



Risk of COVID-19 Transmission and Livelihood Challenges of Stranded Migrant Labourers during Lockdown in India

Margubur Rahaman¹ · Avijit Roy² · Pradip Chouhan² · Kailash Chandra Das¹ · Md Juel Rana¹

Accepted: 21 June 2021 / Published online: 1 September 2021
© Indian Society of Labour Economics 2021

Abstract

The lockdown during the first phase of COVID-19 pandemic in India triggered an unprecedented humanitarian crisis. Labourers in the informal sector lost their jobs overnight and were stuck at their work places. The present study examines the risk of COVID-19 transmission among stranded migrant labourers and their livelihood challenges during the lockdown. A telephonic survey was conducted during the lockdown of first wave of COVID-19 pandemic to collect information from the stranded migrant labourers. The non-probability snowball sampling technique and structured questionnaire were used to draw the sample. Simple frequency distribution and standard statistical methods were used to accomplish the study objectives. The factors of COVID-19 transmission such as poor housing, co-morbidities, poor practice of WASH and COVID-19 precautions were significantly high among the migrant labourers. The lockdown created livelihood crisis among them. For instance, ration shortage (86%), financial distress (82%), reduction of wages (13%), job loss (86%) and anxiety for COVID-19 infection (81%) were often seen. Many of the labourers did not receive any ration kits (30%) and financial assistance (86%) during lockdown. The governmental assistance to overcome the stranded migrant labourers' challenges during lockdown was less than desirable. India needs to frame a sustainable and effective policy for social security for labourers, particularly in emergency situations.

Keywords Migrant labourers · Livelihood challenges · Reliefs · Lockdown · COVID-19 · India

✉ Margubur Rahaman
margubur48@gmail.com

¹ Department of Migration and Urban Studies, International Institute for Population Sciences (IIPS), Mumbai 400088, India

² Department of Geography, University of Gour Banga, Malda, West Bengal 732103, India

1 Introduction

The COVID-19 pandemic has created not only health disaster but also economic devastation globally. Human migration expands the intensity and geographical boundary of COVID-19 transmission (Sirkeci and Yucesahin 2020). The governments across the globe have imposed restrictions on human migration and mobility (named COVID-19 lockdown) to break the chain of mass transmission of COVID-19. The worldwide COVID-19 lockdown enhanced the socio-economic vulnerability and health crisis, which has not been seen in the last seventy-five years (United Nations 2020). The lockdowns have pushed the economies into a depression, which has resulted in an abnormal fall in GDP globally (Unni 2020). The unstable economic situation has introduced unemployment, job trimming, lessening of wage rate and overall socio-economic crisis. The degree of socio-economic crisis and unemployment has been typically high in developing countries during the lockdown possibly due to the presence of high proportion of informal sector labourers and lack of programmes and policies related to social security for them (Walter 2020). In 2018, 81 per cent of the labourers were engaged in the informal sector in India, without social security and quality of living (Unni 2020). A large number of informal sector labourers are migrant labourers, who have migrated from rural to urban areas. Most of them are originated from socio-economically backward districts of West Bengal, Uttar Pradesh, Bihar, Odisha, Jharkhand and Madhya Pradesh (Keshri and Bhagat 2013). In India, the lockdown took effect on 24 March 2020 without any prior notice and systematic basic arrangements for informal sector labourers and migrants, which is the main source of all difficulties among the migrants. Few migrant labourers could able to return to their native place, but large proportions of them were stuck at working place during the lockdown (SWAN 2020).

Individuals faced socio-economic and health crisis due to the unprecedented COVID-19 lockdowns (Buheji et al. 2020). The informal sectors labourers' especially migrant labourers lost their job overnight and have faced extreme socio-economic hardship. The government was almost silent on the basic issues of migrant labourers (economic crisis, food shortage, unemployment, lack of transport facilities and financial and ration relief) during the initial phase of COVID-19 lockdown. Indian migrant labourers have encountered multiple hardships compared to general people during lockdown (Bhagat et al. 2020). After the initial stage of lockdown, the economic crisis, food shortage and insecure future have seen an unusual turn among migrant labourers (Adhikari et al. 2020). The anxiety of transmitting the COVID-19 disease and the absence of a caregiver or family have boosted the prevalence of mental illness among the migrant labourers during lockdown (Choudhari 2020). About one and half month after the lockdown, the government announced special trains (*Shramik trains*) for stranded migrant labourers. However, inadequate special train services have failed to return all migrants to their native places. As a result, millions of labourers were stuck in their workplaces without basic facilities. Therefore, a scientific study is needed to examine the risk of COVID-19 transmission among stranded migrant labourers and challenges to their livelihoods during lockdown.

