

Impact of Male Out Migration on Women in Kumaon Himalaya

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ABSTRACT

Outmigration from villages is a perennial phenomenon. The constant attraction towards urban areas from the villages and small towns is incessant. The young men from the villages move to big towns/cities in search of better job opportunities and good standard of living. The native village survives on money order economy and the agricultural produce for sustainability. The women folk who are left behind bear the entire burden of rearing children, looking after old parents, and performing various roles in the society like attending religious and marriage events or other such social obligations. The out migrants merely come once or twice when there is harvest season or any emergency. The women folk have a larger role to play in the absence of their husbands, sons or brothers. The hilly terrain is also not very friendly for all the chores like carrying fuel wood as well as drinking water from far of distances. The dilemma here is that at the first place these women become very appreciative when their husbands and sons and brothers go to cities to earn a living but as time passes and these men folk stop visiting native village regularly these women become overburdened. Although the outmigrants send money regularly and the condition of village and their homes are becoming cemented and more facilities are available as compared to previous decades. The present paper is a hunch to know the impact of this widespread outmigration on the women folk of Kumaon Himalaya. This study is exploratory, qualitative and narrative in nature where primary survey of six villages was conducted in the Dhari block of Nainital district in Uttarakhand. Findings reveals that about 3/4th of the total out migrants are of young age (age below 30) and male. Over 70% of the male out migrants are highly educated (Graduate and above) and 68.49% of them are employed in private jobs. About 1/4th portion of the male out-migrants is of students and Haldwani alone attracts 25.75 % migrants due to a number of livelihood options and education facilities. Due to out-migration of the male members of the households, the wives and mothers left behind are facing acute workload of household chores, field's work, livestock ranching, taking care of aged parents and managing all social obligations on their own. Some of the households present a different approach, as their standard of living has raised drastically and have had positive impacts of male out-migration.

Key words: Out Migration, Male out-migration, Sustainability, Kumaon Himalaya

INTRODUCTION

Male out-migration is the most often adopted strategy in rural areas to overcome risks associated with agriculture and other allied economic activities and even to diversify income and raise their standard of living. There are various underlying factors for the increasing flow of migration from rural areas, such as underdevelopment, unemployment, lack of availability of non-farm jobs and increasing population pressure. Therefore, the young male population migrate to the other nearby towns and cities or to other states in the search of better

education or livelihood opportunities. Its impact is felt in every aspect of life such as demographic, economic, social, political and even religious especially on the women, children and the aged people left behind. The women juggle in different roles in sustaining their families and fields in this region while the men folk have migrated. The matter of concern is remittances, which could hardly make any dent on reducing the workload of hill women. Every able-bodied woman works for average 8 to 10 hours daily in various productive activities, such as cultivation, fodder collection, fuel collection, animal husbandry apart from cooking of food and

care of children and aged family members in their households.

Male out-migration has in fact overburdened women as they have to undertake those activities which were being performed earlier by their spouses like working in fields and MNREGA works. The women in the rural hills, are those who are left behind and do not have time for themselves. They keep moving within the web of the household's works, agricultural works and social obligations. Many out migrants have also abandoned their houses and farmlands in large numbers, resulting into deserted rural landscapes. Apart from these topographical changes, there are a number of socio-cultural changes results from out-migration in the rural areas. Alcoholism among male youth became a major social concern and many more related vices. Todaro (1969) tried to explain migration in developing countries in terms of push and pull factors respectively. Unemployment, flood, earthquake, drought, political instability, etc., are the push factors and pull factors determines migration due to attraction of city life, for education, health, job opportunities and training facilities and so on. These typical "push and pull factors" are necessarily not true for explaining the reasons for migration everywhere. To understand the nuances of driving factors behind the outmigration especially male out-migration and its impacts on the various aspects of life behind with particular focus on women, a micro level study has been carried out.

CURRENT STATUS OF THE KNOWLEDGE

Migration (both immigration and emigration) in Uttarakhand has been a historical process. The demographic and ethnographic characteristics of hill Regions in the state has been influenced by a large in-migration from other parts of the mainland during 11th and 12th century and later years (Atkinson 1822-88). During the British rule, the state was a part of United province (Uttarakhand and Uttar Pradesh currently) and with the creation of Garhwal and Kumaon army regiments, local youth got regular employment on a large number for the first time in the region. This necessitated out-migration of local youth for few years who generally returned to their villages after the end of their service tenure. Also, there had been seasonal migration of males from upper hills to clear the jungles in lower Shivalik hills

(Walton 1910). This initial exposure to outside world had a major influence on building acceptance of livelihood based on migration. The situation has changed substantially in the last five decades with a large number of population out-migrating permanently along with families from the hill region of the state mainly to eke out their livelihoods and better future of their children, but the rate of out migration has accelerated after 1991 (Hasija et al. 2017). The attraction to cities arising due to hardships of village life in hills such as poor transport connectivity, lack of water, inadequate medical facilities, poor educational facilities and inaccessible markets have further accelerated the process of migration of youth (Mamgain and Reddy 2015). A large number of research work orients towards the impacts of out migration as two sides of the same coin, both positive and negative. The neo-classical economists argue that migration improves the income and standard of living of source areas through several ways. As remittances received in source areas generate demand for goods and services in that region which further improves employment and income opportunities. Migrants also bring with them new knowledge and technology which they use in their native place (Lewis 1954). On the other side, the magnitude of out-migration is so huge that a number of villages stand totally abandoned or with very low population tagged as "Ghost villages" (Umar 2012), changes in the traditional food consumption patterns and major social concerns such as alcoholism, consumption of marijuana, etc. are also results of migration. -The migration is temporary as well as permanent in nature, and migrants also include both educated and uneducated youths, particularly males. -The increasing trend of male out-migration has affected the overall quality of rural life by increasing the responsibilities, hardships and workload, especially of women (Joshi 2018). By and large the workload of women belonging to migrant member households increased perceptibly due to absence of male members in the family (Bhandari and Reddy 2015). Pandey (2019) identified that when adult men work away from home resulted changes in the households' labour-configurations and division of labour and ultimately increased burden of work to the women further reduces women's participation in education, degrades their health, and negatively affects their reproductive process and fertility rate.

Feminisation of agriculture has reduced agricultural output so they become dependent to remittance to buy marketed food. Lei and Desai (2021) work on the male out-migration and the health of left-behind wives in India, concluded that the negative health implications of husbands' out-migration were partly driven by low remittances sent by the migrants, which could cause economic hardships for women left behind and lead to negative health consequences. Based on the gaps identified the objective set were: (i) To analyse the magnitude of out migration in the study area, (ii) To assess the impact of out-migration on the household's economy and well-being and (iii) To examine the impact of male out-migration on the women of the region.

