MENTAL HEALTH IMPACT OF THE COVID-19 PANDEMIC ON REVERSE MIGRANT WORKERS IN UTTARAKHAND – A CROSS-SECTIONAL STUDY

ABSTRACT

The announcement of a nationwide lockdown in India in March 2020 in response to the CoVID-19 pandemic led an exodus of migrant workers back to their homes. The significant adverse impact of this event in its early phase on these reverse migrants has been well documented. With the passage of several months, these reverse migrants eventually reached their homes and re-entered their own communities. This study was conducted amongst a rural community on the interior regions of Almora in hill state of Uttarakhand. It aims to assess the impact of the later phase of the CoVID-19 pandemic and lockdown on the reverse migrants, and compare this impact with the local residents, who have never migrated. Door-to-door survey was conducted in the study population, 5-9 months after the lockdown was announced. The participants were matched and grouped into residents and reverse migrants and were evaluated on PHQ-9, GAD-7, IES, and BRIEF-COPE to assess the impact on the participants. No significant depression or anxiety was found in the reverse migrants group, even though the impact of the pandemic and lockdown was felt more by them as compared to the residents group. In addition, there was no significant difference between the two groups for depression or anxiety. These findings can be attributed to factors such as social support from the community members, engagement in work and the use of approach based coping mechanisms.

KEYWORDS

Community Psychiatry, Pandemic, Mental Health, Reverse Migration, Uttarakhand

INTRODUCTION

The year 2020 began with the world recognizing that the novel CoVID-19 virus was a 'public health emergency of international concern'.[1] In early March, the WHO characterized CoVID-19 as a pandemic. India responded by imposing a nationwide lockdown in the end of March. This lockdown, amongst the most stringent in the world**,** also ended up as being amongst the longest. [2]

The brunt of this lockdown, enforced at short notice, was felt by the country's 40 million internal migrants. An exodus of these migrants began from the cities. While estimates vary, around 23 million migrants set out on the long reverse journey back to their places of origin.[3,4]

In the initial months of the lockdown, these reverse migrants were kept in government shelters, quarantine centers and relief camps. There have been studies on the mental health of persons in this early phase of reverse migration, and they have demonstrated significant adverse impact.[5–9] It is worth reiterating that in this early phase, the reverse migrants were far away from their home and families. They were being kept in restrictive settings such as those described above or were on the road.

As the lockdown eased from June 2020, these reverse migrants reached their homes and families and re-entered life within their own communities. On many other dimensions too, this later phase of the pandemic and lockdown was very different from the early phase. This paper is the first to study the mental health of reverse migrants in the later phase of the lockdown, when they had returned to their villages of origin.

AIM & OBJECTIVES

Aim: Assess the impact of the CoVID-19 pandemic related lockdown on the mental health of reverse migrants.

Objectives:

Assess demographic profile and mental health status of migrant workers who have returned to their villages of origin due to the lockdown.

Compare the impact with residents, I.e., those who have never migrated and continue to who reside in these same villages.

METHODOLOGY

RESEARCH DESIGN: Cross Sectional - Comparative study.

OPERATIONAL DEFINITIONS

CAMP Kumaon: CAMP Kumaon is a community mental health program of Manas Foundation being delivered in Dwarahat block of District Almora, Uttarakhand in collaboration with the CMO Office, Almora. It provides services both at block level at Community Health Centre, Dwarahat and at the village level at Ganoli and four other adjoining villages.

Catchment area: This study draws upon these five villages served by CAMP Kumaon. (Fig. 1) Before the lockdown, the combined population of these 5 villages was 1500, comprising of around 350 families. At the peak of the reverse migration, around 500 migrants had returned to these five villages.

Figure 1: Map of CAMP Kumaon and catchment area

Reverse Migrant: An individual who has moved away from the catchment area in search of employment, either with or without the family and has migrated to a different state in India at least 6 months before the lockdown.

Resident: An individual whose parental home is in the 5 villages of the catchment area, and who has been living here for at least 6 months before the announcement of the lockdown, with permanent employment or business within the village or its vicinity.

SAMPLE SIZE: Consecutive Sampling was employed to recruit 30 reverse migrants (Group 1) and 30 residents (Group 2). Groups were matched on the basis of age and gender.

INCLUSION AND EXCLUSION CRITERIA

The following criteria were used to induct participants for the study

	Group 1 – Reverse Migrants	Group 2 - Residents
Inclusion Criteria	• Participant must be a migrant who has returned home to the defined catchment area due to the pandemic and lockdown. • Participant has access to the mental health clinic and can be followed up. • Participant can read and comprehend Hindi.	• Participant must be a resident of the defined catchment area. • Participant has access to the mental health clinic and can be followed up. • Participant can read and comprehend Hindi.
Exclusion Criteria	• Participant does not consent to the study. • Participant has no history of pre-existing mental illness or intellectual disability. • Presence of other psychiatric co-morbidity at Diagnosable level according to ICD-10 • Substance dependence at diagnosable level except nicotine and tobacco use.	

