state of agricultural backwardness: First, the resources owned by the subsistence farmers in Uttarakhand hills are too meagre to support the expenses involved in the use of modern inputs; Second, the agricultural operational holdings are of very small size due to fragmented nature of terraced farming, which makes the use of modern implements such as tractors almost impossible; and third, almost 90 per cent of hill agriculture, except for the narrow river/rivulet valleys, is completely rain dependent. It may be mentioned here that the use of traditional tools such as plough, leveller, and inputs such as traditional seeds are largely used in the hill(y) parts of the state of Uttarakhand. Composted animal dung is used as the only means to fertilize the soil, which has also become unaffordable for the reason that animal rearing has also diminished considerably due to shortage of manpower, fodder, and pastures. As could be seen through Figure 4.1, except for the pesticides, other modern inputs are rarely used in the hill agriculture.

Figure 4.1: Percentage distribution of the households with non-migrant husbands and households with out-migrant husbands using new methods of agriculture



Note: *High Yielding

4.4 Investments in Agriculture

The available literature reveals the fact that remittances are rarely used for capital investment in agriculture (Hyden *et al.,* 1993). However, empirical studies also suggests that migrants or their households in the place of origin generally use remittances to procure consumer items, and other goods and services which may improve family welfare as well as their social status. In such situations, investment in low return yielding productive assets such as agriculture, particularly in the mountainous regions, becomes the low priority, which may perpetuate poverty and inequality (Durand and Massey, 1992). The poor soil quality, small land holdings, low commodity prices and the lack of access to irrigation also make any investment in the agriculture as an unwise economic decision (Jokisch, 2002). As is highlighted by the data presented in Table 4.5, in sharp contrast to 17 per cent households with out-migrants, 56 per cent households with non-migrant husbands don't invest in agriculture. The mean statistics for money reported to have been invested in agriculture by non-migrants' households stands at `216, whereas it is estimated to be `416 for out-migrants' households. These differences are significant at one per cent level ($p<0.01$). This reveals that the mean amount of money invested in agriculture is higher for households with out-migrants than their counterparts, which can be

attributed to the need to compensate for the absence of able-bodied male work force for tillage, sowing and other works in the case of out-migrant households, as is also revealed by Table 4.6.

Table 4.5: Percentage distribution of the households with non-migrant husbands and households with out-migrant husbands investing money in agriculture

Background characteristics	Households with non-migrant husbands	Households with out-migrant husbands	Total
Money invested in agriculture last year			
None	56.2	17.3	36.2
`1 thru `499	15.8	26.2	21.2
` 500	14.6	26.3	20.6
More than `500	13.3	30.2	22.0
Mean amount of money invested in agriculture last year*	215.6 (262.9)	415.9 (235.8)	318.8 (268.4)
Increased investment in agriculture over the period of time	42.5	45.9	44.2
Out migrant has increased investment in non-farm activities	NA	15.0	15.0
Total sample	240	255	495

Note: The figures in parentheses indicate standard deviation,
NA: Not Applicable,
*p<0.01.

The 'absence' of able-bodied male members necessitates hiring of the work force for the said purpose entailing an expenditure which would have not been incurred, had the male member not out-migrated. However, this kind of investment can only be referred to as operational expenditure rather than the investment, as it is not for improvement in the land quality but for the purpose of cultivation which is of recurring nature. Thus the higher investment, as shown against the households with out-migrants is more on account of recurring expenditure incurred on hiring the labour, especially male work force, than on the improvement of the quality of land or the acquisition of additional agricultural land. It may be pointed out here that most of the remitted income (forming around 40 per cent of the household income) is spent on consumption of items which are not locally produced, leaving almost no money for any possible investment (Bora, 1996). For this reason, investment in the non-farm activities has not increased much either. In fact, during the field investigations, no visible improvement could be seen in the villages as a consequence of out-migration, as was also evident from the focus group discussions. In Table 4.5, denominator includes all the households (and those who have not spent any money are kept in the category of households with "zero investment"). Around 40 per cent households in both the groups feel that there is increase investment in agriculture over the

period of time. Only 15 per cent out-migrant household believe that out-migrant has increased investment in non-farm activities.

In the study area, as is indicated earlier, labourers are mostly hired for ploughing and sowing (Table 4.6). The family labour, essentially female, performs all other tasks such as the application of fertilizers, pesticides, weeding and harvesting. The percentage distribution reveals that the out-migrants' households are twice more dependent on hired labour than non-migrants' households for ploughing and sowing of the farms. It may be pointed out here that Table 4.6 includes only those households which have hired labours.

Table 4.6: Percentage distribution of the households with non-migrant husbands and households with out-migrant husbands by different agricultural activities for which labour is hired

Background characteristics	Households with non-migrant husbands	Households with out-migrant husbands	Total
Labour hired for			
Ploughing	42.1	82.0	62.6
Fertilizer	0.4	6.7	3.6
Sowing	41.3	80.0	61.2
Weeding	0.0	0.8	0.4
Pesticides	0.0	0.4	0.2
Harvesting	0.0	0.4	0.2
Total sample	240	255	495
Money spent to hire labour per year			
Up to `500	69.3	62.7	64.8
More than `500	30.7	37.3	35.2
Mean amount spend on hiring labour (in rupees)	497 (124.5)	501 (137.3)	500 (133.0)
Total sample	101	209	310

Note: The figures in parentheses indicate standard deviation.

Around 37 per cent out-migrant households have reported to have spent more than `500 in hiring, whereas for non-migrants' households, it stands at 31 per cent. The mean differences are not found to be statistically significant (Table 4.6).

Table 4.7 shows the impact of various explanatory variables on the dependent variable i.e. investment in agriculture. The dependent variable for the multiple regression model is the investment undertaken by household in agriculture. The independent variables comprise: type of household (whether households with non-migrants/out-migrants), size of operational land holding, number of household members (separate for males and females) in the working age

group of 15-60 years, perception about continuing with the agricultural activity, household income, age of the household head, labour hiring for farming, monthly per capita expenditure of the households, savings of the households during the last one year and the amount of investment undertaken by households during the last 2 years.

Table 4.7: Multiple regression for determinants of investments in agriculture

Variables	B Coefficients
Constant	68.35
Type of household: 1 if Household with out-migrant husbands, 0 otherwise	13.03
Total Land used for cultivation (in *beegha*)	151.86*
Number of males in the households in working age group	-2.85
Number of females in the households in working age group	42.36
Abandonment of agricultural activity: 1 if Yes, 0 otherwise	-26.71**
Household income (in rupees)	-26.11
Age of household head (in years)	0.91**
Hired labour: 1 if Yes, 0 otherwise	489.95*
Monthly per capita expenditure (in rupees)	-0.04*
Investments in last 2 years (in rupees)	10.42*
Savings in last 1 year (in rupees)	1.78
R^2 Adjusted	0.79

***p<0.01, **p<0.05, *p<0.10.

As could be discerned from Table 4.7, there does not appear to be any statistically significant difference between the households with out-migrants and non-migrants regarding the investment in agriculture. The results indicate that investment will decrease, on an average by `26 if household is contemplating to abandon agriculture activities. Though monthly per capita expenditure (MPCE) is significant and has negative influence but still the impact is not much noticeable. Investment by the households in the last 2 years is the other variable which has statistically significant positive impact on investment in agriculture in the current year. The investment by households in agriculture will increase on the average by `489 if they have hired labour for agricultural activities. This result is in line with the bivariate analysis.

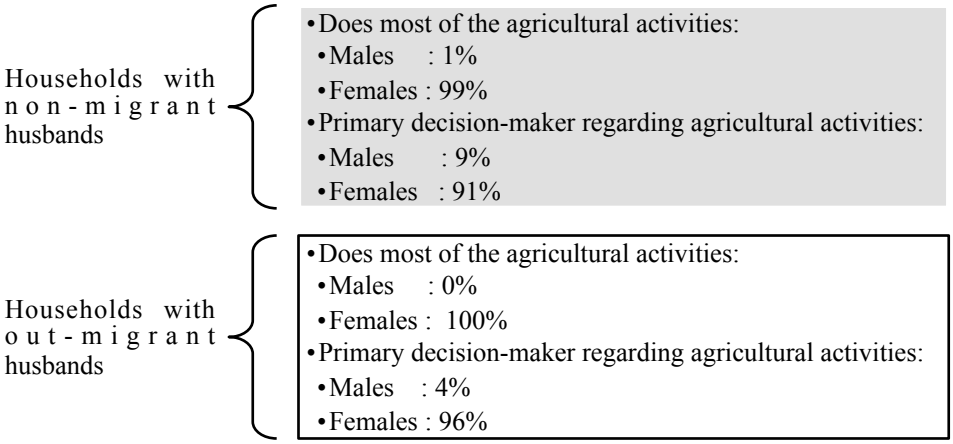
Except for household income, number of household members in the working age group, and savings generated during the last one year, all other variables have emerged as statistically significant. The result where saving does not appear to be significantly influencing the investment decision seems to be strange for the fact that the investment decisions generally are heavily impacted by past savings. However, findings suggest that the variables such as 'total

land used for cultivation' and 'hired labour' exercise positive and statistically significant strong influence on the dependent variable. The most plausible explanation of 'savings in the last one year' has no impact, is that most of the investments are in fact not the investments but regular expenditure incurred on the tillage and other farm related activities. It may also be pointed out here that the migrants generally have the tendency to shift their households to their migration destination on permanent basis. They, therefore, may not have any inclination to use their saving for investment in the farms. All other variables bear the expected signs and display a relationship which is well documented in the relevant literature.

4.5 Gender Division of Labour in Agricultural Activities

Some observations on the role and contribution of men and women in agricultural activities bring to the fore the issue of 'gender disparity' in which the men hold the central place of the prime agriculturalist while women, on the other hand, are merely termed as "helpers". This supports the view that agriculture activities also manifest gender division, despite the fact that an overwhelming proportion of agriculture related work is handled by women alone (Figure 4.2). Given the almost non-existent use of the modern agricultural technology, there is heavy reliance on human labour inputs. It may be mentioned here that land preparation, a basic yet small fraction of these works, is the exclusive domain of the males, while females participate in the most labour-intensive agricultural tasks such as planting, weeding and harvesting, although men also share these workloads in small measures. The aforementioned engagement of women in the farming activities is in addition to the drudgery of housework, tending livestock, collecting fodder and fuel, fetching water, and most importantly rearing children (Pande, 1996). The out-migration of husbands has increased the roles and responsibilities of left-behind wives, as they have to evolve from participants to decision makers. The phenomenon of out-migration has impelled the women to work aggressively to manage all agricultural related activities which are *de facto* controlled by men or are defined as 'men's work' (Pessar and Mahler, 2003; Deere, 1982). With shifting of the agriculture related occupational responsibilities to the women, as a consequence of migration of husbands in search of better prospects of income and quality of life, agriculture in this particular region, by and large, became feminised. The existing literature also emphasizes that this happens to almost any region where there is a mass exodus of male work force in search of better livelihood options (Hadi, 1999, 2001; Ghosh and Sharma, 1995).

Figure 4.2: Percentage distribution of the households with non-migrant husbands and households with out-migrant husbands participating in agricultural activities



In the survey, women were asked specifically whether or not they are responsible for the supervision of agricultural activities. Figure 4.2 reveals that, overall, the percentages of women taking decision about agricultural activities are high in both the groups and this may be because of the role of women in the agricultural activities is evidently far more than the males. Ninety six per cent of the women with out-migrant husbands, and 91 per cent of the women with non-migrant husbands have reported to be taking agriculture related decisions. The minor difference between both the groups of wives, regarding supervision of agricultural activities, may be due to the fact that the wives of non-migrants are engaged in agricultural activities, but the decisions related to agriculture are primarily taken by their husbands, while in the households with out-migrants, the left-behind wives shoulder responsibilities and, therefore, are the decision makers.

4.6 Change in Agricultural Land-use and Agricultural Production

When the households were asked about their perception about the changes in the agricultural land use, around 10 and 12 per cent households belonging to non-migrants and out-migrants respectively have reported change in the agricultural land use. The types of change that they have mentioned are: reduction in the agriculture related activities of households with out-migrants while a rise in such activities with regard to households with non-migrants. This is further corroborated by specific enquiries regarding change in the agricultural production over the period of time.

Table 4.8: Percentage distribution of the households with non-migrant husbands and households with out-migrant husbands by use of agricultural land and agriculture production

Background characteristics	Households with non-migrant husbands	Households with out-migrant husbands	Total
Change in agricultural land use	10.3	12.4	11.4
Change in agriculture production over the period of time			
Decrease	27.8	37.2	32.6
Same	72.2	62.8	67.4
Change in agriculture production as perceived by households with non-migrant/out-migrant husbands against their counterparts			
Decrease	15.4	37.2	26.4
Same	84.6	62.8	73.6
Decrease in labour force	54.0	63.5	58.9
Total sample	256	262	518

Fifty four and 64 per cent households with non-migrant and out-migrant husbands respectively think that there is a reduction in the availability of labour force in agriculture sector over the period of time (Table 4.8). This could be attributed to the push and pull factors of migration that caused a serious depletion in the labour availability in the region. When the households with out-migrant husbands were asked whether they felt that the absence of male members have adversely affected agricultural activities, around 76 per cent households have reported in positive. Similarly, 77 per cent households felt that the presence of the husband back home would have made the lives of wives easier especially in relation to agriculture related works (Figure 4.3).

Figure 4.3: Percentage distribution of the households with out-migrant husbands by perception of impact of out-migrants on agriculture

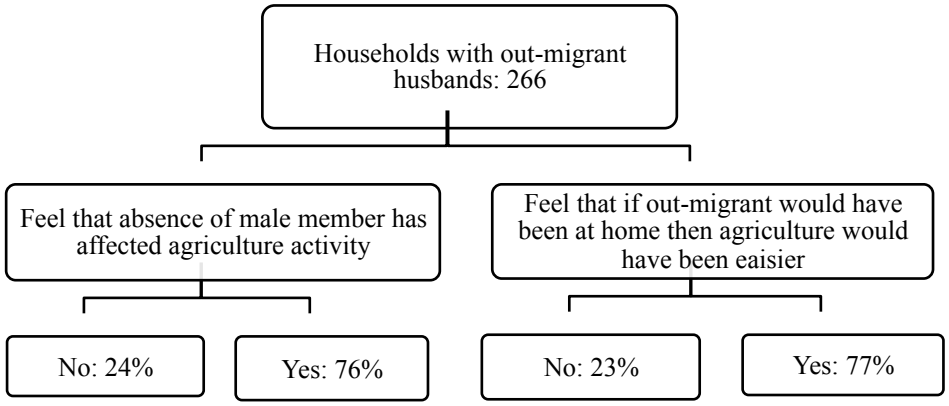
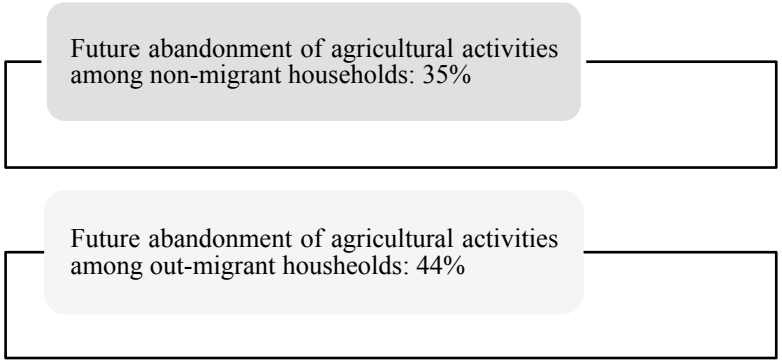


Figure 4.4 reveals that 35 per cent households with non-migrant husbands are contemplating to completely abandon the agricultural activities, whereas 44 per cent households with out-migrant husbands are also found to be holding similar views. Lack of manpower, dependence of agriculture on rain which has become erratic over the years, and non-remunerative nature of agriculture are the reasons cited by both types of households for increasing apathy to continue with agriculture as an occupation. This situation is exacerbated by the predominance of widely dispersed marginal and small sizes of the terraced landholdings which are prone to landslides during the rainy season, repair of which may put a heavy strain on already meagre resources of the households. Increasing risks and uncertainties, therefore, appeared to have pushed the households towards the non-farm livelihood option. However, in view of the small amount of remittances received, it is unlikely that there would be a substantial decline in the agricultural activities.

Figure 4.4: Percentage of the households with non-migrant husbands and households with out-migrant husbands by future abandonment of agricultural activities



Growing awareness regarding the existence of better educational opportunities for the next generation in the plains, substantive information flow about changing life styles through migrants and the instruments of mass media such as radio and televisions, demonstration effect, and enhancement in social esteem have also been cited as the reasons for pulling the local populace towards relocation to plains and non-farm jobs. The traditional social network has further facilitated this process as the people who already have employment outside became the sources of support to other aspiring young men in the villages to migrate by reducing the cost of migration (transport, food, lodging and waiting costs). The powerful role of social networking can also be understood from the fact that most of the migration takes place in case of higher castes which already have a wide network of out-migrants. Migration is not so common a phenomenon among schedule caste and schedule tribes due to existence of a poor

social networking base, effectively hampering their possibilities to migrate due to high cost of migration (Mamgain, 2004). Thus, the migration in the study area, *per se*, has started partially transforming from stark poverty and economic distress led migration to opportunity driven. During the field enquiry, respondents have also pointed out to the decline in the extension work by the Agricultural Extension Centres, as one of the reasons for not adopting the latest advancement in agricultural technology and diversification of agricultural activities.

4.7 Summary

Above discussion has highlighted that out-migration which is a strategic response to livelihood uncertainties in the Garhwal hills is perceptively the only way to have access to a better quality of life and prosperity. Given the poor asset base and small terraced-fields, completely dependent on rains for irrigation, and their inability to provide food security, the local population is forced to diversify income sources in the form of out-migration, in the absence of better options for sustenance of their survival. This has profound implications for the socio-economic and development profile of the area under consideration. As agricultural activities are primarily family based, migration has fundamentally changed the gender division of labor in farm households in the sense that there is a marked increase in the roles and responsibilities of the left-behind wives. The long-term implication of the shortage of active and able-bodied male work force is that there may be considerable decline in the rain-dependent and subsistence farming activities. In the absence of shortage of family labour for male specific tasks, there could be four strategies to deal with the situation: (i) Substituting machines for human labour (ii) Hiring the labour (iii) renting out land to others, and (iv) leaving the land as fallow. Among all the possible options specifically mentioned above (i) may not work in the widely dispersed small terraced agricultural holdings and difficult geographical terrain. Due to shortage of labour in the households with out-migrants, the left behind household members first go for option 1 hire labour (option ii) or rent out land (option iii) to prevent the land from becoming barren. In cases where either of these two options cannot be met, they leave their land fallow (option iv).

Increasing incidence of uncultivated land or just formal cultivation limited to few nearby located terraced fields indicate a rising probability of reduction in farming activities, especially vis-a-vis the households with out-migrants. This trend, coupled with the reduction in animal husbandry related activities, brings to the fore that while remittances arising out of migration may have provided some relief to such households, it has also systematically eroded the two

most productive assets at their disposal, land and the animal husbandry. Both of them are conventional livelihood options. It may be further stated that the shortage of economically active population due to out-migration has also severely hampered the development potential of the area. Further, little capitalization/investment undertaken by the out-migrants who remit the money largely for the purpose of maintaining the left-behind families, coupled with the strong tendency to permanently settle down in the plains after retirement also raise a serious issue about the development of the local economy. It may also be pointed here that migration also does not hold much promise for significant economic uplift for the local population, except for providing food security, due to the fact that an overwhelming proportion of migrating male work force mostly migrate and seek employment just after completing their schooling after matric or intermediate level, and, therefore, do not have much employable skills to get better paid jobs and usually end up with petty jobs keeping them and their future generations in a bad loop. This certainly calls for a fresh look at the development approach and strategies, as the development efforts made so far have failed to yield substantive output in terms of the creation and expansion of gainful employment opportunities, sizeable improvement in farm productivity and diversification of agriculture, keeping in view the peculiar nature of land holdings in this state, and other well thought out and researched measures which could eventually arrest the out-migration trend. The study has, therefore, not found any significant impact of male out-migration on the cereal production and investment in farming.

CHAPTER 5: HEALTH STATUS AND TREATMENT SEEKING BEHAVIOUR

5.1 Introduction

Health is an important dimension of welfare that may profoundly impact the well-being of left-behind households of out-migrants for the fact that being left behind, and possibly bearing a larger work burden, may increase women's stress and fatigue leading to potential health problems. The socio-economic status and expectations, and their place in family hierarchy largely determine the ability of the left-behind wives to effectively use health care related information and services to protect and promote their physical and reproductive health, as well as their stress management capacity.

The present chapter discusses the health issues, based on self-reported information from respondents on health status, treatment seeking behaviour, Reproductive Tract Infections (RTIs), Sexually Transmitted Diseases (STDs), and stress level of the wives of non-migrants and out-migrants. This information is expected to provide an indication of the level of and changes in overall health status. However, there could be variance in the responses not because of differing perceptions and the actual health condition, but because of difference in the reference group against which one's health condition is assessed. For instance, while some of the wives of out-migrants may look at their health status with respect to the wives of other migrants, some of them may take the wives of non-migrants as the reference group. However, whatever may be the reference group, the overall picture is unlikely to be different except for that the awareness among the wives of migrants is likely to be better due to medical and nutrition related information-sharing by their better informed husbands (Stillman *et al.,* 2007). Research studies in this regard have also highlighted that the health status of the wives of out-migrants are likely to be better than that of the wives of non-migrants for the fact that such wives may have better access to the nutritional food and medical care due to better income (Desai *et al.,* 2010). In the light of this background, this chapter makes an attempt to enhance the understanding of the nutrition intake of the wives of non-migrant and out-migrant husbands, their health and stress levels, treatment seeking behaviour and prevalence of Reproductive Tract Infections (RTIs) and Sexually Transmitted Diseases (STDs).

5.2 Nutrition Intake

The conventional wisdom states that nutrition is a basic human need and a prerequisite to a healthy life, and that a proper diet is essential from the very early stages of life for proper growth, development and to remain active. As per NSSO 2004-05 survey, total energy intake is very similar in rural and urban areas (2047 kcal and 2020 kcal respectively), but fat intake was much higher in urban (48 g) as compared to rural areas (36 g). The proportion of energy intake from cereals was, nevertheless, found to be higher in rural than the urban population, while the proportion of energy intake from other food groups comprising particularly milk products, oils, and fats along with some fruits and vegetables was higher in urban areas (Bowen *et al.,* 2011). Since the Indian society has some socio-economic peculiarities, cultural norms, and practices that determine the nutritional status of the households especially the wives (or women), it may be appropriate to understand the nutritional intake with regard to the respondents for this study.

During the survey, the respondents were asked about the type and quantity of food that they ate in the last one month, not to precisely analyse the nutritional habits, but rather to explore and investigate the general characteristic of the pattern of food consumption. A number of items like milk or curd or any other milk products, pulses or beans, vegetables, fruits, rice, egg, fish, and chicken or meat were included in order to study the nutritional status and in particular to see whether there is any significant difference in the nutrition intake between the wives of non-migrants and out-migrants. Table 5.1 shows the intake of different types of food items suggesting some difference in consumption of non-vegetarian food items only among the two groups, which could be largely attributed to the willingness of the individuals to eat non-vegetarian food items. The data do not reveal any considerable difference in the nutrition intake between the wives of non-migrants and out-migrants.

Table 5.1: Percentage distribution of intake of different food items

Type of food items intake	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Milk/curd/any other milk products	96.4	98.9	97.7
Pulses or beans	100.0	100.0	100.0
Vegetables	100.0	100.0	100.0
Fruits	97.6	100.0	100.0
Rice	100.0	100.0	100.0
Egg/Fish/Chicken/Mutton etc.	89.3	81.2	85.1
Total sample	252	266	518

Table 5.2 highlights the percentage distribution of frequency of intake of different food items. The table reveals that more than 98 per cent of respondents have daily intake of milk products, pulses/beans, vegetables and rice. The only low intake is that of fruits, and even in that group the wives of the out-migrant husbands appear to have better intake of fruits than the wives of non-migrant husbands. This may be due to better disposable income of the out-migrant households.

Table 5.2: Percentage distribution of frequency of intake of different food items

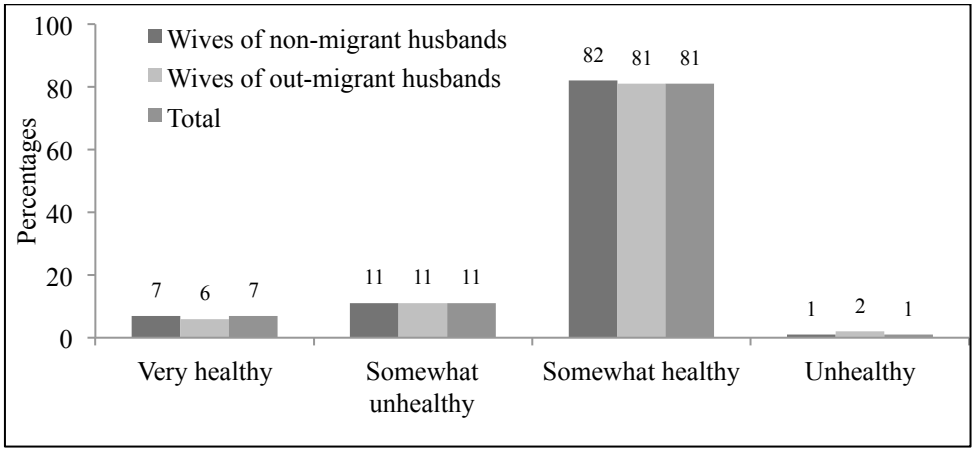
Frequency of consumption of food items	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Milk or curd or any other milk products			
Monthly	0.0	0.0	0.0
Bi-monthly	0.4	0.4	0.4
Weekly	1.2	1.5	1.4
Daily	98.4	98.1	98.2
Pulses or beans			
Monthly	0.0	0.0	0.0
Bi-monthly	0.0	0.0	0.0
Weekly	0.4	1.1	0.8
Daily	99.6	98.9	99.2
Vegetables			
Monthly	0.0	0.0	0.0
Bi-monthly	0.4	0.0	0.2
Weekly	0.4	0.4	0.4
Daily	99.2	99.6	99.4
Fruits			
Monthly	17.1	6.8	11.7
Bi-monthly	14.2	14.3	14.3
Weekly	50.4	57.5	54.1
Daily	18.3	21.4	19.9
Rice			
Monthly	0.0	0.0	0.0
Bi-monthly	0.4	0.4	0.4
Weekly	0.8	0.4	0.6
Daily	98.8	99.2	99.0
Total sample	252	266	518

5.3 Health Status

Survey based research studies around the world have shown that a simple question, asking the respondents about their own assessment of their health status, is a good indicator of the overall health status and a good predictor of future outcomes (Desai *et al.,* 2010). This study also

followed the same and the results are summed up in Figure 5.1. It reveals that an overwhelming majority i.e. 81 per cent of the respondents have assessed themselves as somewhat healthy, 7 per cent as healthy, 11 per cent as somewhat unhealthy, while only 1 per cent have reported themselves to be unhealthy. The differences between the health statuses of the wives of both the groups are negligible suggesting that migratory status of the husbands do not have any significant impact on the health status of their wives.

