COVID Induced Reverse Migration in Uttarakhand, India: Issues and Opportunities

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

One of the most dangerous and pressing issues humanity has encountered recently is the COVID-19 pandemic, which has had a negative economic, social, and psychological impact on the people of India and the entire world. Many people have lost their lives because of the pandemic, and many more are currently suffering from its aftereffects. Because of the lockdown and lack of resources, the pandemic has also presented significant challenges to policymakers in India and around the world, particularly in rural areas. During the pandemic reverse migration from the urban to rural areas started all around the world. The Himalayan state of Uttarakhand witnessed a great reverse migration to the villages during the pandemic.

This research paper investigates the main reasons behind the reverse migration during COVID, with problems faced by reverse migrants in their native villages and towns that forced them to migrate back. The study was conducted with the help of questionnaires and interviews of 40 respondents. The main reasons behind the reverse migration were the government-implemented lockdown, huge job losses, poor food and health supplies, problems of housing, fear of COVID infections, the sudden homesickness generated due to COVID, etc. There were also challenges to the government institutions, NGOs, and social groups of the state to facilitate efficient health

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services, places for residence, and food and create livelihood opportunities in the villages which have experienced huge reverse migration.

But all these, mainly the lack of job opportunities and health and educational facilities in rural areas, proved to be insufficient, so migrants were compelled to go back to their working places just after the removal of lockdown by the govt. The study concludes that the reverse migration in Uttarakhand was loaded with several issues and opportunities which are important to investigate; the study can further generate insight for researchers and policymakers. Employment generation in the agriculture, horticulture, and tourism sectors with the development of education, health, and infrastructural facilities and judicious use of available land, water, and forest resources would prove helpful to reverse migrants to get employment at their native places, and it will also reduce the pace of migration in the hill state.

1. INTRODUCTION

People have long left hilly rural areas of Uttarakhand in search of work in the different cities of India and world, posing a migration problem for the state. People abandoning their villages in search of livelihood, education and health services have been a problem for the Himalayan state for a long time. In repercussion, sparsely inhabited "ghost villages" are common throughout the rural mountainous areas of the state. There are around 16,500 villages in Uttarakhand, of which 1,048 are deserted (uninhabited) and 734 have become ghost villages (Yugal Joshi, 2022). Over 3.5 lakh people migrated from their home places from 2011 onwards in search of better livelihood opportunities, education, and health facilities. As many as 1,768 hamlets in the state had been categorized as "ghost villages" (Kandpal, 2021). An absolute decline of 17,868 persons in the population of Almora and Pauri Garhwal districts between 2001 and 2011 is a testimony of huge out-migration (Mamgain and Reddy, 2017).

A total of 3, 83,726 persons from 6338-gram panchayats out-migrated from hilly areas non-permanently in the last ten years. While 18,981 people migrated permanently from these hilly areas (Roshani and Chauhan, 2024; Rural Development and Migration Commission Report, 2019). The Himalayan state has been grappling with a migration problem for a long. These villages were dotted with locked houses and lacked good basic amenities (Kandpal, 2021). Out-migration has become a common phenomenon in the Uttarakhand Himalaya. Many people, mainly youth, have out-migrated semi-permanently and permanently (Sati, 2021).

After the formation of the migration commission in 2017 on average among the total migrants, 50.16 percent people migrated in search of employment, 15.21 percent education, 8.83 percent due to lack of health facilities and in search of better-quality life (Migration Commission Report, 2019).

But during pandemic a trend of reverse migration has been noticed by the state. The unprecedented migrant crisis was a major catastrophe that emerged during the pandemic. Forced by the pandemic, the ominous choice between 'life' and 'livelihood' had to be made. India enforced 68 days of four-phased-lockdown starting from 24th March to 31st May 2020 to deal with COVID-19 pandemic (NABARD Report, NA). Lack of job due to the pandemic was the main reason behind the return of these migrants, while some returned in fear of the virus. There were also some psychological and emotional reasons behind the return of migrants (Jesline et al., 2021).

Due to COVID pandemic a huge number of people forced to return (reverse migration) to their native states, cities, towns, and villages. Main reason behind this was heavy loss of jobs and rising livelihood issues as people were left helpless by the ventures, where they were working or providing their services; most of these reverse migrants were employed in informal and unorganized sectors. The migrants were compelled to return to their villages and hometowns due to a prolonged loss of their livelihoods following the imposition of the lockdown. This was actually a short-term, non-permanent reverse migration. A total of 59,360 migrants returned to 10 districts — excluding Dehradun, Haridwar and Udham Singh Nagar — according to an interim report released by the state's Rural Development and Migration Commission on April 23, 2020 (Prakash, 2020).