TOOLS OF DATA COLLECTION

Socio-Demographic Data Sheet: The socio-demographic proforma available at was used to collect the socio-demographic of the participants. The proforma covers various aspects namely- Age, Religion, Marital status, Education Level, Type of Family and Occupational Status.

Patient Health Questionnaire-9 (PHQ-9): PHQ is a multiple-choice self-report inventory by Pfizer Inc. The questionnaire is used for screening, monitoring, diagnosing and measuring the severity of depression according to DSM –IV criteria.[10]

Generalised Anxiety Disorder-7 Item Scale (GAD-7): Developed by Spitzer et al (2006), GAD-7 is used for screening for Generalised Anxiety Disorder and assessing its severity in clinical practice and research.[11]

Impact of Event Scale – Revised (IES-R): Developed by Weiss et al (1997) to measure symptoms of traumatic events with focus on diagnosing PTSD and impact of large-scale traumatic incidents. There are three subscales: intrusion (intrusive thoughts, nightmares, intrusive feelings and imagery, dissociative-like re-experiencing), avoidance (numbing of responsiveness, avoidance of feelings, situations, and ideas), and hyperarousal (anger, irritability, hypervigilance, difficulty concentrating, heightened startle). IES is routinely used to score the severity of subjective distress from traumatic incidents.[12]

BRIEF-COPE: The Brief-COPE is a 28 item self-report questionnaire designed to measure ways to cope with a stressful life event. The coping styles are primarily divided into Approach or Avoidant Coping.[4]

METHODOLOGY

The study was initiated after getting clearance from the Institutional Ethics Committee at DY Patil Institute of Medical Sciences, Pune. Door to door survey was conducted in 5 villages of CAMP Kumaon to enumerate the number of migrant workers. Thirty participants from Group 1 and Group 2 were selected using consecutive sampling as shown in Figure 1. The participants were interviewed between 29/08/2020 to

27/12/2020. This was from 5 to 9 months after lockdown began. In fact, this was the period when restrictions on travel and work had significantly eased.

Data was collected using printed forms and was analysed using IBM SPSS (v25.0 for MacOS) for descriptive statistics. Comparison of scores between the two groups was done using independent sample t-test with p-values less than 0.05 considered as significant.

Figure 2: Study Design

RESULTS

60 participants were enrolled in the study, of whom 30 were reverse migrants and 30 were residents. All participants were male. The minimum age was 20 for both migrants and residents and maximum age was 40 and 37 for migrants and residents respectively.

TABLE 1: Mean age and income and SD of the participants

	MEAN ± SD			T test	p
	MIGRANTS	RESIDENTS	TOTAL		
AGE	26 ± 5	26 ± 6	26 ± 5	-0.54	0.588
INCOME	9783 ± 3688	7267 ± 2935	8525 ± 3540	-	-

The groups were age matched. According to Table 1, it can be seen that the two groups didn't show any significant difference in their age [t= -0.545, p=0.588]. The reverse migrant group had significantly higher mean monthly income as compared to the residents.

TABLE 2: Employment status of the participants

	MIGRANTS	RESIDENTS	TOTAL
EMPLOYED	1 (3.3%)	16 (53.3%)	17 (28.3%)
UNEMPLOYED	29 (96.7%)	14 (46.7%)	43 (71.7%)

At the time of the data collection, only one of the 30 (3.3%) reverse migrants was employed. In contrast, more than half (53.3%) of the residents were employed. The mean duration of the burden of financial loss faced by both groups of participants was 6 months (SD = 1).

Table 3: Comparison of PHQ and GAD between the two groups using Independent t-Test.

	MEAN ± SD		T-test	P
	Migrants	Residents		
PHQ	3 ± 2	3 ± 3	-0.429	0.669
GAD	1 ± 1	1± 1	1.680	0.980

From the above table, Table 3, it can be seen that the mean PHQ and GAD score for both the groups is 3 and 1 respectively. This shows that neither group had significant levels of depression or anxiety. Taking the results of the t-test into account, there was no significant difference between the two groups for depression (t = -0.429, p = 0.669) or anxiety (t = 1.680, p = 0.098).

Table 4: Comparison of IES and the subscales between the two groups using Independent t-Test.