Figure 5.1: Percentage distribution of the self-perception of the health status



In order to further develop understanding about the general health conditions of the wives of non-migrant and out-migrant households, the data was also collected on general morbidities and symptoms which included fever, headache, backache, itching in the body, dizziness, frail health, injury and other health problems. The reference period for these morbidities was six months prior to the date of the survey. The respondents were also asked whether they have been sick in the last six months which required longer duration of treatments. If the responses confirmed the same, they were further probed on the type of ailments they had been suffering. Seventy nine per cent wives of non-migrant husbands have reported illnesses, while it is found to be 74 per cent for the wives of out-migrant husbands. The general health conditions of the wives of both the groups are reported to be largely similar. In both the groups, symptoms like headache, backache and stomach ache are reported by 38 per cent of the respondents and fever is reported by around 44 per cent wives. Other diseases like cold, inflammations, and dental problems etc. are reported by around 18 per cent of the respondents. Further, the respondents were asked whether they suffered from any long term illness that needs regular consultation

with the physicians. Negligible percentages of wives in both groups have reported to be suffering from any long term illnesses (Table 5.3).

Table 5.3: Percentage distribution of the wives by their health status

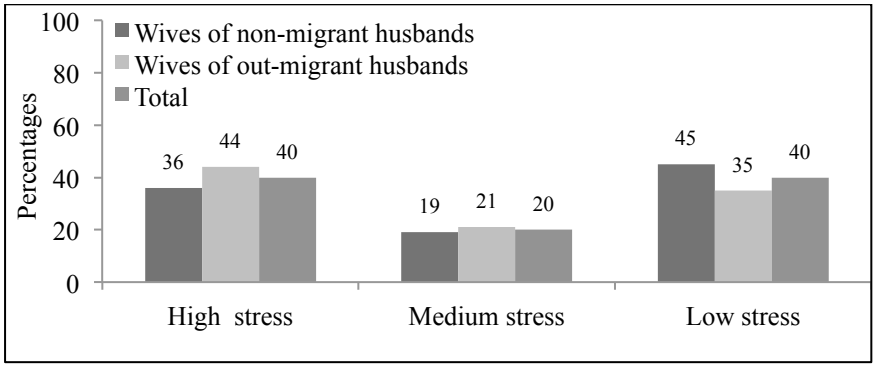
Health status	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Suffering from any ailment/accident/injury/aches	78.6	73.7	76.1
Name of ailments (short term illness)			
Aches like head, back and stomach	39.9	36.7	38.3
Fever	43.4	43.9	43.7
Others[#]	16.7	19.4	18.0
Any long term illness requiring regular treatment	0.8	1.5	1.2
Total sample	252	266	518

Note: Reference period: last 6 months from the date of survey,
[#]cold, inflammations, dental ailments etc.

5.4 Emotional Well-being

Since conjugal separation, owing to migration of the husband, is more by compulsion than by choice, it leaves the left-behind wives under tremendous stress and emotional loneliness. This section examines if there persist any significant difference in the stress levels of the left-behind wives as compared to the reference group i.e., the wives of the non-migrants. The questionnaire contained 23 statements regarding the stress levels of the wives on a 3 point Likert scale (always, sometimes, never). These 23 statements are then clubbed into three indices i.e., 'low stress condition', 'medium stress condition' and 'high stress condition', depending upon their stress level. The relevant information has been shown in Figure 5.2.

Figure 5.2: Percentage distribution of the wives by their stress level



The bivariate distribution shows that a significantly higher proportion of the left-behind wives are under stress (44 per cent) as compared to the wives of non-migrant husbands (36 per cent) (Figure 5.2). This difference in stress levels between the wives of non-migrant and out-migrant husbands is statistically significant ($p<0.10$).

5.5 Treatment Seeking Behaviour

As discussed in the preceding chapter, economic condition of the out-migrant households is found to be better than that of the non-migrant households, which implies that former households are better placed to seek medical attention as and when required as compared to the latter. Besides affordability of the health care facility at the place of the current residence, accessibility to health care facilities located at the place of destination of the out-migrant husbands, puts the wives in an advantageous position as compared to the wives of non-migrants. It may be mentioned here that a series of questions were put to the respondents enquiring about treatment seeking in case of illnesses, place of treatment, total expenditure etc. The information in this regard is given in Table 5.4.

Table 5.4: Percentage distribution of the wives by their treatment seeking behavior

Treatment seeking behaviour of the wives	**Wives of non-migrant husbands**	**Wives of out-migrant husbands**	**Total**
Person consulted			
No consultation	1.5	1.5	1.5
Doctor	98.0	98.0	98.0
Family/member of the household	0.5	0.0	0.3
Quacks	0.0	0.5	0.3
Place of consultation			
Government hospital	67.7	71.0	69.3
Private hospital/nursing home/clinic	31.3	28.5	29.9
Primary health centre/sub centre	0.5	0.0	0.3
Quacks	0.0	0.5	0.3
Others[#]	0.5	0.0	0.3
Expenditure on treatment[##]			
`2 to `25	71.8	62.2	67.0
`26 to `75	16.9	18.1	17.5
More than `75	11.3	19.7	15.5
Mean expenditure on treatment (in rupees) *	173.7 (1066.8)	179.9 (1187.1)	176.8 (1126.8)
Total sample	198	196	394

Note: [#]home,
[##]Expenditure on treatment includes medicine, transportation and medical test etc.,
Figures in parentheses denote standard deviation.

As is evident from Table 5.4, 98 per cent of the wives of both the groups have consulted doctors in cases of illnesses. This high rate suggests that the women, in general, are alert to their health-care needs. When respondents were asked about the place of consultation, most of them, belonging to both the groups, reported that they have visited government hospitals. This can be attributed to a massive expansion of government health facilities that occurred under the 6th and 7th Five Year Plans in the 1980s with a goal of providing one health sub-centre per 5,000 population and a Primary Health Centre (PHC) per 30,000 population. Women make somewhat more use of the government services, in general, but a significant number of wives of both the groups have also reported to have availed private sector facilities for most of their ailments, though this is relatively higher for non-migrant households.

The expenditure on the treatment includes money spent on medicine, consultation, pathological and radiology related tests, and expenditure incurred on transportation. Seventy two per cent wives of the non-migrant husbands and 62 per cent wives of the out-migrant husbands reported to have been spending `2 to `25. The median value depicts that half of the wives of non-migrant husbands spend `20 for their treatment and half of the wives of out-migrant husbands spend `23. Though money spent by the wives of out-migrant husbands is more, the difference is marginal. The mean expenditure on the treatment of disease is `174 for the wives of non-migrant husbands and `180 for the wives of out-migrant husbands (Table 5.4). It may be further pointed out that only three respondents (2 wives of non-migrant husbands and 1 wife of out-migrant husband) have reported to have been hospitalized last year preceding the survey. The wives of non-migrant husbands have reported to have spent between `3 and `300, that of out-migrant husband's wife has reported an expenditure of `2000 (Table not shown). The amount invested on diseases which needed regular treatment reported to be varying between `0 and `600 (Table not shown). Obviously, the cost of treatment is largely low because majority of the respondents prefer government hospitals. As reported by one of the wives of out-migrant husband:

"*Mere pati swasthya vibhaag mei kaam karte hai aur isiliye mujhe apne ilaz aur dawayion par ek bhi paisa nahi khurch karne padta hai.*"

(My husband works in the health department, so I don't have to spend a single penny for my treatment and medicines.)

5.6 Reproductive Tract Infection (RTI)/Sexually Transmitted Diseases (STDs)

There has been an implicit relationship between migration and the spread of Sexually Transmitted Diseases (STDs) and this phenomenon has invited the attention of the scholars and policy makers. The earlier studies have documented the high prevalence of STDs/HIV among migrant population (Yang, 2004; He *et al.,* 2005). A close examination of such studies brings to the fore that the migrants are likely to engage in high risk behaviour such as commercial sex, multiple partners or IV drug use than non-migrants (Lagarde *et al.,* 2003; Li *et al.,* 2004; Yang, 2004; Coffee *et al*., 2005; He *et al.,* 2005; Liu *et al.,* 2005; Mtika, 2007; Yang, Derlega, and Luo, 2007; Agadjanian and Winfred, 2008; Yang and Xia, 2008). The aforementioned risks are closely associated with the phenomenon of migration which results in the splitting of established sexual partnerships, relaxed social control, removal of many social taboos, as well as social isolation and marginalization of migrants in host communities (Matteelli and Signorini, 2000; Yang, Derlega, and Luo, 2007). It has further been pointed out that the couple who has a long term mobile partner is prone to more sexual risk behaviour and they also exhibit a higher HIV prevalence than the resident or short-term mobile partners (Kishamawe *et al.,* 2006). More recently, the focus in research on migration and STDs/HIV has been expanded from migrants to their partners left behind. However, the nature of left-behind partners' vulnerabilities and the mechanisms through which STDs/HIV spread among the partners of migrants are debatable. In international migration of husbands, the frequency of husbands visiting home is very less due to time and money factor, but in internal migration (as in this study) the frequency of husbands visiting home is quite high. It would be interesting to see whether internal migration of husbands also affects the sexual health of the left-behind wives. The discussion encapsulates that migration is inextricably associated with the sexual health of the left-behind wives (Sevoyan and Agadjanian, 2010). A study undertaken by Decosas *et al.,* (1995) establishes that the spread of HIV is fuelled by certain types of migration such as seasonal labour migration, female migration and rural-to-urban migration.

Two outcome based approaches can be exercised in order to assess the risk of STDs among the population. The first is to examine whether or not a woman is suffering from any of the STDs e.g. Gonorrhoea, Trichomoniasis, Chlamydia, Syphilis and HIV/AIDS. However, the second is the number of STD symptoms reported by the respondents. The study in context employs the second approach. In order to elicit information from the respondents whether they suffer from STDs or not, a syndromic approach was applied. The approach relies on symptoms rather than

on the results of STD tests. The historical evidence of this approach reflects that it has been introduced by World Health Organization in 1991 and it has been found more cost effective method for identifying and treating STDs in developing countries (WHO, 1991). Although the approach has been debated and questioned, yet it has been proved to be an effective method for STD identification and treatment in resource limited settings. The approach employs some main STD symptoms which include pain during urination, ulcers or sores in the genital area, itching in or around the vagina, vaginal odour or smell, vaginal bleeding, and abnormal discharge from the vagina (as cited in Sevoyan and Agadjanian, 2010).

In the study area, the respondents of both the groups were asked whether they had heard about RTI/STDs, and if they had, then they were probed about the sources of information. As it is indicated in Table 5.5, higher percentage of the wives of out-migrant husbands (97 per cent) than the wives of non-migrant husbands (77 per cent) have reported to know about the RTI/STDs. The main source of information is reported to be ASHA workers in the villages. To be more precise, eighty-one per cent wives of both the groups have reported to be aware of RTI/STDs from the ASHA workers and the remaining 20 per cent have heard from other sources like radio/television/cinema, government doctors, other health workers and relatives or friends (Table 5.5).

Table 5.5: Percentage distribution of the wives by their awareness about RTI/STD

Awareness about RTI/STDs	**Wives of non-migrant husbands**	**Wives of out-migrant husbands**	**Total**
Heard about RTI/STDs	77.0	96.6	87.1
Total sample	252	266	518
Source of information			
Radio/Television/Cinema	11.3	8.9	10.0
Newspaper/Books/Magazines	0.5	0.8	0.7
Doctor	1.0	4.7	3.1
Health worker	1.0	1.2	1.1
ASHA	81.4	79.8	80.5
Adult education programme	0.5	0.0	0.2
Relatives/Friends	4.1	4.3	4.2
Others[#]	0.0	0.4	0.2
Total sample	194	257	451

Note: [#] Slogans/Pamphlets/Posters/Wall hoardings.

The community-based studies undertaken in India (Bang *et al.,* 1989; Bhatia and Cleland, 1995) have reported that reproductive morbidities are primarily determined by menstrual hygiene, the risk-behaviour of one of the partners, contraceptive infection, and treatment

seeking behaviour. For reproductive morbidity, the list of symptoms is generated on the basis of information obtained from existing literature. The symptoms of reproductive morbidity on which information has been elicited are itching or irritation over vulva, boils/ulcers/warts around vulva, pain in lower abdomen not related to menstruation, pain during urination or defecation, swelling in the groin, painful blister like lesions in and around vagina, low backache, pain during sexual intercourse, spotting after sexual intercourse, menstruation problems, and abnormal vaginal discharge. All the women were asked to report if they had any of these symptoms. The reference period for these morbidities is one year prior to the date of survey.

The study is based entirely on self-reported symptoms and no clinical examination was conducted for the verification of the diseases. Because of the stigmatization of reproductive morbidity, women are often reluctant to report their problems, but every effort was made in this study to elicit accurate information from them. The respondents were assured of the confidentiality of the information provided. Table 5.6 shows the percentage distribution of the wives reporting different types of RTI/STD symptoms. Around 10 per cent wives of non-migrant husbands were reported as suffering from low backache and itching or irritation over vulva respectively, while these percentages stand at 17 and 14 per cent for the wives of out-migrant husbands.

Table 5.6: Percentage distribution of wives reporting different types of RTI/STD symptoms

Suffering from various symptoms of RTI/STD	**Wives of non-migrant husbands**	**Wives of out-migrant husbands**	**Total**
Itching or irritation over vulva	9.9	13.9	12.0
Boils/ulcers/warts around vulva	1.6	1.9	1.7
Pain in lower abdomen not related to menses	1.6	2.3	1.9
Pain during urination or defecation	1.2	1.1	1.2
Swelling in the groin	2.4	2.3	2.3
Painful blister like lesions in and around vagina	0.0	0.0	0.0
Low backache	10.7	16.9	13.9
Pain during sexual intercourse	1.6	3.0	2.3
Spotting after sexual intercourse	0.0	0.0	0.0
Menstruation problem	2.4	1.5	1.9
Abnormal vaginal discharge	0.0	0.0	0.0
Total sample	252	266	518

Overall, the data shows that a higher percentage (41 per cent) of the wives of out-migrant husbands than the wives of non-migrant husbands (29 per cent) are suffering from RTI/STD symptoms (Table 5.7). Further, it has been found that more than a quarter of the women who have reported to be suffering from RTI/STD symptoms, did not discuss these problems with anyone and preferred to suffer silently, thereby increasing their vulnerability to further complications. During informal interactions, it is also reported that the women are reluctant to discuss these problems with other household members because of implicitly attached stigma and for the fear of ostracism, and also that they did not consider these problems as serious. As is suggested by the data tabulated in Table 5.7, almost half of the respondents in both the groups have discussed these problems with their husbands at some point in time.

Table 5.7: Percentage distribution of the wives suffering from RTI/STD symptoms

Characteristics of wives	**Wives of non-migrant husbands**	**Wives of out-migrant husbands**	**Total**
Suffering from RTI/STD	28.6	40.6	34.7
Discussed about the disease with anyone			
Did not discuss	37.5	33.3	35.0
Husbands	50.0	51.9	51.1
Friends/Relatives	6.9	0.9	3.3
Fathers/Mothers-in-law	2.8	11.1	7.8
Parents	2.8	2.8	2.8
Consulted anyone about RTI/STD			
Did not consult anyone	31.9	37.0	35.0
Government doctor/ANM/ Nurses	52.8	47.2	49.4
Private doctor/Nurse	5.6	8.3	7.2
Home remedies	9.7	7.4	8.3
Total sample	72	108	180

Further, only one per cent wives of the out-migrant husbands have reported to have discussed these problems with their friends/relatives, whereas seven per cent wives of the non-migrant husbands have discussed their problems with their friends/relatives. Contrary to this, around three per cent wives of non-migrants and 11 per cent wives of out-migrants have discussed the RTI/STD symptoms with their mothers-in-law (Table 5.7).

In this study, women who have reported health problems related to RTI/STD symptoms were asked whom they consulted about the problem. A large majority of them said that they did not

seek any treatment for their reproductive tract infections (35 per cent). Thirty two per cent wives of the non-migrant husbands have not consulted any health professional, whereas 37 per cent wives of the out-migrant husbands did not consult any health professional (Table 5.7). Many women did not seek treatment because they did not want to discuss 'dirty' or 'shameful' problems with anyone. Another reason reported by the wives of out-migrants is that due to absence of their husbands, they don't feel confident to seek treatment all by themselves. Others did not perceive the problems as serious; they think they are 'normal' problems associated with a woman's life. Another reason reported by many of them is unaffordability of the cost of treatment. Those who have sought medical advice from the private facilities have reported that they did not seek consultation from government doctors or auxiliary nurses/midwives because of poor functioning of government medical care facilities. Another research study also found that women are reluctant to discuss or to seek information about sexual diseases because there is a stigma attached to it and hence this act as a deterrent to open discussion on sexual behaviour etcetera, which results in women being completely unaware about the knowledge of STDs/ HIV and hence they are unaware about its prevention and treatment options (Gupta, 2000).

5.7 Impact of Husbands' Out-migration on the Health of the Wives Left-Behind

It would be pertinent to examine if migration has contributed to the health among the wives of the out-migrants and this has been done by applying multivariate logistic regression technique. The dependent variables considered are: fallen sick in the last 6 months, reported symptoms for RTI/STDs, and self-reported good health. These dependent variables have been made dichotomous i.e. 0=No and 1=Yes. For the logistic models, the presented results are odds ratios and should be interpreted as an increase or decrease in the odds of the dependent variable (reporting fallen sick in the last 6 months, reported RTI/STDs symptoms, and good health (self-reported)) in response to a unit increase in the continuous independent variables or, categorical variables, with being in a given category is relative to the reference category. In logistic model, a value above one denotes a positive impact, whereas a value below one means a negative impact.

Ordinal regression has been applied for stress level. Stress level has three attributes as discussed in the aforementioned sections i.e. 'low stress condition', 'medium stress condition'

and 'high stress condition'. Those who have no problem have been given the highest score and they fall in the category of 'low stress condition' denoting they are not undergoing any stress or trauma. Standard interpretation of the ordered logit coefficient is that for a one unit increase in the predictor, the response variable level is expected to change by its respective regression coefficient in the ordered log-odds scale, while the other variables in the model are held constant. The odds ratios of the predictors can be calculated by exponentiation of the estimate.

Table 5.8: Impact of migratory status of the husbands on their wives' general health and stress levels

Independent variables	**Self-reported good Health**	**Sick in last 6 months**	**RTI/STDs**	**Stress Level**
	0=No, 1=Yes	**0=No, 1=Yes**	**0=No, 1=Yes**	**0=Low, 1=Medium, 2=High**
Migration status of husband				
Wife of non-migrant husband®				
Wife of out-migrant husband	1.21	1.25	1.32	1.90**
R Square	0.09	0.14	0.18	0.30
Common controlled variables	Age of the wife, Age square of wife, Age at first birth, Total children ever born, Number of years of education of Wife, Husband's education, Type of household, Caste of household, Wife is head of the household, Standard of living index, Wife is currently employed.			
Variables controlled	Have own toilet, Have separate kitchen, Heard about RTI/ STDs, Duration of marriage.	Have own toilet, Have separate kitchen.	Age difference between spouse, Heard about RTI/ STDs, Duration of marriage.	Age difference between spouses, Duration of marriage.

Note: Significance level ***p<0.01,
® Reference category.

Table 5.8 reveals that there is no significant difference in the impact of different forms of ailments due to out-migration of husbands except for the stress level. There is no sign that wife get sick, suffer from RTI/STDs, or their (self-reported) health worsens as a result of husbands' out-migration. Coefficient for wives of out-migrant husbands depicts that wives of this group are more likely to have stresses as compared to the wives of non-migrants.

Self-reported good health status: Table 5.9 reveals that among the wives of out-migrants, with increasing years of educational attainment, higher percentage of them have reported good health. It can be assumed that relatively more educated women can take care of their health in a better way as compared to those who are less educated. Same holds true for the wives of non-

migrants as well. Another significant effect on the self-reported good health status by the wives of out-migrants is the standard of living. The better the standard of living, the higher is the probability of good health status. This may be due to the fact that, the out-migrant households have high income and they are in a better position to seek medical treatment.

Sick in last 6 months: Table 5.9 also presents variables which affect physical health of the wives in the last six months for both the groups separately. It indicates that the duration of migration of husband has negative impact on physical health of the left-behind wives implying that with larger duration of migration of the husbands, women have reported bad physical health. There could be two reasons for this kind of reporting. The first is that with the passage of years, the stress, responsibilities, and other difficulties start getting reflected in her poor health as she has to cope with them all alone. Second, the exposure to the information shared by the husband might have made her more aware of the health care needs, and therefore what appeared to have been treated as a minor /routine problem earlier could be taken as an ailment needing attention. Which of these is closer to the reality is a matter of further investigation which is beyond the purview of this study. Total number of children ever born has a positive impact on both the group of wives, as reported by the respondents. It implies that the higher the number of children ever born, the wives of both the groups are less likely to report to suffer from any physical ailment.

Table 5.9: Impact of husbands' out-migration on health of the left-behind wives

Background characteristics	**Self-reported health**		**Sick in last 6 months**		**RTI/STDs**		**Stress level**	
	NM	**M**	**NM**	**M**	**NM**	**M**	**NM**	**M**
Age of the wife	1.46	1.61	0.98	0.74	0.60	0.76	1.14	1.35
Age square of wife	0.99	0.99	1.12	1.10	1.12	1.10	1.00	1.99*
Spouse age difference	0.87	0.93	1.11***	1.01	0.97	0.99	0.95	1.87*
Duration of marriage	0.77	0.75	1.01	1.41	1.40	1.08	0.87	0.99
Age at first birth	0.88	0.73	0.77	1.09	1.38	1.04	1.07	1.32
Total number of births (CEB)	1.15	1.05	0.50***	0.61**	1.355	0.91	1.75***	1.17
Education of wife (in no. of years of schooling)	1.30**	1.07*	0.93	0.94	0.79**	0.88	0.95	2.92***
Household structure								
Nuclear®								
Non-nuclear	1.07	0.80	0.88	0.77	1.35	0.36	1.54**	1.51

Have own toilet								
No®								
Yes	1.04	0.57	.23**	0.54	NA	NA	NA	NA
Have separate kitchen								
No®								
Yes	7.07	0.51	0.18	0.00	NA	NA	NA	NA
SLI								
Low®								
Medium	0.38	1.57**	1.63	0.55	1.02	0.52*	0.86*	0.84***
High	0.42	2.04**	2.90	0.57	0.97	0.54*	0.40	0.71***
Engaged in income-generating activities								
No®								
Yes	1.85	1.11	0.85	0.68	1.28	1.11	0.85***	0.64***
Duration of migration	NA	0.95	NA	1.12**	NA	0.99	NA	1.01
Number of visits of husband	NA	1.50	NA	NA	NA	0.88	NA	0.46
Heard about RTI/STDs								
No®								
Yes	NA	NA	NA	NA	14.93***	1.83*	NA	NA
Suffering from RTI/STDs								
No®							0.68	0.87
Yes	1.10	1.09	NA	NA	NA	NA	®	®
R square	0.24	0.12	0.30	0.20	0.22	0.12	0.23	0.46

Note: *p<0.10, **p<0.05, ***p<0.01,
® Reference category,
NA= Not applicable,
NM=Wives of non-migrant husbands, M=Wives of out-migrant husbands,
The other controlled variables are husbands' education, caste, whether the wives are the heads of the households, decision-making authority regarding money matters, remittances received.

Among the wives of non-migrant husbands, age difference between spouses has negative impact on the physical health of the women. The odds of wives reporting bad health is 11 per cent more likely with every one year increase in age difference between spouses. Whether it is the direct impact of inter-spousal age difference on the physical health of the women or the indirect impact of low inter-spousal communication or low treatment seeking behavior or decision-making authority, as a result of wide spousal age gap, is a debatable issue. Further, the study reveals that among the wives of non-migrant husbands, those who have their own toilets are 77 per cent less likely to have bad health.

RTI / STD symptoms: The left-behind wives of medium and high SLI are less likely to report having symptoms of RTI/STDs as compared to the wives of low SLI. The wives of non-migrant husbands, having more number of years of education, are less likely to report about having symptoms of RTI/STDs. It may be because, the educated ones take particular precautions

towards RTI/STDs and, therefore, are less likely to suffer from it. Among those who have heard about RTI/STDs are more likely to report the same as compared to those who did not hear about the disease. This may be due to the fact that since the former are aware of the disease, they are in a better position to report the same in case they are suffering from the symptoms while those who have never heard of the disease are less likely to report as the nature and seriousness of disease is not known to them. More so, social taboos and the fear of condemnation from the immediate family and others may compel them to silently suffer instead of reporting and taking treatment for the same.