METHODOLOGY

The study is qualitative, exploratory and narrative in nature. A primary survey of randomly selected 180 women done in six villages of Dhari Block, namely Bana, Sunkiya, Chaukhuta, Chaukhuta-Chak-Gajar, Sheela-Lekh and Kapharoulee in the Nainital District of Kumaon Himalaya. With 20,951 semi-permanent and 4,823 permanent out-migrants from 2008 to 2018, Nainital is among top three districts affected by out migration in Kumaon. Further, the number of out-migrants aged less than 35 are highest in the district Nainital (Sati 2021). However, Nainital district is among the most attracted district in the state where people are immigrated not from the state but also from all over India and even abroad but the hilly Community development blocks are adversely affected by out migration such as block Dhari. During field survey in this block, 20 migrant households from each village were tracked using snowball sampling technique. Direct questionnaire method was used to gather demographic and socio-economic information of households from respondents with both closed and open-ended questions, followed by in-depth interviews of local women to understand the situations and phenomena from their point of view with both structured questions. This was followed by response-driven questioning which takes advantage of a particular line of information.

To explore the perception of women, this study also uses tools of Participatory Rural Appraisal (PRA), such as Work clocks. A number of researchers has already employed this tool in different formats

as bar graphs and pie charts, etc. (Sarkar 2017, Bisht 2020) to analyse the daily life style and work load on women in her daily routine. The clocks were made with participatory observation and informal interviews of local women. Work clocks was divided into 24 hours to document the daily working hours of individual women and further typical women's work clock resulted as the average of all individual women's work clocks. The collected data were tabulated and analysed with the simple statistical techniques along with qualitative content analysis. This study used GPS (Global positioning system), Remote Sensing and GIS (ArcMap 10.8) and Google Earth Pro (7.3.4.8248) for demarcation and mapping of the study area and to locate abandoned houses.

STUDY AREA

With a population of 10.09 million (Census 2011) Uttarakhand is the second most populated state/ UT among Indian Himalayan Region (IHR) after Jammu and Kashmir (ENVIS Centre on Himalayan Ecology). According to 2011 Population Census, nearly 70 per cent of Uttarakhand population lives in its rural areas. The ten hill districts (generally referred as Hill Region) of the State account for 48.1 per cent of its population, and severely affected by out-migration. To understand the magnitude of the issue this study was conducted in the Kumaon region of the state namely, Nainital.

Nainital is a part of the Kumaon Himalaya and lies in the southern part. It comprises parts of Shiwalik hills, the bhabar and the plains. It is bounded on the north by district Almora, in the north-west by Garhwal, in the west by Bijnor, in the south by a plain district of Udham Singh Nagar and in the east by Champawat district. The Nainital district is further divided into Tehsils/Blocks/Community Development Blocks (C.D.Blocks) for administrative purposes. There are 8 C.D. Blocks in the district Nainital (Census 2011) named as Betalghat, Ramgarh, Kotabagh, Bhimtal, Dhari, Okhal Kanda, Ramnagar and Haldwani (Fig. 1).

The primary field survey was conducted in the C.D. Block Dhari, a block in the hill region of the district. The region extends in a small north-east portion of the district bounded by Nainital Shiwalik in the south. It is a southern most part of the Lesser Himalaya (Fig. 2).

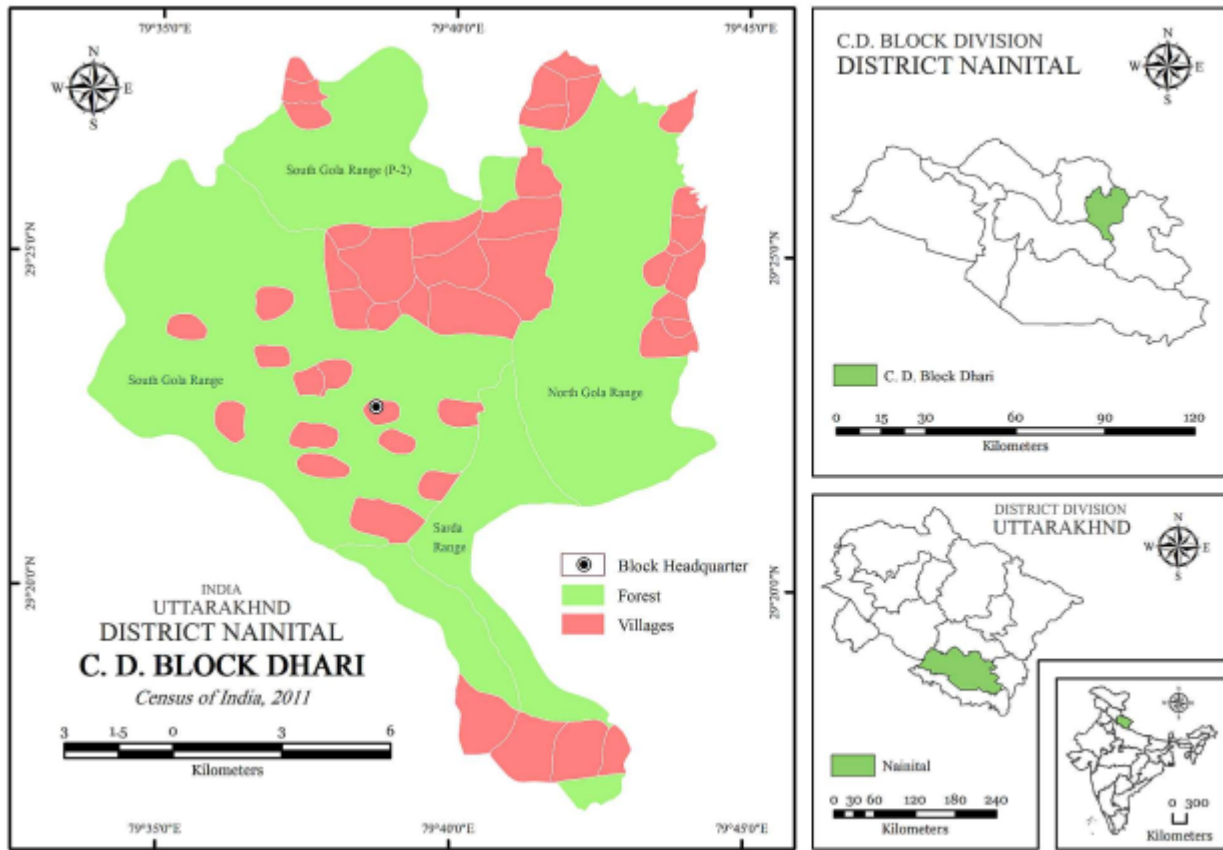


Figure 1. Location of Study Area.