2 Review of Literature

2.1 Origin, Destination and Causes of Internal Labour Migration in India

India is among those countries in the world that have large internal and international migration. According to the Census 2011, there were almost 450 million internal migrants in India (Registrar General of India 2011), and more than half of the total migrants in the country were women (Rajan et al. 2020). Male migration is primarily driven by employment/work, while most female migration is due to marriage (Rajan 2013). Almost 40 million migrant labourers are spread over the country estimated by Census 2011 (Registrar General of India 2011). A significant number of these migrants work in informal sectors and are engaged in vulnerable work (Srivastava and Sutradhar 2016). Most of the labour migrants originate from socio-economically backward districts of West Bengal (Malda, Murshidabad, Uttar Dinajpur districts, etc.), Bihar (Kisanganj, Gaya, Purnea, Saharsa, Madhubani, etc.), Odisha (Kalahandi, Mayurbhanj, Naupara, Nabarangpur, etc.) and others (SWAN 2020). The prime destinations of migrant labourers are metro cities (Mumbai, Delhi, Chennai, Kolkata, Bangalore, etc.) and socio-economically developed states (Kerala, Punjab, Haryana, Tamil Nadu, etc.). The major pull factors of labour migration are higher wage rate and job availability at place of destination (Ranjan and Sarkar 2020). The job insecurity, low wage rate and low per-head agricultural land force labour to migrate from their native place (Rajan and Sumeetha 2019). In India, the migrants' remittance significantly contributes to the GDP and helps improve the socio-economic condition of the people at their native place (Mehedintu et al. 2020).

2.2 Issues and Adjustment of Internal Migrant Labourers

One of the important aspects of labour migration is adjustment to working environment and socio-cultural norms at the destination place (Uddin and Mohammed 2021). The concept of adjustment was introduced by Black (1988) to understand the subjective and objective adjustments of labourers with their new role at working place. Both the subjective and objective adjustments measure the worker's well-being (Black 1988). The well-being of labourers is measured by the present and future situation, quality of life, social connections and the nature of economic insecurity (Reza et al 2019). Both adjustment and well-being concepts were largely affected by COVID-19 lockdown. During the present era of demographic transition, labour migration significantly modifies the size of population in a region (Skeldon 2013). In the present globalised world, the role of migration on socio-economic development of any community, society and region has highly observed (Castles 2008). The increasing trend of internal and international migration has been creating various issues such as left behind's psychological and health issues (Desai and Banerji 2008), threats and risks at the place of destination (Gushulak et al. 2009), human smuggling (Kyle and Liang 2001), human trafficking (Avdan 2012), etc. The association between COVID-19 mass transmission and migration turned the migration-related research question into a new domain such as impact of mass migration

of spread of COVID-19, impact of lockdown on migrants, risk of COVID-19 transmission among migrant labourers and socio-economic vulnerability of migrant labour during lockdown.

2.3 Challenges and Copping Strategies of Migrant Labourers During COVID-19 Crisis

The Government of India (GoI) announced a complete nationwide lockdown on 24 March 2020 since the spread of COVID-19. The unplanned lockdown has affected migrants negatively, particularly the marginalized and daily wage-based labourers (Rajan et al. 2020). The informal migrant labourers are most vulnerable during COVID-19 crisis due to job loss and job trimming (Bhagat et al. 2020). The government had not developed any appropriate strategy for millions of internal and international migrant labourers, informal sector labourers and houseless population during the first phase of lockdown (Krishnakumar and Rana 2020). Mass reverse labour migration flow was observed from metro cities to rural India after running special trains for labourers. The Stranded Labourers Action Network (SWAN) found that a significant number of stranded labourers faced food shortage, financial crisis and social insecurity during lockdown (SWAN 2020).

Millions of stranded migrants were left at their place of destinations with a vulnerable condition during the lockdown. Two months after the lockdown, the government had taken some initiatives to overcome the issues of migrant labourers. But, few studies have focused on the issues of stranded migrant labourers during the first two months of lockdown (Adhikari et al. 2020; SWAN 2020; Rajan et al. 2020). However, few if any studies have focused on the risk of COVID-19 transmission among stranded migrant labourers, their livelihood challenges and access of governmental or non-governmental assistance during lockdown in India. Therefore, this study is aimed to measure the risk of COVID-19 transmission, basic livelihood challenges and access of reliefs among stranded migrants during lockdown.