The models do not control for past abortions. Abortion can be associated with RTI symptoms in a variety of ways: it can result from unprotected intercourse with an infected permanent or casual partner, or follow a pregnancy and subsequent abortion leading to an infection if done outside a proper medical setting. Post-abortion complications can also be confounded with RTI symptoms (Sevoyen and Agadjanian, 2010). One more limitation is that the study has only asked whether wives have heard about RTI/STDs and not evaluated their knowledge on this issue.

Stress level: While examining the stress level of the wives of out-migrant husbands, the study has found that variables such as age square of women, age difference between spouses, and number of years of education of wives, are significant determinants for high stress level. With increasing age, it may be that loneliness surrounds the wives left behind and accordingly, they have reported high stress level. Moreover, they have to shoulder greater responsibilities; they may have tensions regarding their children (particularly their marriage), and well-being of all the household members. Also, the higher the age gap between the spouses, the lower may be the inter-spousal communication. Compounding this further, the husbands are staying elsewhere for the purpose of earning a livelihood. As a result of these cumulative factors, the wives left behind have reported high stress level with increasing age gap between the spouses. It has been found in this study that the odds of the stress level of left-behind wives, increases with the increase number of years of schooling. This may be because they have a better understanding of their circumstances and hence carry a higher level of tension regarding their children and husbands' future. For them, husbands' out-migration may be a source of livelihood, but they can foresee the challenges ahead in terms of financial and household related issues. It is not that the wives who are less educated do not face these challenges, but

interactions with comparatively higher educated wives have revealed that they want to prepare themselves for the challenges ahead instead of facing them abruptly. Further, among the wives of out-migrants, the wives in higher standard of living category have lower stress levels than those wives in lower or middle standard of living category. Those left behind wives who are involved in income generating activities are less likely to report high stress level. It may be because that when they are involved in income generating activities they feel more confident and secured about their family future.

Among the wives of the non-migrant husbands, those staying in the non-nuclear households have high stress level than those staying in nuclear households. Moreover, with increasing number of total children ever born, the stress level also increases. Further, the wives of higher standard of living and those who are engaged in income generating activities have lower stress level than their counterparts.

5.8 Access to Health Facilities

The respondents were asked about 'whether they seek permission from anyone if they have to visit any place for health purpose', 52 per cent wives of non-migrant husbands have reported that they don't have to take permission from anyone, whereas only 38 per cent of the wives of out-migrant husbands have said that they don't have to take such permission. The percentage is low for the wives of out-migrant husbands due to the fact that most of them are living in non-nuclear households i.e. with their parents-in-law, which necessitated informing them and seeking permission for consulting a doctor. In contrast to this, most of the wives of non-migrant husbands are found to be staying in nuclear households (Table 5.10). It may be clarified here that if the wives are not seeking permission to visit a doctor, it does not imply that they don't even inform their husbands or other household members.

The wives of both the groups were asked whether the distance to the healthcare facilities was a problem for them to seek health-care services such as consulting doctors in government hospitals or private clinics. Around 44 per cent wives of non-migrant husbands and 49 per cent wives of out-migrant husbands have reported that the distance to the healthcare facilities is a problem for them. When it comes to the arrangement of money for treatment, 78 and 96 per cent wives of non-migrant and out-migrant husbands respectively have reported no problem in arranging money for the medical attention. The difference in the percentages could be attributed to the difference in disposal income enjoyed by each of the categories. Almost the same is true

of arranging vehicle for transport to the health-care facility. Further the wives of the out-migrant husbands have reported to have ease in finding a household member to accompany them to the hospital plausibly on account of the prevalence of joint household system among the out-migrant households (Table 5.10).

Table 5.10: Percentage distribution of wives of non-migrant and out-migrant husbands by access to health facilities

Decision making	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Getting permission to go for health purpose	48.4	62.4	55.6
Distance to the health facility is a problem	44.4	48.5	46.5
Arranging money for treatment is a problem	22.2	4.5	13.1
Arrangement of vehicle is a problem	7.5	3.0	5.2
Getting accompaniment to go to the health facility	75.0	83.1	79.2
Total sample	252	266	518

5.9 Summary

The results of the study have provided some insights into the health status of the wives left behind, albeit the differences between the two groups of respondents are not considerable. The wives of both the groups are reported to have been suffering from common health problems such as headache, backache and stomach ache. Secondly, they have also reported to have been suffering from seasonal fever and other types of problems like inflammation in hands, legs, cough, tooth problem, indigestion and pain in the chest etc. The respondents of both the groups have reported that they have been consulting the doctors for their illness. There did not seem to be much difference in the health status caused by the absence or presence of husbands in the households, except for the fact that the wives of out-migrants' households are more likely to have higher stress level as compared to the wives of the non-migrants. This may be due to the fact that the husbands' absence has pushed/forced the wives to shoulder many more household responsibilities and manage domestic chores.

The wives of non-migrants have reported higher odds of ill health in the last six months from the date of survey than the left-behind wives. Most of the wives of both the groups have reported to have been visiting government hospitals for consultation, followed by private doctors.

Interestingly, wives of the out-migrant husbands appeared to have better awareness regarding diseases and health care needs as compared to the wives of non-migrant husbands, probably due to knowledge diffusion by the visits of the out-migrant husbands. Consequently, this category of wives is found to have better knowledge about RTI/STDs. It may be further pointed out that higher percentages of the wives of out-migrants are reported to be suffering from RTI/STDs as compared to another group. An in-depth study probably would be required in order to ascertain the cause of much more prevalence of RTI/STDs among the wives of out-migrant husbands.

Thus, there is no significant impact of the husbands' out-migration on the general and reproductive health of the left-behind wives. However husbands' out-migration has been found to have exercised significant impact on the stress level of the left behind wives.

CHAPTER 6: FAMILIAL LIFE AND WORK PARTICIPATION

6.1 Introduction

The rural-to-urban migration usually does not involve movement of all household members. It is assumed that a high level of out-migration from the villages is associated with major changes in the traditional household structures. The households' adaptation to migration is remarkably affected by the implicit association between the patterns of kinship and family residence (UN, 1994). A close observation of the phenomenon of migration and empirical investigations undertaken exhibit that it could be conjugal separation only and that the wife and children may keep enjoying support from other family members while staying back home (Parasuraman, 1986). It is further observed that the motive of migration could be to supplement the income of the whole family rather than only the immediate family comprising wife and children (Gulati, 1987). Given the fact that living arrangements, in the absence of husbands, may have profound impact on left-behind wives' lives, it would be interesting to analyze this aspect which has not found much space in the existing literature. Such a study could also highlight change in living arrangements over the time period, satisfaction towards current living arrangements, reasons behind staying in the current living arrangements, their relationships with parents. The extent of familial support (from parents and parents-in-law), and intra-family conflicts have also been analyzed. In addition to this, work participation, number of working hours during agricultural and non-agricultural seasons, participation in decision-making, problems involved in managing households are some of the others issues that have been dealt with in the present chapter.

6.2 Living Arrangements of the Wives of Non-migrant Husbands and Out-migrant Husbands

This section has tried to understand whether there is any difference between the household structures of the wives of non-migrants and out-migrants. As can be discerned from Table 6.1, around 61 per cent of the wives of non-migrant husbands are living in the nuclear households, 39 per cent wives are staying with their parents-in-law while around 27 per cent wives of the out-migrants are staying in nuclear households and 73 per cent of the wives have reported to be living with the parents-in-law. In view of the fact that average age of the wives of non-migrants stands at around 36 years as compared to 30 years for the wives of out-migrants, it appears that the wives of out-migrants live with the extended household for the sake of social, emotional and financial support especially in the absence of husbands from whom the family may be receiving irregular and/or low level of remittances. Besides, in the event of living in nuclear

arrangements, the left-behind wives may have to assume responsibilities and roles which they would not generally undertake (Hugo, 2000). These may comprise: looking after family finances, health, increased work-burden, other familial and domestic responsibilities that husbands would have otherwise shouldered, including hiring and supervision of agricultural labourers during the sowing and harvesting seasons.

Further, the wives of non-migrants were asked whether there has been any change in the living arrangements over the period of time and the wives of out-migrants were asked whether there has been any change in the living arrangements after their husbands out-migrated, 42 per cent wives of non-migrant husbands have not changed their living arrangements, whereas percentages (73 per cent) are much higher for the wives of out-migrant husbands. A very notable finding of the present study is that none of the wives of both the groups have shifted from nuclear to non-nuclear household. However, it has been found that 58 per cent wives of non-migrant husbands and 27 per cent wives of out-migrant husbands have changed their living arrangements from non-nuclear to nuclear households. Here, in the study area, the non-nuclear households mainly indicate staying with parents-in-law (Table 6.1).

Table 6.1: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by their living arrangements

Living arrangements	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Current living arrangements			
Nuclear	61.1	27.1	43.6
With parents-in-law	38.5	72.9	56.2
With others[#]	0.4	0.0	0.2
Have changed living arrangements			
Same as before	41.7	72.9	57.7
Changed from nuclear to non-nuclear	0.0	0.0	0.0
Changed from non-nuclear[##] to nuclear	58.3	27.1	42.3
If there is change in living arrangements, then duration of current residence			
Up to 5 years	61.0	75.0	65.6
More than 5 years	39.0	25.0	34.4
Mean duration of current residence (in years)**	5.7 (4.3)	4.7 (3.3)	5.4 (4)
Decision making regarding the current living arrangements			
Self with others (mostly husbands)	82.5	82.0	82.2
Others (mostly husbands, parents-in-law)	17.5	18.0	17.8
Total Sample	252	266	518

Note: #parents, ##with parents-in-law, Figures in parentheses denote standard deviation, **$p<0.05$.

The movement from non-nuclear to nuclear living arrangements is found to be far more prominent with regard to non-migrant households. For instance, 4 in every ten non-migrant households are found to be living for more than 5 years in the current living arrangements. On the surface it may appear that such a change in living arrangements was made by choice by the married couples, but a deeper investigation into this issue reveal a very different picture. The emergence of a fairly large proportion of non-migrants' households as nuclear households is majorly found to be a result of death of the parents which paved the way for the formation of nuclear households. It may be stated here that living parents act as a glue to keep the family united, as could be seen from the statement of a female respondent (HOH) which is quoted below:

"*Mere teen ladke hai. Teeno mei se do shadi shuda hai aur wo dono chahte hai ki wo alag ho jaye, lekin jab tak mai jinda hoon mai apne parivar ka batwara nahi hone doongi.*"

(I have three sons. Two of them are married and wanted to get separated but I would not let this happen as long as I am alive.)

Interestingly, the decision making regarding living arrangements is shared by both the wives and their husbands. Table 6.1 indicates that eight out of 10 wives, in both the groups, have accepted to have made a joint decision in this regard.

When the respondents were probed about the reasons for continuing to live in the current living arrangements, a number of reasons have been cited by the respondents. While an overwhelming majority (61 and 73 per cent wives of non-migrant husbands and wives of out-migrant husbands, living in nuclear households respectively) has reported the death of the parents-in-law as a reason for forming a nuclear household, 15 per cent and 13 per cent wives of both the groups respectively have reported incompatibility as the main reason for branching out. When probed about the incompatibilities, the respondents have cited improper behaviour or attitudes of the parents-in-law towards their daughters-in-law and vice-versa or frequent quarrels within the households. Around 20 per cent wives of non-migrant husbands prefer to live in nuclear households (Table 6.2) for which no reason is reported.

Table 6.2: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by reasons behind staying in current living arrangements

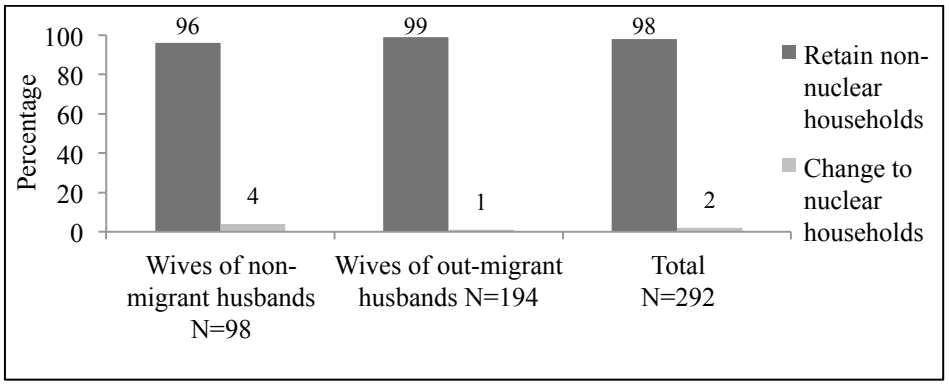
Reasons for living in current living arrangements	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Nuclear households			
Incompatibility within households	14.7	12.7	13.7
Parents-in-law died	60.8	73.2	67.0
Preference for nuclear households	19.9	7.0	13.4
Other reasons[#]	4.6	7.1	5.9
Total sample	156	71	227
Non-nuclear households			
Take care of parents-in-law	11.5	5.6	8.6
Preference for non-nuclear households	82.3	87.6	84.9
Other reasons[##]	6.2	6.8	6.5
Total Sample	96	195	291

Note: [#]To shoulder one's own responsibilities, taking care of native home etc.
[##]For the sake of everyone's happiness, can share happiness and woes in non-nuclear family, children are nurtured well in the non-nuclear family.

Interestingly, 82 and 88 per cent wives of non-migrant husbands and out-migrant husbands respectively have stated that it is their preference to live in the non-nuclear households. Apart from this, 12 per cent wives of non-migrant husbands and 6 per cent wives of out-migrant husbands have reported that they wanted to take care of their parents-in-law (Table 6.2). Apart from this, the wives who are living in non-nuclear households feel that children are better nurtured in the non-nuclear households. The left-behind wives have also reported that they can share their feelings and get over loneliness owing to the absence of husbands, to some extent, by staying together in extended households.

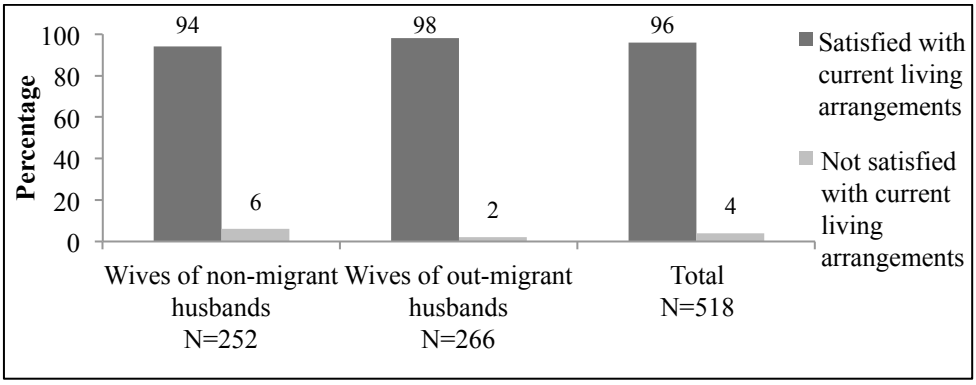
The respondents, living continuously in the extended households ever since their marriage, were also asked whether they have ever thought of shifting to nuclear households. Interestingly, only four per cent wives of non-migrant husbands and one per cent wives of out-migrant husbands have expressed their explicit desire to live in the nuclear arrangements. However, this percentage may be low on account of social pressure and social desirability of the answers, especially in a backward and conservative area.

Figure 6.1: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands staying in non-nuclear households about their choice to stay in nuclear households



Approximately 95 per cent wives of non-migrant husbands and wives of out-migrant husbands are happy with their current living arrangements (Figures 6.1 and 6.2).

Figure 6.2: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands satisfied with their current living arrangements



6.3 Familial Relationships of the Wives of Non-Migrant Husbands and the Wives of Out-migrant Husbands

6.3.1 Relationship with the parents

The section above clearly throws light on the living arrangements of the wives of non-migrant husbands and the wives of out-migrant husbands. It is clear that the wives either live with their parents-in-law or they live in nuclear households rather than staying with their parents or with the families of their brothers-in-law. Hence, it also becomes essential to throw some light on their relations with their parents. Parents generally live in the adjacent villages or districts. None of the respondents lives with their parents (Table not shown). Table 6.3 reveals that when it comes to parents visiting their daughters' home, then there are not many differences in terms

of percentages among both the groups of wives. On an average, parents are reported to have visited their daughters' homes thrice a year in both the groups of wives. Eleven per cent wives of non-migrant husbands and 17 per cent wives of out-migrant husbands have reported to have visited their parents' home more than four times a year. The mean number of visits for the wives of non-migrant husbands and the wives of out-migrant husbands stands at 3 for both the groups, which implies that there is no difference in the frequency of visiting their parents' home among the wives of both the categories. Eighty nine and 94 per cent wives of non-migrant husbands and wives of out-migrant husbands respectively celebrate some of the festivals with their parents. *Makar Sakranti* and *Raksha Bandhan*[15] are the two festivals which wives reported to have celebrated in their parental homes (Table not shown).

Apart from the festivals, wives of the out-migrant husbands and non-migrant husbands have also reported that they visit their parents' households to attend the fair of nearby villages. Advanced communication technologies like mobiles and improved transportation and connectivity have reduced the distances to connect to their near and dear ones. The wives have reported that they talk to their parents at least once a week. The frequency of calling their parents is particularly high among the wives of younger age groups (Table not shown).

Table 6.3: Percentage distribution of the wives of non-migrant husbands and wives of out-migrant husbands by their interaction with their parents

Interaction with parents	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Parents' visit			
1 to 2 times	51.5	48.2	49.7
3 to 4 times	45.0	47.4	46.3
More than 4 times	3.5	4.5	4.0
Mean frequency of parents' visit	2.7 (1.2)	2.7 (1.1)	2.7 (1.2)
Wives' visit to their parents			
1 to 2 times	45.7	37.5	41.2
3 to 4 times	43.3	45.1	44.3
More than 4 times	11.1	17.4	14.5
Mean frequency of wives' visiting their parents	2.8 (1.6)	3.2 (1.6)	3.0 (1.6)
Celebrate festivals with parents	88.5	94.1	91.6
Total Sample	208	255	463

Note: Figures in parentheses denote standard deviation.

[15] *Makar Sakranti* and *Raksha Bandhan* are two Hindu festivals.

6.3.2 Familial support

In the present study, familial support comprising economic, physical and emotional[16] support, has been considered to determine the extent to which the wives of out-migrants get support from their parents or parents-in-law in relation to the reference group i.e. non-migrant households. The values of Cronbach alpha, given in Tables 6.4a, 6.4b and 6.4c, show that the index is a good measure of economic, physical and emotional support.

6.3.2.1 Economic support: Thirty five and 20 per cent wives of non-migrant husbands and out-migrant husbands respectively have responded that they have low economic support from their parents-in-law. The Table 6.4a shows that the wives of out-migrant husbands have high economic support of their parents-in-law. This is expected in view of the fact that most of the wives of out-migrants stay with their parents-in-law. Around 96 per cent of the wives of both the groups reported that they have low economic support from their parents. This is also expected, as in the Indian scenario, when daughters are married, they become the responsibility of their husbands and parents-in-law (Table 6.4a).

Table 6.4a: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by economic support

Economic support	Cronbach alpha	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Economic support by parents-in-law	**0.94**			
Low		34.5	20.4	26.7
Medium		10.9	19.0	15.4
High		54.5	60.6	57.9
Total sample		110	137	247
Economic support by parents	**0.75**			
Low		98.3	94.4	96.4
Medium		1.7	3.9	2.8
High		0.0	1.7	0.8
Total sample		181	179	360

6.3.2.2 Physical support: The physical support here refers to the sharing of the work load and also extending physical support when one is not able to perform the work for some reason. The

[16] For details of the economic, physical and emotional support index see Chapter 2: Data and Methodology

percentage distribution of the wives of both the groups reveals that 68 per cent wives of non-migrant husbands have reported low physical support, whereas it is 62 per cent for the wives of out-migrant husbands. This again proves that the wives of out-migrant husbands have more physical support from their parents-in-law than their counterparts. The physical support from the parents appears to be negligible (Table 6.4b). This may be because the wives of out-migrants and non-migrants are not staying with their parents and mostly have their parental homes in far-off villages. So, it is physically not possible to help and provide assistance to their daughters.

Table 6.4b: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by physical support

Physical support	Cronbach alpha	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Physical support by parents-in-law	**0.91**			
Low		67.9	62.3	64.8
Medium		14.7	23.9	19.8
High		17.4	13.8	15.4
Total sample		110	137	247
Physical support by parents	**0.81**			
Low		100.0	98.3	99.2
Medium		0.0	1.7	0.8
High		0.0	0.0	0.0
Total sample		181	179	360

6.3.2.3 Emotional Support: Emotional support from the parents-in-law is also higher among the wives of out-migrant husbands than the wives of non-migrant husbands. Around 85 per cent wives of non-migrant husbands receive high emotional support, while it is 93 per cent among the wives of out-migrants husbands. Emotional support is also provided by the parents of respondents of both the groups. High emotional support is provided to 84 per cent of the wives of non-migrant husbands and 90 per cent of the wives of out-migrant husbands (Table 6.4c). Percentages of emotional support given by the parents to their daughters is high, may be because of advancement in communication technology.

Table 6.4c: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by emotional support

Emotional support	Cronbach alpha	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Emotional support by parents-in-law	**0.90**			
Low		9.8	4.2	6.4
Medium		5.3	2.8	3.8
High		84.8	93.0	89.9
Total sample		132	213	345
Emotional support by parents	**0.67**			
Low		5.3	2.0	3.5
Medium		10.6	7.8	9.1
High		84.1	90.2	87.5
Total sample		208	255	463

6.3.3 Conflicts within the households

The living arrangements will be an incomplete piece of work if mention is not made about conflicts in the households. The survey has asked the wives of non-migrant husbands as well as the wives of out-migrant husbands about the presence of conflicts within the households, with whom do they have conflicts, and the reasons behind conflicts. When respondents were asked about their conflicts with the household members, in general, 16 and 23 per cent wives of non-migrant husbands and wives of out-migrant husbands respectively reported their conflicts with other household members (Table 6.5). The higher percentage of conflicts with household members as reported by the wives of out-migrant husbands than the wives of non-migrants may be attributed to the type of living arrangements, as higher percentages of the wives of the out-migrants than the wives of the non-migrants live in the non-nuclear households. Looking into the reasons of conflicts, one can say that the reasons are very petty, which on later stages (cumulative impact of these petty issues) become big and may even result into nuclear households. The starting point of the dissonance could be improper/inefficient/lousy work of the daughter-in-law or could be conflicts pertaining to sharing work and responsibilities in the households or petty money matters etc. However, the arguments revolve generally around two main issues: sharing of remittances and work. Around 68 per cent wives of non-migrant husbands reported conflicts when they asked for money. Apart from these, the other reasons for

conflict reported are related to food, shelter, visiting parental home, quarrels on petty issues, husbands unable to be supportive at the time of problems etc. (Table not shown). The left-behind wives as well as the wives of non-migrants have reported most of such conflicts with their mothers-in-law (Table not shown).

Table 6.5: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by their familial conflicts and relationships

Problems/conflict	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Problems/conflict with household members	15.5	22.9	19.3
Problems/conflict with household members, if husbands would have been out-migrants	14.3	NA	14.3
Whether any change in relationship with parents-in-law/parents over the time period	49.6	56.4	53.1
With whom the relationship changed			
Parents	82.4	93.3	88.4
Parents-in-law	17.6	6.7	11.6
Total Sample	252	266	518

Note: NA=Not Applicable.

The wives of non-migrant husbands were asked whether they would have faced the same problems had their husbands been out-migrants. Around 14 per cent wives agreed that migration status of the husband would not have mattered and they still would have faced the same problems (Table 6.5). Around 50 per cent wives of non-migrant husbands and 56 per cent wives of out-migrant husbands have reported that their relationship has changed with their parents/parents-in-law, after marriage or migration of their husbands. Eighty two per cent wives of non-migrant husbands and 93 per cent wives of out-migrant husbands have reported that their relationship has changed with their parents and remaining have reported change in relationships with their parents-in-law (Table 6.5).

The reasons behind this change in the relationship with parents is because wives cannot always support their parents at the time of their difficulties, they are unable to help them financially etc.; and the reasons given for acrimony in the relationship with the parents-in-law are inability to do household work to their parents-in-laws' expectations and frequent quarrels on petty issues etc.

6.4 Work Participation of the Wives of Non-Migrant Husbands and the Wives of Out-Migrant Husbands

6.4.1 Participation in agriculture

It is assumed that husbands' out-migration compels women to move out of the orbit they were confined before and take on responsibilities on behalf of their husbands. One such domain is agriculture. An extensive research in China reinstates the fact that the phenomenon of migration is considered as the situation of the feminization of agriculture (De Braw *et al.,* 2003). The reference in the context underscores the fact that agricultural feminization can broadly be seen through labour feminization and managerial feminization. However, the dearth of empirical researches on managerial feminization of agriculture may establish that the out-migration of man may result in a gendered division of agricultural labour.

The present study has tried to examine whether 'feminization of agriculture' is prevalent in the area under study. The survey also includes questions about whether the wives had the primary responsibility for farm activities or not. The study has found that the wives of both the groups participate widely in agricultural production in rural Garhwal. The study has also found that there is 'feminization of agriculture' as 97 per cent wives do most of the agricultural activities in their households (Table 6.6).

Table 6.6: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by participation in agricultural activities

Decision regarding agricultural activities	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Does most of the agricultural activities			
Wives	98.8	95.3	97.0
Others[#]	1.2	4.7	3.0
Takes most of the decisions related to agriculture			
Wives	78.8	54.9	66.5
Others#	21.2	45.1	33.5
Total sample	240	255	495

Note: # like mothers-in-law, elder daughters, sisters-in-law.