According to the data released by the Uttarakhand migration commission in July, 2020,

over 2.15 lakh people had returned to their homes in Uttarakhand during the COVID-19 epidemic (Roy, 2020). As a result of countrywide lockdown, an estimated number of about 3.57 lakh migrant workers have returned to their homes in the state till September, 2020 (Pathak, S. and Agarwal, M. 2023 and The New Indian Express, Nov. 4th, 2020. It was also stated that majority of return migrants (81%) arrived from different states, 18% were from different districts within state, and about 0.3% were from foreign countries (Awasthi and Mehta, 2020).

It was during this phase, that Uttarakhand witnessed a temporary reverse migration, as people lost their jobs in urban areas; they deemed it necessary to revert temporarily areas (Roshani and Chauhan, 2024).

It is disturbing to note that almost three-fourth (72%) of migrant workers were not paid by their employers during COVID-19 induced lockdown, which reflect the despondency and livelihood crisis that forced migrant to rush to their native places. It was reported that those migrates who came back were basically salaried workers, minor businessmen, street vendors, shopkeepers, laborers, cooks, clerks, waiters, small restaurant owners and those who were employed in private companies (Jesline et al., 2021). This is a time for domestic solidarity and unity. I encourage the Government to draw on India's vibrant civil society to reach out to the most vulnerable sectors of society, to ensure no one is left behind in this time of crisis (United Nations Organization, 2020).

Most people who conducted the terrifying reverse migration caused by COVID-19 expressed a wish to go back to their original locations, indicating that the depressing conditions in the hill districts still exist (Ahmed, A. et al. 2024).

The COVID-19 pandemic has been a wake-up call for nations worldwide to ensure that they have basic amenities for self-sufficiency. This crisis has challenged pre-existing concepts like globalization and outsourcing, and has highlighted the importance of Mahatma Gandhi's concept of Gram Swaraj or a self-reliant village system (Vij et al., 2023).

Further, the state of Uttarakhand has experienced significant flows of reverse migration in recent years, as people who had previously migrated to other parts of India are returning to their home state (Dutt et al., 2022). There has also been reverse migration in around 850 villages spread over the 13 districts of the state (Malik, 2022).

The government of Uttarakhand should try to convince reverse migrants to stay their homes in the hills area after the lockdown with the help of effective implementation of various rural development and employment generate government schemes (Parveen & Mamgain, 2020).

Benefits of reveres migrants include the resurgence of traditional farming, the uptake of self-employment programs, and higher savings because of reduced living expenses. Additionally, government initiatives like interest-free loans and rural entrepreneurship schemes have further facilitated economic reintegration for returnees. However, persistent challenges such as fragmented landholdings, inadequate markets, and infrastructure gaps underscore the need for targeted interventions (Agarwal and Mittal, 2025). The reverse migration can preserve their heritage and culture as a breath of fresh air at a time when people are quick to cut off their roots completely and never look back in search of newer pastures (Malik, 2022).

2. STUDY AREA

Uttarakhand is situated in the mighty Himalayas and is known for its natural beauty as well as its panoramic views of several physical features and landscapes. It is situated between 28°43' and 31°27' North latitudes and 77°34' and 81°02' East longitudes (Fig. 1). The state's elevation ranges from roughly 200 metres above sea level to more than 7800 metres. Kumaun and Garhwal are the two divisions that make up the state, which spans an area of around 53,483 square kilometers.