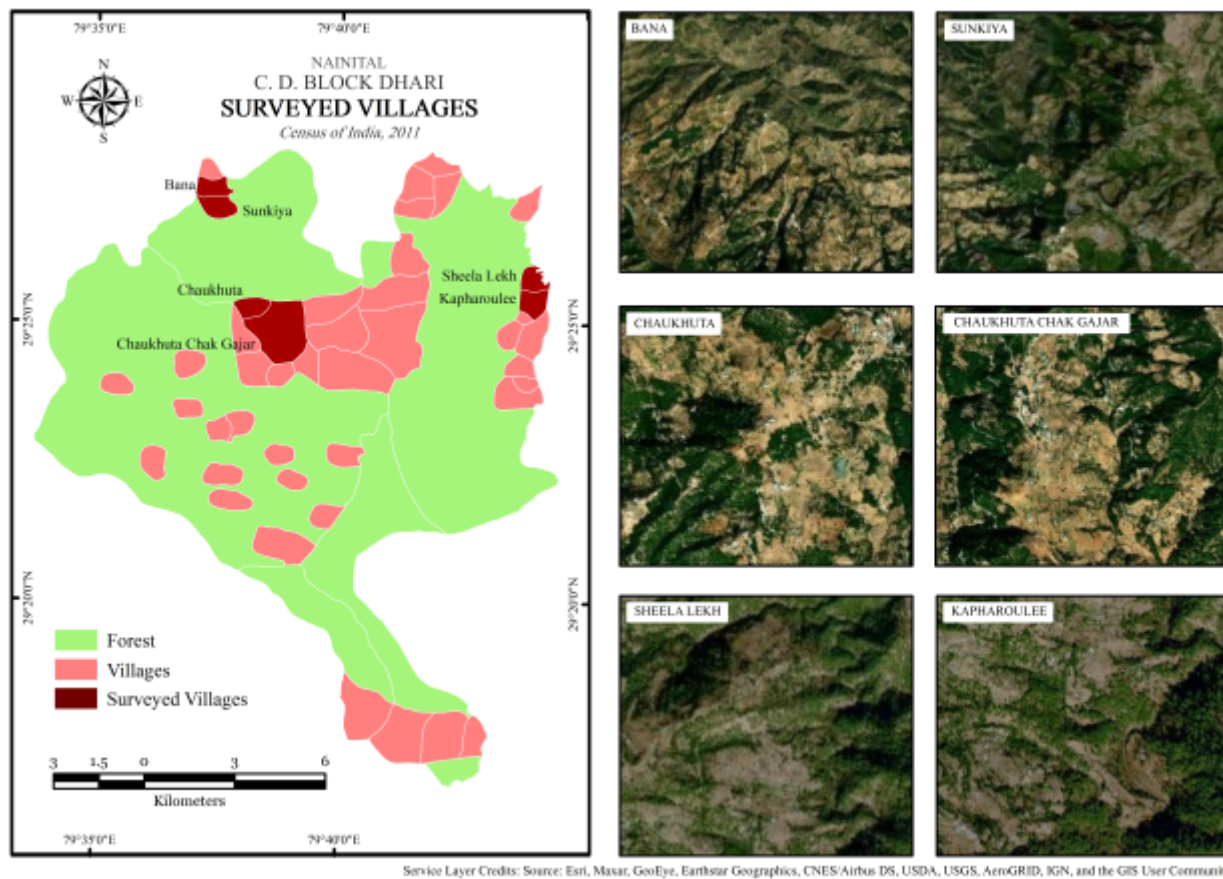


Figure 2. Location of Surveyed Villages.

The villages for the primary survey were selected randomly. Six villages named as Bana, Sunkiya, Chaukhuta, ChaukhutaChakGajar, Sheela Lekh and Kaphraulee were covered. All the villages situated on the northern most region of not only the block but even district, from where warm belt of district Almora begins.

RESULTS AND DISCUSSION

Socio-economic Profile of the Households

In the study area, 87.50% households headed by males, those who are not only the financial heads but also takes all the socio-cultural decisions in the family. About 60% of the households are medium (5-9) in size and only 2.50 % families are very large (15 and above) in size (Fig.3 a,b).

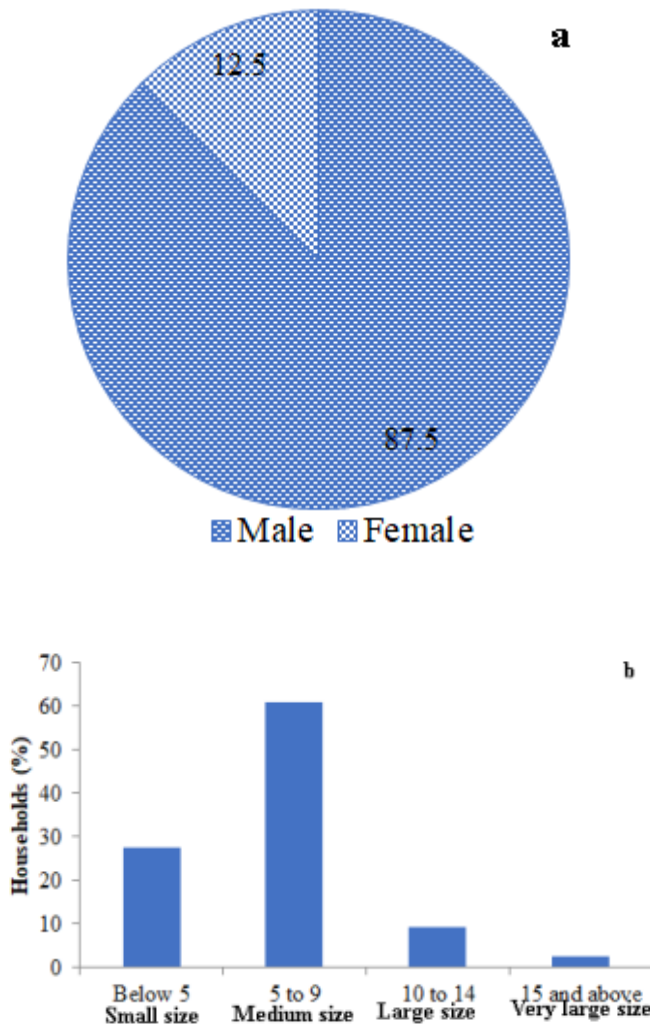


Figure 3. (a) Gender of head of the household (b) Size of the households

The size of the land holdings generally varies from 5 to 500 Nali (Nali is a unit of area which is used to measure the size of land in Uttarakhand, where 1 Nali = 2160 sq. feet or 49.8329 Nali = 1 Ha). On the basis of this, six classes have been made. About one fifth of the households has small land holdings (less than 50 Nali) and 42.50% households has the medium size land holdings ranges from 50 to 100 Nali. Only 10 % households have very large size of land holdings more than 250 Nali (~ 5 Ha).

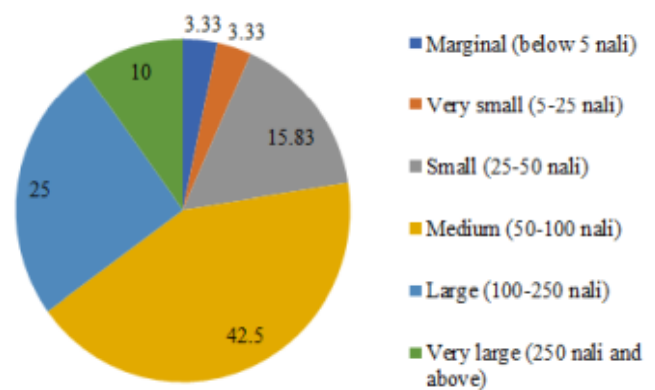


Figure 4. Percentage of Households as per their Size of the Land Holdings.