Since there does not appear to be much difference among the wives of the migrant and non-migrant households, it appears that women had traditionally been tending to agriculture with a clear cut division of the tasks. Migration must have contributed to further feminisation as some of the tasks performed by the migrant male workforce may now have had to be undertaken by

the females left behind. The typical works of the male work force such as ploughing, levelling etc. may have either been taken over by other able-bodied male members in the house or handed-over to the hired labour.

In the survey, women were asked specifically whether or not they are responsible for the supervision of the agricultural activities. The responses suggested that if the family is of extended nature, the supervision is undertaken by elderly people in the house, while with regard to nuclear out-migrant households, the women have to shoulder the burden of supervision. Thus the left-behind wives, in a nuclear set-up, have experienced increased responsibility to contract and to supervise hired male labourers. In view of the scarcity of the male work force in rural Garhwal due to out-migration, it is hired labour that decides, on the basis of his convenience: when to plough, level-off or undertake other activities requiring their involvements. Wherever leasing out had to take place for some reasons, abandonment of agricultural operations on most of the cultivable terraced field, especially those located far behind from the place of residence, is observed. The abandonment of agricultural tasks might have also been exacerbated by the receipt of remittances from out-migrants and getting engaged in other paid works, wherever possible. The extension of livelihood options (remittances from out-migrants) leading to a decline in the agricultural operations, which has made life easier for those left behind, has serious implications for local development. For instance, disinterest in these activities, as livelihood options, may make any institutional effort to reinvigorate or modernise hill agriculture very difficult, as such initiatives may not be adequately responded to by the left behind households.

6.4.2 Work participation outside home

In the study area, it would be interesting to understand the wage generating activities (outside homes) of the wives of non-migrant/out-migrant husbands. In this regard, it may be mentioned that traditional societies in India, generally, look down upon the paid work participation by women outside their homes (Roy and Nangia, 2005), though in other countries, they are found to be actively participating in the local labour market (Arizpe, 1981). Theoretical literature, amply supported by the empirical evidences, suggests that working outside and earning on their own, give women financial independence and consequently empowerment. The survey has collected information on the wives of both the groups regarding their paid work participation.

Interestingly, equal proportions of both the groups (around 34 per cent) have reported paid work participation (Table 6.7).

Table 6.7: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by their work participation

Occupation	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Involved in occupation earning in cash/kind	33.7	33.8	33.8
Type of occupation			
MGNREGA	92.9	85.6	89.1
Others[#]	7.1	14.4	10.9
Amount earned in the last 6 months			
Upto `2500	40.0	30.0	34.9
`2500 to `5000	50.6	58.9	54.9
More than `5000	9.4	11.1	10.3
Mean amount earned in last 6 months (in rupees)	3700 (4032.7)	3942.8 (4339.1)	3824.9 (4182.8)
Total sample	252	266	518

Note: [#]ASHA, *Aanganwadi* worker, having shops, taking tuition, preparing mid-day meal and tailoring etc., Figures in parentheses denote standard deviation.

Ninety-three per cent wives of non-migrant and 86 per cent wives of out-migrant husbands, actively participating in the paid work, have reported to have worked as daily wage labourers in programmes related to Mahatma Gandhi National Rural Employment Guarantee Act[17] (MGNREGA). The other types of occupations in which the wives of both the groups are involved comprise: working as ASHA[18], *Aanganwadi* worker, running small shops, taking tuitions, preparing mid-day meal and tailoring etc. Fifty one per cent wives of non-migrant husbands have reported to be earning between `2500 and `5000, whereas 59 per cent wives of out-migrant husbands are found to be earning between `2500 and `5000. There is no significant difference in the mean amount earned between wives of out-migrant husbands and wives of non-migrant husbands (Table 6.7).

[17]The **Mahatma Gandhi National Rural Employment Guarantee Act** (MGNREGA) is an Indian job guarantee scheme, enacted by legislation on August 25, 2005. The scheme provides a legal guarantee for one hundred days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage of ₹120 per day.

[18]**Accredited Social Health Activists** (**ASHAs**) are community health workers instituted by the Government of India's Ministry of Health and Family Welfare (MoHFW) as part of the National Rural Health Mission (NRHM).

6.4.3 Daily household chores

In this section, we first focus on the impact of out-migration of husbands on women's total working hours and (hence) their leisure, which is assumed to be an important determinant of welfare. The labour time allocation across productive activities on and off the farm, both in terms of participation and time (in hours) has also been examined. Table 6.8 depicts participation of wives in different household activities during agricultural and non-agricultural seasons. Only 4-5 out of ten wives of both the groups have reported to be collecting drinking water from the natural sources, during both the seasons. Two-to-three out of ten wives of both the groups of households have reported not to be involved in cleaning and mopping of the house.

Table 6.8: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by their participation in different household activities during agricultural and non-agricultural season

Participation in different kind of household work activities	Wives of non-migrant husbands		Wives of out-migrant husbands	
	Non-agriculture	Agriculture	Non-agriculture	Agriculture
Collects drinking water	46.8	42.9	45.5	40.2
Cleaning and mopping house	73.0	71.0	66.5	63.9
Cooking food	83.7	82.5	70.3	64.7
Milking animals	84.9	83.3	74.1	70.3
Take care of animals	92.5	91.7	94.7	90.6
Taking care of children	59.1	59.9	73.7	71.4
Washing clothes	86.9	88.1	94.7	94.0
Collection of wood	81.3	79.8	85.7	82.3
Others like cutting grass etc.	56.0	43.7	61.7	42.1
Total sample	252	266	252	266

While examining the percentage of participation of wives in different activities, it has been found that it is higher for the wives of non-migrant husbands as compared to the wives of out-migrant husbands regarding of activities such as collecting drinking water, cleaning and mopping house, cooking food and milking animals during both agricultural and non-agricultural seasons. However, for tasks such as tending to children, washing clothes, collecting fuel-wood and others, a greater percentage of the wives of out-migrants devote more time as compared to the wives of non-migrants. It suggests that the wives of out-migrant husbands are more involved in outside work like collection of wood etc. It also appears that since wives of out-migrant husbands largely live in extended family system, other tasks are mainly done by

other household members such as mothers-in-law, sisters-in-law, older daughters while younger boys might be tending to the cattle (Table not shown).

In the study area, a typical day starts at 5 a.m. in the morning and ends at 10 p.m. in the night. On an average, a day can be described as "Working outside the home, whether on one's own or another's farm, means an early start. Before beginning work outside the home, by 7 a.m. in summer and 8 a.m. in winter, women have to make some arrangements for food for the households. The day begins for them at 5 a.m. when they have a breakfast of *chapattis*[19] and *sabji*. Sometimes left-over *chapattis* or *sabji* (cooked vegetables) from the previous evening is eaten with or without pickle. They work in the fields for four to five hours. In the afternoon, they go home and cook rice for the households, which are eaten with some *dal* (pulses). During their work at the field, they get tea and some biscuits. In the afternoon, they take a nap and after 3 p.m. again they are ready to work. In the evening again, food is cooked which is again rice (left over) and/or *chapattis* with vegetables. Finally they go to bed around 10 p.m".

It can be observed from the aforementioned description that women spend most of their time in food preparation, cleaning, child care, livestock care and agricultural work. A wife of non-migrant husband has described a typical day for her. She states, "I get up early – about 5.30 in the morning. I start the fire and make *chapattis* and vegetables for breakfast. And then I start my other chores like washing dishes, sweeping, mopping the floor, washing clothes. By 7 a.m., I go to the field to assist my husband. Then he would come back by noon while I come back earlier than him to prepare meal". The wives of non-migrant husbands usually accompany their husbands to the field to assist them.

Whether one participates in an activity or not is a rather crude measure, and hence, the number of hours devoted to various household chores has been analyzed. In order to study the workload of women due to out-migration of their husbands, the ideal measure of workload would have been the time allocation of women among different activities to understand the drudgery of workload. In terms of domestic activities, the study collects information pertaining to time allocation to various "household chores" that include preparing food, doing laundry, getting water, and cleaning house; care of domestic animals; hours spent in child care are also recorded separately. However, in the study area, it has been found, a large majority of them did not have a clear demarcation of the number of hours spent in various activities, e.g. cooking food and

[19] *Chapattis* is a form of bread made up of wheat flour and *sabji* refers to the cooked vegetables.

cleaning house are their simultaneous work. So in such instances, it becomes difficult for them to mention the hours spent for each activity. This is one of the limitations of the study because of the overlapping nature of many tasks.

Traditional cropping practices mean that, labour in particular, is strongly related to output. In the survey, labour input of wives, in hours per day, is recorded for two stages of the production process: time given in field and time given at home. Table 6.9 presents the result with respect to hours worked in a day. Fifty and sixty per cent wives of non-migrant husbands and out-migrant husbands respectively have reported working for more than 8 hours in a day during non-agricultural season. During agricultural season, 66 per cent and 73 per cent wives of non-migrant husbands and out-migrant husbands respectively have reported to be working for more than 8 hours in a day. Looking into the average hours worked by the wives of both the groups, one can conclude that there is no statistical difference in their working hours. While looking into the time spent by both the groups of wives on household work, it has been found that 39 and 58 per cent wives of non-migrant and out-migrant husbands respectively are working for more than 5 hours, in a day during non-agricultural seasons. No difference in working hours related to agricultural activities for both the groups of wives is found. It may be because the wives of out-migrants are mostly staying in non-nuclear households while the wives of non-migrants are staying in nuclear households. Due to this, the former get the support of other household members in domestic as well as agricultural tasks, while the latter have to do the tasks single handedly as their husbands are mostly engaged in non-agricultural work. However, some studies have concluded just the opposite: that the wives of out-migrants have more responsibilities and work load than the wives of non-migrants (Hadi, 1999, 2001; Ghosh and Sharma, 1995), which could be attributed to different socio-economic contexts.

Table 6.9: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by their working hours during agricultural and non-agricultural season

Working hours of wives	Wives of non-migrant husbands		Wives of out-migrant husbands	
	Non-agriculture	Agriculture	Non-agriculture	Agriculture
Total working hours (including household and agriculture)				
1 to 7 hours	29.8	17.6	15.1	14.7
7 to 8 hours	20.6	16.8	24.9	12.8
More than 8 hours	49.6	65.6	60.0	72.5

Mean working hours per day	7.8 (1.9)	8.9 (2.3)	8.4 (1.8)	9.3 (2.2)
Total working hours in household work				
Up to 3 hours	28.7	44.8	19.3	38.2
3 to 5 hours	32.7	37.9	23.1	37.4
More than 5 hours	38.6	17.3	57.6	24.4
Mean working hours in household chores	4.3 (2.0)	3.3 (1.8)	5.0 (2.0)	3.5 (1.7)
Total working hours in agriculture work				
Up to 2 hours	25.4	25.4	32.5	24.3
2 to 3 hours	27.5	42.9	26.3	41.2
More than 3 hours	47.1	31.7	41.2	34.5
Mean working hours in agriculture work	3.5 (1.6)	5.7 (1.5)	3.4(1.6)	5.8 (1.5)
Total sample	252	266	252	266

Note: Figures in parentheses denote standard deviation.

How women's leisure time is affected by the out-migration of husbands is an empirical issue. Sixty per cent and fifty six per cent wives of non-migrant and out-migrant husbands respectively enjoy 1 to 2 hours for rest during afternoon in non-agricultural season. During agricultural season, eighty per cent wives in both the groups manage to take out 1 to 2 hours for rest in the afternoon (Table 6.10).

Table 6.10: Percentage distribution of the wives of non-migrant and out-migrant husbands by their leisure time in the afternoon during agricultural and non-agricultural season

Leisure time in the afternoon	**Wives of non-migrant husbands**		**Wives of out-migrant husbands**	
	Non-agriculture	**Agriculture**	**Non-agriculture**	**Agriculture**
Less than 1 hour	2.0	9.7	2.3	7.9
1 to 2 hours	60.0	83.0	56.2	84.2
More than 2 hours	38.0	7.3	41.5	7.9
Mean time in hours	2.2 (0.8)	1.5 (0.7)	2.3 (0.8)	1.5 (0.7)
Total sample	252	266	252	266

Note: Figures in parentheses denote standard deviation.

The mean leisure time for wives of both the groups thus does not differ (Table 6.10). Some studies, however, have also reported that the wives of out-migrant husbands enjoy more leisure and put in less effort in their work because they tend to enjoy the high income through remittances from the migrant husbands (Miluka *et al.,* 2007). This may not hold true for the area under study due to infrequent and low level of remittances.

6.5 Impact of Out-Migration of Husbands on the Wives' Decision Making in Agricultural Activities, Participation in Wage Labour and Number of Working Hours

An attempt has been made to study how women's decision in agriculture related activities, participation in wage labour and hours worked in different activities are affected by the out-migration of their husbands. Controlling for initial levels, in household and individual characteristics, we find negative impact of out-migration of husband on the wives taking decision related to agricultural activities, and these effects are significant at the 10 per cent level (Table 6.11). The probability of taking decision related to agricultural activity is 60 per cent less likely for the left-behind wives than those who are living with their husbands. This may be because the wives of out-migrants are living in extended households where the elderly household members may be taking such decisions.

Table 6.11: Impact of out-migration in determining agriculture related decision making, participation in wage labour and number of working hours of the wives of non-migrant and out-migrant husbands

Migration status of husbands	Agriculture related decision making	Participation in wage labour	Number of working hours
	Exp. Beta	Exp. Beta	B Coefficients
Non-migrant husbands®			
Out-migrated husbands	0.40*	1.08	-0.15
R square	0.39	0.07	0.21
Controlled variables	Age of the wife, age square of wife, Number of years of education of wife, Type of households, Caste of household, Wife is head of the household, Standard of Living Index, Bad health reported, Total number of household members in working age group		

Note: ® reference category,
The values in the table are beta coefficient,
Dependent variable (a) Agriculture related decision making- 0=No, 1=Yes (b) Participation in wage labour- 0=No, 1=Yes, (c) Number of working hours- continuous,
For dependent variables (a) and (b) binary logistic regression has been applied, for (c) multiple regression has been applied,
*p<0.10.

The study did not find any significant association between husbands' out-migration and wives entering the labour market. The evidence also suggests that there is no impact of out-migration of husband on the number of hours worked among the wives of both the categories (Table 6.11). Rodriguez and Tiongson (2001) reported that migrants indeed reduce the labour participation and hours of work of the left-behind households. However, the present study did

not find any evidence to support this contention. The impact of different socio-economic variables affecting agriculture related decision making, participation in wage labour and number of working hours of the wives of non-migrant and out-migrant husbands has been regressed and results are shown in Table 6.12.

Agriculture related decision making: Between the two groups under study, the wives belonging to extended households are less likely to be the prime decision makers (in regard of agricultural operations) in the households as such decisions may be made by the elderly people in the households. The case may be entirely different with the nuclear households, where wives may have far more say in the decision making.

If the wives of out-migrant husbands are the heads of the households, then it is 5 times more likely that the wives are in-charge of farming than those who are not the heads of the households, and twice more likely if the wives have good health than those who do not have good health. The wives of non-migrant husbands of medium SLI are more likely to be in-charge of farming as compared to those wives who belong to low SLI category.

Participation in wage labour: Among the wives of out-migrant husbands, with increase in age, they are more likely to participate in wage labour. Among the wives of out-migrant husbands, those belonging to SC/ST/OBC categories are twice more likely to participate in wage labour than the wives of general category.

Number of working hours during agricultural season: The age of wives of both the groups is found to have positive impact on the number of working hours during agricultural season, whereas age square has negative impact. It implies that with the rise in age, the involvement of older women in the agricultural operations may decline. This may be due to the strenuous nature of agricultural tasks which may not be possible for older women to perform. The wives of non-migrant husbands living in extended households are found to be less likely to work for more number of hours as compared to those staying in nuclear households. SLI shows that the number of working hours will decrease with the increase in SLI.

Table 6.12: Factors determining agriculture related decision making, participation in wage labour and number of working hours of the wives of non-migrant and out-migrant husbands

Background characteristics	Agriculture related decision making		Participation in wage labour		Number of working hours during agricultural season	
	NM	M	NM	M	NM	M
Caste of household						
General®						
SC/ST/OBC	2.12	0.59	1.89	2.41***	0.29	(-)0.25
Standard of living						
Low®					(-)0.75*	(-)0.55*
Medium	7.11**	1.23	0.65	1.19	NA	NA
High	0.98	0.49	1.23	0.74	NA	NA
Total household members	0.6**	0.89	0.98	1.22	0.19	(-)0.21
Age of the wife	0.94	1.28	1.41	1.53**	0.69*	0.33*
Age square of wife	1.01	1.02	0.99***	0.99***	(-).010*	(-)0.006*
Number of years of education	1.01	1.03	0.96	1.1	0.10	0.28
Type of households						
Nuclear®						
Non-nuclear	0.09*	0.22***	1.23	0.99	0.88**	0.44
Wife is head of the household						
No®						
Yes	3.11	5.13***	5.78	0.99	0.66	(-)0.01
Self-reported health of women						
Bad®						
Good	0.64	2.23***	1.42	1.22	1.05	0.96*
Total agricultural land	NA	NA	NA	NA	(-)0.74	(-)0.18
R Square	0.38	0.39	0.07	0.06	0.29	0.16

Note: Dependent variable (a) Agriculture related decision making- 0=No, 1=Yes (b) Participation in wage labour- 0=No, 1=Yes, (c) Number of working hours- continuous variable,

For dependent variables (a) and (b) binary logistic regression has been applied, for (c) multiple regression has been applied,

For the 'number of working hours', standard of living index has been considered as continuous variable.

NM= Wives of non-migrant husbands, M= Wives of out-migrant husbands,

NA= Not applicable,

SC= Scheduled caste, ST= Scheduled tribe, OBC= Other backward classes,

® Reference category,

The values in the table are beta coefficient,

*p<0.10, **p<0.05, ***p<0.01.

6.6 Decision-making Power of the Wives of Non-Migrant Husbands and the Wives of Out-Migrant Husbands

Davin (1996) and Zhang *et al*. (2004) have argued that the women who are left behind by the out-migrant males of the households enjoy greater autonomy leading to strengthening of their decision making capacity and better control over the productive activities. The study has found only one household in which the wife of a non-migrant husband is head of the household, and this is because her husband is physically challenged. However, among households with out-migrants, 31 per cent of the wives of out-migrant husbands are reported to be the heads of their households (Table 6.13).

Table 6.13: Percentage distribution of the wives of non-migrant and out-migrant husbands by participation in decision making

Decision-making power	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Wives as heads of the households	0.4	30.8	15.2
Decisions related to household affairs			
Self	88.5	82.3	85.3
Self and husband	2.4	0.0	1.2
Others*	9.1	17.7	13.5
Wives taking decisions related to money	20.6	61.3	41.5
Total Sample	252	266	518

Note: *parents-in-law, husbands etc.

While examining decision-making power related to household work among the wives of both the groups, it has been found that 89 per cent wives of non-migrant husbands and 82 per cent wives of out-migrant husbands take decisions by themselves. The percentage is high for the wives of non-migrant husbands because most of them have reported to be in nuclear households. Decisions related to money matters are reported to be have been taken by 21 per cent wives of non-migrant husbands and 61 per cent wives of out-migrant husbands. The percentage is very high for the wives of out-migrant husbands probably for the fact that husbands might be remitting some money separately only for the expenses of their wives (Table 6.13). On further enquiring, it has been reported that the money is actually given to the wives when the out-migrant husbands visit their homes and meet their wives (Table not shown).

6.7 Difficulties Faced By Wives of Non-Migrant and Out-Migrant Husbands in Dealing with Different Household Responsibilities

In any traditional society, as is in rural Garhwal, women are solely responsible for the household chores, even if they are working outside their homes in income generating activities. This study, nevertheless tries to find out if they face difficulty in managing their finances without being overtaxed by other responsibilities. The relevant information in this regard is presented in Table 6.14. As is evident from the information, the majority of the wives of both the groups appear to be confident enough to run the show well, despite facing problems on account of insufficient incomes. There also appear to be some difference among both the groups with regard to availability of the financial resources to run the households. Here the wives of the out-migrants appear to be far more comfortable as compared to the wives of the non-migrants. The financially better off position of the wives of out-migrants seems to be indicating towards far more financial autonomy that they enjoy as compared to the wives of non-migrant households.

Table 6.14: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by types of household difficulties

Difficulties faced by the wives	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Difficulty in dealing with financial responsibilities			
Never	61.5	52.8	54.9
Sometimes	36.5	47.2	44.7
Always	1.9	0.0	0.5
Difficulty in managing resource demand at the time of emergency			
Never	61.5	52.1	54.4
Sometimes	38.5	47.9	45.6
Difficulty in taking right decisions at the time of emergency			
Never	75.0	59.5	63.3
Sometimes	25.0	40.5	36.7
Available money sufficient to run household affairs			
Never	69.2	73.0	72.1
Sometimes	26.9	21.5	22.8
Always	3.8	5.5	5.1
Difficulty in receiving or obtaining money from husbands			
Never	92.3	96.3	95.3
Sometimes	5.8	3.7	4.2
Always	1.9	0.0	0.5
Total sample*	52	163	215

Note: * This section is asked to those who take decisions related to finance in their households.

Table 6.15 depicts that around 87 per cent wives of out-migrants have reported that they have never faced difficulty in rearing and educating their children, while for the wives of non-migrant husbands, this percentage is around 77 per cent. This may be because the households of out-migrants have higher income than the non-migrants and more exposure to what is happening outside due to frequent interaction with their out-migrant husbands. Further rearing of the children becomes far smoother in an extended household set up where other household members are also available for help which is not a case with the nuclear households. It may be recalled that most of the out-migrant households fall in the former category while non-migrant households are generally nuclear structured.

Table 6.15: Percentage distribution of the wives of non-migrant husbands and the wives of out-migrant husbands by types of difficulties faced for their children

Difficulties faced by the wives	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Not able to educate children			
Never	77.2	87.1	82.0
Sometimes	21.8	12.4	17.3
Always	1.0	0.5	0.8
Total Sample	202	186	388
Difficulty in bringing up of children			
Never	75.0	88.4	81.7
Sometimes	24.6	11.2	17.8
Always	0.4	0.4	0.4
Total sample	244	249	493

6.8 Summary

The study reveals that there has been a faster movement of non-migrant households from extended to nuclear household structures, as compared to that of the out-migrants. However, most of such transitions in regard of non-migrant households appear only after the death of parents-in-law and not as a natural outcome of a process in which a married couple initiates a separate living arrangement by branching out to a nuclear household structure. Not a significant proportion of the wives of out-migrant households have expressed the desire to move to nuclear household structure for the fact that the extended household structure provide them the much needed social, economic and emotional support besides sharing responsibilities in regard of rearing and educating the children. It may also be interesting to mention here that the high percentage of conflicts of the wives with their household members is reported by the wives of

out-migrant husbands, which could be attributed to their continuance in the extended household set up.

The study has found that the wives of both the groups participate widely in agricultural production in rural Garhwal. Since there does not appear to be much difference among the wives of the migrant and non-migrant husbands, it appears that women have traditionally been tending to agriculture with a clear cut division of the tasks. The migration must have contributed to further feminisation as some of the tasks performed by the migrant male workforce may have to be undertaken by the females left behind.

The traditional set up of the society has, however, not prevented the wives of non-migrant as well as out-migrant husbands from actively participating in the paid manual labour jobs, especially in programmes related to Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Thus the study did not find any significant association between husbands' out-migration and wives entering the labour market. When the allocation of the time of wives of both the groups is examined, it is found that for tasks such as tending to children, washing clothes, collecting fuel-wood and others, a greater percentage of the wives of out-migrants devote more time as compared to the wives of non-migrants husbands.

While examining decision-making power related to household work among the wives of both the groups, an overwhelming majority of the wives belonging to both the groups enjoy autonomy in decision making, although the wives of out-migrants enjoy greater degree of autonomy vis-a-vis the financial matters.

To sum up, the study find that their significant impact of husbands' out-migration on the decision making power of the left behind wives in respect of agriculture. No significant impact of husbands' out-migration could be found on the left behind wives with regard to their participation in wage labour market. Also, no significant impact of husbands' out-migration could be seen on the number of working hours as compared to the reference group.

CHAPTER 7: PERCEPTION ABOUT HUSBANDS' OUT-MIGRATION

7.1 Introduction

The issue of out-migration of male members in search of employment has received a growing amount of research attention. The common thread among all these studies is that out-migration from an area takes place due to lack of employment opportunities or lack of any prospect for economic upliftment and people from such areas move to regions where they can at least earn their day-to-day livings (Braun van, 2004). The region under study is no exception where males out-migrate, leaving behind their families, to overcome the destitution by diversifying income sources and providing economic support to their family members left behind (Kishtwaria, 2007).

In closely-knit societies as that of Garhwal, the out-migration of the husbands certainly affects the lives of the members of the households who stay back, in particular that of spouses, both at individual and social levels. The absence of the out-migrants also enforces a change in the gender balance, exposing the left-behind wives to greater responsibilities in the households. The left-behind households do not and cannot remain static in its perspective of the 'traditionally scripted family values' primarily for two reasons: first, by compulsion the left-behind wives have to improve their self-confidence and assume responsibilities which otherwise the out-migrant male members would have shouldered (Aguilera-Guzman *et al.,* 2004), and second, out-migrants wearing a modified attitude due to their exposure to new ideas and values, may affect the conventional hierarchical social relationships and re-working it towards modified gender relations and livelihood options (Gulati, 1993). While the new role burdens women with works, management responsibilities, and economic difficulties, it may also provide them with increased authority in decision making, freedom of movement and spending – the parameters that often describe women's autonomy (Ghuman, 2003; Jejeebhoy and Sathar, 2001). However, in most of the cases, the assumed autonomy may not be translated into reality as the authority of the male members may be usurped by the older male or female members, although women may still enjoy far more autonomy in the absence of their husbands albeit under supervision and regulation from the elders in the extended households (Desai and Banerji, 2008).