Mountains and hills make up over 46,035 square kilometers of the state's total land area, while the Tarai and Bhabhar plains occupy 7,448 square kilometers. The Greater Himalaya, a vast chain of snow-capped peaks with an average elevation of 6100 metres, is the tallest of the state's three parallel Himalayan Mountain zones. There are many gorges, uneven slopes, narrow yet fruitful river valleys, and forest-covered ranges in the central Himalayan region. The third zone, known as the Siwalik Mountains and foothills, is located on the outer side of the Himalaya and is distinguished by large, smooth valleys in the area known as "Duns". The plains of Tarai and
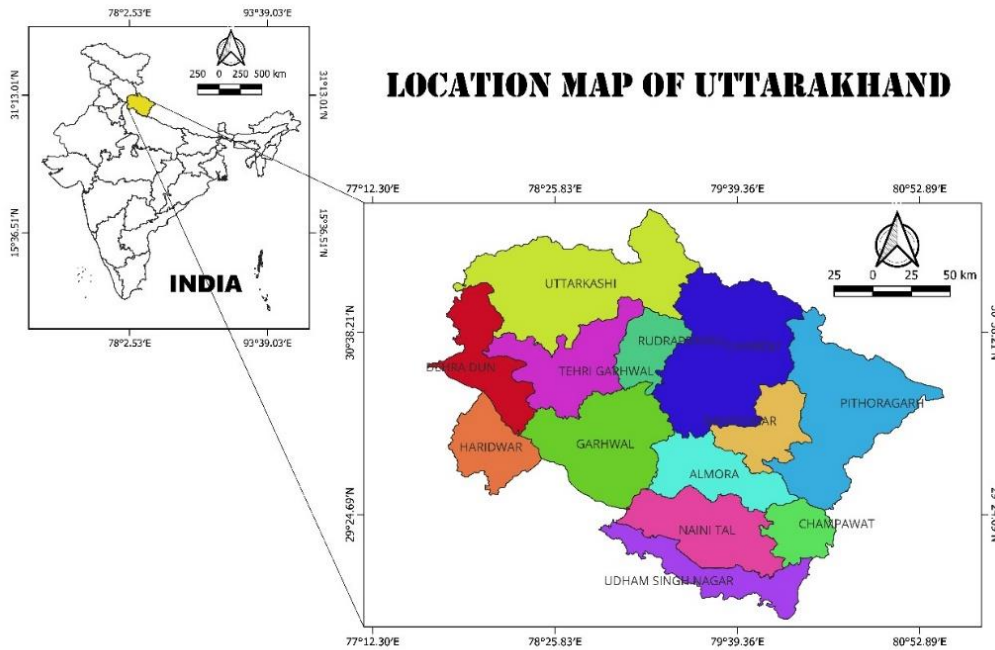
Fig. 1. Map of Uttarakhand

Bhabhar are located south of the foothills. The state has a subtropical climate, with an average temperature of 25°C in the southern foothills, while at heights above 6000 m, the temperature stays below freezing, and the region is continually covered in snow and ice throughout the year. The state's rainfall patterns are notably inconsistent, with considerable rainfall occurring in the districts of Tarai and the Bhabhar plains and valleys, while snowfall occurs on higher peaks.

3. OBJECTIVE

The purpose of the present study is to investigate the problem of reverse migration in Uttarakhand in the wake of the COVID-19 outbreak. To understand the causes of their moving back to rural areas and the difficulties they encounter finding employment and income and gaining access to essential services like healthcare, education, and internet are its main goals. The study also focused on the psychological effects, such as mental stress and social stigma, and how well government programmes work to assist these people. The study also aims to determine the returnees' intentions to stay and their interest in skill development.

4. METHODOLOGY

The present study is associated with the COVID-induced reverse migration in Uttarakhand. This research paper has both qualitative and quantitative bases. Various reports from the govt, NGOs, research papers and web sources have been concerned with providing the theoretical base to the study. The study was conducted with the help of questionnaires and interviews. For the purpose, 40 respondents were selected using purposive sampling, i.e., including only reverse migrants during COVID. Among the total respondents, 09 were females and 31 were males, in which the highest number of respondents, i.e., 15, were graduates, 08 were postgraduates, 10 respondents were educated up to 12th, and 07 were educated up to 10th standard. The caste-wise profile of the respondents shows that among 40, 29 were General, 09 were SC, and 02 were of the OBC caste category.

5. RESULTS AND DISCUSSION

Reverse Migration: Reverse migration refers to the movement of individuals returning to their native places after previously living or working elsewhere.
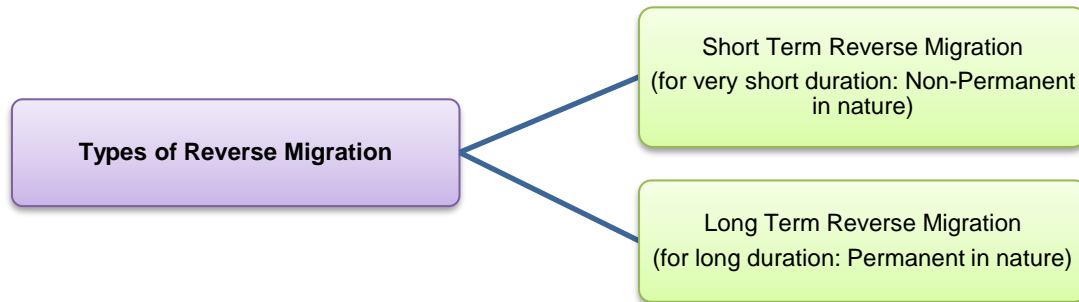
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Types of Reverse Migration:

Fig. 2. Types of Reverse Migration

Causes of Reverse Migration: Both short term and long-term reverse migration have some common causes with their own specific causes as;
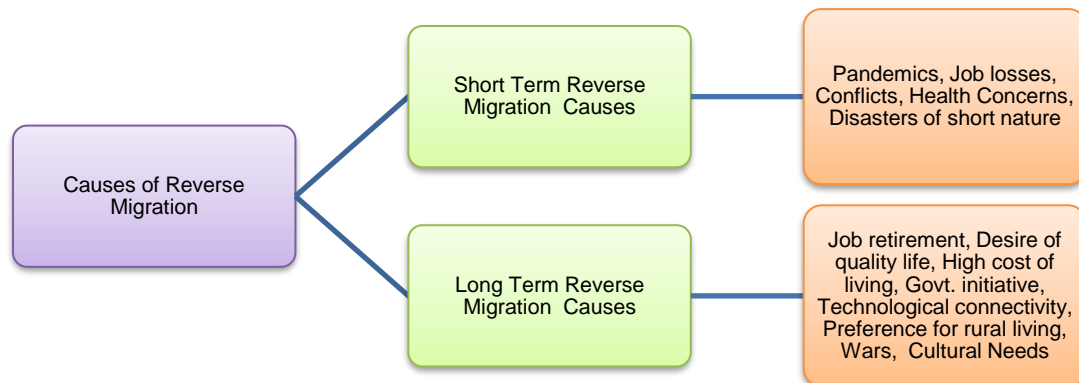

Fig. 3. Causes of Reverse Migration

COVID-19 Induced Reverse Migration in Uttarakhand: The COVID-19 pandemic has had a severe impact not just on India but across the globe, disrupting the lives of millions. Uttarakhand was among the many regions significantly affected during COVID-19. With lockdowns in place and limited employment opportunities in cities, hundreds of thousands of people were compelled to return to their villages and hometowns in the state. This sense of uncertainty and distress triggered a widespread wave of reverse migration, as people moved from urban centers back to rural mountain areas across the state.

Table 1. Number of Reverse Migrants in Uttarakhand during COVID

Sl. No.	District	Number of Returnees/ Reverse Migrants
1	Almora	43784
2	Bageshwar	1925
3	Chamoli	5877
4	Champawat	15097
5	Dehradun	2254

Sl. No.	District	Number of Returnees/ Reverse Migrants
6	Haridwar	3136
7	Nainital	9650
8	Pauri	60440
9	Pithoragarh	5451
10	Rudra Prayag	7656
11	Tehri	19242
12	Udham Singh Nagar	21958
13	Uttarkashi	19405
	Total	215875