	MEAN ± SD		T-test	P
	Migrants	Residents		
Avoidance	0.08 ± 0.20	0.02 ± 0.11	1.24	0.219
Intrusion	0.27 ± 0.27	0.11 ± 0.20	2.65	**0.010**
Hyperarousal	0.18 ± 0.20	0.01 ± 0.03	4.87	**0.000**
Total	3.27 ± 3.26	0.87 ± 1.53	3.65	**0.001**

Comparing the impact of the lockdown, Table no. 4, the reverse migrant group showed significantly higher impact of the lockdown as compared to the resident group. Higher mean scores for total IES-R score, mean hyperarousal score, mean intrusion score was seen in reverse migrant group. There was no significant difference for mean avoidance scores.

Table 5: Comparison of both the groups on BRIEF- COPE using Independent t-Test

	MEAN ± SD		T-test	P
	Migrants	Residents		
Self-Distraction	2.83 ± 1.44	1.53 ± 1.43	3.506	**.001**
Active	2.00 ± 1.08	1.33 ± 1.42	2.043	**.046**
Denial	0.63 ± 1.10	0.50 ± 0.97	.498	.621
Substance Use	0.43 ± 0.77	1.00 ± 1.36	-1.979	.053
Emotional Support	0.47 ± 0.94	0.50 ± 0.97	-.135	.893
Informational Support	2.10 ± 1.79	0.20 ± 0.81	5.307	**.000**

Behavioural Disengagement	0.27 ± 0.64	0.07 ± 0.37	1.487	.142
Venting	0.20 ± 0.61	0.13 ± 0.51	.460	.647
Positive Reframing	0.33 ± 0.76	0.07 ± 0.37	1.736	.088
Planning	0.30 ± 0.70	0	2.340	**.023**
Humour	0.50 ± 1.01	0	2.715	**.009**
Acceptance	0.43 ± 0.86	0.07 ± 0.37	2.153	**.035**
Religion	0.30 ± 0.70	0	2.340	**.023**
Self-Blame	0.20 ± 0.61	0	1.795	.078
Avoidant Summary	4.57 ± 4.01	3.23 ± 3.09	1.443	.154
Approach Summary	5.63 ± 3.89	2.17 ± 2.41	4.150	**.000**

On comparing the BRIEF- COPE scores between the two groups, the reverse migrant group has a significantly higher score in the self-distraction coping, active coping, use of informational support, planning, humour, acceptance, religion based coping mechanism. Overall, the reverse migrant showed significantly higher score for approach-based coping.

DISCUSSION

Of the 200 migrant families that returned home, 30 were selected who were engaged in a mirid of work profiles before migrating back, were aged between 20 and 40, thus represented a heterogenous study population.

Several studies have been conducted to understand the psychological effects of migration. Firdaus et al concluded that single, unskilled, illiterate daily wage laborers with higher years of migration and lack of sanitation and housing facilities are more likely to have mental health concerns.[5] A WHO report stated that mental health problems like anxiety, depression, sleep disturbances, psychosomatic and post-traumatic stress disorders are commonly seen among migrants.[6]

EARLY PHASE OF THE PANDEMIC AND LOCKDOWN

This vulnerable population of migrants was especially hard hit by the events that unfolded after the onset of the CoVID-19 pandemic. While most people were able to isolate themselves in their homes when the lockdown was announced, the migrants were under additional stress of returning back to their villages. In large numbers, they resorted to walking back for hundreds of kilometers, over a span of days and weeks. This distress was only amplified by the fact that they were not allowed to come back to their villages as people feared outsiders would bring back the virus with them. There was a rise in ‘social tensions’ such as discrimination and xenophobia.[13]

Studies conducted during this early phase of the pandemic and lockdown found a significant negative impact on the mental health of the migrant laborers. Kumar et al found that about 73.5 % of the migrant workers staying in shelter houses or government authorized buildings screened positive for either depression or anxiety.[5,6] A research conducted to study mental health concerns of the migrant workers residing in relief camps in Bangalore found that migrant workers were primarily affected by the uncertainty about the duration of lockdown, financial difficulties and fear of being unemployed/laid off by their employer. [14,15]

The stressful social and administrative conditions prevailing when these studies were conducted has been described above. To compound the situation, these studies were carried out when the returning migrants were housed in shelter homes, a situation that has been found to be distressful for migrant laborers. This is primarily because they

live in an unfamiliar environment with a set of unknown people, some of them don't even share a common language to communicate. Besides, a lot of these migrants came to shelter homes hoping to leave for their villages/hometowns in a few days but with extension of lockdown were forced to stay at the shelter homes.[16]

LATER STAGE OF PANDEMIC AND LOCKDOWN

After June 2020, the restrictions on travel were relaxed. The returning migrants were able to reach their homes and families. They reunited with their communities and began participating in shared activities. The present study takes a fresh look at the mental health of reverse migrants at this later stage of the pandemic, when five to nine months had passed since the announcement of the lockdown. It is also the first to use as control population the residents from the same villages who had never migrated, and who shared the socio-economic and cultural background of the reverse migrants.