Research studies have also pointed out that the preponderance of the impact of migration on the wife of out-migrant is also moderated through household structure, educational level of the wife of out-migrant, place of residence (rural/urban), place in the social hierarchy and duration of migration (Hoodfar, 1996). It was likewise reported that the positive impact of the absence of husband as out-migrant is far more pronounced in nuclear households compared to extended households (Desai and Banerji, 2008) for the reason that the latter also act as household based rural elderly care system with socially defined responsibilities of daughter-in-law and the elderly household members.

It may be further pointed out that the wives of out-migrants may have to face economic difficulties, besides emotional loneliness, if the out-migrated husbands get engaged in low paid jobs, which is most likely as majority of out-migrating males are not much educated and do not possess employable skills. Further, the financial strains on the women may be much higher if the remittances sent by out-migrant husbands are irregular and insufficient. The earlier studies for other regions have shown that remittances from the migrants are generally not adequate and women who get left behind in the native villages have to assume, though not by choice, the role of breadwinner in addition to added familial and domestic responsibilities (Jetley, 1987). The responsibility of looking after the growing children in terms of rearing, schooling and health care, along with elderly household members is another problem that the wives of out-migrant husbands generally confront with. The only relief to the wives of the out-migrants would be if the households gradually reduce its engagement with traditional farm-based livelihoods, as discussed earlier.

The husbands' out-migration can have both advantages and disadvantages for the households left behind. However, it is imperative to understand what these women think of their existing status (left behind or stay put) per se. Whether there are differences in what they think of one another, whether the wives of non-migrants feel privileged/deprived while staying with their husbands, depending upon their perception of the increased problems of the wives of out-migrants/better economic status. Moreover, it is presumed that the out-migrants are usually more concerned with the benefits viz., acquisition of the employable skills and financial gains, they hope to gain by moving out rather than the consequences that the left-behind households would encounter with, in this process.

This chapter is an attempt to understand the perception of the wives of non-migrant husbands and the wives of out-migrant husbands about the process of rural-urban migration with a view to identify 'new' benefits and their understanding of problems encountered, in this process. It is important to understand the perceptions of the wives of non-migrant and out-migrant husbands on perceived benefits and if the trade-off between benefits and costs associated, in terms of socio-economic, psychological and other important parameters are fair enough to accept their status of 'left behind'. One good measure of this acceptability could be to find out if they would want their sons-in-law/sons to be out-migrants. Continuing with the discussion and also looking at other aspects, besides migration as a livelihood strategy and quality of life perspective, it may be interesting to capture wives' perspectives on their husbands' out-migration in order to gain new insight into the broader social dynamics of migration.

It may be mentioned here that the perception based documentation is essentially of qualitative nature and, therefore, cannot be put to statistical testing. The documentation may, however, be extremely useful to gain new insights into broader social issues arising out of migration.

7.2 Wives' Perception Regarding Husbands' Out-migration

This section discusses the preference of the wives to be either 'left-behind' in the villages or to stay with their husbands in the villages despite the possibility of marginal sustenance. The stated preference of the wives is captured in Table 7.1 which reveals that 80 per cent wives of non-migrant husbands prefer to be left behind, while such proportion for the wives of out-migrant husbands is 96 per cent. It appears that migration, as a means of better livelihood, has become an accepted social norm, even if the wife and husband could not stay together as part of their married life. Hence, the material well-being seems to have taken precedence over the marital bliss which appears to be understandable especially when there are little opportunities for earning in their villages for meeting even their basic needs. Thus migration appears to be part of a wider household strategy, than the choice of the migrating individual, to reduce the magnitude of destitution.

Interestingly, the focus group discussions (FGDs) also highlight that even the parents prefer to marry off their daughters to the out-migrants, as it is seen as means of assured livelihood, better quality of life, status and prestige for the daughters married to such husbands. Nevertheless, beneath the surface, migration is not just a process of 'moving to' and 'settling in' places of

destination and passively sending/receiving remittances, it also involves the experience of being 'left-behind' by the wives of the out-migrants and the emotional and psychological struggle of uprooting and separation from loved ones (Toyota *et al.,* 2007) by the out-migrants. Thus the trade-offs between perceived benefits and costs entail much more careful calculations. Given the social taboo that restricts the explicit expression and accounting for emotional loneliness of the wives of the out-migrants, there seems to be little possibility of inclusion of these extremely important considerations in the trade-off analysis.

Regarding opinions of the wives of non-migrant and out-migrant husbands favouring or disfavouring "husbands' out-migration without family", about 82 per cent wives of non-migrant husbands and 96 per cent wives of out-migrant husbands favour out-migration of the husbands (Table 7.1). Though the left-behind wives are in favour of out-migration of their husbands, they also have opined that on the personal front, the conjugal separation imposes emotional burden on them as their husbands may not be able to attend every occasion, festival or any other ceremonies in the villages. The separation from their husbands sometimes makes them feel lonely, and same could be true of the out-migrant husbands. This proves that though the wives in the rural Garhwal have accepted their husbands' out-migration as a survival strategy they are still struggling with their physical needs and emotional requirements.

Table 7.1: Percentage distribution of the wives' perception regarding husbands' out-migration

Wives' perception	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Prefer to be a left-behind wife	79.8	95.9	88.0
Favour husbands' out-migration	82.1	95.9	89.2
Total sample	256	262	518

Further probing about the reasons regarding favouring or opposing husbands' out-migration reveal that migration of the husbands not only contributes to the household income, but also adds prestige. Women perceive migration in terms of long term consequences i.e. suffering of separation caused by migration is regarded as an investment by them as parents, in order to ensure a better future for their children. There may not be any major change in their own lifestyles or any noticeable improvement in their way of current living, but the solace that it would help their children to get better education and consequently jobs keeps them going. Another important consideration for the wider acceptance of out-migration is the prospects of

finding better grooms for their daughters. Thus migration not only gets progressively incorporated into the livelihood strategy of the household, but it is also expected to offer other tangible and intangible, short as well as long term benefits.

It is clear from the previous chapters, that the socio-economic conditions of the households with out-migrants are better than the households with non-migrants. Out-migration is perceived as a medium of satisfying basic and immediate economic needs, apart from the long term benefits. It has also been stated by the left-behind wives that, if their husbands would not have out-migrated, it would have been difficult to make both the ends meet. Their living status would have deteriorated. Now, it is possible to save some money and could afford to think about better future, not only for themselves, but also for their children.

Even the mothers of non-migrants want their sons to out-migrate and earn more. According to a wife of non-migrant husband:

"*Meri saas chahti thi ki unka beta shaher jakar kaam kare naki gaon me reh kar ek dihadi mazdoor banker rahe. Jiski wajeh se ghar mei kafi jhagre hote hai*".

(My mother-in-law wants her son to out-migrate rather than staying in the village and being a daily wage earner. Because of this, there are frequent quarrels at home.)

The above mentioned paragraphs talk about the positive perspectives of out-migration. However, the other side of it could not be ignored. There are women who have opined that in the absence of their husbands, they feel lonely and deeply feel the absence of the physical and emotional support of their husbands mainly during their illnesses or at the time of any crisis at home. However, for the left-behind wives, it is sometime a life-time of loneliness and struggle for bare survival. Those wives who have disfavoured the out-migration of their respective husbands, have stated that the households should stay together through the ups and downs of their lives, handle household responsibilities, the couples should stay together sharing every adversity and prosperity etc. Hence, the basic underlying reason for not favouring husbands' out-migration is that, they are against conjugal separation. According to a wife of an out-migrant:

"*Mai gaon mei apni saas ke saath rehti hoon. Mere pati delhi mei hai. Mera dewar apni shadi ke baad alag ho gaya aur kahi aur chala gaya. Isiliye musibat ke samay mere saath koi mera apna nahi hota hai. Ye ek hani hai mere pati ke bahar rehne se mujhe*".

(I stay in the village with my mother-in-law. My husband is in Delhi. My brother-in-law (husband's younger brother) got separated after his marriage and is staying elsewhere. So, at times of difficulty, we don't have our near and dear one's close by to support us. This is one of the disadvantages of migration of my husband.)

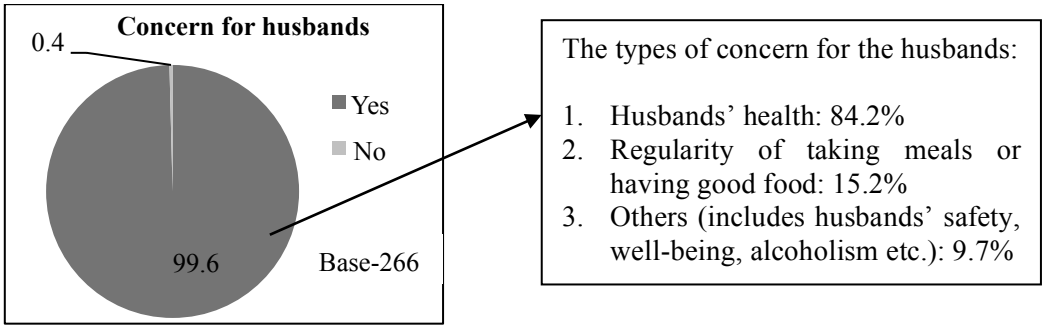
Further, another wife of the out-migrant has reported:

"*Mai sochti hoon ki mere pati wapas aakar gaon mei reh sakte hai, aur hum yahi par kheti aur kuch kaam kaaz karke reh lenge. Mai apne pati ke saath rehne ke liye pichle saal delhi gayi thi ek hafte ke liye. Jahan ye log rehte hai wo ghar bahut hi chota hai. Ye log bahut mehnat karte hai aur makaan malik bhi inse dhang se vyavhaar nahi karta hai. Magar jab bhi ye shaher mei kaam karne wale gaon mei aate hai to aise kapde pehante hai dikhaane ke liye ki ye shaher mei rehte hai. Ye isiliye hoga ki saher mei to inke paas time nahi hota hoga acche kapde pehanane ke liye kyonki din bhar to kaam hi karte rehte hai. To isiliye ek taraf to ye acche kapde pehankar apna samazik pratishtha banate hai aur doosari taraf inko apni pasand ke kapde pehnaneka mauka mil jata hai*".

(I think my husband can come back and stay in the village, and we can sustain by whatever earning we have through farm and non-farm works. I had been to Delhi for a week last year to stay with my husband. The accommodations there are very small. They work very hard. The landlords are quite rude as well. However, the out-migrants, on their return visit, dress well to flaunt their quality of life in the cities. This is mainly because they undergo so much hardship in the cities that they don't get time to dress well. So, when they return to their respective villages, they dress well to flaunt that they are working in the cities and hence are able to enjoy better life.

Absence of husbands has been reported by the left behind wives as constant source of concern, both on account of the well-being of spouse (Figure 7.1) and handling of tricky household issues in their absence. The issues such as husbands' health, safety, well-being, alcoholism etc. are the major concerns reported by the left-behind wives.

Figure 7.1: Percentage distribution of the wives' concerns for their husbands

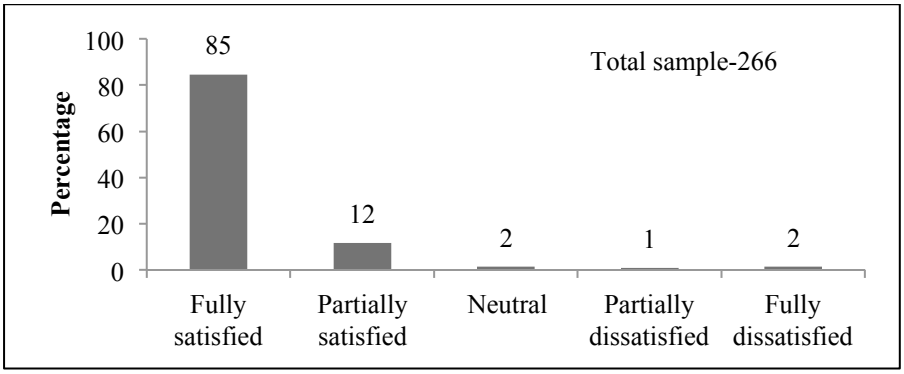


Interestingly, none of wives has shown any concern for the possibility of extra-marital affairs their husbands could engage in while staying away from them for a long time. The worries about earning for meeting the basic needs of the household appear to have taken precedence over every other issue.

Further, the left-behind wives were asked about their perception towards their lives i.e. whether they are satisfied with their lives. Here satisfaction indicates the feeling of overall well-being among the left-behind wives - a general state of mind reflecting contentment. Eighty five per cent of the wives of out-migrant husbands have reported to be fully satisfied while only 12 per cent reported to be partially satisfied with their lives (Figure 7.2). It appears that women have reconciled to their destiny of living separated from their husbands as out-migration of husbands is viewed as unavoidable in order to ensure accrual of regular cash income for the households. Only 5 per cent left-behind wives are either neutral or unhappy about their lives. It may be pointed out that the reported responses may be socially desirable, as the expression of inner feelings in front of outsiders is considered to be a social taboo. Thus there is a possibility of the response not being genuinely reflective of the inner feelings of the left-behind wives.

It may be pointed out that around 43 per cent wives have reported that they feel loneliness (Table not shown). They felt helplessness as they did not have any prospect of joining their out-migrant husbands or of their husbands returning to their native place to stay with them permanently. There are, however, 21 per cent left-behind wives who are positive about future prospects of joining their husbands (Table not shown). When the left-behind wives were asked about their desire to stay with their husbands at their places of work, 98 per cent of them have reported that given a chance to live with their husbands, they would, for sure, stay with their husbands at their places of employment (Table not shown). The responses, as captured in Figure 7.2, are indicative of social desirability of the statements.

Figure 7.2: Percentage distribution of the left-behind wives' perception towards their lives



7.3 Left-behind Wives' Visit to Their Husbands' Place of Work

The available literature, generally, states that the females intermittently or not often visit the work places of their husbands. It has been found that it is the male migrant who maintains visiting relationship with the family. Some studies have, nevertheless, pointed out that left-behind wives also visit the work places of their husbands (Silver, 2006). In rural Garhwal, 79 per cent wives of the out-migrant husbands have reported to have visited their respective husbands' places of work, albeit for various motives. For instance, three-fourth of the wives of out-migrant husbands have reported that they have visited their husbands' place of work for 'leisure', remaining one-fourth have reported to have done it in order to get treatment for their ailing health conditions (Table 7.2).

Table 7.2: Percentage distribution of left-behind wives visiting their husbands' places of work

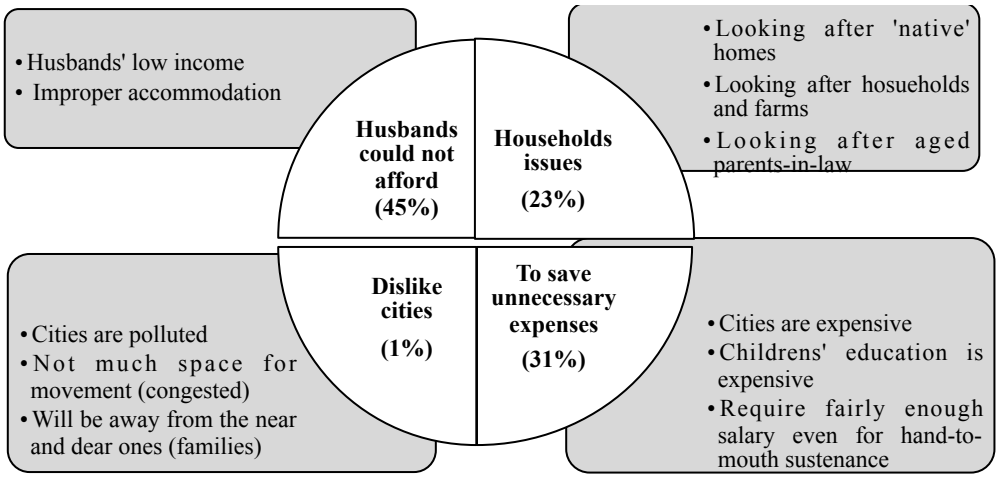
Visits to husbands' places of work	Wives of the out-migrant husbands
Ever visited husbands' place of work	78.6
Purpose of visiting husbands' place of work	
Seeking health treatment	24.9
For leisure	75.1
Total sample	262

7.4 Motives for Leaving Wives Behind

The major question, however remains: why the wives are left behind? Is it because of husband's unaffordability to maintain their households at their work places or is it for the compulsions of the places of origin? When asked about the reasons behind their staying back in

the villages instead of living with their husbands, 45 per cent wives have cited the reason of unaffordability of expenses involved.

Figure 7.3: Percentage distribution of left-behind wives by reasons behind staying back in the village



Total sample: 266

They have emphasized that with meager earnings of their husbands, both the objectives could not be fulfilled, thus leaving no option for the wives but to stay back with other household members in the villages. About 31 per cent wives have reported that they had stayed back because they wanted to save upon the unnecessary expenses in the cities where their husbands are working. Remaining left-behind wives reported to have stayed back to look after their native homes or to take care of their aged parents-in-law (Figure 7.3).

During the survey, it is also reported that most of the out-migrants live in shared accommodation in order to save their living expenses, so that they could spare a larger part of their earnings for remitting back to their respective places of origin. It is also reported that the out-migrants with permanent government jobs have taken their households along as they could afford the expenses involved, while sparing some income to remit back. From these inputs, it can be inferred that leaving behind the wives is more a by-product of economic compulsions than a well thought out strategy.

7.5 Wives' Perception Regarding Economic Conditions

The question is put to the left-behind wives on how they rate themselves against the wives of non-migrant husbands with regards to their economic conditions and similarly, the same

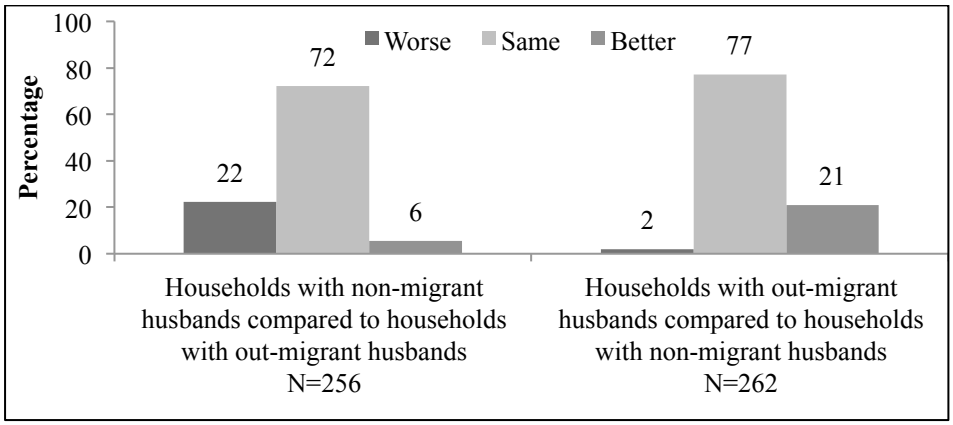
question is put to the wives of non-migrant husbands as well. It is a common understanding that the phenomenon of out-migration reflects positively upon the economic conditions (Olayiwola, 2009). Figure 7.4 reveals that 21 per cent left-behind wives have perceived that their economic condition is better than their counterparts. Almost similar proportions (22 per cent) of the wives of non-migrants have perceived that their economic condition is worse than their counterparts. As stated by one of the wives of non-migrant husbands:

"*Jo baher kaam karte hai wo jyada kamate hai, jiski wajeh se unki arthik stithi theek hoti hai*".

(The out-migrants earn better than the non-migrants, and, therefore, their economic condition is good.)

Although ground realities suggest that the households with out-migrants are economically better-off than the households with non-migrants, the left-behind wives however did not reveal any such difference from their counterparts. This may be due to their reluctance caused by their fear to share these details with the outsiders (interviewers).

Figure 7.4: Percentage distribution of the wives' perception comparing financial conditions



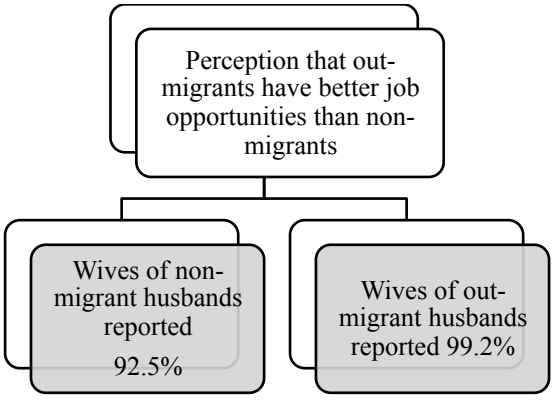
Many of the wives have stated that rather than remaining unemployed in the rural areas, it is better to get jobs in the urban areas, as such actions would not only improve earnings but also raise the social status of the households with out-migrant husbands. The wives of both the groups were asked whether the out-migrant husbands have better job opportunities than the non-migrant husbands. More than 93 per cent wives of non-migrant husbands and approximately 100 per cent wives of out-migrant husbands have reported that 'out-migrant husbands' have better opportunities than 'non-migrant husbands' (Table 7.3).

According to one of the wives of non-migrant husbands:

"*Naukari jaroori hai aur yaha gaon mei naukari nahi milti hai acchi aur agar milti hai to paisa bhi kum milta hai.Waha shaher mei naukari acchi mil jati hai*".

(Employment is a necessity and there isn't any good employment opportunity here in the villages. Even if there is any, the salary is too low. In the urban areas, the employment opportunities are better.)

Figure 7.5: Percentage distribution of the perception regarding employment opportunities of the out-migrants



Total sample: Wives of non-migrant husbands-256, Wives of out-migrant husbands-262

7.6 Wives' Perception on Different Socio-Economic Household Characteristics

The earlier chapters on the consequences of out-migration have found that, the women and children who remain behind, either perform the tasks that were previously carried out by the out-migrant men, or hire others to perform them, if sufficient remittances are received. Is this effect conditional on the living arrangements of the wives left-behind? It may be conditional i.e. if a woman is living in a non-nuclear household then work load gets distributed among other household members, and if it is a nuclear household, then the responsibilities need to be handled solely.

The conjugal separation may profoundly influence the roles, support structures, and responsibilities of the wives of the out-migrant husbands. Perception of the wives of out-migrant husbands has also been garnered about different types of work responsibilities that they handle due to husbands' out-migration and how it differs as compared to what the wives of non-migrant husbands do. These differences have been identified using a 3 point Likert-type

scale. Similar questions have been asked to the wives of non-migrant husbands as well. The work responsibilities include agricultural work, household responsibilities (household decision making) and household work.

In terms of agricultural work, most of the left-behind wives (97 per cent) perceive that husbands' out-migration doesn't increase the workload. Even when the wives were asked about increase in the responsibilities and household work as compared to their counterparts, most of the wives of both the groups feel that they shoulder equal responsibilities and household work. Around 18 per cent wives of out-migrant husbands have reported that they have more household responsibilities than the wives of non-migrant husbands (Table 7.3).

Table 7.3: Percentage distribution of the wives' perception regarding household work and responsibilities

Wives' perception	Wives of non-migrant husbands as compared to wives of out-migrant husbands	Wives of out-migrant husbands as compared to wives of non-migrant husbands	Total
Agricultural work			
Low	6.3	1.9	4.1
Same	90.9	96.6	93.8
High	2.8	1.5	2.1
Household responsibilities			
Low	2.8	1.5	2.1
Same	85.3	80.5	82.8
High	11.9	18.0	15.1
Household work			
Low	0.8	0.0	80.4
Same	88.5	88.0	88.2
High	10.7	12.0	11.4
Total sample	256	262	518

The absence of husbands may increase the responsibility of managing the other household affairs such as health of the household members, financial emergencies, education and health related problems of the children, maintaining family relations. Apart from this, maintaining self-respect and decision-making power are other issues that require attention. Questions were put to the wives of out-migrant husbands on these above mentioned aspects regarding what they

perceived about their status as compared to the wives of non-migrant wives. Same question was put to the wives of non-migrant husbands.

Fifty eight per cent wives of non-migrants perceive they have better health than the wives of out-migrants, whereas 93 per cent wives of out-migrant husbands have reported to have better health than their counterparts (Table 7.4) which probably can be attributed to the fact that they enjoy an additional option of getting treated for serious ailments in the cities where out-migrant husbands work. Better access to financial resources due to remittances and autonomy in decision making may have also helped the wives of the out-migrants in taking timely decisions for getting access to local health care facilities. This is also supported by the statement of one of the left-behind wives in a FGD that:

"*Shaher mei acche aspataal hai. Agar koi gambheer bimari hoti hai ghar mei kisi ko to hum shaher, jahan mere pati kaam karte hain, me jakar doctor ko dikha sakte hain* ".

(There are good hospitals in the urban areas. If there is any serious ailment to any household member, we can take them to the doctor in the city where my husband works.)

This field study also reveals perceived differences in the educational accomplishments and health care of the children belonging to both types of households, as is highlighted by Table 7.4. On both the counts, households of the out-migrants appears to enjoy an edge over their counterparts, although some of the wives of out-migrants have also stated that education of the children is far more smooth when the husbands are back home. It would be pertinent to quote the expression of the wife of one of the out-migrants in this regard:

"Jinke pati ghar par rehte hai ve bachho ke padhai likhai dekh sakte hai".

(If husband stays back home then he can supervise children's education better.)

The sentiments echoed, appear to be pointing towards absence of fatherly care, support and sense of discipline in the households of the out-migrants. Yet, exposure of the out-migrant husbands to the importance of education and better health care in the cities of their destinations, appear to have guided the households back home to focus on the issues of education and health care.

The study has found that 97 per cent wives of both the groups reported to have better familial relations (Table 7.4). Though in previous chapters, wives of the out-migrants reported to have had serious differences with other household members on certain issues, the net impact of these differences might not have cast much shadow on the relations among household/family members. These differences probably could be attributed to better sense of self-respect (as their husbands are bread earners for their respective households) and increased desire for autonomy, among the wives of out-migrants, in the decision making, within the households, as is also highlighted in Table 7.4.