3 Data and Methods

This empirical study is based on the quantitative research approach. The study concentrates only on stranded migrant labourers in informal sectors in Mumbai during COVID-19 lockdown. *In the first stage*, one author visited Malda district in West Bengal to collect the stranded migrant labourers' information and phone number of those who were stuck in Mumbai during lockdown. The first respondent's mobile number was collected from his household member with the help of local administrative member (*Panchayet Pradhan*). The authors visited Malda district because previous studies confirmed a large number of labour migrants originated from Malda (Ranjan and Sarkar 2020; SWAN 2020) and a significant number of them were stuck in Mumbai during COVID-19 lockdown (The Wire 2020). *In the second stage*, the study adopted non-probability snowball sampling techniques for the purpose of data collection through a telephonic survey. A structured interview schedule covering

a set of questions about the socio-economic background, risks and challenges of stranded migrant labourers is used. The participation of respondents is based purely voluntary, and proper consent has been taken before the interview. A total of 350 stranded migrants were interviewed through telephone. After excluding non-response, misreporting and partial response (53 respondents), 297 migrants were taken to accomplish the study objectives. Simple frequency distribution and graphical analysis have been done for the univariate and bivariate analyses. The study was carried out with the help of STATA 14 and Microsoft office 2010 software.

4 Result

4.1 Background Characteristics of the Stranded Migrant Labourers

Table 1 shows the socio-economic and demographic characteristics of the stranded migrant labourers. The majority of migrant labourers are aged 20–39 years (79.5%), male (95.3%), and belong to the Hindu religion (61%). This study also found that almost one-tenth of the migrant labourers are aged people (40 and more years aged). Almost 71% of migrant labourers are married. More than half of the respondents are illiterate or primary educated. The majority of the stranded migrant labourers work in the construction sector (37%), followed by the industrial sector (30.3%), sewage section (17.2%) and transport sector (12.5%). About 30% of the respondents have mentioned that migrant remittance is the primary source of household income. More than half of the migrant labourers' monthly income was less than twenty thousand rupees.

4.2 Risk Factors for COVID-19 Transmission Among Stranded Migrant Labourers

4.2.1 Living Conditions

Table 2 presents the living conditions of the stranded migrant labourers during lockdown. The majority of stranded migrant labourers were living in an unhealthy environments. More than half of the migrant labourers lived in semi-pucca or kutcha rooms. Half of them were residing in rooms at the working site provided by employment authority. More than six persons slept in a single room (64%). Almost 13% of migrant labourers were living in rooms without electrical facilities. One-third of the migrant labourers did not have access to improved sanitation facilities. Many migrant labourers used unclean cooking fuel (33.7%) and had no separate kitchen (90.9%).

4.2.2 Morbidity Prevalence and Patterns

Figure 1 displays the major health problems faced by the stranded migrant labourers during the COVID-19 lockdown. The prevalence of fever/cough (25%) was high,

Table 1 Socio-economic characteristic of the stranded migrant labourers during the lockdown

Background characteristics	Per cent distribution	Background characteristics	Per cent distribution	Background characteristics	Per cent distribution
Age		Monthly income		Caste	
<20 years	12.1	< ₹10,000	32.7	General	21.5
20–29 years	50.2	₹10,000–₹20,000	37.0	OBC	37.0
30–39 years	29.3	₹20,000–₹30,000	16.8	Scheduled caste	27.6
≥40 years	7.7	> ₹30,000	13.5	Scheduled tribe	13.8
Sex		Marital status		Religion	
Female	4.7	Married	70.7	Hindu	61.0
Male	95.3	Unmarried	29.3	Muslim and others	39.0
Household income source		Working sector		Education level	
Agriculture	50.1	Construction	37.0	Illiterate	39.1
Business	13.9	Industry	30.3	Primary	32.0
Service	0.7	Sewage	17.2	Secondary	17.8
Migrant remittance	30.3	Transport	12.5	Higher secondary	9.1
Other	5.0	Other	3.0	Graduation and above	2.0

Source: Authors' field survey (2020)

Table 2 Living conditions of the stranded migrant labourers during the lockdown

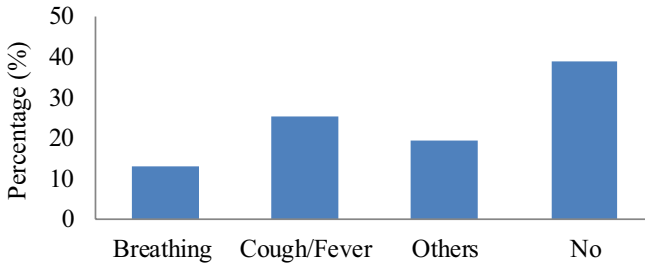
Background characteristics	Per cent distribution	Background characteristics	Per cent distribution
Housing characteristics		Type of the living room	
Houseless	0.7	Own	0.0
Kutchha	25.0	Rented	47.6
Pucca	18.7	Company provided	51.7
Semi-pucca	55.6	Houseless	0.7
Sleeping room density		Place of cooking	
Low (≥ 3 persons)	3.4	In separate room	3.4
Moderate (4–5 persons)	32.7	In living room	90.9
High (≥ 6 persons)	64.0	Outdoor	5.7
Electricity		Cooking fuel	
Yes	86.5	Clean	33.7
No	13.5	Unclean	66.3
Source of drinking water		Sanitation facilities	
Unimproved source	2.4	No facilities	5.7
Public tap	70.0	Unimproved	26.9
Tube well	10.8	Improved	3.4
Other improved source	16.8	Improved with share	64