Source: Interim report of Rural Development & Migration Commission, 20 June 2020
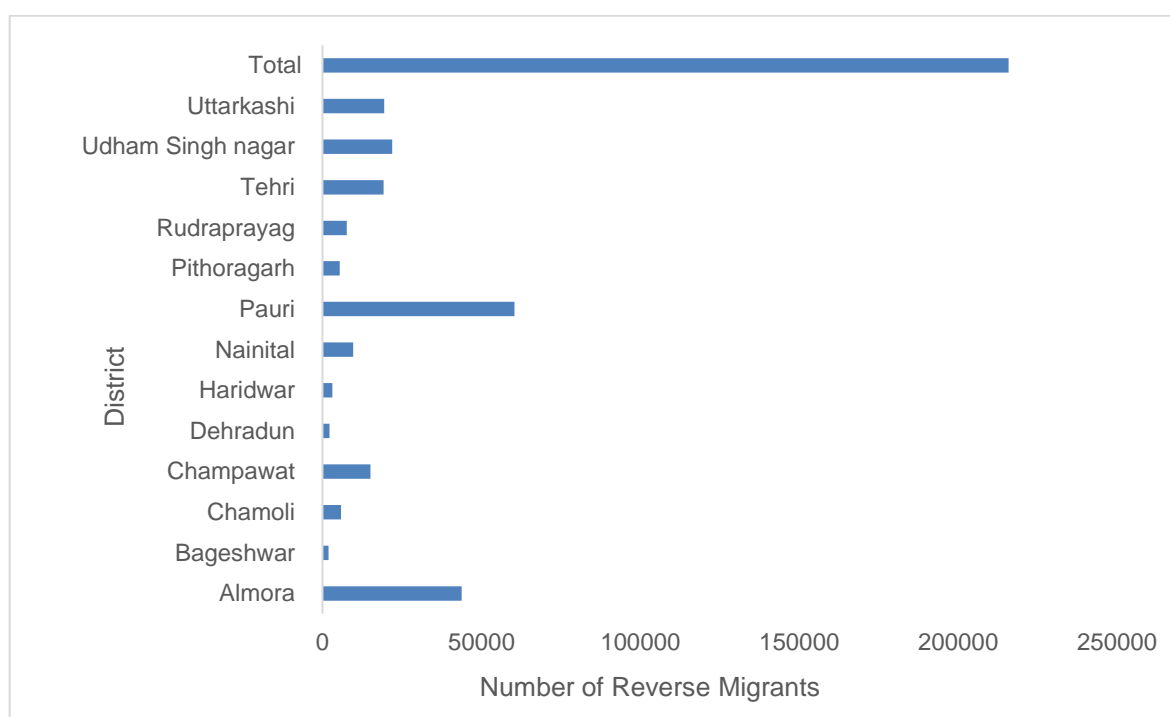

Fig. 4. District wise Reverse migrants in Uttarakhand during lockdown, June 2020

It is clear from Table 1 and Fig. 4 that till 20 June 2020, 215875 migrants all over the state reversed back (Interim report of Rural Development & Migration Commission, 20 June 2020). From the above table and figure, it is also apparent that the highest number of reverse migrants were from the Pauri (60440) and Almora (43784) districts, as both the two districts have been badly affected by the migration in the state and have the highest number of migrants too (Table 1 and Fig. 4).

Table 2. Summary of the Respondents (Answer with Yes) (N=40)

Sl. No.	Question Summary	Yes	Percentage (%)
1.	Returned permanently after COVID	7	17.5
2.	Received assistance for return	12	30
3.	Intent to stay permanently	11	27.5
4.	Employed/self-employed during COVID	18	45
5.	Satisfied with income	9	22.5
6.	Received any government scheme	10	25
7.	Access to health facility	15	37.5
8.	Proper road connectivity	20	50
9.	Internet/mobile access	18	45

Sl. No.	Question Summary	Yes	Percentage (%)
10.	Access to higher education nearby	6	15
11.	Faced social stigma	9	22.5
12.	Experienced mental stress	14	35
13.	Received any skill training	7	17.5
14.	Interested in training support	25	62.5

Source: Primary Survey

Table 3. Summary of the Respondents' Answers

Migration Status
- **7 respondents (17.5%)** stayed in the village permanently after return.
- **33 respondents (82.5%)** returned to urban areas.

Employment & Livelihood
- **18 (45%)** were employed/self-employed locally during COVID.
- **Only 9 (22.5%)** were satisfied with their income.
- **10 (25%)** accessed a government employment scheme (MGNREGA).
- **7 (17.5%)** received skill training.
- **25 (62.5%)** expressed interest in training support.

Infrastructure & Services
- **15 (37.5%)** had access to health facilities.
- **20 (50%)** reported proper road connectivity.
- **18 (45%)** had regular internet or mobile access.
- **Only 6 (15%)** had access to higher education nearby.

Social & Psychological Issues
- **9 (22.5%)** faced social stigma.
- **14 (35%)** experienced mental stress or anxiety.

Intentions & Assistance
- **11 (27.5%)** wanted to settle permanently.
- **12 (30%)** received assistance for returning home.

Source: Primary Survey

Challenges Related to Reverse Migration in Uttarakhand: Reverse migration in Uttarakhand, particularly due to COVID-19, has presented several challenges, including economic, social, psychological, and infrastructural issues. Here are some key challenges:

1. Employment and Livelihood Issues

The COVID-19 pandemic has posed a challenge to create employment opportunities in areas where people are migrating in large numbers. Not only this, but due to the pandemic, a huge group of people working in various private organizations were forced to reverse migrate to their native villages and native places in the state due to lack of employment in urban centers.