There are a varied sources of income in every household. Only two households (1.67%) responded that they were solely dependent on agriculture and allied activities, as their pension application is pending with authorities. One-third of the household’s main source of income is agriculture & allied sectors, daily wages and pension of parents (Fig.5). Remittance have also played a vital role in household’s income in one fourth of the total families surveyed.

In the study area, people prefer cows more followed by Goats and Buffaloes (Fig. 6a). 40% households have livestock headcounts less than 3, those do not have goats or oxen and 35 % households have the livestock’s more than 5 in number, those who earn from goats or having oxen and horse.

Male Out Migration: Magnitude, Characteristics, Reasons and Destinations

More than three-fourth of the total out migrants are Below 30 years of age. As far as aged people are concerned, they are merely 2%, basically they have left with their children for health treatments or for

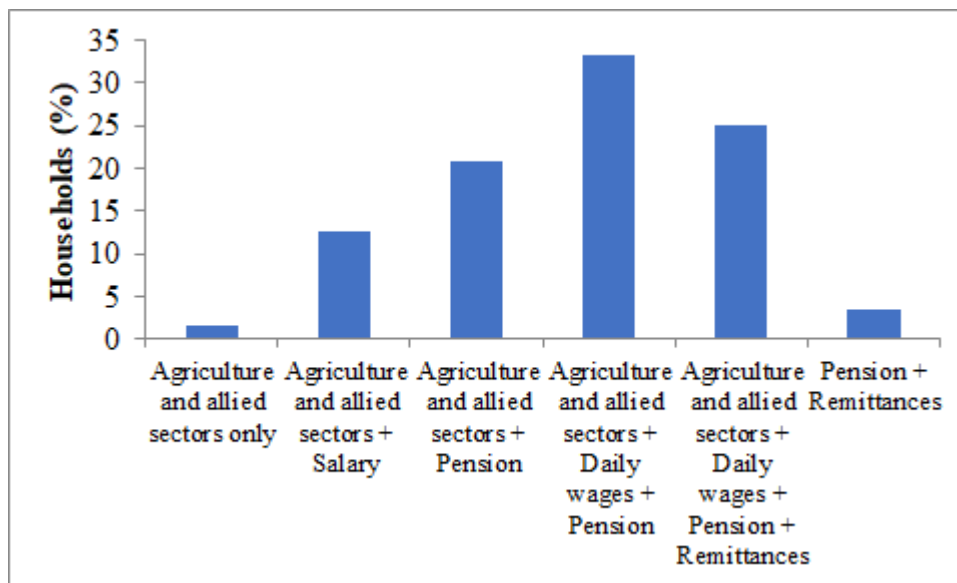


Figure 5. Sources of Income of Households.

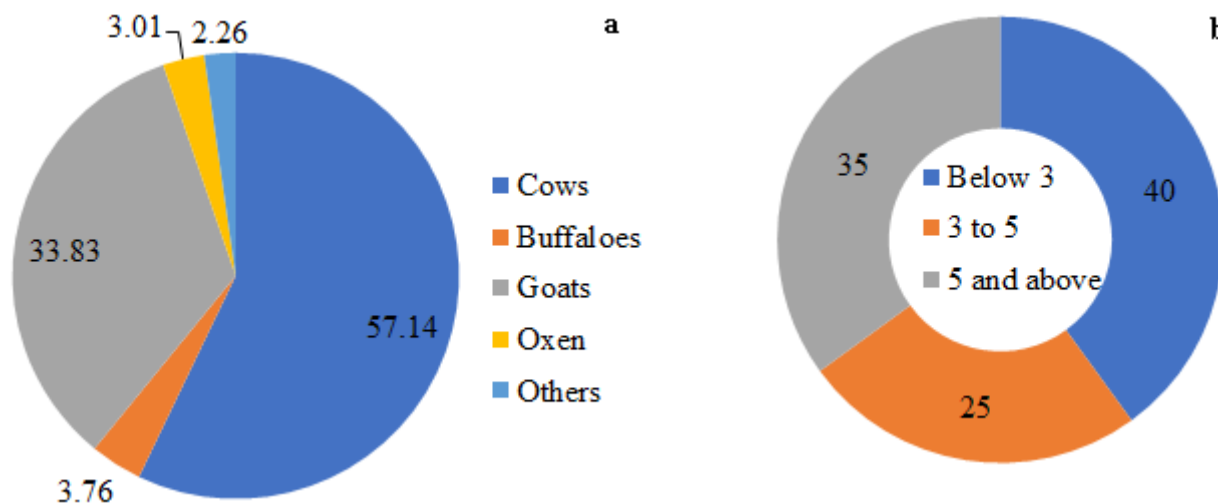


Figure 6. (a) Livestock headcounts (%), (b) Households (%) with livestock's headcounts

Table 1. Age Groups of the Out Migrants.

Age Group	Age range	Total no. of migrants	Percentage to total
Young	{< 30}	175	77.09
Lower Middle	{30-39}	37	16.30
Upper Middle	{40-49}	10	4.41
Old	{50 <}	5	2.20
Total		227	100

the reasons unknown. Sometimes the elderly also migrates seasonally to plain areas due to chilled winters in hills.

Data clearly represents the magnitude of the male migration. 71.37% are males out of total out migrants. There are 64.17% households from where at least one male has out migrated but there are 6.67% households from where 3 or more men have out-migrated (Fig.7 a,b). These households are mostly the joint families.

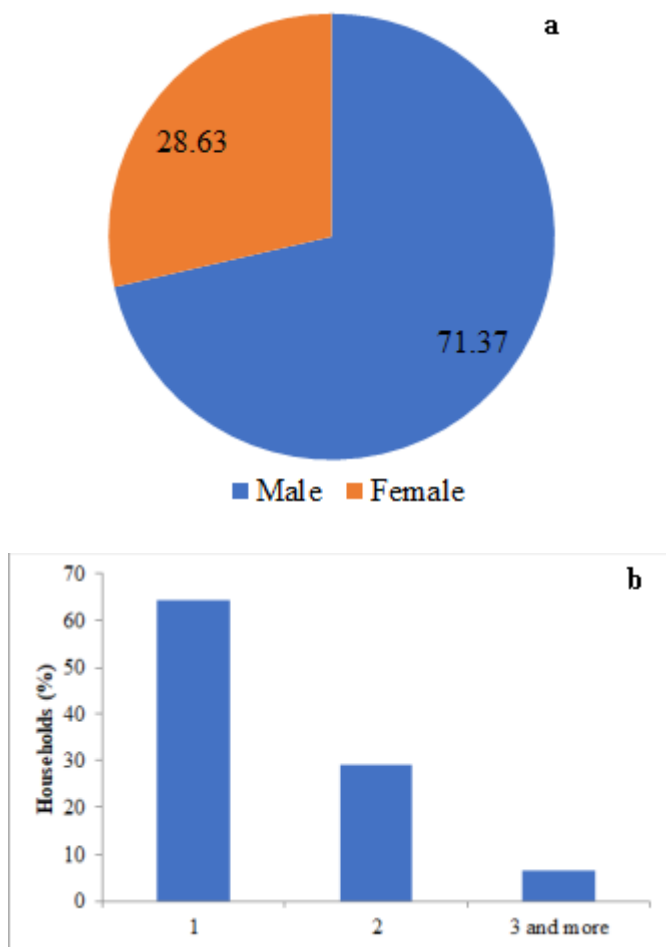


Figure 7. (a) Gender of the out migrants, (b) Households (%) with male out migrants