Source: Authors' Field Survey (2020)

followed by other health issues (20%) and breathing problems (13%). Almost 40% of respondents reported that they were not affected by any health issues during the lockdown. Figure 2 shows that multi-morbidity was significant among aged labourers (aged 40–49 years). The breathing problem and cough/fever were significantly high among them. The prevalence of any diseases was found low among young adult migrant labourers (46%).

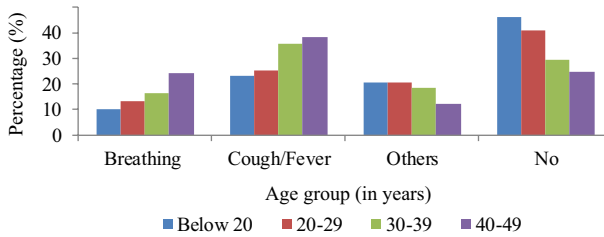
4.2.3 Status of Maintaining COVID-19 Precautions

The World Health Organization has recommended some simple COVID-19 precautions such as social distancing, wearing masks and using sanitizers. Figure 3 shows the percentage of labourers who maintained COVID-19 precautions during lockdown. A substantial proportion of respondents (74%) were usually not using hand sanitizers. Nearly 62% of the respondents were usually not wearing masks. Only one-tenth of them were using masks regularly to protect them from COVID-19. Using masks and sanitizers were reported to be expensive for the marginalized groups and daily wage earner migrant workers. Almost 51% of stranded labourers were not maintaining social distancing.



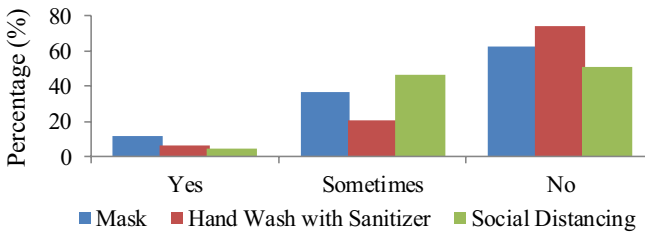
Source: Authors' Field Survey (2020)

Fig. 1 Morbidity prevalence among the stranded migrant labourers



Source: Authors' Field Survey (2020)

Fig. 2 Morbidity conditions among the stranded labourers by their age groups



Source: Authors' Field Survey (2020)

Fig. 3 Percentage of stranded migrant labourers who maintained COVID-19 precautions

4.3 Livelihood Challenges of Stranded Migrant Labourers

4.3.1 Ration Shortage and Financial Crisis

Figure 4 shows the percentage of labourers was faced ration shortage and financial crisis during the lockdown. This figure displayed that 54% of labourers faced

acute ration shortage during the nationwide lockdown. However, 33% of labourers reported that they were sometimes faced ration shortages. Simultaneously, only 14% of the labourers did not face any kind of ration shortage. A significant number of them experienced financial crisis severely (59%), followed by sometimes (22%) during the COVID-19 lockdown. However, almost 18% of them responded that they were not experienced the financial crisis during the COVID-19 lockdown.

4.3.2 Wages

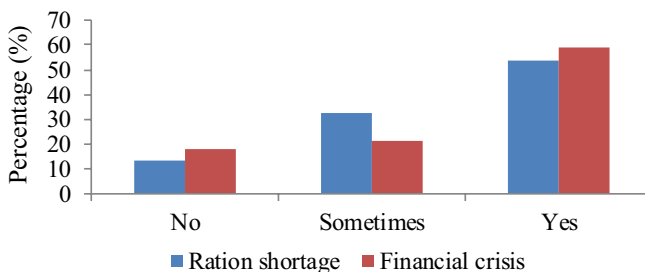
Figure 5 shows the percentage of labourers who were receiving wages during the lockdown. Almost 86% of labourers did not get any wages during lockdown. Only 14% of labourers received wages from their employer. Among them, 13% received wages, which was partial payment. Only 1% of labourers received full payment of wages.