Lack of Job Opportunities: The state's rural economy lacks diverse employment opportunities, due to which most of the returnees, who were mainly employed in service sectors, construction work and other sectors of an unorganized nature in urban areas, had very

limited opportunities to get jobs here in their native places and nearby small urban areas. Only 18 (45%) respondents accept that they got employed or started their own work (Tables 2 and 3).

Dependence on Agriculture: Many returnee migrants were forced to take up agriculture as a means of livelihood, which is largely unprofitable and uneconomical in the mountainous state of Uttarakhand. Devoid of agriculture for a long period, agricultural fields got barren and laden with unavoidable grass and bushes. Fragmented and small-sized land holdings, poor irrigation facilities, and lack of modern technology are also major hindrances in economical agriculture. Monkeys and wild boars are also a huge problem for the state's agriculture.

Limited Industrial and Commercial Development: Most of the state's land is mountainous, due to which industrial and manufacturing areas could not be developed. Trade and commercial activities are also very

limited here in the mountainous parts of the state. Only in the plains of 4 districts, Udham Singh Nagar, Haridwar, Dehradun and Nainital, are they ahead in terms of industries, and the rest of the areas are underdeveloped, where alternative employment sources are very limited. Due to limited sources of employment, the returning migrants had to face a lot of problems of employment.

2. Infrastructural Deficiencies

Poor Health Facilities: Only 15 (37.5%) respondents (Table 2 and 3) benefited from health facilities during COVID. The COVID-19 pandemic exposed the weak health care system in the remote areas of Uttarakhand, making it difficult to provide proper and efficient medical care to returning migrants. They were at the mercy of nature and poorly available health services.

Inadequate Transport and Connectivity: Since most of the territory of Uttarakhand is mountainous, road connectivity is poor with inadequate transport mediums in remote villages, making movement and access to villages and markets difficult. Hence, it became a big challenge for the migrants returning to their homes. Only 20 (50%) respondents accept that they are satisfied with transportation and connectivity in the state (Table 2 and 3).

Limited Internet Access and Communication: The lack of digital infrastructure, the internet, and communication in Uttarakhand adversely affected access to remote work, work from home, education, and online business opportunities, due to which work from home in remote areas also did not prove to be fruitful; as a result, many reverse migrants were forced to go back to their place of work within a short time.

3. Social and Psychological Challenges

Social stigma: 9 (22.5%) of the respondents who returned during the COVID-19 pandemic faced discrimination in their community. They were seen as potential carriers of the virus, which led to their isolation for some time (Table 2 and 3).

Adjustment issues: Many returnees struggled to readjust to rural life after years in urban settings, resulting in social adjustment problems. Consequently, some returned to cities immediately after the lockdown was lifted.

Mental health issues: Uncertainty about employment, financial instability, and lifestyle changes among migrants as the pandemic progressed led to stress and anxiety. 14 (35%) respondents reported severe mental stress and anxiety after returning to their native places (Table 2 and 3).

4. Lacking in government policy and support

Inadequate skill mapping and utilization: The government lacked a proper mechanism to effectively utilize the skills of returning migrants, which also led to many problems. As data collection, monitoring, plan formulation and implementation were tough during pandemic. Only 10 (25%) respondents got help from govt. schemes most probably MGNREGA but most of them not shown their interest in working such schemes for long period due to different social constraints (Table 2 and 3).

Delay in relief and assistance: Many migrants did not receive timely financial assistance or livelihood support.

Limited implementation of employment schemes: Government programs like MGNREGA provide short-term relief but are not enough for permanent employment. Reverse migrants also have not shown their willingness to work in such schemes mainly those who have some kind of professional skills. Apart from this, the government has not shown the ability to implement new schemes.

5. Environmental and Resource Constraints

Pressure on natural resources: Continuous migration from cities to rural areas has led to an increase in the population of villages, which has put a lot of pressure on water, soil, food, and forest resources.

Lack of sustainable development plans: The government has shown its inability to create any new plan for the returning migrants and implement it properly, and no long-term approach has been implemented to create a self-reliant rural economy. This forced reverse migrants to migrate again to their workplaces or somewhere else in search of employment.

6. Educational and Skill Development Gaps

Limited Higher Education Opportunities: As the pandemic forced most students to pursue their education online, poor internet connection

and online available educational materials and records in most places hampered their continuation of education.