More than two third (72.22 %) of the male migrants are of young age (age below 30 years) and half of the male out migrants are highly educated (Graduate and above) (Fig.8). Almost 45.48 % of

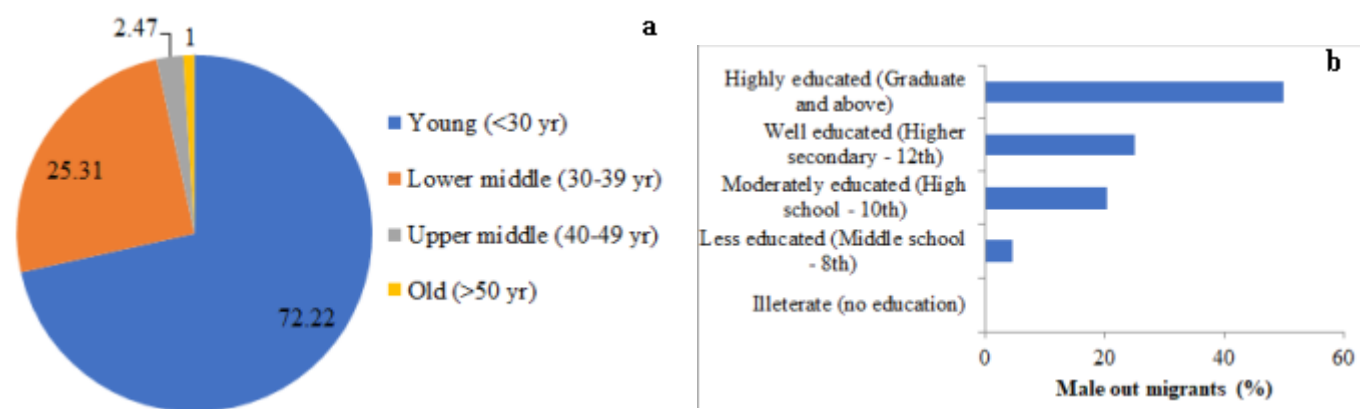


Figure 8. Characteristics of male out migrants: (a) Age composition, (b) Educational status

the male have out-migrated for the purpose of joining the job and more than one-fourth males have migrated in search of jobs. About one-fourth of the males migrated for the purpose of higher education and technical training.

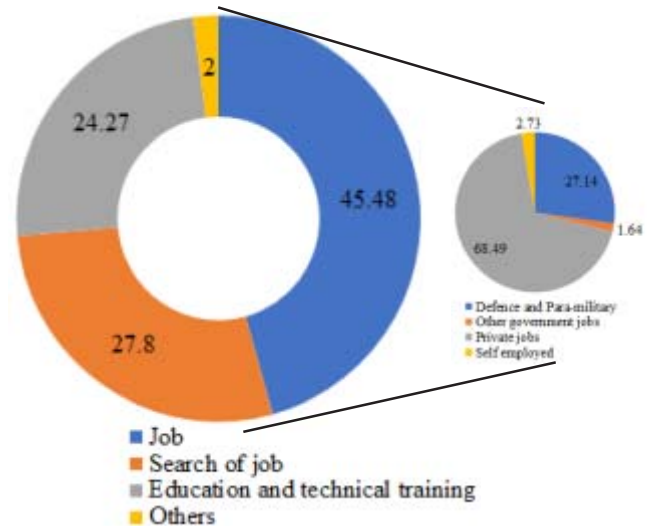


Figure 9. Reasons of male out migration and job profile of the migrants.

The out-migrated males are mostly employed in private jobs (68.49%) followed by Defence and Para-Military forces (27.14 %). 1.64 % male migrants are employed in government jobs other than Defence, which includes Police, Banking, etc.

Out of the total male migrants, 12.71 % are in the Defence and Military services and the place of posting is not fixed as it's a transferable job. More than half of the males have migrated within the state (54.23 %), in which Haldwani attracts about one-fourth (25.75 %) of the total male migrants, followed

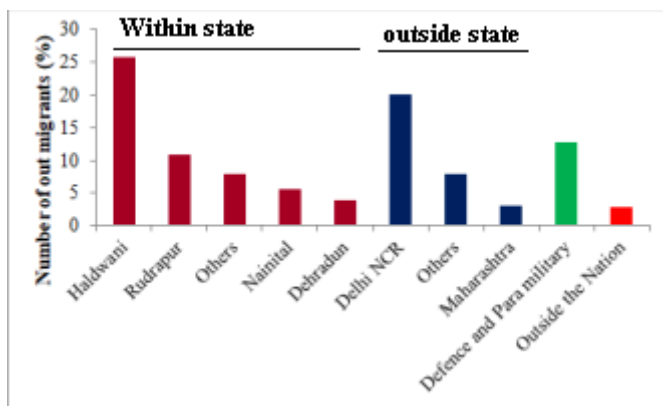


Figure 10. Destination of out migration

by Rudrapur (10.98 %) and Nainital (5.50 %). Outside state, 20.06 % males have migrated to the Delhi-NCR only, followed by Maharashtra. Other than these states, males have also migrated to Kerala, Bengaluru, Udaipur, Ladakh, etc. 2.85 % males have crossed the international borders to Kuwait, Saudi Arabia, Nepal, etc. (Fig.10).

Impact of Male Out Migration on the Households:

The impact of male out migration is felt in every aspect of life such as demographic, economic, social, political and cultural especially on the women, children and the older people left behind. The out migration of male members of the household affects the environment, economy and socio-cultural status of the households left behind in both positive and negative ways.

As the remittance sent by the out migrants enhances the socio-economic status of the family, but in a number of cases the out migration of the workforce also increases the workload on the members left behind. Most of the male migrants are in the private jobs or still struggling for decent jobs, so they are not able to send the regular remittance to the family, but they definitely help in the family functions, health treatments and for sustenance. This is why 79.17 % households accept that they received the remittances either in the regular basis or in the form of financial help in various ways. But about one fourth households also denied this as the out migrants from their families are still struggling for the job or they are not able to send any financial

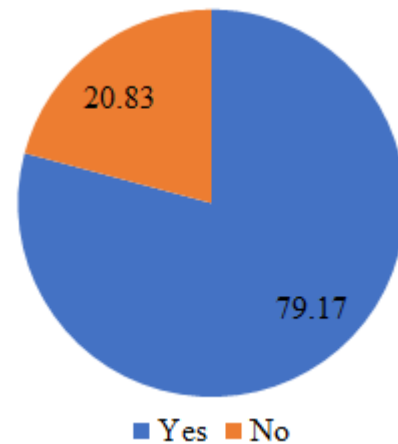


Figure 11. Households (%) received remittances

help because of very low earnings and affordability issues in cities.