Table 7.4: Percentage distribution of the wives of out-migrant and non-migrant husbands regarding their perception about their socio-economic conditions

Perception	Wives of non-migrant husbands as compared to wives of out-migrant husbands	Wives of out-migrant husbands as compared to wives of non-migrant husbands	Total
Better health	57.9	93.2	76.1
Better education of children	63.9	94.4	79.5
Better family relations	97.2	97.7	97.5
Better self-respect	94.4	97.7	96.1
Better decision making	60.4	77.1	68.7
Total sample	256	262	518

The wives of out-migrant husbands were asked separately about their perception regarding increase in the household work in absence of their husbands. The duties which are normally done by the husbands, when at home, include looking after the grazing of cattle and livestock (cow, bull, sheep and goats), ploughing, preparing of soil for sowing, collecting fuel woods etc. Table 7.5 reveals that only 6 per cent left-behind wives have reported that their responsibilities related to agricultural activities have been increased as compared to the wives of non-migrant husbands. This seems to suggest that out-migration did not result in the redistribution of agricultural task related responsibilities in favour of the wives of out-migrants. However, when asked about the agricultural activities that the left-behind wives have to do, which was earlier the male domain, about 84 per cent of them agreed that they have to undertake most of such tasks themselves but they did not perceive that as an additional burden.

Table 7.5: Percentage distribution of the wives' perception regarding increased responsibilities due to husbands' out-migration

Wives' perception	Wives of out-migrant husbands
Agricultural responsibilities increased as compared to non-migrant wives	6.1
Performing agricultural activities of male domain	83.6
Performing any other activities* of male domain	76.7
Total Sample	262

*Attend meetings at *panchayat* level, meet teachers at the schools of their children, participate in different activities as member of school committees etc.

The absence of husbands forces the left-behind wives to confront with situations where they have to cobble up their strengths and capacities and enhance their performative abilities. Under such circumstances, the wives of the out-migrant husbands have to acquire improved negotiative skills through which they could manage to deal with problems facing them, although how long such changes shall last is a question that needs to be examined in-depth (Rajan, 2004).

When left-behind wives were asked that, apart from household work, what kind of work they do which was earlier done by the male members of the households, 77 per cent wives have reported that they have to attend meetings at *panchayat*[20] level, meet teachers at the schools of their children, and also participate in different activities as member of school committees. As part of their expanded duties, left-behind wives interact with organizations and institutions that they might not have done before, such as banks and government agencies (Table 7.5). This certainly indicates towards the opportunities, though involuntarily, for capacity building provided by the out-migration of their husbands, which may not be available to the wives of non-migrants.

7.7 Wives' Perception about Their Children's Out-migration

Although this issue, in itself, requires an independent in-depth study, an attempt has been made here to enhance understanding of the perception of the wives of both the groups regarding the bearing of out-migration on the future course of action for their children. The queries put to the respondents were: Whether they will allow their children to out-migrate? Whether they will

[20]*Panchayat* indicates a group of people elected by the residents of a *gram sabha*. Group of villages is called gram sabha.

allow their sons to leave behind their wives? Interestingly almost everyone has responded in favour of both the queries as is revealed by information contained in Table 7.6, although most of the respondents favoured their sons to take their wives along with them rather than leaving them behind.

Table 7.6: Percentage distribution of the wives' perception regarding their children's out-migration

Wives' perception	Wives of non-migrant husbands	Wives of out-migrant husbands	Total
Son wants to out-migrate for work			
Won't allow	0.8	0.0	0.4
Allow	99.2	100.0	99.6
Son decides to leave his wife behind and out-migrate for work			
Won't allow	3.2	2.6	2.9
Allow	96.8	97.4	97.1
Son decides to take his wife to the place of his work			
Won't allow	1.2	0.0	0.6
Allow	98.8	100.0	99.4
Daughter happens to be married to an out-migrant and has to stay back in the village			
Won't allow	9.5	7.5	8.5
Allow	90.5	92.5	91.5
Daughter happens to be married to an out-migrant and has to stay with her husband at the place of his work			
Won't allow	0.0	0.0	0.0
Allow	100.0	100.0	100.0
Total sample	256	262	518

There appeared to be unanimity on the issue of their daughters accompanying their out-migrant husbands. All these responses bring to the fore that even the present generation left-behind wives longed to accompany their husbands which has not been permitted by circumstances. For instance, one of the left-behind wives has stated:

"Agar mera beta shadi ke baad apni patni ko ghar par chhod kar bahar chala jata hai to mai anumati nahi dungi kyonki uski patni ko usi ke saath rehna chahiye. Agar mera beta bahar hai to uske khane ki chinta rahegi ki usne khaya ya nahi khaya hoga. Patni saath rahegi to dhyan degi".

(If my son goes to other place for work leaving his wife at the village, then I won't allow him, because I feel that his wife should stay with him to look after his meal and well-being.)

Nevertheless, the prospects of better quality of life to the households of out-migrants appears to be so overwhelming that almost, 9 out of 10 wives of both the groups have expressed the desire to marry off their daughters to out-migrants even if they leave their daughters back home and out-migrate (Table 7.6). According to a wife of a non-migrant:

"*Jo ghar par hai unki sthiti thik nahi hai jis karan mai apni beti ko gaon mei rukne ki anumati nahi doongi. Mai bhi gaon mei hi rehti hoon par main yahan reh kar khush nahi hoon...kisi mazboori ke karan mere mata-pita ne mera viviah non-migrant ke saath kar diya.*"

(Those staying in the village have very poor condition so I won't allow my daughter to stay behind. I also stay in the village. Due to some unavoidable circumstances, my parents had to marry off me to a non-migrant. But I am not happy.)

Similar sentiments was expressed by the wife of an out-migrant:

"Agar beti ki shadi ese aadmi se ho jo shaher mei kaam karta hai aur wo use ghar par chode to main anumati nahi doongi kyonki jo ghar par reh jati hai patniyan unki dasha kharab hoti hai. Koi dekhene wala nahi hota hai".

(If my daughter marries an out-migrant and she is left behind in the village, then I won't allow, because the left-behind wives have worse conditions in the villages as there is no one to look after them.)

7.8 Summary

The analysis of the data and discussion on the results appear to suggest that migration, as a mean of better livelihood, has become an accepted social norm, even if the wife and husband could not stay together as part of their married life. Hence, the material well-being seems to have taken precedence over marital bliss, which appears to be understandable especially when there are little opportunities for earning in the villages for meeting even the basic needs. Thus, migration appears more to be part of a wider household strategy, than the choice of the migrating individual, to reduce the magnitude of destitution. An overwhelming promotion of the wives of non-migrants have favoured the migration of their husbands in the interest of

economic welfare and social status of their households. The women seem to perceive migration in terms of long term consequences i.e. suffering of separation caused by migration is regarded as an investment by them as parents, to ensure a better future for their children. Although they did not expect any major change in their own lifestyles or any noticeable improvement in their way of current living, but the solace that it would help their children to get better education and consequently jobs, keeps them going. Another important consideration for the wider acceptance of out-migration is the prospect of finding better grooms for their daughters. Thus migration not only gets progressively incorporated into the livelihood strategy of the household, but also expected to offer other tangible and intangible and short as well as long term benefits.

The expressed feelings of satisfaction by the wives of out-migrants appear to emanate from their reconciliation to their destiny of living separated from their husbands to ensure accrual of regular cash income for the households. However, there is every probability that such responses may only be socially desirable, as the expression of inner feelings in front of outsiders is considered to be a social taboo. This seems to be indicated by the fact that almost all the wives of out-migrants have reported that given a chance to live with their husbands, they would, for sure, stay with their husbands at their places of employment. It is further corroborated by the fact that although the left-behind wives are in favour of out-migration of their husbands, they also have opined that on the personal front, the conjugal separation imposed emotional disturbance as their husbands may not be able to attend every good occasion, festival or any other ceremonies in the villages. It is because of this experience almost every respondent favour their sons, if they choose to migrate, to take their wives along with them rather than leaving them behind. Unanimity also appear to be on the issue of their daughters accompanying their out-migrant husbands. All these responses bring to the fore that even the present generation left-behind wives also long to accompany their husbands, which is not permitted by circumstances. Nevertheless, the prospects of better quality of life to the households of out-migrants appears to be so overwhelming that almost, 9 out of 10 wives of both the groups express the desire to marry off their daughters to out-migrants even if they leave their daughters back home and out-migrate.

An overwhelming proportion of the wives of out-migrants have reported to have better health than their counterparts, which probably can be attributed to the fact that they enjoy an additional option of getting treated for serious ailments in the city where their out-migrant

husbands work. Better access to financial resources due to remittances and autonomy in decision making may have also helped the wives of the out-migrants in taking timely decisions for getting access to local health care facilities as well.

This field study also reveals perceived differences in the educational accomplishments and health care of the children belonging to both types of households and on both the counts, the households of the out-migrants appears to enjoy an edge over their counterparts, although some of the wives of out-migrants have also stated that education of the children is far more smooth when the husbands are back home.

At the same time, the wives of out-migrants have stated that in the absence of their husbands, they have to attend meetings at panchayat level, meet teachers at the schools of their children, and also participate in different activities as member of school committees. As part of their expanded duties, left-behind women interact with organizations and institutions that they might not have done before, such as banks and government agencies. This certainly indicates towards the opportunities, though involuntarily, for capacity building provided by the out-migration of their husbands, which may not be available to the wives of non-migrants.

CHAPTER 8: CONCLUSION AND POLICY IMPLICATIONS

8.1 Introduction

Migration as a phenomenon is not a new event, rather, it has been seen and felt since the beginning because humans have always moved from one place to another in search of a better or improved livelihood which is indeed one of the key features of the history of human evolution. Over a period of time, a vast amount of literature on migration has been generated giving rise to many theories which then has been used to explain the phenomena of intra and inter-national migration. Contemporary literature has very well documented and applied the conceptual foundations of existing theoretical framework encompassing from the oldest neoclassical theory to dual labour market, relative deprivation, network, institutional theories etc. to build a commonly accepted theoretical construction of migration. The issue of migration has also been examined from many perspectives such as intra and inter-national migration, factors causing initiation and continuation of migration. Each perspective provides an insight into totally different dimensions of migration. They are not mutually exclusive and may in fact help in discovering various facets of migration irrespective of the level i.e., intra or inter-national. All these theories point to the fact that the phenomenon of migration connotes to the reality of movement of individuals from native spaces to another with an explicit desire for permanent change which is triggered by more than one factors like social, cultural, economic or non-economic. Interestingly, inter-regional migration within a nation is generally found to be far greater than the international migration due to ease, ethnic-language-cultural affinity and social cohesion.

Like elsewhere, in India too, there has been a significant rise in rural out-migration to urban areas during the last several decades because of the presence of better economic conditions in urban areas. This type of migration is regarded as the movement of a large number of people from their usual residence (rural) to live, work and earn in urban areas for a long period of time. Contrary to general expectations, as per the 2001 Census, most of the migration (69 per cent) in 2001 remained confined to rural to rural areas, whereas only 14 per cent of the migration took place between rural to urban areas. The rural to rural migration was far more evident in the case of Bihar (80 per cent), Jharkhand (76 per cent), Assam (73 per cent), Himachal Pradesh (72 per cent), Sikkim (71 per cent), Uttar Pradesh (70 per cent), Rajasthan (70 per cent), Chhattisgarh

(69 per cent), Orissa (68 per cent), and West Bengal (67 per cent). Most of it was part of the intra-state migration. Interestingly, reasons for migration are different for the male and female migrants. For instance, while 63 per cent of the males migrated for 'work/employment' and 'moved with the household', 84 per cent of the migrant women attributed the reasons of 'marriage' and 'moved with the households' as the reasons for migration from their places of origin in 2001. Migration on account of marriage suggests that a larger proportion of females either move from the place of their parental homes to join the husbands' families, as part the long-established cultural practices of the Indian society, or join their migrated husbands at the places of their employment. Since women are bound to migrate on account of marriage, they, therefore, are likely to be far more migratory than men. However, there are probabilities that though the women may primarily migrate along with the husbands, they may also join the workforce at the place of destination.

In view of the research-based documentation, providing an insight into the fundamental causes of migration, highlighting 'push' and 'pull' factors as the drive behind migration, and that 'push' factors lead to migration from economically vulnerable areas to relatively prosperous areas, it is logical to infer that like elsewhere, migration in India must be originating from backward areas and destined for areas promising better income earning opportunities. Examining the ground realities, employment and, therefore, livelihood earning opportunities have been extremely limited in the backward regions of India, making them far more vulnerable to distress out-migration of the active male population as part of their survival strategies.

Uttarakhand, as a geographical region, is primarily characterised by its sparse population, and engagement of the people in predominantly primary economic activities, coupled with inadequate infrastructure and negligible presence of secondary and tertiary sectors especially in the hilly part of the state. Subsistence based and rain-fed agriculture has been predominantly the primary source of livelihood for the hill population. Bereft of any employment opportunities and credible source of earning, the hill population has been migrating to plains for a long time and most of them are serving the Indian defence forces in order to survive and maintain their families. An overwhelming majority of the migrants work in the informal sector with low paid jobs. Out-migration, thus, is seen by most households primarily as a way for survival than an accumulation strategy. However, the heavy out-migration of the male work

force from Garhwal has had serious implications for local development. While this permanent kind of migration has resulted in the remittances inflows, not regular and substantial by any standard, it has also led to the collapse of agricultural and many other economic activities. Besides, it has given rise to many socio-economic and psychological problems that are generally associated with the left-behind elderly people, wives and children. Although some studies have been conducted on the phenomenon of out-migration from Garhwal, there has been a dearth of studies which could properly research and document the plight and perspectives of the left-behind family members, particularly the wives. This study, therefore, focuses on this neglected aspect and endeavours to develop an insight into the issues which required attention but appear to have been overshadowed by too much debate on remittances inflows in the context of male-outmigration from hills. The study takes the wives of non-migrant husbands as the reference group and compares different dimensions of the lives of the wives of migrant husbands with this reference group.

8.2 Objective of the Study

The broad objective of the study is to examine the socio-economic, physical and psychological welfare aspects of the wives of out-migrants by taking wives of non-migrants, as the reference group. In pursuance of this, the study aims:

1) To study the socio-economic characteristics of households with out-migrant and non-migrant male members in order to examine if there exists any difference in these characteristics.
2) To study the difference in the pattern of farm and non-farm activities between households with out-migrant and non-migrant male members.
3) To examine the difference, if any, between wives of out-migrant and non-migrant husbands in the context of the general and reproductive health status.
4) To examine the change in living arrangements, the extent of familial support, and intra-family conflicts, work and decision making participation as a consequence of the migration of husbands.
5) To examine as to how the wives of out-migrant husbands perceive the phenomenon of migration and how they respond to it.

8.3 Hypotheses of the Study

1) There are significant socio-economic differentials among households with out-migrant and non-migrant husbands.
2) Husband's out-migration has significant impact on the cereal production in farm lands as compared to non-migrant households.
3) Husband's out-migration entails significant impact on investments in farm activities as compared to non-migrant households.
4) Husbands' out-migration has significant impact on the general and reproductive health of the left-behind wives.
5) Husbands' out-migration has significant impact on the stress level of the left behind wives.
6) Husbands' out-migration has significant impact on agriculture related decision making among the left-behind wives.
7) Husbands' out-migration has significant impact on women's participation in wage labour market.
8) Husbands' out-migration exercises significant impact on the number of working hours (including daily chores) of the left-behind wives.

8.4 Database and Conceptual Framework

8.4.1 Database

The primary data for this study was collected in 2011 from nine villages from three development blocks, enumerated in 2001 Census, located in Pauri Garhwal district of Uttarakhand. The data have been collected from the place of origin for the fact that it could provide far more comprehensive and accurate information on the problems and perspectives of left-behind wives. The households, to be interviewed, were selected with equal probability from the household list in each area using systematic sampling. Considering that the impact of migration is strongly felt only after certain period of time by the families and communities, a minimum period of 3 years of out-migration was considered to determine the status of the household as migrant/non-migrant. Consequently, the left-behind wives meant those women, whose husbands had been out-migrant for at least last three years, and that the duration of marriage was at least three years at the time of survey. If a selected household did not meet these criteria, it was replaced randomly by another household. If there were more than one woman in the household who fitted the selection criteria, only one was selected for the study using KISH table. In the surveyed households, the personal interviews were conducted with

both the male/female head of the household, wherever required, to canvass the schedule's information. If the head of the household was absent at the time of the survey, another adult household member was interviewed instead.

In a randomized experiment, the differences or comparison of socioeconomic and demographic characteristics of the households belonging to migrant and non-migrant persons could be statistically tested by using appropriate bivariate analysis such as t-test and Mann Whitney test. These tests are applied to test the significance of differences in means or proportions of socioeconomic and demographic characteristics of both types of households (migrant vs. non-migrant). Similarly, to accomplish other objectives of this study, appropriate multivariate regression models have been applied. However, for most of the analyses, descriptive statistics have been used.

8.4.2 Conceptual Framework

The conceptual framework for this study is guided by the central focus of the research i.e., socio-economic-psychological welfare of the left-behind population mainly wife, as they are assumed to be devoid of critical emotional support from the migrant. This study takes household as the study unit and has included both kinds of households i.e., households belonging to migrants and households wherefrom no migration has taken place. The later acts more as a reference group. The impact of migration on the migrant household is studied on four broad parameters: farm and non-farm activities, health and health care seeking behaviour, familial aspects, and how the migrant's household perceives the migration in terms of its economics, and quality of life of the family members, in particular that of wife and children of the migrant.

8.5 Conclusions

As could be discerned from the results and discussion from previous chapters, migration has radically changed the socio-economic and demographic profile of the population in the study area and has set off both positive and negative ramifications. For instance, while migration has reduced population pressure on the subsistence hill agriculture, provided employment opportunities to the unemployed and under-employed work force, improved the quality of life for the migrant's family to some extent, it has also resulted into the separation of families for a

long time causing psychological, emotional and social stress to the family members left behind, in particular, the wife. Consequently, the rural development agenda which could not effectively address the issues of lack of infrastructure, social and economic services, has never grasped and acted upon these dimensions of migration. The major conclusions that are drawn from this study are listed below:

1. Heads of the out-migrant households are older and less educated than the reference group. This may be due to the fact that higher percentages of the wives of out-migrants live in non-nuclear households as compared to the wives of non-migrants. The non-nuclear households comprise more of staying with the parents-in-law. Hence, the heads in the former households are older and less educated than the latter.
2. The households of out-migrant husbands have reported higher household savings, income and monthly per capita expenditure (MPCE) as compared to the reference group. They are found to be incurring relatively higher expenditure on food, clothing, education, fuel, light, travel, entertainment, medical expenses etc. than the households with non-migrant husbands. The standard of living index reveals that the households with out-migrant husbands own relatively more assets as compared to the reference group.
3. Out-migrants are younger, better educated and have higher income than their counterparts. Can it be inferred that the comparatively highly educated males out-migrate for higher earnings or in order to get absorbed in urban jobs, the males get educated? However, though educated, most of the out-migrants do not possess any professional skills to get engaged in skilled jobs at destinations. The migrants in the cities are basically engaged in occupational categories of transport, production and related works and other services. They are mostly engaged in low-skilled, generally low paid jobs. Employment in the Indian Armed Forces is reported to be a great attraction among the youths of Garhwal. The outflow of people is mostly to the state of Delhi. The other preferred places of out-migration are within the state of Uttarakhand viz., Dehradun and Haridwar, and other states/UTs like Punjab, Haryana, Chandigarh etc.
4. The left-behind wives are relatively younger, and have lower duration of marriage, less age gap with their spouses, higher age at marriage, more educated, and have fewer numbers of living children than the wives of non-migrants. This implies that may be the out-migrants prefer educated girls to marry and because out-migrants need time to settle

in their urban jobs, they marry late and accordingly the age at marriage is higher for left-behind wives than the wives of non-migrants (because they have less age gap between spouses). Also, the lesser number of children among wives of out-migrants than the wives of non-migrants may be the outcome of the diffusion of awareness about small family norms by the out-migrant husbands.

5. Accordingly, on the basis of the 1st, 2nd, 3rd, and 4th points of conclusion, the first hypothesis that there are significant socio-economic differentials among the households with out-migrant and non-migrant husbands is accepted, because at the household level, the study has found statistically significant differences in terms of various socio-economic parameters such as the age of the head of the household, educational attainment of household heads, household income, household savings, monthly per capita expenditure (MPCE), and household size. At the individual level, the study has also found statistically significant differences between the out-migrant husbands and the non-migrant husbands in terms of age, their level of educational attainment and income. Even in the case of wives, statistically significant differences are found between the wives of out-migrants and the wives of the non-migrants with respect to their age, education, age at marriage, duration of marriage, age gap among spouses, and number of living children.
6. Most of the left-behind wives are found to be living in non-nuclear households as compared to the reference group (as mentioned in point 1). This, however, may be attributed to relatively younger age group of the wives of out-migrants when there is a higher probability of parents-in law living with the families. Also, it may be migration strategy of the husbands that their wives and children continue to stay with their parents, firstly to look after their aged parents in their absences and secondly their wives and children to get support from the other household members to cope up the out-migrants' absence.
7. Moreover, the study has not found any statistically significant impact of male out-migration on the cereal production and investment in farming. Hence, the second and third hypotheses that husband's out-migration has significant impact on the cereal production in farm lands as compared to non-migrant households and husband's out-migration entails significant impact on the investments in farm activities as compared to non-migrant households are discarded. It was assumed that may be the out-migration

would lead to more investments in farm activities either to hire labours to substitute the labour loss due to out-migration and also invest more in acquiring hybrid seeds, and fertilizers. Also, due to higher investments, it was hypothesized that the cereal production would increase. Though, the operating expenditure in agriculture is found to be higher among the out-migrant households due to the fact that they have to hire labour to substitute for the loss of labour due to out-migration of the male members from the households.

8. No statistically significant impact of husbands' out-migration on the general and reproductive health has been found among the wives of out-migrants as compared to the reference group. Hence, the fourth hypothesis that husbands' out-migration has significant impact on the general and reproductive health of the left-behind wives is discarded. It was assumed that the left-behind wives would enjoy better health condition as compared to the wives of non-migrants. However, the former has more awareness of the RTI/STDs than the latter.
9. With regard to the stress level of the wives, the left-behind wives are found to be far more stress prone than the reference group. These wives have reported the feelings of loneliness and depression due to the long absence of their husbands. Hence, the fifth hypothesis that husbands' out-migration has statistically significant impact on the stress level of the left-behind wives is accepted.
10. The study has found evidences of an increasing trend of feminization of agriculture because the male members either out-migrate or get involved in non-farm activities. The study, however, did not find any evidence of the statistically significant impact of husbands' out-migration on the decision making power of the left behind wives vis-a-vis agriculture. Hence, the sixth hypothesis that husbands' out-migration has significant impact on agriculture related decision making among the left-behind wives is discarded. Though the women are actively involved in agricultural activities, they are not necessarily involved in decision making. The households lease in or lease out the land to prevent the land from becoming barren. It has been found that 'lease in' land is particularly prevalent among the households with non-migrant husbands, while 'lease out' land is common among the households with out-migrant husbands.
11. No statistically significant impact of husbands' out-migration could be found on the left behind wives regarding participation in wage labour market. Hence, the seventh

hypothesis that husbands' out-migration has significant impact on women's participation in wage labour market is discarded. Also, no statistically significant impact of husbands' out-migration could be seen on the number of working hours as compared to the reference group. Hence, the eighth hypothesis that husbands' out-migration exercises significant impact on the number of working hours (including daily chores) of the left-behind wives is discarded. It was assumed that the wives of out-migrants have to handle more responsibilities and accordingly the number of working hours would increase as compared to the wives of the non-migrants.

12. Higher proportion of left-behind wives is found to own bank/post office accounts than the reference group, indicating the compulsion to operate bank/post accounts in the absence of their husbands. It also suggests more autonomy whether out of choice or compulsion. Also, it can be concluded that the wives of out-migrants have higher mobility than the wives of non-migrants.
13. The data reflecting decision-making power related to household affairs reveal that the wives of out-migrants enjoy much less decision-making power than the reference group. This could be attributed to the difference in household structures, as majority of the wives of out-migrants are staying in non-nuclear households where the decision making is generally exercised by elderly family/male members.
14. Comparing the costs and benefits associated with migration, the respondents have emphasized larger benefits when it comes to current survival strategy and future financial security of the family. It appears that they have accepted the reality and are content to be left behind. Even the reference group favoured migration as it is perceived to be bringing greater financial security. The appreciation of migration as an attractive economic strategy is further corroborated by well expressed desire of almost all the respondents to encourage their children to migrate either by seeking employment outside the place of origin or through marriage. However, they also insist that their sons, if out-migrate, should not leave their wives behind implying their well concealed grief about the long conjugal separation.

8.6 Policy Implications

Although in the academic and policy making domains, the measures to de-incentivise migration of work force have gained far more prominence, there is a need to understand and recognise the centrality of out-migration, as a survival and growth strategy for the local inhabitants of

Garhwal. The ideal situation would be 'economic pull' rather than 'economic push' driven migration. While the former is a conscious economic choice, the latter is determined by compulsion to migrate for survival. Therefore, there is an urgent need to consider certain policy interventions which could help in devising livelihood strategies at the local level. However, public policy must go beyond economic policies, as there are other equally important dimensions such as basic socio-economic, psychological, reproductive and other health issues and problems that confront women in general and wives and children of out-migrants in particular. It may be further pointed out that while creation of livelihood options at the local level is primarily driven and sustained by conducive public economic policies, other challenges are better tackled by community based organisational support efforts. Given that the formation of Self Help Group (SHG) interventions in different parts of India have played a critical role in transforming lives of women in the rural areas and is considered as one of the most significant tools in participatory approach for the economic empowerment of women and improving various aspects of the social structure, the experiment is worth undertaking in this part of India as well. Similarly, these organisations through interactive and participatory peer information, duly supported by NGOs' outreach programmes in relevant areas, may also help to improve awareness and education of the women about health care issues in general and reproductive and child health as well as sexually transmitted diseases (STD). This institutionalised mechanism could become an effective tool to solve their common problems, within the same socio-economic and cultural context, through self and mutual help. It may also provide an effective platform to provide space and support to the women in the villages and does have a strong catalytic effect on the quality of life for the left-behind women.