4.3.3 Anxiety About COVID-19 Transmission

Figure 6 shows the percentage of labourers who were feeling anxiety about COVID-19 infection during the lockdown. The majority of stranded labourers (57%) were feeling anxiety always, followed by 31% of them felt anxiety sometimes during lockdown. About 12% of respondents said that they were not anxious about COVID-19 infection.

4.3.4 Migrant Workers' Opinion About the Impact of COVID-19 Lockdown on Quality of Life

The effect of COVID-19 lockdown was negatively associated with migrant workers' quality of life as given in Table 3. Most migrant workers responded that their



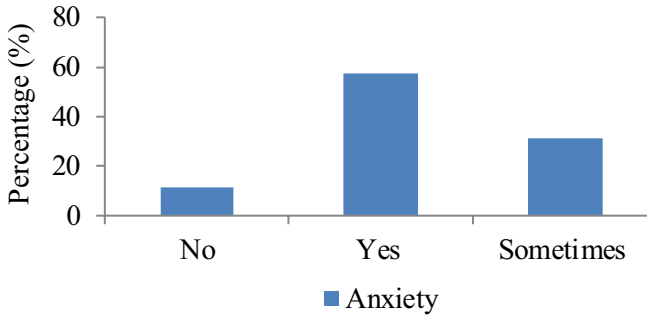
Source: Authors' Field Survey (2020)

Fig. 4 Percentage of labourers who were faced ration shortage and financial crisis



Source: Authors' Field Survey (2020)

Fig. 5 Percentage of labourers who were receiving wages



Source: Authors' Field Survey (2020)

Fig. 6 Percentage of labourers who were feeling anxiety about COVID-19 infection

food intake capacity, income, savings and employment opportunity have significantly reduced due to lockdown. Almost 88% of labourers expressed that their daily food intake was affected due to the lockdown. More than 90% of labourers expressed that their income, savings and employment opportunity were reduced and livelihood vulnerability was increased due to the lockdown.

4.4 Access to Ration and Financial Relief

Figure 7 presents the percentage of labourers who received ration kits and financial aid during lockdown. A significant proportion of labourers did not get any ration

Table 3 Labourers' perception about the impacts of lockdown on their livelihood

Perception about impact of lockdown	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Daily food intake has reduced	70.4	17.5	11.1	0.7	0.3
Income has reduced	84.2	8.1	5.1	1.7	1.0
Saving has reduced	71.4	19.2	6.7	2.0	0.7
Livelihood vulnerability increased	88.6	6.1	3.0	2.0	0.3
Employment opportunity has reduced	73.7	21.5	3.4	0.3	1.0

Source: Authors' Field Survey (2020)

kit (31%) and financial aid (86%) during the lockdown crisis. Most of the labourers received ration kits from NGOs (60%), followed by governmental organisations (9%). Similarly, 12% of labourers received financial aid from NGOs, followed by governmental organisation (2%).

5 Discussion

The present study has focused on the burning issues of stranded migrant labourers during COVID-19 lockdown in India. *Firstly*, the study has examined the risk factors for COVID-19 transmission among the labourers. The risk factors such as living conditions (room density and WASH practice), co-morbidity and precautions (social distance, using sanitizer and using mask), have been included in the study to assess the transmission of COVID-19 infection. *Secondly*, the livelihood challenges such as ration shortage, financial crisis, unpaid wages and perception about the impact of lockdown on daily life have been used to assess the livelihood vulnerability. And finally, the access of governmental and non-governmental assistance (ration and financial assistance) during the COVID-19 crisis has been analysed.

The risk factors for COVID-19 transmission were significantly high among stranded labourers during the lockdown. For instance, the extreme poor housing conditions and precautions were found among them, which might increase the risk of COVID-19 transmission. The precautions, especially wearing mask and using sanitizers is expensive for the stranded labourers. The poor lifestyle and housing are

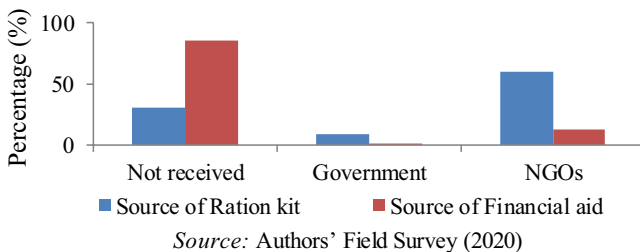


Fig. 7 Percentages of labourers who received ration kit and financial aid

the main reasons for the mass spread of infectious diseases among them, which was suggested by previous researchers (Castelli and Sulis 2017). Most of them are living in the poor housing condition with high room density in the metro cities of India, which was found in previous studies (Gupta and Kumar 2007). This underdeveloped living condition was also the challenging issue to follow the WHO guidelines precautions to contain the COVID-19 spreading such as social distancing, hygienic WASH practice and home isolation.