We observed that despite the passage of so many months, the reverse migrants were more significantly impacted as compared to the residents, even though they did not meet the threshold for a significant impact by a traumatic event as per IES.

However, the reverse migrants did not have significant levels of depression and anxiety (Table No. 3). In addition to this, there was no significant differences in mean depression and anxiety scores between the two groups. This finding of insignificant levels of depression and anxiety in our later phase study stands in contrast to the findings of the early phase studies described above.[17]

Several factors, both general and specific, could have contributed to this difference. The stressful situation prevailing in the early phase, especially in relation to reverse migrants, has been described earlier. The passage of several months could have led to the amelioration of these aggravating factors. This could have contributed to a mitigation in the levels of distress as the situation evolved into the later phase. In addition to these general factors, certain specific characteristics of the participants of our study could have contributed to the low levels of anxiety and depression.

SPECIFIC SOCIAL AND CULTURAL FACTORS

In this study, most of the reverse migrants have farming land. After returning to their villages, they were found to be engaged in agricultural activity (harvesting) along with their family members. Engagement is work has been associated with increased levels

of positive emotions and wellbeing.[14,15] Thus, involvement in work could have contributed to the observed low scores on depression and anxiety.

It is also relevant that the participants live in a closely knit community and seem to have a sense of belongingness, purpose and support. This provides a sense of social connectedness which seems to play an important role in reducing the levels of both anxiety and depression. Additionally, research has shown that during a stressful psycho-social event social support provides a 'physical and psychological advantage' and plays a key role in reducing psychological.[16]

COPING STRATEGIES AND MENTAL HEALTH

Even though the impact of lockdown was felt more by the reverse migrants (Table No. 4), we have seen that they did not have significant levels of depression and anxiety. This could, perhaps, be related to their significantly higher use of coping strategies like self-distraction coping, active coping, use of informational support, planning, humour, acceptance, religion based coping mechanism in comparison to the residents.

Overall, reverse migrants showed significantly higher mean score for approach-based coping (Table No. 5). Migration to a new place brings with it a lot of hardships, acculturation being one of them. Over time migrants adapt to the changing situations and learn to re-appraise the situation. This prior experience of adjusting might have led to reverse migrants using more approach-based coping techniques such as use of informational and emotional support, planning etc.

Positive social support has also been found to enhance resilience, help protect against developing trauma-related psychopathology and decrease consequences of trauma-induced disorders, such as posttraumatic stress disorder.[17] Therefore, it can be said that social support and the approach-based coping mechanisms might have helped reverse migrants deal with the impact of the pandemic and lockdown.

CONCLUSION

The early phase of the CoVID-19 pandemic and lockdown was extremely stressful for the whole country in general, but even more so for migrant workers. Studies on the mental health of reverse migrants in this early phase showed significant adverse impact. The present study was undertaken to assess the mental health of reverse migrants in the later phase of the pandemic and lockdown, after they had reintegrated back into their communities. No significant depression or anxiety was found in the reverse migrant's group, even though the impact of the pandemic and lockdown was felt more by them as compared to the residents group. In addition, there was no significant difference between the two groups for depression or anxiety. These findings can be attributed to factors such as social support from the community members, engagement in work and the use of approach based coping mechanisms.

STRENGTHS & LIMITATIONS

STRENGTHS

To the best of our knowledge, this was the first study that used as the control group, the residents from the same village who shared the same socio-economic and cultural background as migrants.

Secondly, research has established that during the early phase of lockdown the migrants were significantly distressed and had higher levels of depression and anxiety. However, no study has been carried out to study the mental health of reverse migrants after they have returned to their communities. Our study was conducted in the later phase, from 5 to 9 months after the onset of the lockdown, and at a time when the 'unlock' process was well under way.

LIMITATIONS AND FUTURE DIRECTIONS

- **Due to distance barrier and widespread catchment area a larger sample could not be included. The study can be replicated in a larger sample.**
- Reverse migrants showed use of approach based coping techniques as compared to the residents. The future researchers can focus on the relationship between coping, subjective distress, depression and anxiety among the reverse migrants.
- Role of social support can be further evaluated with focus on reverse migrants
- As our sample was only male participants, gender-based differences could not be assessed.

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