Only 6 (15%) respondents have higher education access during the pandemic due to nearness to the cities or which were in urban areas (Table 2 and 3).

Lack of Skill-Based Training: There were no structured programs for training and skill development for local employment opportunities, a problem that became more acute as the pandemic spread. As it is noted that 25 (62.5%) returnee respondents were interested in training programs (Table 2 and 3).

7. Opportunities: Initiatives, Resilience, and Positive Issues

The COVID-19 pandemic was a worldwide disaster that challenged and affected individuals and societies worldwide economically, socially, and psychologically. Nevertheless, with all its difficulties, various initiatives, resilience strategies, and positive developments emerged, demonstrating human adaptability and collective strength, so the case of Uttarakhand. Government. People and NGOs collectively took various measures to cope with the challenges, which can be summed up as follows:

1. Government Initiatives

However, the COVID-19 pandemic created a unique happening: due to lockdown, many people lost their jobs and were forced to migrate to their native place. Due to loss of employment, large-scale reverse migrants came to Uttarakhand from major cities like Delhi, Gurgaon, Noida, Ghaziabad, Bangalore, Mumbai, etc., and many other states. The Uttarakhand government took several steps to reverse migrants who returned to the Uttarakhand. The government is focusing on commercializing cultivation of local crops like black soybean, horse gram, kidney beans, amaranth, and finger millet and declared subsidies to promote agriculture with a 90 percent subsidy on farm machines, 80 percent to build poly houses, 80 percent for honey production, and 50 percent for mushroom cultivation (Prakash, 2020). Government is providing huge subsidies and support to dairy development in the village through the self-help groups. The Uttarakhand government is also focusing on developing basic

infrastructure and linking remote villages to metaled roads.

2. Technological Advancement

During and after the pandemic, various governmental and non-governmental companies provided their employees with the facility of working from home, which presents an unparalleled example of technological advancement. Internet providers are strengthening their infrastructure in the state mainly in the mountains, to provide uninterrupted internet and communication facilities. Various employees were doing their jobs while sitting at home through work from home, and this facility is being provided even after the pandemic has ended, i.e. even now.

3. Desire for a Better-Quality Life

But during and after the COVID-19 pandemic many youths have returned to their villages and hometowns that have no records anywhere in search of mental peace, fresh air, and water due to increased awareness of health. Increasing levels of pollution and rising temperatures in metropolitan centers are also increasing reverse migration to the state.

4. High Cost of Living in the Cities

After the COVID-19 pandemic, the financial conditions of the masses get worse. Simultaneously, the cost of living is increasing mostly in the cities throughout the world. The economic sustainability of the population is decreasing day by day in the present economically unstable world. The high cost of living and reverse migration are closely linked. Rising housing costs, expensive healthcare, transportation, and other factors in cities make urban life increasingly difficult for many families. Especially for the middle and lower age groups who struggle to maintain their quality of life in metropolitan areas, many people, especially retirees, self-employed individuals, or those with remote work opportunities, have chosen to reverse migrate to their hometowns to reduce expenses. Although many migrants initially move to cities to maintain their economic survival, their earnings do not match the rising cost of living in the city. Therefore, some people prefer to return to their places of origin, where there is a lower cost of living and affordable healthcare. Increasing opportunities in the tourism sector, eco-tourism, adventure tourism, agro-tourism,

and small businesses provide motivation to the people to settle in their native places and reverse migrate.

5. Job retirements

In Uttarakhand, earlier retired people preferred to reside in those cities where they worked throughout their lives or in cities like Haldwani, Dehradun, etc. But after the COVID-19 pandemic, a trend can be noticed that after retirement from employment, people are thinking about settling in their native places, preferably those native places where easy access is available. Mountainous locations like Uttarakhand offer natural beauty, availability of open spaces, and low pollution, making these regions attractive for post-retirement life.