A significant share of old-aged migrant and the multi-morbid labourers were stuck during lockdown, who are also more likely to be infected with the COVID-19 virus. The existence of low immunity and co-morbidities among aged persons (Kulkarni et al. 2014) have more risk to COVID-19 infection (Liu et al., 2020). The presence of significant co-morbidities has been found in the present study. Previous studies also suggested that a large proportion of informal sector labours have suffered from different communicable and non-communicable diseases (Ahmad and Aggarwal, 2017). The presence of co-morbidities also increases the chances of COVID-19 infection among labourers. The poor living conditions and co-morbidities have increased the chances of being infected with COVID-19 virus and increased the demand for health care services.

The lockdown has created the sudden job loss, food shortage and economic distress. Similar findings have also documented in previous studies in different contexts (Choudhury et al. 2020; Adhikari et al. 2020). A significant number of stranded labourers were working without or partial payment, which indicates the violation of labourers' fundamental right. During the lockdown, workers were deprived of their basic rights and were driven into poverty (Choudhury et al. 2020). During this tragic situation, various organizations have helped in the distribution of rations and financially, which is commendable (Suresh et al. 2020). The present study suggests that a negligible number of stranded labourers received governmental assistance during lockdown, which highlights the failure of the government (The Scroll 2020). The complexity of the public distribution system (PDS) is responsible for poor access of the governmental ration relief among the stranded labourers during the lockdown. The government's inadequate effort on the issues of stranded labourers has exacerbated the chaotic situation among them. In such a situation, many people try to return home on foot and even die in accident. There are also cases of stranded migrants who committed suicide and died due to starvation (Aman et al. 2020). Most of the stranded migrant labourers were anxious about COVID-19 infection during the lockdown; a similar result was also found in previous research (Kumar et al. 2020). Anxiety about COVID-19 infection is one of the causes of suicide during lockdown, but government's effort for mental health like telephonic mental counselling service for stranded migrants was almost negligible.

The inadequate information about number and location of stranded migrants (Sengupta and Jha 2020) is another reason of poor coverage of governmental assistance (The Hindu 2020). About two months after the lockdown, the government took some initiatives that were insufficient. Firstly, government launched "Shramik Setu portal and app" to provide different information-related welfare schemes and online application facilities to migrant labourers to avail the benefits (The Print 2020). The present study found that most of the migrant labourers were illiterate. Therefore,

high illiteracy among the migrants critiques the potential benefits of “Shramik Setu portal and app”, and they question how they use this app if most were illiterate. Secondly, the Government of India announced full subsidised ration and cooking fuel for poor people, insurance for frontline health workers, and transfer cash to construction labourers (The Economic Times, 2020a, 2020b). However, this announcement did not cover stranded migrant labourers. Thirdly, the Union Home Ministry announced to arrange over 2600 “Shramik” special trains (since May 1) for transportation of stranded migrant labourers (Ghosh and Sarkar 2020), but the arrangement and number of trains were insufficient. Many labourers are unable to arrange travel tickets due to insufficient number of train services and expensive ticket. Fourthly, the *Garib Kalyan Rozgar Abhiyaan* (GKRA scheme) was implemented by the government to create jobs for return migrants in 116 districts of selected six states (Bihar, Madhya Pradesh, Uttar Pradesh, Rajasthan, Jharkhand and Odisha) on a mission mode (The Economic Times 2020c). However, the rest of the deprived districts missed from this scheme, which raised question on governmental decision. Fifthly, the ministry of labour and employment envisaged to set “National Database” for informal sector labourers and provide them universal social security coverage, which will help keep track of migrants (Ministry of Labour and Employment 2014). But, during lockdown the collection of such type of data will be impossible. In such circumstances, stranded migrant labourers have been distressed in two ways, viz. protect themselves from a lethal virus and fight for survival due to loss of income during this pandemic (Srivastava 2020). The United Nations said the government should follow the Supreme Court judgement to ensure the well-being of millions of internal migrant labourers (United Nations Human Rights 2020).

6 Conclusion

The risk of COVID-19 virus transmission among migrant labourers has been significantly high due to their deprived socio-economic and housing conditions, poor practice of COVID-19 precautions and high prevalence of co-morbidities. The lockdown has negatively impacted their lives and livelihood. During this crisis period, some non-governmental organisations have taken initiatives to provide ration kits and financial assistance. The access of governmental assistance has been less than desirable. The government failed to provide basic need of stranded migrants such as food, shelter, financial support as well as social security. Undoubtedly, the havoc on migrant labourers has been due to inefficient government policies and programmes on crisis management in general and stranded migrants in particular. In addition, the government does not have data on place of origin, place of destination, socio-economic and demographic status, etc. In this background, the government needs to maintain a database for the migrations for the social security benefits. Importantly, the government needs sustainable and effective policy for the migrant labourers, which will ensure the supply of rations, economic support, employment opportunities and mobile health services.