Further, the existing public outreach services and 'information education and communication' (IEC) activities need to be strengthened by reworking on the village-level health workers and primary health centres. These services, in the past, have achieved remarkable success by becoming vital instruments of change, but have become partially defunct due to change in the governance priorities and support programmes, and partially due to non-availability of the medical and other staff owing to geographical disadvantage of the place. Improving awareness with the help of NGOs and SHGs and reinforcing motivation of health workers with updated knowledge to combat the problems of maternal and child health care would probably be a better placed measure for such kinds of areas.

The region, due to its agro-climatic conditions, does have great potential for generating high income per unit of land by diversifying agriculture into horticulture, production of cash crops like soyabean and high value off-season vegetables and floriculture. This, however, requires resurrection of extension services and effective promotion along with the required infrastructure facilities in the form of soil and water conservation measures, irrigation facilities and credit and marketing support.

Besides, promotion of trade, investment and development by providing a more efficient transport, road, communication, power system that would serve as a conduit for growth in the areas of origin, may be able to control the current trend of out-migration to some extent. It is not that Uttarakhand does not have any policy or programme. The need of the hour is to implement existing policies and programmes effectively and efficiently. For example: The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is an Indian job guarantee scheme, enacted by legislation on August 25, 2005. The scheme provides a legal guarantee for one hundred days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage of ₹120 (US$2.27) per day in 2009 prices. The Central government outlay for scheme is ₹40,000 crore (US$7.56 billion) in FY 2010–11. This scheme needs to be strengthened further to control the labour out-migration.

Women's participation in agriculture has been increasing over a period of time. Women are now moving beyond the orbit they were earlier confined to, into an area which is traditionally considered a male bastion. Women are becoming the 'de-facto' in-charge of the agricultural activities. However, it is also a grim reality that women are ill-prepared sometimes to handle the responsibilities. Hence, there is an urgent need for a socio-political framework within which women can be empowered with the relevant skills and technologies to undertake this new role more efficiently and effectively.

Agricultural activities are very alarming in Uttarakhand as more than one-third wives of non-migrant and two fifth wives of out migrant husbands reported that they want to abandon agricultural activities in future. This will be danger for the self-sustenance of the local population. The shift from farm to non-farm activities is a recent trend. However, stagnating agricultural sector is a matter of concern that seeks immediate policy attention. In the survey, it has been observed that agriculture is still the main occupation of the households and some of

the household members out-migrate for the prospects of better livelihood. However, those who do not choose to out-migrate: they are either involved in agriculture or sustain on some meagre income from non-farm activities. Hence, there is a need to focus on the development of agriculture. The study concludes that remittances to some extent are invested in agriculture. Hence, this investment can be channelized towards commercial farming suitable for the region.

8.7 Limitation of the Study

Since migration process and its implication for out-migrants' wives in particular and their families in general are of complex nature, this study may not have necessarily captured different dimensions viz., socio-psychological aspects of the migration. The study has also not looked into the perspectives of the out-migrants, as to how they view themselves, their source community, and the opportunities available at the current place of residence. Another point of caution here: the inferences have been drawn on the basis of cross-sectional data and are not based on the 'cumulative history of labour migration'. Further researches can be carried out to document the mechanism through which out-migration impacts the lives of the households and the left behind wives, as it has profound policy implications. It may also be interesting to find out if women still retain their autonomy after they permanently migrate with their husbands or when the out-migrants join back their families in the villages. For example, the wives left behind have learned to negotiate with various institutions, such as schools and government offices, which earlier have taken care of by their husbands. Are these changes sustainable when they join their husbands or do they fall back to their more traditional gender roles?

8.8 Further Scope for Research

The future research could focus around the following points:

1. The gathering and analysis of more specific and longitudinal data on change in household structure, gender roles and relations, physical health and psychological well-being, of children and aged parents of out-migrant households.
2. Impact on the academic performance and professional success of the children belonging to the out-migrant households.
3. Analysis of the migration-induced changes on development prospects especially in view of the absence of productive assets and able bodied males in the hilly villages.
4. The male out-migrants from the villages get absorbed in different activities in the cities. The jobs may range from regular jobs in the government sector to daily wage labourers

in the private sector. The impact of male out-migration at the place of origin i.e. the villages, may be different depending on the type of employment. In case, where it is regular job, the households' income will be consistent and they may be better settled economically as compared to the households where the out-migrants are daily wage earners. However, the present study did not include any separate analysis of the impact of male out-migration based on the employment of the male out-migrants.

5. Labour migration, when successful, is an economic benefit to families, but families can experience greater economic hardship if migrant men cannot secure good employment (Sadiqi and Ennaji, 2004). Therefore, the appropriate groups for comparison should not be only women married to non-migrants and women married to migrants. It is important to differentiate this latter group into women married to successful migrants and women married to unsuccessful migrants. Women married to unsuccessful migrants may experience the greatest economic strain due to increased financial responsibilities—additional responsibilities that at the same time might be associated with greater increases in autonomy.
6. Also, the male non-migrants may directly or indirectly have felt the impact of labour migration e.g. their status at the social/community level, the economic challenges etc.
7. In addition to the exploration of mechanisms through which husbands' migration may increase wives' autonomy, another issue that needs investigation is the permanency of women's increased autonomy due to men's labour migration. Although it is well-established that women's autonomy increases upon her husband's absence, what happens upon his return has not been extensively investigated.

Bibliography

1. Abeyasekera, S. (2005). Multivariate methods for index construction. In *Household surveys in developing and transition countries: Design, implementation and analysis* (pp. 367-387). United Nations Statistics Division.

2. Acosta, P., Fajnzylber, P., & Humberto, L. J. (2007). The impact of remittances on poverty and human capital: Evidence from Latin American household surveys. In C. Ozden and M. Schiff (Eds.), *International migration, economic development and policy* (pp. 59-98). Washington D.C.: The World Bank and Palgrave Macmillan.

3. Adams, Jr. R. H. (1989). Worker remittances and inequality in rural Egypt. *Economic Development and Cultural Change*, *38*(1), 45–71.

4. Adams, Jr. R. H. (1991). The economics uses and impact of international remittances in rural Egypt. *Economic Development and Cultural Change, 39*(4), 695-722.

5. Adams, Jr. R. H. (2007*)*. International remittances and the household: Analysis and review of global evidence (Working Paper No. 4116). Retrieved from World Bank Policy Research website: https://openknowledge.worldbank.org/handle/10986/7146.

6. Afsar, R. (2003, June 22-24). *Internal migration and the development nexus: The case of Bangladesh*. Paper presented at the Regional Conference on Migration, Development and Pro-Poor Policy Choices in Asia, Dhaka, Bangladesh.

7. Agadjanian, V. & Winfred, A. (2008). Forced migration and HIV/AIDS risks in Angola. *International Migration*, *46*(3), 189-216.

8. Agadjanian, V., Menjivar, C., & Sevoyan, A. (2007, March 29-31). *Reshaping the post-Soviet periphery: The impact of men's labor migration on women's lives and aspirations in rural Armenia*. Paper presented at the Annual meeting of Population Association of America, New York.

9. Agrawal, G. & Negi, N. S. (2012). Double burden of nutrition among women in hilly states in India. *Middle East Journal of Family Medicine, 10*(5), 8-16.

10. Aguilera-Guzman, R. M., Garcia, M. S. C., & Garcia, F. J. (2004). Psychometric characteristics of CES-D in a sample of Mexican rural adolescents in areas with a strong migratory tradition. *Salud Mental, 27*(6), 57-66.

11. Alcaraz, C., Chiquiar D. & Salcedo A. (2012). Remittances, schooling, and child labor in Mexico. *Journal of Development Economics,* 97(1), 156-165.

12. Amimtham, S. (2008). *Impacts of international migration on socio-economic conditions in rural northeast Thailand*. Unpublished doctoral dissertation, Komazawa University, Japan.

13. Amuedo-Dorantes, C., & Pozo, S. (2009). New evidence on the role of remittances on health care expenditures by Mexican households (Discussion Paper No. 4617). Retrieved from Institute for the Study of Labour website: http://ftp.iza.org/dp4617.pdf.

14. Amuedo-Dorantes, C., Sainz, T., & Pozo, S. (2007). Remittances and health care expenditure patterns of populations in origin communities: Evidence from Mexico (Working Paper No. 25). Retrieved from Inter-American Development Bank-INTAL website: www.cibera.de/fulltext/17/17646/intal/aplicaciones/uploads/publicaciones/i_INTALITD_WP_25_2007_AmuedoDorantes_Sainz_Pozo.pdf.

15. Ananth, C. V., & Kleinbaum, D. G. (1997). Regression models for ordinal responses: A review of methods and applications. *International Journal of Epidemiology*, *26*, 1323-1333.

16. Anderson, J. A. (1984). Regression and ordered categorical variables. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, *46*, 1–30.

17. Arizpe, L. (1981). Relay migration and the survival of peasant households. In Jorge Balan (Ed.), *Why people move comparative perspective on the dynamics of internal migration* (pp. 187-210), Vendome, France: The UNESCO.

18. Asis, M. M. B. (2004). When men and women migrate: Comparing gendered migration in Asia. Retrieved from United Nations Division for the Advancement of Women (DAW) website: http://www.un.org/womenwatch/daw/meetings/consult/CM-Dec03-EP1.pdf.

19. Ayuwat, D. (1997). The change of occupations of the rural population in northeast Thailand. *Regional Views, 10*, 61-74.

20. Bahuguna, P., & Belwal, O. K. (2013). Fertility differential in rural areas of Pauri Garhwal: A regression approach. *International Journal of Advanced Research in Management and Social Sciences, 2*(8), 161-174.

21. Bahuguna, P., & Belwal, O. K. (2013). Regression model approach for out-migration on demographic aspects of rural areas of Pauri Garhwal. *International Journal of Advanced Research in Management and Social Sciences, 2*(8), 175-182.

22. Banerjee, B. (1984). Rural-to-Urban migration and conjugal separation: An Indian case study. *Economic Development and Cultural Change, 32*(4), 767-780.

23. Banerjee, B. (1986). Rural to urban migration and the urban labour market: A case study of Delhi. Bombay: Himalaya Publishing House.

24. Bang, R., Bang, A., Baitule, M., Chaudhary, Y., Sarmukaddam, S. & Tale, O. (1989). High prevalence of gynecological disease in rural Indian women. *Lancet, 333*(8629), 85-88.

25. Bartholomew, D. J., Steele, F., Moustaki, I., & Galbraith, J. I. (2002). Principal components analysis. In Chapman & Hall/CRC (Eds.), *The analysis and interpretation of multivariate data for social scientists* (pp. 115-142). UK: CRC.

26. Beine, M., Docquier, F., & Rapoport, H. (2008). Brain drain and human capital formation indeveloping countries: Winners and losers. *The Economic Journal, 118*, 631–652.

27. Belwal, O. K. (2007). Hill out-migration from Uttarakhand: Access to livelihood education and other determinants of movement. *Demography India, 36*(1), 135-143.

28. Bender, R, & Grouven, U. (1997). Ordinal logistic regression in medical research. *Journal of the Royal College of Physicians of London*, *31*, 546–551.

29. Bever, S. W. (2002). Migration and the transformation of gender roles and hierarchies in Yucatan. *Urban Anthropology and Studies of Cultural Systems and World Economic Development, 31*(2), 199–230.

30. Bhatia, J. C., and Cleland, J. (1995). Self reported symptoms of gynecological morbidity and their treatment in south India. *Studies in Family Planning, 26*(4), 203-213.

31. Boehm, D. A. (2008). Now I am a man and a woman! Gendered moves and migrations in a transnational Mexican community. *Latin American Perspectives, 35*(1), 16-30.

32. Bora, R. S. (1996). *Himalayan migration: A study of the hill region of Uttar Pradesh*. New Delhi: Sage Publications.

33. Bora, R. S. (2000). Arresting out-migration: Some policy considerations for Uttaranchal. *The Indian Journal of Labour Economics, 43*(2), 293-308.

34. Bose, S. R., Ghosh, P. P. (1978). Agro economic survey of Bihar: A pilot study. Patna: B.K. Enterprise.

35. Bowen, L., Ebrahim, S., Stavola, B. De, Ness, A., Kinra, S., Bharathi, A.V., Prabhakaran, D., Reddy, K.S. (2011). Dietary intake and rural-urban migration in India: A cross-sectional study. Retrieved from Plos One website: http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0014822.

36. Boyle, P., Halfacree, K., & Robinson, V. (1998). *Exploring contemporary migration*. London: Addison Wesley Longman.

37. Brant, R. (1990). Assessing proportionality in the proportional odds model for ordinal logistic regression. *Biometrics*, *46*, 1171–1178.

38. Braun van, J. (2004). Towards a renewed focus on rural development. *Agriculture and Rural Development, 11*(2), 4-6.

39. Brittain, A. W. (1990). Migration and the demographic transition: A West Indian example. *Social and Economic Studies, 39*(3), 39-64.

40. Byerlee, D. (1974). Rural–urban migration in Africa: Theory, policy and research implications. *International Migration Review, 8*(3), 543–566.

41. Census of India (2001). India D-series, Migration, Registrar General and Census commissioner, India.

42. Census of India (2011). India D-series, Migration, Registrar General and Census commissioner, India.

43. Chilimampunga, C. (2006). The impact of rural-urban migration on household food security in selected villages in Chiradzulu and Mangochi districts. In Tsutomu Takane (Ed.), *Current issues of rural development in Malawi* (pp. 62-98). Japan: Institute of Developing Economies.

44. Coffee, M. P., Garnett, G. P., Mlilo, M., Voeten, H., Chandiwana, S., & Gregson, S. (2005). Patterns of movement and risk of HIV infection in rural Zimbabwe. *Journal of Infectious Diseases*, *191*(1), S159-S167.

45. Connell, J. (1984). Status or subjugation? Women, migration and development in the South Pacific. *International Migration Review 18*(4), 964-983.

46. Cox-Edwards, A. & Ureta, M. (2003). International migration, remittances and schooling: Evidence from El Salvador. *Journal of Development Economics, 72*(2), 429-461.

47. Croll, E. J., & Huang, P. (1997). Migration for and against agriculture in eight Chinese villages. *China Quarterly, 149,* 129-146.

48. Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychomerika*, *16*, 297-334.

49. D'emilio, A. L., Cordero, B., Bainvel, B., Skoog, C., Comini, D., & Gough, J., et al. (2007). The impact of international migration: Children left behind in selected countries of Latin America and the Caribbean (Working paper). Retrieved from UNICEF website: http://www.unicef.org/socialpolicy/index_46050.html.

50. Das, K. C. (2012, August 26-29). *Urban transition in India: Evidences from 2011 Census data.* Paper presented at the Conference on The 2nd Asian Population Association Conference, Bangkok.

51. Das, K. C., & Murmu, A. (2010, December). Female Migration to Mega Cities of India. *Journal of History and Social Sciences, 1*(1), Retrieved January 01, 2013, from http://jhss.org/archivearticleview.php?artid=13.i8.

52. Davin, D. (1996). Migration and rural women in China: A look at the gendered impact of large-
53. Dawson, G. (1995, September 25-29). *Women, men and Merantau: Shifting gender relations in transmigrant households.* Paper presented at the Conference on Indonesian Women in the Household and Beyond, Leiden.

54. De Brauw, A., & Rozelle, S. (2008). Migration and household investment in rural China. *China Economic Review, 19*(2), 320-335.

55. De Brauw, A., Taylor, J. E., & Rozelle, S. (2003). Migration and incomes in source communities: A new economics of migration perspective from China. *Economic Development and Cultural Change, 52*(1), 75-101.

56. De Silva, W. I. (1994). How serious ageing in Sri Lanka and what can be done about it? *Asia-Pacific Population Journal, 9*(1), 19-36.

57. Decosas, J., Kane, F., Anarfi, J. K., Sodji, K. D., & Wagner, H. U. (1995). Migration and AIDS. *Lancet*, *346*, 826-828.

58. Deere, C. D. (1982). The division of labour by sex in agriculture: A Peruvian case study. *Economic Development and Cultural Change, 30*(4), 795-811.

59. Desai, S., & Banerji, M. (2008). Negotiated identities: Male migration and left-behind wives in India. *Journal of Population Research, 25*(3), 337-352.

60. Desai, S., Dubey, A., Joshi, B. L., Sen, M., Shariff, A., & Vanneman, R. (2010). Education. In *Human Development in India: Challenges for a Society in Transition* (pp. 75-96) New Delhi: Oxford University Press.

61. Deshingkar, P. & Akter S. (2009). Migration and human development in India (Human development research paper 2009/13). Retrieved from United Nations Development Programme website: http://hdr.undp.org/sites/default/files/hdrp_2009_13.pdf.

62. Deshingkar, P. (2004). Understanding the implications of migration for pro-poor agricultural growth. Retrieved from Organization for Economic Co-operation and Development website: http://www.oecd.org/dataoecd/24/28/36562999.pdf.

63. Deshingkar, P. (2006, March 6-7). *Internal migration, poverty and development in Asia*. Paper presented in Asia 2015: Promoting Growth, Ending Poverty, London, United Kingdom.

64. Durand, J., & Massey, D. S. (1992). Mexican migration to the United States: A critical review. *Latin American Research Review, 27*(2), 3–42.

65. Durand, J., & Massey, D. S. (2004). What we learned from the Mexican migration project. In J. Durand & D. Massey (Eds.), *Crossing the border* (pp. 1-14). New York: Russell Sage Foundation.

66. Durand, J., Kandel, W., Parrado, E. A., & Massey, D. S. (1996). International migration and development in Mexican communities. *Demography, 33*(2), 249-264.

67. Duryea, S., Ernesto, L. C. & Alexandra, O. (2005). Migrant remittance and infant mortality: Evidence from Mexico. Washington: Inter-American Development Bank, Mimeographed.

68. Essang, S. M., & Mabawonku, A. F. (2007). Impact of urban migration of rural development: Theoretical considerations and empirical evidence from southern Nigeria. *The Developing Economies, 13*(2), 137-149.

69. Food and Agricultural Organizaiton (FAO). (1992). Rural Women in Latin America-Rural development, access to land, migration and legislation, op. cit., cited in Roca.1993, op. cit., pp-4.

70. Filmer, D., & Pritchett, L. H. (2001). Estimating wealth effects without expenditure data-or tears: An application to educational enrollments in states of India. *Demography*, *38*(1)*,* 115-132.

71. Findley, S. E., & Williams, L. (1991). Women who go and women who stay: Reflections of family migration processes in a changing world (Working Paper No.176). Retrieved from World Employment Programme Research, International Labour Office website: http://www.ilo.org/public/libdoc/ilo/1991/91B09_196_engl.pdf.

72. Frank, R., & Hummer, R. A. (2002). The other side of the paradox: The risk of low birth weight among infants of migrant and non-migrant households within Mexico. *International Migration Review, 36*(3), 746-765.

73. Ganguly, S. & Negi, N. S. (2010). The extent of association between husbands' out-migration and decision making power among left behind wives in rural India (Working Paper No. 147). Retrieved from Asian Research Institute website: http://ssrn.com/abstract=1743932.

74. Gertler, P., & Gruber, J. (2002). Insuring consumption against illness. *American Economic Revie*w*, 92*(1), 51-70.

75. Ghosh, P. P. (1993). Temporary migration of rural labour and employment in Bihar. *National Labour Institute Bulletin, 22*(1).

76. Ghosh, P. P., & Sharma, A. N. (1995). Seasonal migration of rural labour in Bihar. *Labour and Development, 31*(50), 118-136.

77. Ghuman, S. J. (2003). Women's autonomy and child survival: A comparison of Muslims and non-Muslims in four Asian countries. *Demography, 40*(3), 419-436.

78. Giannelli, G. C., & Mangiavacchi, L. (2010). Children's schooling and parental migration: Empirical evidence on the "left behind" generation in Albania (Discussion

Paper No. 4888). Retrieved from Child Migration Research Network website: http://www.childmigration.net/Giannelli_10.

79. Goldsmith, P. D., Gunjal, K., & Ndarishikanye, B. (2004). Rural–urban migration and agricultural productivity: The case of Senegal. *Agricultural Economics, 31*(1), 33-45.

80. Grawert, E. (1992). Impacts of male outmigration on Women: A case study of Kutum / Northern Darfur / Sudan. *The Ahfad Journal, 9*(2), 37-60.

81. Gulati, L. (1987). Coping with male migration. *Economic and Political Weekly, 22*(44), 41-46.

82. Gulati, L. (1993). *In the absence of their men: The impact of male migration on women.* New Delhi: Sage.

83. Gupta, G. R. (2000, July 12). *Gender, sexuality, and HIV/AIDS: The what, the why and the how*. Paper presented at the XIII International AIDS Conference, Durban, South Africa.

84. Gwatkin, D. R., Rutstein, S., Johnson, K., Pande, R. P., & Wagstaff, A. (2000). Socio-economic differences in health, nutrition and population (Multicounty reports). Washington, DC: The World Bank, HNP/Poverty Thematic Group.

85. Haan, A. De. (1997). Unsettled settlers: Migrant workers and industrial capitalism in Calcutta. *Modern Asian Studies, 31*(4), 919-949.

86. Haan, A. De. (2006). Migration, gender, poverty: Family as the missing link. In S. Arya & A. Roy (Eds.), *Poverty, Gender and Migration* (pp. 107–128). New Delhi: Sage.

87. Hadi, A. (1999). Overseas migration and the well-being of those left-behind in rural communities of Bangladesh. *Asia-Pacific Population Journal, 14*(1), 43-58.

88. Hadi, A. (2001). International migration and change of women's position among the left-behind in rural Bangladesh. *International Journal of Population Geography, 7*(1), 53-61.

89. Hadi, A., & Kamal, K. A. (1997, October 11-17). *Demographic and socio-cultural consequences of international migration in rural Bangladesh*. Paper presented at the XXIII IUSSP International Population Conference, Beijing, China.

90. Hansen, P. (1995). Questions from somewhere: Who's who in attitude research about 'Immigrants'. *Innovation, 8*(2), 191-199.

91. Hansen, P. (2009). Post-national Europe-Without cosmopolitan guarantees. *Race & Class*, *50*(4), 20-37.

92. Hansen, P. (2010). More barbwire or more immigration, or both? EU migration policy in the nexus of border security management and neoliberal economic growth. ***The Whitehead Journal of Diplomacy and International Relations***, *11*(1), 89-101.

93. He, N., Detels, R., Zhu, J., Jiang Q., Chen Z., Fang Y., Zhang X., Wu, M., & Zhao, Q. (2005). Characteristics and sexually transmitted diseases of male rural migrants in a metropolitan area of eastern China. *Sexually Transmitted Diseases*, *32*(5), 266-292.

94. Helweg, A.W. (1983). Emigrant remittances: Their nature and impact on a Punjabi village. *New Community*, *10*(3), 435–443.

95. Hilderbrandt, N., & McKenzie, D. J. (2005). The effect of migration on child health in Mexico. *Economia, 6*(1), 257-289.

96. Hondagneu-Sotelo, P. (1992). Overcoming patriarchal constraints: The reconstruction of gender relations among Mexican immigrant women and men. *Gender and Society 6*(3), 393-415.

97. Hoodfar, H. (1996). Egyptian male migration and urban families left behind: Feminization of Egyptian family or a reaffirmation of traditional gender roles? In D. Singerman and H. Hoodfar (Eds), *Development, Change, and Gender in Cairo: A View from the Household* (pp. 51–79). Bloomington: Indiana University.

98. Hosmer, D.W., & Lemeshow, S. (2000). *Applied Logistic Regression* (2nd edition). New York: John Wiley and Sons.

99. Howe, L. D., Hargreaves, J. R., & Sharon, R. A. H. (2008, January). Issues in the construction of wealth indices for the measurement of socio-economic position in low-income countries. *Emerging Themes in Epidemiology, 5*(3). Retrieved January 1, 2012, from http://www.ete-online.com/content/5/1/3.

100. Hugo, G. (1997, April 21-24). *Migration and female empowerment*. Paper presented at the IUSSP Seminar on Female Empowerment and Demographic Processes: Moving Beyond Cairo, Lund, Sweden.

101. Hugo, G. (2000). Migration and Women's Empowerment. In H. Presser & G. Sen (Eds.), *Women's Empowerment and Demographic Processes: Moving Beyond Cairo* (pp. 287-317). New York: Oxford University Press.

102. Hugo, G. J. (1987). Forgotten refugees: Post war forced migration within south-east Asian countries. In J.R. Rogge (Ed.), *Refugees: A third world dilemma* (pp. 282-298). New Jersey: Rowman and Littlefield.

103. Hyden, G., Turner, B. L. II Turner, & Kates, R. (1993). Beyond intensification. In B. L. II Turner, G. Hyden, & R. Kates (Eds.), *Population growth and agricultural change in Africa* (pp. 320–360). Gainesville: University of Florida.

104. International Fund for Agricultural Development (IFAD) (2007). Migration and rural employment, Proceedings of the Round Table on Migration and Rural Employment in conjunction with the thirtieth session of IFAD's Governing Council. Retreived from IFAD website: http://www.ifad.org/events/gc/30/roundtable/migration/proceedings.pdf.

105. International Fund for Agricultural Development (IFAD) (2007). Sending money home: Worldwide remittance flows to developing and transition countries. Retrieved from International Fund for Agricultural Development website: http://www.ifad.org/remittances/maps/brochure.pdf.

106. International Organization for Migration (IOM) (2005). Dynamics of remittance utilization in Bangladesh (IOM Migration Research Series Number 18). Retrieved from IOM website: http://www.iom.org.bd/images/publication/1356247574_Dynamics%20of%20Remittance%20Utilization%20in%20Bangladesh.pdf.

107. International Organization for Migration (2005). Internal migration and development: A global perspective (IOM Migration Research Series Number 19). Retrieved from IOM website: http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/68.pdf.