Out of the total respondents, 39.17 % have 50-75% active agricultural land in which they regularly practice farming in every season, rest of the land remains barren. 30% households are practicing agriculture in less than half of the land holdings they have. According to the local people, out-migration of the family members is one of the major causes behind this. The remittances which they receive although not on regular basis, and thence are not totally dependent on income from farming (Fig. 12).

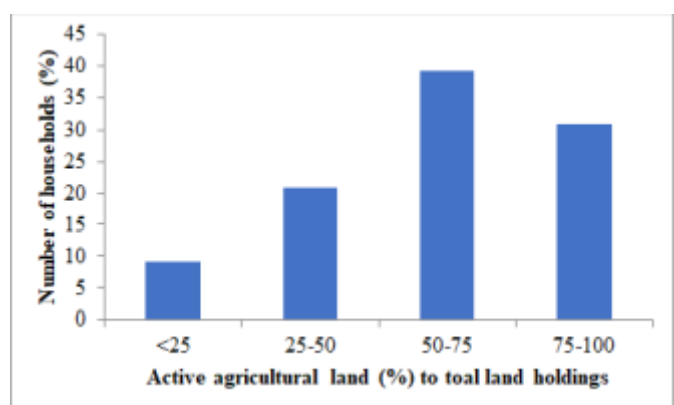


Figure 12. Households (%) as per active agricultural land.

In all six surveyed villages, there were three totally abandoned houses, 1 in Kapharoulee and 2 were in village Gajar. The family left behind or neighbours



Figure 13. Locations of Abandoned Houses: (a) Village Gajar, (b) Village Kapharaoulee

usually take care and utilize these types of abandoned houses as store houses, cowsheds, etc. but houses in Figure13 were totally in svelte conditions. There are a number of reasons in these mountains to leave the houses abandoned such as forest fire, flood, landslides, etc. but the sole reason for these abandoned houses is out-migration as per the local people. The major reason of leaving these houses abandoned are, that the entire family has moved to cities and have settled there for decades and there is no one to look after the native home.

Impacts of Male Migration on Women Folk:

This study was conducted by in-depth interviews ranging from women of young (age below 30) to the old age (more than 50). It was observed that age also affects the perception of women towards out-migration of men.

Figure 15 presents the contradictory responses from the women respondents. Strangely, 78.33 % of

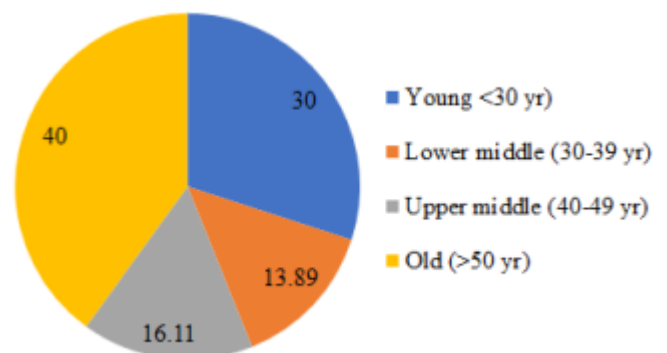


Figure 14. Age composition of respondent women

respondents accept that the out-migration of men increases the workload on them but parallely 85 % women respondents are in favour of the out migration for varieties of reasons. The statements of local women dehaize this contradiction in the following way:

The statement of Kavita Bisht, whose daughter (23) and son (20) both have out migrated for the

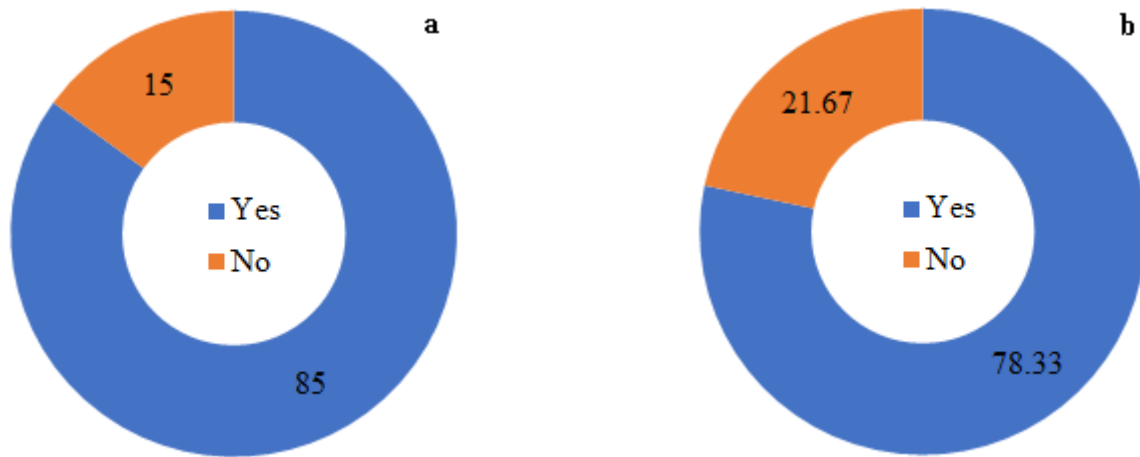


Figure 15. (a) Women in the favour of out migration, (b) Feeling overburdened by the out migration of men

purpose of education, clearly shows that for the sake of their children's future, parents are ready to bear the excess workload. The women (15%) especially older are not in the favour of out migration, as Lilawati Devi, a woman who has an experience of more than eight decades is in the favour of a life which is far from overcrowded urban centres, peaceful and safe and with her entire family around. The workload in the households of the rural mountains is shown with the following narration of a local women:

The out migration of the male members of the family affects the women left behind in different ways. Some of the women in the study area, whose sons have out-migrated with their families long back, have become the victim of social isolation. An old woman responded when she was asked about the number of members in the family.

High magnitude of male out-migration and remarkable gap in the gender of out migrants is clearly unveiled with the statement of a local woman. Apart from demographics, economy, livelihood system, social status, etc., there are also some cases where the whole path of life has changed due to the out-migration of husband. The husband of a local women out-migrated long back and never returned back. However, this matter of personnel insecurities is purely a result of out-migration but the statement of the women creates a link between the phenomenon and male out-migration.

As the out-migration of male members of the family adversely affect the women behind them similarly some of the households have positive

impacts too. The statement of a mother represents this with the following narration.

Livestock is the core of any household in the study area. Whole livelihood system is interlinked with the livestock in some way or the other, so most of the workforce and time is consumed in tending to livestock. The son of Hemanti Devi, who is in Indian Army, sold all the livestock to keep his mother away from the hardship of livestock and allied works. Similarly, the daughter-in-law of retired subedar Sher Singh, Mamta Bisht, whose husband works in a private company and brother-in-law is in the army, is not overburdened by the out migration of the male members of the family even their socio-economic status is continuously enhanced and the hardship of agriculture and livestock's work is not a big deal as they can afford the labour force for that.