Acknowledgements The authors are grateful to the respondents.

Authors' Contribution All authors jointly contributed to the design of the study. AR and MR contributed to the data collection and analysis. MJR contributed to the writing of the draft report. PC and KCD edited the final draft. All authors have read and approved the final manuscript.

Funding This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

Declarations

Conflicts of Interest The authors have no conflicts of interest.

Access to the Data The data analysed in this study are available from the corresponding author upon reasonable request. The corresponding author takes responsibility for the integrity and accuracy of the data analysis.

References

- Adhikari, A., N. Goregaonkar, R. Narayanan, N. Panicker, and N. Ramamoorthy. 2020. Manufactured Maladies: Lives and Livelihoods of Migrant Workers During COVID-19 Lockdown in India. *The Indian Journal of Labour Economics* 63: 969–999.
- Ahmad, N., and K. Aggarwal. 2017. Health shock, Catastrophic Expenditure and Its Consequences on Welfare of the Household Engaged in Informal Sector. *Journal of Public Health* 25 (6): 611–624.
- Aman, Kanika Sharma, R. Krushna, and G.N. Thejesh. 2020. India Non Virus Deaths During lockdown (Version 20200730). Zenodo.
- Avdan, N. 2012. Human Trafficking and Migration Control Policy: Vicious or Virtuous Cycle? *Urnal of Public Policy*. <https://doi.org/10.1017/SO143814X12000128>.
- Bhagat, R.B., R.S. Reshmi, H. Sahoo, A.K. Roy, and D. Govil. 2020. The COVID-19, Migration and Livelihood in India: Challenges and Policy Issues. *Migration Letters* 17 (5): 705–718.
- Black, J.S. 1988. Work Role Transitions: A Study of American Expatriate Managers in Japan. *Journal of International Business Studies* 19 (2): 277–294.
- Buheji, M., da Costa Cunha, K., Beka, G., Mavric, B., De Souza, Y. L., da Costa Silva, S. S., et al. 2020. The extent of covid-19 pandemic socio-economic impact on global poverty. a global integrative multidisciplinary review. *American Journal of Economics* 10(4): 213–224.
- Castelli, F., and G. Sulis. 2017. Migration and Infectious Diseases. *Clinical Microbiology and Infection* 23 (5): 283–289.
- Castles, S. 2008. Development and Migration—Migration and Development: What Comes First? *Development* 2 (09): 1–18.
- Choudhari, R. 2020. COVID-19 Pandemic: Mental Health Challenges of Internal Migrant Labourers of India. *Asian Journal of Psychiatry* 54: 102254. <https://doi.org/10.1016/j.ajp.2020.102254>.
- Choudhury, P., Koo, W., Li, X., Kishore, N., Balsari, S., & Khanna, T. 2020. Food Security and Human Mobility During the Covid-19 Lockdown. *Harvard Business School Technology & Operations Mgt. Unit Working Paper* (20–113): 20–113.
- Desai, S., and M. Banerji. 2008. Negotiated Identities: Male Migration and Left-Behind Wives in India. *Journal of Population Research* 25 (3): 337–355.
- Ghosh, A., and S. Sarkar. 2020. The Coronavirus (COVID-19) Pandemic's Impact on Maternal Mental Health and Questionable Healthcare Services in Rural India. *The International Journal of Health Planning and Management* 35 (6): 1626–1628. <https://doi.org/10.1002/hpm.3050>.
- Gupta, R., and Kumar, P. 2007. Social evils, poverty & health. *Indian Journal of Medical Research* 126 (4): 279–288.
- Gushulak, B.D., J. Weekers, and D.W. MacPherson. 2009. Migrants and Emerging Public Health Issues in a Globalized World: Threats, Risks and Challenges, An Evidence-Based Framework. *Emerging Health Threats Journal* 2 (1): 7091. <https://doi.org/10.3402/ehjt.v2i0.7091>.