6. CONCLUSION

The reverse migration has posed many challenges with several opportunities for the state. The challenges are the lack of deteriorating agriculture & fewer employment opportunities, poor basic infrastructure, poor health and educational facilities, and frequent natural calamities in the hilly state of Uttarakhand which forced the native people to migrate to the urban centers. However, there appear to be many opportunities also if the government succeeds in providing livelihood opportunities and basic facilities to the reverse migrating people in the state in their native places and villages. Extensive policy research and studies are needed to explore and suggest viable strategies so that the situation of 'reverse migration' created by the pandemic COVID or any other reasons can be converted into an opportunity that positively may contribute to the overall development of Uttarakhand, mainly rural areas of the state. The problem of ghost villages and underutilization of natural resources like land, water, and forests can also be solved. In this regard, agriculture, horticulture, dairying, home stays, abundant cultural and religious sites, and tourism like health tourism, adventure tourism, religious tourism, and the hospitality industry may prove an advantage. Government should focus on large-scale skill development and training programs for rural populations and reverse migrants. Developing small and cottage industries by providing easy and tax-free loans to nurture self-sufficient and sustainable village economies would be another crucial step. Overall, governments should focus on

developing basic amenities like housing, health, education, and employment with frequent communication and transportation systems. In this way, reverse migration in the state may be transformed into an opportunity.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

Agarwal, D., & Mittal, T. (2025). Impact of reverse migration on India's economy in Uttarakhand. *International Journal of Creative Research Thoughts (IJCRT), 13*(2), 725–738.

Ahmed, A., et al. (2024). Forced reverse migration in Uttarakhand during the COVID-19 outbreak: A boon or a bane? *European Economic Letters, 14*(4). http://eelet.org.uk

Awasthi, I., & Mehta, B. S. (2020). The forced out-migration from hill regions and return migration during the pandemic: Evidence from Uttarakhand. *Indian Journal of Labour Economics, 63*, 1107–1124. https://doi.org/10.1007/s41027-020-00291-w

Dutt, S., Verma, S. K., Bahadur, P., & Snehi, R. K. (2022). Magnitude and pattern of reverse migration and their socio-economic implications in Uttarakhand. *Res Militaris, 12*(1), 513–524.

Jesline, J., et al. (2021). The plight of migrants during COVID-19 and the impact of circular migration in India: A systematic review. *Joshua George, 8*, (231).

Joshi, Y. (2022, June). Calling children back: Is it possible to initiate reverse migration in Uttarakhand? *Firstpost.* https://www.firstpost.com/opinion/calling-children-back-is-it-possible-to-initiate-reverse-migration-in-uttarakhand-10760411.html

Kandpal, P. C. (2021). Policy concerns of 'reverse migration' in Uttarakhand during COVID-19. *IIPA Digest.*

Malik, I. (2022). Migration and reverse migration in Uttarakhand. *Degres Journal, 7*(8), 1–5.

Mamgain, R.P., Reddy, D.N. (2017). Out-migration from the Hill Region of Uttarakhand: Magnitude, Challenges, and Policy Options. In: Reddy, D., Sarap, K. (eds) Rural Labour Mobility in Times of Structural Transformation. Palgrave Macmillan, Singapore. https://doi.org/10.1007/978-981-10-5628-4_10

NABARD. (n.d.). *Insight Report-1: COVID-induced migration: Why, how, and what next.* Department of Economic Analysis & Research, NABARD.

Parveen, S., & Mamgain, P. (2020). A study on reverse migration of human resources: A study of Uttarakhand State. *PalArch's Journal of Archaeology of Egypt / Egyptology, 17*(7), 8961–8975.

Pathak, S., & Agarwal, M. (2023). Reverse migration and COVID-19: A study of government initiatives on reverse migration. *Sodh Disha, 61*(4).

Prakash, M. (2020, April 28). COVID-19: Uttarakhand wants to retain returning citizens. *Down to Earth.* https://www.downtoearth.org.in/news/economy/COVID-19-uttarakhand-wants-to-retain-returningcitizens-70737

Roshani, & Chauhan, B. (2024). Migration in the border areas of Uttarakhand: An emerging security threat. *Journal of Mountain Research, 19*(1), 227–233. https://doi.org/10.51220/jmr.v19-i1

Roy, S. (2020, October 26). Uttarakhand estimates two-thirds of migrants have returned to places of work. *The Hindustan Times.*

Rural Development and Migration Commission. (2019). *Rural development and migration commission report: Uttarakhand.* https://spc.uk.gov.in/department1/document/documentEng-21-10-2021-09-06-42.pdf

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

United Nations Organization. (2020, April 2). India: Migrant workers' plight prompts UN call for 'domestic solidarity' in coronavirus battle. https://news.un.org/en/story/2020/04/1060922

Vij, S., et al. (2023). Reverse migration challenges in Uttarakhand: A comparison of domestic and foreign migrant workers in the post-COVID economy. *Juni Khyat, 13*(12).

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