108. Ishtiaque, A., & Ullah, Md. S. (2013). The influence of factors of migration on the migration status of rural-urban migrants in Dhaka, Bangladesh. *Human Geographies–Journal of Studies and Research in Human Geography, 7*(2), 45–52.

109. Islam, Md. M. (1991). Labour migration and development: A case study of a rural community in Bangladesh. *Bangladesh Journal of Political Economy, 11*(2), 570-587.

110. Jain, A. (2010). Labour migration and remittances in Uttarakhand. Retrieved from International Centre for Integrated Mountain Development (ICIMOD) website: http://lib.icimod.org/record/8089/files/attachment_735.pdf.

111. Jejeebhoy, S., & Sathar, Z. (2001). Women's autonomy in India and Pakistan: The influence of religion and region. *Population and Development Review*, *27*(4), 687–712.

112. Jennissen, R. (2007). Causality chains in the international migration systems approach. *Population Research and Policy Review, 26*(4). 411 – 436.

113. Jetley, S. (1987). Impact of migration on rural females. *Economic and Political Weekly, 22*(44), WS47-WS53.

114. Jha, B. (2011). Policies for increasing non-farm employment for farm households in India (Working Paper No. 310). Retrieved from Institute of Economic Growth website: http://www.iegindia.org/workpap/wp310.pdf.

115. Johnson, R. A., & Wichern, D. W. (1992). *Applied multivariate statistical analysis* (3rd edition). New Jersey: Prentice Hall.

116. Jokisch, B. D. (2002). Migration and agricultural change: The case of smallholder agriculture in highland Ecuador. *Human Ecology, 30*(4), 523–550.

117. Kanaiaupuni, S. M., & Donato, K. M. (1999). Migradollars and mortality: The effect of U.S. migration on infant survival in Mexico. *Demography, 36*(3), 339-353.

118. Katz, E. & Stark, O. (1986). Labor migration and risk aversion in less developed countries. *Journal of Labor Economics, 4*(1), 134-149.

119. Khaing, K. S., Punpuing, S., Chamratrithirong, A., & Guest, P. (2011). The impact of migration on mobility of other family members in Thailand. *Asian Population Studies, 7*(2), 107 – 121.

120. Khaled, L. (1995). Migration and women's status: The Jordan case. *International Migration, 33*(2), 235-250.

121. Khan, A. (2005). Urban centres as a catalyst for socio-economic and regional development in TWC's: A case study of Peshawar-Pakistan. *Gomal University Journal of Research, 2*(1), 17 -30.

122. Khanka, S. S. (1988). *Labour force, employment and unemployment in a backward economy*. New Delhi: Himalaya Publishing House.

123. Kish, L. (1949). A procedure for objective respondent selection within the household. *Journal of the American Statistical Association*, *44*(247), 380–387.

124. Kishamawe, C., Vissers D. C., Urassa, M., Isingo R., Mwaluko, G., Borsboom, G. J., et al. (2006). Mobility and HIV in Tanzanian couples: Both mobile persons and their partners show increased risk. *AIDS, 20*(4), 601–608.

125. Kishtwaria, J. (2007, March 8-9). *Migration in mountains: Problems of women*. Paper presented at the conference on Women of the Mountains, Utah, USA.

126. Kothari, U. (2002). Migration and chronic poverty (Working Paper No. 16). Retrieved from Chronic Poverty Research Centre website: http://www.chronicpoverty.org/uploads/publication_files/WP16_Kothari.pdf.

127. Kothari, U. (2003). Introduction: Migration, Staying Put and Livelihoods. *Journal of International Development, 15*(5) 607-609.

128. Kothari, U. (2013). Climate change and migration: A political discourse of resettlement in the Maldives. *The Geographical Journal, 180*(2) 130-140.

129. Krishna, S. (2002). Economic Profile of Uttaranchal. *Economic and Political Weekly, 37*(19), 1843-1849.

130. Krishnaiah, M. (1997). Rural migrant labour systems in semi-arid areas: A study of two villages in Andhra Pradesh. *The Indian Journal of Labour Economics, 40*(1).

131. Kumari, S., & Sekher, T.V. (2010). Elderly in Punjab: Economic Dependency, Health Conditions and Living Arrangements. *Man and Development*, *32*(1), 77-88.

132. Lagarde, E., Schim van der Loeff, M., Enel, C., Holmgren, B., Dray-Spira, R., Pison, G., et al. (2003). Mobility and the spread of human immunodeficiency virus into rural areas of West Africa. *International Journal of Epidemiology, 32*(5), 744–752.

133. Lahaie, C., Hayes, J. A., Piper, T. M. & Heymann, J. (2009). Work and family divided across borders: The impact of parental migration on Mexican children in transnational families. *Community, Work and Family, 12*(3), 299-312.

134. Lall, R., Campbell, M. J., Walters, S. J., & Morgan, K. (2002). A review of ordinal regression models applied on health-related quality of life assessments. *Statistical Methods in Medical Research*, *11*, 49–67.

135. Levitt, P. (1997). Transnationalizing community development: The case of migration between Boston and the Dominican Republic. *Nonprofit and Voluntary Sector Quarterly, 26*(4), 509-526.

136. Li, X., Fang, X., Lin, D., Mao, R., Wang, J., Cottrell, L., et al. (2004). HIV/STD risk behaviors and perceptions among rural-to-urban migrants in China. *AIDS Education and Prevention, 16*(6), 538-556.

137. Liu, H., Li, X., Stanton, B., Liu, H., Liang, G., Chen, X., Yang, H., & Hong, Y. (2005). Risk factors for sexually transmitted disease among rural-to-urban migrants in China: Implications for HIV/sexually transmitted disease prevention. *AIDS Patient Care and STDs*, *19*(1), 49-58.

138. Lokshin, M., & Glinskaya, E. (2008). The effects of male migration for work on employment patterns of females in Nepal (Working Paper No. 4757). Retrieved from World Bank website: http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2008/10/21/000158349_20081021112713/Rendered/PDF/WPS4757.pdf.

139. Lu Y. & Treiman D. J. (2006, March 30-April 1). *The other face of migration: How do labor migration and remittances affect children's education in South Africa?*. Paper presented at the Annual meeting of Population Association of America, Los Angeles, California.

140. Lucas, R. E. B. (1997). Internal migration in developing countries. In M. R. Rosenzweig & O. Stark (Eds), *Handbook of population and family economics* (pp. 722-787). Boston: Elsevier.

141. Lucas, R. E. B., & Stark, O. (1988). Migration, remittances and the family. *Economic Development and Cultural Change, 36*(3), 465-481.

142. Mahler, S. J., & Pessar, P. R. (2006). Gender matters: Ethnographers bring gender from the periphery toward the core of migration studies. *International Migration Review 40*(1), 27-63.

143. Mamgain, R. P. (2004). Employment, migration and livelihoods in the hill economy of Uttaranchal. Unpublished doctoral dissertation, Jawaharlal Nehru University, India.

144. Markova, E. (2010). Effects of migration on sending countries: Lessons from Bulgaria (GreeSE Paper No 35). Retrieved from London School of Economics website: http://eprints.lse.ac.uk/28438/1/GreeSE_No35.pdf.

145. Mascarenhas-Keyes, S. (1990). Migration, 'progressive motherhood' and female autonomy: Catholic women in Goa. In L. Dube & R. Palriwala (Eds.), *Structures and strategies: Women, work and family* (pp. 119-143). New Delhi: Sage Publications.

146. Massey, D. S., Arango, J., Hugo, A., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1998). Worlds in motion: Understanding international migration at the end of the millennium. Oxford, England: Clarendon Press.

147. Massey, D., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. (1993). Theories of international migration- A review and appraisal. *Population and Development Review, 19*(3), 431-466.

148. Mathur, R. S. (1983). Economic structure and labour force utilization: A study of the hill region of Uttar Pradesh. In T. S. Papola, B. K. Joshi & H. S. Verma (Eds.), *Development of hill areas issues and approaches.* Bombay: Himalaya Publishing.

149. McCullagh, P. (1980). Regression models for ordinal data. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, *42*, 109–142.

150. Mendola, M. (2006). Rural out-migration and economic development at origin: What do we know? (Working Paper No. 40). Retrieved from Sussex Migration website: https://www.sussex.ac.uk/webteam/gateway/file.php?name=mwp40.pdf&site=252.

151. Menjivar, C., & Agadjanian, V. (2007). Men's migration and women's lives: Views from rural Armenia and Guatemala. *Social Science Quarterly, 88*(5), 1243-1262.

152. Miluka, J., Carletto, G., Davis, B., Zezza, A. (2007). The vanishing farms? The impact of international migration on Albanian family farming (Working Paper No. 4367). Retrieved from World Bank Development Research Group Poverty Team website: http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2007/09/24/000158349_20070924103913/Rendered/PDF/WPS4367.pdf

153. Mini, S. E. (1998, March 17-20). *The impact of rural-urban migration on the in Eastern Cape Villages*. Paper presented at the Human Sciences Research Council migration workshop, Pretoria.

154. Mittal, S., Tripathi, G. & Sethi, D. (2008). Development strategy for the hill districts of Uttarakhand (Working Paper No. 217). Retrieved from Indian Council for Research on International Economic Relations website: http://www.icrier.org/pdf/Working_Paper_217.pdf.

155. Mondain, N., Randall, S., & Diagne, A. (2009, September 27 to October 2). *Assessing the effects of out-migration on those left behind in Senegal: Local family dynamics between change and continuity*. Paper presented at the XXVI IUSSP International Population Conference, Marrackech, Morocco.

156. Mosse, D., Gupta, S., Mehta, M., Shah, V., Rees, J. & KRIBP Team (2002). Brokered livelihoods: Debt, labour migration and development in tribal western India. *Journal of Development Studies, 38*(5), 59–88.

157. Mtika, M. M. (2007). Political economy, labor migration, and the AIDS epidemic in rural Malawi. *Social Science & Medicine*, *64*, 2454-2463.

158. National Sample Survey Organisation (2008). NSS 65th round, Ministry of Statistics & Programme Implementation, Government of India.

159. National Sample Survey Organisation (2007). Nutritional intake in India, 2004-2005. Report No. 513(61/1.0/6). Ministry of Statistics & Programme Implementation, Government of India. Retrieved from NSSO webiste: http://mospi.nic.in/rept%20_%20pubn/513_final.pdf.

160. Nautiyal, A. (2003). Women and development in the Garhwal Himalayas. *Asian Journal of Women Studies, 9*(4), 93-113.

161. Negi N. S., Sekher T. V., & Ganguly S. (2010). Antenatal care among tribals: A study of Chhattisgarh and Jharkhand. *Studies of Tribes & Tribals, 8*(2), 77-86.

162. Oberai, A. S., & Singh, M. H. K. (1983). *Causes and consequences of internal migration: A study in the Indian Punjab*. Delhi: Oxford University Press.

163. Olayiwola, F. O. (2009). Perception of rural-urban migration in selected rural communities in Ondostate, Nigeria, *Bangladesh e-Journal of Sociology, 6*(1), pp. 96-105. Retrieved December 25, 2010, from http://www.irsa-world.org/XII/papers/16,17-3.pdf.

164. Palmer, I. (1985). *The impact of male out-migration on Women in Farming*. West Hartford, CT: Kumarian Press.

165. Pande, P. N. (1996). *Drudgery of the hill women*. New Delhi: Indus Press.

166. Papola, T. S. (1996). Integrated planning for environment and economic development in mountain areas (Discussion Paper Series No. MEI 96/2). Retrieved from International Centre for Integrated Mountain Development website: http://lib.icimod.org/record/7614/files/attachment_237.pdf.

167. Parasuraman, S. (1986). Migration and its effect on family. *Indian Journal of Social Work, 47*(1), 1-14.

168. Parinduri, R. A. & Thangavelu, S. M. (2008). Remittance and migrant households'consumption and saving patterns: Evidence from Indonesia (Research Paper No. 2008-02). Retrieved from Nottingham University Business School Malaysia Campus website: http://ssrn.com/abstract=1146366.

169. Paris, T., Singh, A., Luis, J., & Hossain, M. (2005). Labour out-migration, livelihood of rice farming households and women left behind: A case study in Eastern Uttar Pradesh. *Economic and Political Weekly, 40*(25), 2522–2529.

170. Peat, J., & Barton, B. (2005). Medical Statistics: A guide to data analysis and critical appraisal. UK: Blackwell Publishing.

171. Pedraza, S. (1991). Women and migration: The social consequences of gender. *Annual Review of Sociology 17,* 303-325.

172. Perez-Stable, E. J., Slutkin, G., Paz, E. A., & Hopewell, P. C. (1986). Tuberculin reactivity in United States and foreign-born Latinos: Results of a community-based screening program. *American Journal of Public Health, 76*(6), 643-646.

173. Pessar, P. R., & Mahler, S. J. (2003). Transnational migration: Bringing gender in. *International Migration Review, 37*(3), 812-846.

174. Piore, M. J. (1979). Birds of passage: Migrant labour in industrial societies. Cambridge: Cambridge University Press.

175. Prasad, R., Singh, M. N., Das, K. C., Gupta, K., & Bhagat, R. B. (2009). Migration to greater Mumbai urban agglomeration: A study of characteristics of principal migrants and their social linkages. *Demography India*, *38*(2), 319-334.

176. Preston, S., Heuveline, P., & Guillot, M., (2000). *Demography: Measuring and modeling population processes*. Maiden U.S.A.: Blackwell Publishers Ltd.

177. Qin, M., Punpuing, S., & Guest P. (2008, April 17-19). *Labor migration, left behind elderly living arrangements and intra-household elderly care in Kanchanaburi Demographic Surveillance System, Thailand*. Paper presented at the Annual meeting of Population Association of America, New Orleans, LA.

178. Rajan, S. I. (2004). From Kerala to the Gulf: Impacts of labour migration. *Asian and Pacific Migration Journal, 13*(4), 497-510.

179. Registrar General and Census of India, Annual Health Survey 2010-11 Fact Sheet government of Uttarakhand. Retrieved from Census of India website: http://www.censusindia.gov.in/vital_statistics/AHSBulletins/AHS_Baseline_Factsheets/Uttarakhand.pdf.

180. Rencher, A. C. (1995). Factor Analysis. In A. C. Rencher (Ed), *Methods of multivariate analysis* (pp. 445-488). New York: John Wiley & Sons.

181. Reshmi, R. S. (2008). *Labour migration of women from Kerala: Socio-economic impact on migrants and their families*. Unpublished dissertation for the doctoral degree, International Institute for Population Sciences, Mumbai.

182. Richard, A. (1998). Remittances, investment and rural asset accumulation in Pakistan. *Economic Development and Cultural Change, 47*(1), 155-173.

183. Rodriguez, E., & Tiongson, E. (2001). Temporary migration overseas and household laboursupply: Evidence from urban Philippines. *International Migration Review, 35*(3), 709–725.

184. Rogaly, B., Biswas, J., Coppard, D., Rafique, A., Rana, K., & Sengupta, A. (2001). Seasonal migration, social change and migrants rights; Lessons from West Bengal. *Economic and Political Weekly, 36*(49), 4547-4559.

185. Rogaly, B., Daniel C., Abdur, S., Kumar, R., Sengupta, A., & Biswas, J. (2002). Seasonal migration and welfare/illfare in eastern India: A social analysis. *Journal of Development Studies, 38*(5), 89-114.

186. Roy, A. (2003). *Impact of male out-migration on left-behind women and families: A case study of Bihar*. Unpublished dissertation for the doctoral degree, International Institute for Population Sciences, Mumbai.

187. Roy, A. K., & Nangia, P. (2005, July 18-23). *Impact of male out-migration on health status of left behind wives-A study of Bihar, India*. Paper presented at the XXV IUSSP International Population Conference, Tours, France.

188. Rozelle, S., Taylor, J. E., & De Brauw, A. (1999). Migration, remittances and agricultural productivity in China. *The American Economic Review, 89*(2), 287-291.

189. Sadiqi, F., & Ennaji, M. (2004). The impact of male migration from Marocco to Europe on women: A gender approach. *Finisterra: Revista Portuguesa De Geografia, 39*(77), 59-76.

190. scale migration. *Journal of International Development, 8*(5)*,* 655-665.

191. Schoorl, J. J. (1995). Determinants of international migration: theoretical approaches and implications for survey research. In Van der Erf and Heering L. (eds.), Causes of international migration (pp.3–14). Luxemburg Office for Official Publications of the European Communities.

192. Sekher, T. V. (1997). *Migration and Social Change*. Jaipur and New Delhi: Rawat Publication.

193. Sevoyan, A., & Agadjanian, V. (2010). Male migration, women left behind and sexually transmitted diseases in Armenia. *International Migration Review, 44*(2), 354–375.

194. Shaheed, F. (1981, April 6-11). *Migration and its Effects on Women in the Village Provenance*. Paper presented at the Tripartite Asian Regional Seminar, Rural Development and Women, Mahabaleshwar, India.

195. Sharma, A. N. (1997). *People on the move: Nature and implications of migration in a backward economy*. Delhi: Vikas.

196. Shenoy, K.T, Shenoy, S. & Gopalkrishnan, K. (1997). Reproductive health and gynecological morbidity in Kerala. Studies on Human Development in India, Project of the United Nations Development Programme.

197. Shrestha, D. P. (2007, July 8-11). *Decentralized Health Care Delivery System and Estimation of Expenditure Needs: A Case of Nepalese.* Paper presented at the iHEA 2007 6th World Congress: Exploration in Health, Copenhegan, Denmark.

198. Shrestha, D. P., Duwadi, D. S., & Adhikari, M. R. (2012.) Assessment of remittances policies and programs in Nepal. Retrieved from Observatoire International Des Transferts De Fonds Des Migrants website: http://oitfm.org/wp-content/uploads/2013/09/IMRO-Draft-Report-Nov-20_-2012_Formatted.pdf.

199. Shrestha, D. P., & Rayappa, P. H. (1990). Levels of agricultural development and patterns of population growth in Nepal. *Economic Journal of Nepal, 13*(2), 97-106.

200. Silver, A. (2006, March 30-April 1). *Families across borders: The effects of migration on family members remaining at home.* Paper presented at the Annual meeting of Population Association of America, Los Angeles, California.

201. Sjaastad, L. A. (1962). The costs and returns of human migration. *Journal of Political Economy, 70*(5), 80-93.

202. Srivastava, R. & Sasikumar, S. K. (2003, June 22-24). *An overview of migration in India, its impacts and key issues*. Paper presented at the Regional Conference on Migration, Development and Pro-Poor Policy Choices in Asia, Dhaka, Bangladesh.

203. Srivastava, R. S. (1999). Rural labour in Uttar Pradesh: Emerging features of subsistence, contradiction and resistance. *Journal of Peasant Studies, 26*(2 and 3), 263-315.

204. Stark, O. & Bloom, D. E. (1985). The new economics of labour migration. *The American Economic Review, 75*(2), 173-178.

205. Stark, O., & Taylor, J. E. (1989). Relative Deprivation and International Migration. *Demography, 26*(1), 1-14.

206. Stiglitz, J. E. (1969). Rural–urban migration, surplus of labour and the relationship between urban and rural wages. *Eastern Africa Economic Review, 1*(2), 1–28.

207. Stillman, S., Gibson, J., & McKenzie, D. (2007). The impact of immigration on child health: Experimental evidence from a migration lottery program. *Economic Inquiry, 50*(1), 62-81.

208. Subedi, B. P. (1982). Large Cardamom farming in some villages of Ilam district. *The Himalayan Review, 14*, 25-37.

209. Subedi, B. P. (1991). International migration in Nepal: Towards an analytical framework. *Contribution to Nepalese Studies, 18*(1), 83-102.

210. Subedi, B. P. (2000). Conceptualizing territorial mobility through language of those who move and the dimension of caste and ethnicity: From inside a rural Nepali community. *The Himalayan Review, 31*, 1-36.

211. Subedi, B. P. (2010). Ethnic/caste diversification in Kathmandu metropolitan: Changing social landscape of a capital. *Journal of Geography and Regional Planning, 3*(8), 185-199.

212. Sucharitakul, S., & Punpuing, S. (2011). Migration duration and household asset change. *Sri Lanka Journal of Population Studies, 12*(13), 32 – 54.

213. Swarup, R. (1993), *Agricultural Economy of Himalayan Region*. Vol. 2, Nainital: Garhwal Gayanodaya Prakashan.

214. Taylor, J. E., & Martin, P. L. (2001). Human Capital: Migration and Rural Population Change. In B. L. Gardner & G. C. Rausser (Eds.), *Handbook of agricultural economics* (1st ed., pp. 457-511). New York: Elsevier Science.

215. Taylor, J. E., Arango, J., Hugo, G., Kouaouci, A., Massey, D. S., & Pellegrino, A. (1996), International Migration and Community Development, *Population Index, 62*(3), 397-418.

216. Tiwari, R. T., Mujoo, R., & Tiwari, B. (2001). *Uttaranchal infrastructure and economic development*. New Delhi: A.P.H. Public Corporation.

217. Todaro, M. (1980). Internal Migration in Developing Countries: A survey. In Richard A. Easterlin (Ed.), *Population and Economic Change in Developing Countires* (pp. 361-402). London and Chicago: University of Chicago Press.

218. Todaro, M. P. (1976) Migration and economic development: a review of theory, evidence, methodology and research priorities (Occasional Paper 18). Nairobi: Institute for Development Studies, University of Nairobi.

219. Toyota, M., Yeoh, B. S. A., & Nguyen, L. (2007). Bringing the 'Left Behind' back into view in Asia: A framework for understanding the migration-left behind nexus. *Population, Space and Place, 13*(3), 157-161.

220. Udoh, R. K. (1970). Migration in Nigeria. *Nigeria Magazine*, *103*, 4-8.

221. UNICEF and UNESCO (2012). For a better inclusion of internal migrants in India, Policy briefs. Retrived from UNESCO website: http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/New_Delhi/pdf/Policy_briefs_full_low_01.pdf.

222. UNICEF and UNESCO (2012)b. National workshop on internal migration and human development in India, workshop compendium Vol. I: Workshop Report, New Delhi. Retrived from UNESCO website: http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/New_Delhi/pdf/Internal_Migration_Workshop_-_Vol_1_01.pdf.

223. United Nations (1994). Migration and the family (Occasional papers series No. 12). United Nations,Vienna.

224. Valero-Gil, Jorge (2008). Remittances and the household's expenditures on health (Working Paper No. 9572). Retrived from Munich Personal RePEc Archive: http://mpra.ub.uni-muenchen.de/9572/3/MPRA_paper_9572.pdf.

225. Vyas, S., & Kumaranayake, L. (2006). Constructing socio-economic status indices: How to use principal components analysis. *Health Policy Plan, 21*(6), 459-468.

226. Wagstaff, A. (2005). Economic Consequences of Health Shocks (Working Paper No. 3644). Retrieved from World Bank website: http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-3644.

227. Walton-Roberts, M. (2004). Globalization, national autonomy and non-resident Indians. *Contemporary South Asia, 13*(1), 53–69.

228. Walton-Roberts, M. (2004). Returning, remitting, reshaping non-resident Indians and the transformation of society and space in Punjab, India. In P. Crang, C. Dwyer & P. Jackson (Eds), *Transnational Spaces* (pp. 78-103). London: Routledge.

229. Walton-Roberts, M. (2014). Diasporas and divergent development in Kerala and Punjab: Querying the migration-development discourse. In S. Sahoo , & B.K. Pattanaik (Eds), *Global Diasporas and Development: Socio-economic, Cultural, and Policy Perspectives* (pp. 69-86). New York: Springer.

230. Woodruff, C., & Zenteno, R. (2007). Migration networks and microenterprises in Mexico. *Journal of Development Economics, 82*(2), 509–528.

231. World Bank (2006). Global Economic Prospects 2006: International remittances and migration, Washington, DC: United States. The International Bank for Reconstruction and Development / The World Bank. Retrieved from World Bank website: http://www.worldbank.org/content/dam/Worldbank/GEP/GEParchives/GEP2006/343200GEP02006.pdf.

232. World Health Organization (1991). Management of patients with sexually transmitted diseases (WHO Technical Report Series, No. 810). Report of a WHO study group. Geneva, World Health Organization.

233. Yabiku, S. T., Victor, A., & Sevoyan, A. (2010). Husbands' labour migration and wives' autonomy, Mozambique 2000-2006. *Population Studies, 64*(3), 293-306.

234. Yang, D. (2008). International migration, remittances, and household investment: Evidence from Philippine migrants' exchange rate shocks. *The Economic Journal, 118*(528), 591–630.

235. Yang, X. (2004). Temporary migration and the spread of STDs/HIV in China: Is there a link?. *International Migration Review*, *38*(1), 212-235.

236. Yang, X., and Xia, G. (2008). Temporary migration and STD/HIV risky sexual behavior: A population-based analysis of gender differences in China. *Social Problems, 55*(3), 322-346.

237. Yang, X., Derlega, V. J., and Luo, H. (2007). Migration, behaviour change and HIV/STD risks in China. *AIDS Care, 19*(2), 282–288.

238. Zachariah, K. C., Mathew, E. T., & Rajan, S. I. (1999). Impact of migration on Kerala's economy and society (Working Paper No. 297). Retrieved from Centre for Development Studies website: http://www.cds.edu/wp-content/uploads/2012/10/wp297.pdf.

239. Zachariah, K. C., Mathew, E. T., & Rajan, S. I. (2000). Socio-economic and demographic consequences of migration in Kerala (Working Paper No. 303). Retrieved from Centre for Development Studies website: http://www.cds.edu/wp-content/uploads/2012/10/wp303.pdf

240. Zanker J. H. (2008). Why do people migrate? A review of the theoretical literature (Working Paper No. 28197). Retrieved from Munich Personal RePEc Archive website: http://mpra.ub.uni-muenchen.de/28197/1/MPRA_paper_28197.pdf.

241. Zhang, L., Brauw, A. de & Rozelle, S. (2004). China's rural labour market development and its gender implications. *China Economic Review 15*(2), 230-247.