Work Clock Analysis

The women's work clock is illustrated and employed as a tool of Participatory Rural Appraisal (PRA) to understand the daily lifestyle of the local women, which includes daily working hours, time for oneself including entertainment, relaxation, etc. and more importantly to correlate the male out migration and daily work load of women.

The work clocks were illustrated with the participation and support of the local women. As a result, 63.89 % of women works 14 hours and above in a whole day and only 8.89 % women works 10 to 12 hours a day, which includes mostly the old women of the family. There is no woman who works less than 10 hours a day (Fig.16).

“My sons bring the cash with them for me when they come to visit me after 3-4 months.”

Bhawani Devi
74
Village: Sunkiya



“Neither we ask for the money, nor we give them.”

Devki Devi
41
Village: Gajar



“The people who are responsible for the activation of the fields, all are out-migrated.

It is obvious for fields to become barren.”

Mohan Ram
50
Village: Gajar



“It is not possible to harvest and irrigate own land wholly, other’s one is than the matter so far.”

Puran Singh Dangwal
42
Village: Sunkiya



“Workload is obviously increasing but it is the matter of the future of children.”

Kavita Bisht
39
Village: Gajar



“However, in the local a man can earn lower amount of money in comparison to the plains or cities but he surely lives a peaceful and safe life.”

Lilawati Devi
82
Village: Kapharoulee



“These are mountains, people continue to do work hard until their eyes permanently closed.”

Gopuli Devi
42
Village: Gajar



“I am the only member of the family, and yeah there is a cat also.”

Bhawani Devi
74
Village: Sunkiya



“My daughter also wants to go out for the higher studies after her elder brother, but I am not allowing her. If she also out-migrates who will take care of household’s work with me.”

Munni Devi
50
Village: Bana



“Probably, if he had never migrated out, my life would have been different.”

Geeta Devi
42
Village: Bana



“My son has sold all the livestock and request me to do nothing.”

Hemanti Devi
57
Village: Sunkiya



“There is no any pressure of household work and livestock’s work. We use to buy the fodder and bio manure even employed workers in fields.”

“We, the women continuously work with the beginning of light till night.”

Mamta Bisht
29
Village: Bana



Devki Devi
41
Village: Gajar



“All these, every sized animals are my entertainments.”

Rupa Devi
42
Village: Gajar



Voices from the field

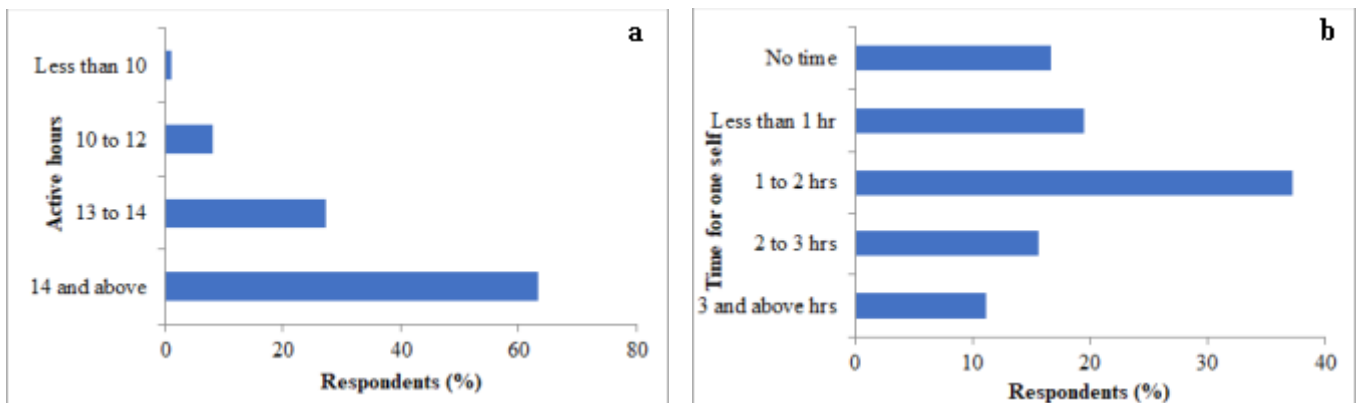


Figure 16. Results of women’s work clock: (a) Active hours in a day/24 hours, (b) Time for one self

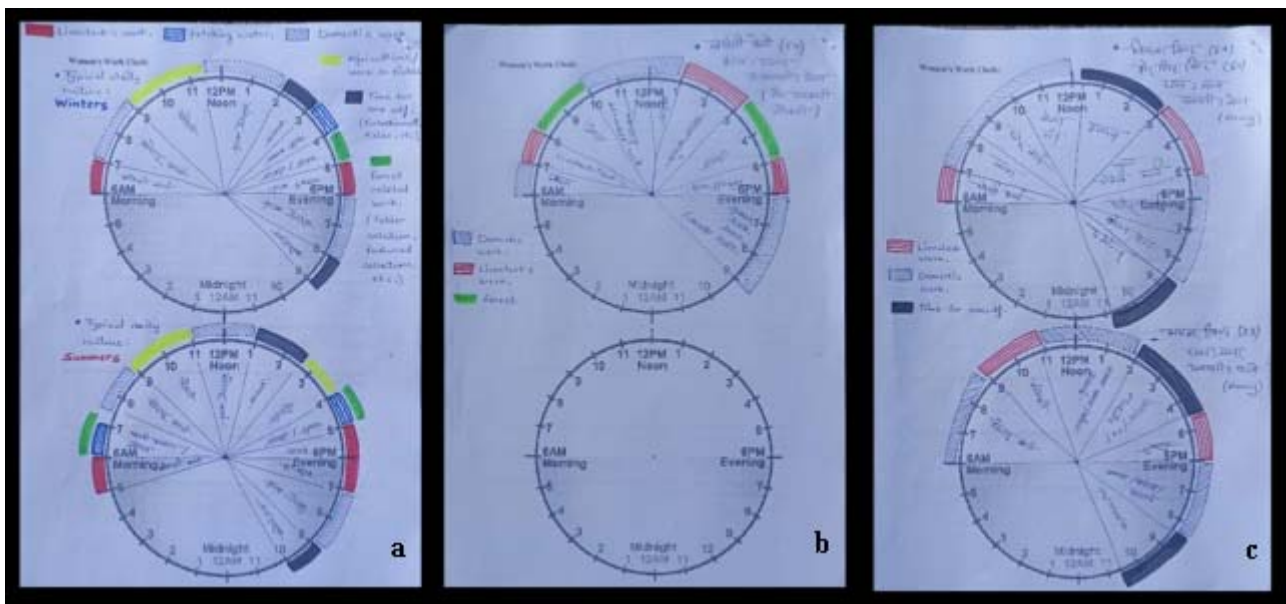


Figure 17. Women's work clock: (a) Typical daily routine, (b) Example of negative impact of male out migration, (c) Example of positive impact of male out migration

As per the work clocks of the local women, more than one third (37.22 %) women have only 1 to 2 hours for oneself in between their active hours. About one fifth respondents do have less than an hour to relax and most important fact is, there are 16.67 % women, who do not have any time to relax, for entertainment etc. The statement of Rupa Devi of village Gajar is an example of this.

CONCLUSIONS

All the households in the study area are agrarian, where most of the livelihood system depends on the agriculture and allied activities. As an agrarian household, the number of working people matters a lot. Due to the joint family disintegration, in the study area one-fourth of the families has family size less than 5 and more than 85% households has less than 10 members. Further, increased out-migration of male members of the family multiplies the burden for the family left behind particularly the women folk. Most of the households has medium size of land holdings (50-100 Nali). Only 10 % households are better off in terms of land holdings. About 3/4th of the total out migrants are of young age (age below 30) and male. Over 70 % of the male migrants are highly educated (Graduate and above). The out-migrated males are mostly employed in private jobs

(68.49%) and they earn only to afford a decent standard of living for themselves in the cities, hence it's very hard to send regular remittances to the families. A huge number of youth (27.80 %) have even left their homes in the search of jobs. Due to substandard education in government institutions and unaffordable education in private counterparts, about 1/4th portion of the out-migrants males is of students. Haldwani alone attracts 25.75 % migrants due to a number of livelihood options and education facilities. Due to out-migration of the male members of the households, agricultural land is becoming barren, specially where the male has migrated with his spouse and children. On the other side, the wives and mothers left behind are facing acute workload of household chores, tending to livestock, field's work, taking care of aged parents and managing all social obligations on their own. Some of the households present a different approach, as their standard of living has raised drastically and have had positive impacts of male out-migration. They are even proud of their sons and husbands working in cities.

The in-situ development of the region could be one way to regulate the rapid male outmigration.

The education system, facilities and exposure should be maintained, monitored and enhanced.

The skill enhancement courses can be initiated like



Figure 18. Women at work in the study area

computer course-basic programming, skill enhancement in industries such as processing units like fruit juices or by products processing. These would encourage youth to diversify their income apart from working on their fields.

The women folk should be given such platforms to enhance their skills in computer courses, cutting tailoring, beauty culture etc so that they become independent.

To encourage and motivate local women to participate in those skill development organizations, are already running such as KGU (Kumaun Gramin Udyog) and CHIRAG (Central Himalayan Rural Action Group).

The connectivity within the region should be developed so that natives can move easily within the region.

Tourism has a greater potential in the region and needs to be given due weightage so that people get inhouse absorption.

Authors' contributions: All authors contributed equally

Conflict of interest: Authors declare no conflict of interest

Ethics statement: Authors declare that they have informed consent of the respondents to use the statments and pictures.

REFERENCES

- Atkinson, E.T. 1882. North Western Provinces Gazetteers. Vol. XII. (Reprinted in 1976), The Himalayan Gazetteer. Vols. I, II and III, Cosmo Publications, Delhi.
- Bhandari G. and Reddy B.V.C. 2015. Impact of out-migration on agriculture and women work load: An economic analysis of hilly regions of Uttarakhand, India. *Indian Journal of Agricultural Economics*, 70(3) , 396-404.
- Bisht, H.S. 2020. Land-use/land-cover change and its impact on women's livelihood in the last 30 years (1990-2020) at Dewal block, Chamoli district, Garhwal Himalaya, Uttarakhand. Unpublished M.A. Dissertation, Department of Geography, University of Delhi, New Delhi.
- Datta, A. and Mishra, S.K. 2011. Glimpses of women's lives in rural Bihar: Impact of male migration. *The Indian Journal of Labour Economics*, 54(3), 457-477.
- Hasija, A.M., Bandooni, S.K. and Selwatkar, A. 2017. Out migration and its impact on socio-economic profile of natives in Lachigad watershed, Pauri Garhwal, Uttarakhand. In: *Natural Resources Management for Sustainable Development and Rural Livelihoods*. Volume B. Today Printers, New Delhi. ISBN-81-7019-584-1(INDIA).
- International Centre for Integrated Mountain Development (ICIMOD). 2011. *Labour Migration and Remittances in Uttarakhand*. Case Study Report, ICIMOD, Kathmandu.
- Joshi, B. 2018. Recent trends of rural out-migration and its socio-economic and environmental impacts in Uttarakhand Himalaya. *Journal of Urban and Regional Studies on Contemporary India*, 4(2), 1-14. DOI:10.15027/45581
- Lei, L. and Desai, S. 2021. Male out-migration and the health of left-behind wives in India: The roles of remittances, household responsibilities, and autonomy. *Social Science & Medicine*, 280, 113982, <https://doi.org/10.1016/>

- j.socscimed.2021.113982.
- Mamgain, R.P. and Reddy, D.N. 2015. Outmigration from hill region of Uttarakhand: Magnitude, Challenges and Policy Options. Project Report, National Institute of Rural Development, Hyderabad, 27 pages.
- Office of the Registrar General and Census Commissioner. 2013. Census of India, Population Data of 2011, Primary Census Abstract Data, Uttarakhand. http://www.censusindia.gov.in/pca/nal_pca.aspx (accessed July 10, 2015).
- Pandey, R. 2019. Male out-migration from the Himalaya: implications in gender roles and household food (in)security in the Kaligandaki Basin, Nepal. *Migration and Development*, 10(3), 313-341. DOI: 10.1080/21632324.2019.1634313
- Prateek, G. Knopf, R.C. and Aggarwal R.M. 2019. Impact of out-migration of men on women's participation in community-based forestry: insights from Van Panchayats of Uttarakhand, India. *International Forestry Review*, 21(2), 212-224.
- Sarkar, R. 2017. Women and Water: Adaptation Practices to Climate Variability in the Sikkim Himalaya. Unpublished M.Phil. Thesis, Department of Geography, School of Human Sciences, Sikkim University, Gangtok.
- Sati, V.P. 2021. Out-migration in Uttarakhand Himalaya: Its types, reasons, and consequences. *Migration Letters*, 18(3), 281–295. <https://doi.org/10.33182/ml.v18i3.957>
- Singh, R. 2018. Impact of male out-migration on women left behind: A study of two villages in Uttar Pradesh. *Remittances Review*, 3(1), 75 – 92.
- Tiwari, P.C. and Joshi, B. 2015a. Climate change and rural out migration in Himalaya. *International Journal of Change and Adaptation in Socio-Ecological Systems (CASES)*, 2, 8–25.
- Tiwari, P.C. and Joshi, B. 2015b. Gender processes in rural out-migration and socio-economic development in the Himalaya. *Migration and Development*, 5(2), 1–21.
- Todaro, M.P. 1969. A model of labour migration and urban unemployment in less developed countries. *American Economic Review*, 59(1), 138-148.
- Umar 2012. The ghost villages of Uttarakhand. *Tehelka Magazine*, 9(27), 10-12.
- Walton, H.G. 1910. *British Garhwal: A Gazetteer*, Reprint 1994, Indus Publishing Company, New Delhi.
- Zachariah, K.C. and Rajan, S.I. 2001. Gender dimensions of migration in Kerala: macro and micro evidence. *Asia-Pacific Population Journal*, 16(3), 47-70.

Received:30th July 2022

Accepted:30th August 2022