- The Hindu. 2020. Govt. has no data of migrant labourers' death, loss of job. <https://www.thehindu.com/news/national/govt-has-no-data-of-migrant-labourers-death-loss-of-job/article32600637.ece>.
- Keshri, K., and R.B. Bhagat. 2013. Socioeconomic determinants of temporary labour migration in India: A regional analysis. *Asian Population Studies* 9 (2): 175–195.
- Krishnakumar, B., and S. Rana. 2020. COVID 19 in INDIA: Strategies to Combat from Combination Threat of Life and Livelihood. *Journal of Microbiology, Immunology and Infection* 53 (3): 389–391. <https://doi.org/10.1016/j.jmii.2020.03.024>.
- Kulkarni, V., P. Chinnakali, T. Kanchan, A. Rao, M. Shenoy, and M.K. Papanna. 2014. Psychiatric Co-morbidities Among Patients with Select Non-communicable Diseases in a Coastal City of South India. *International Journal of Preventive Medicine* 5 (9): 1139.
- Kumar, K., A. Mehra, S. Sahoo, R. Nehra, and S. Grover. 2020. The Psychological Impact of COVID-19 Pandemic and Lockdown on the Migrant Labourers: A Cross-Sectional Survey. *Asian Journal of Psychiatry* 53: 102252. <https://doi.org/10.1016/j.ajp.2020.102252>.
- Kyle, D., & Liang, Z. (2001). Migration merchants: human smuggling from Ecuador and China.
- Liu, T., W. Liang, H. Zhong, J. He, Z. Chen, G. He, et al. 2020. Risk Factors Associated with COVID-19 Infection: A Retrospective Cohort Study Based on Contacts Tracing. *Emerging Microbes & Infections* 9 (1): 1546–1553. <https://doi.org/10.1080/22221751.2020.1787799>.
- Mehedintu, A., G. Soava, and M. Sterpu. 2020. Remittances, Migration and Gross Domestic Product from Romania's Perspective. *Sustainability* 12 (1): 212.
- Ministry of Labour and Employment (2014). Report on Employment in Informal Sector and Conditions of Informal Employment (2013–14) Volume IV. <https://labour.gov.in/sites/default/files/Report%20vol%204%20final.pdf>
- The Print. 2020. Modi Govt's Latest Outreach for Migrant Labourers — ShramikSetu Portal and App. <https://theprint.in/india/modi-govts-latest-outreach-for-migrant-labourers-shramik-setu-portal-and-app/447208/>
- Rajan, S.I. 2013. Internal Migration and Youth in India: Main Features, Trends and Emerging Challenges. Discussion Paper, UNESCO, Delhi.
- Rajan, S.I., P. Sivakumar, and A. Srinivasan. 2020. The COVID-19 Pandemic and Internal Labour Migration in India: A 'Crisis of Mobility.' *The Indian Journal of Labour Economics* 63: 1021–10391.
- Rajan, S.I., and M. Sumeetha. 2019. *Handbook of Internal Migration in India*. Delhi: Sage.
- Ranjan, S. I., & Sarkar, P. 2020. Out-Migration from West Bengal: Measuring the Economic Consequences Both at the Source and Destination. In *Population Dynamics in Eastern India and Bangladesh* (pp. 349–366). Springer, Singapore. <https://doi.org/10.1007/978-981-15-3045-6>
- Registrar General of India. 2011. D Series. Ofce of the RGI and Census Commissioner. Government of India.
- Reza, M.M., T. Subramaniam, and M.R. Islam. 2019. Economic and Social Well-Being of Asian Labour Migrants: A Literature Review. *Social Indicators Research* 141 (3): 1245–1264.
- Sengupta, S., and M.K. Jha. 2020. Social Policy, COVID-19 and Impoverished Migrants: Challenges and Prospects in Locked Down India. *The International Journal of Community and Social Development* 2 (2): 152–172. <https://doi.org/10.1177/2516602620933715>.
- Sirkeci, I., & Yucesahin, M. M. 2020. Coronavirus and Migration: Analysis of Human Mobility and the Spread of COVID-19. *Migration Letters*; 17(2): 379–398. <https://doi.org/10.33182/ml.v17i2.935>
- Skeldon, R. 2013. *Global migration: Demographic aspects and its relevance for development*. New York: United Nations.
- Srivastava, R. 2020. Labour Migration, Vulnerability, and Development Policy: The Pandemic as Inflection Point? *The Indian Journal of Labour Economics* 63 (4): 859–883.
- Srivastava, R., and R. Sutradhar. 2016. Labour migration to the construction sector in India and its impact on rural poverty. *Indian Journal of Human Development* 10 (1): 27–48.
- Suresh, R., J. James, and RSj, B. 2020. Migrant Labourers at Crossroads-The COVID-19 Pandemic and the Migrant Experience in India. *Social Work in Public Health* 35 (7): 633–643. <https://doi.org/10.1080/19371918.2020.1808552>.
- SWAN. 2020. Stranded Workers Action Network <http://strandedworkers.in/mdocuments-library/>.
- The Economic Times. 2020a. PM Modi launches employment scheme for migrant labourers affected by coronavirus lockdown. <https://economictimes.indiatimes.com/news/economy/policy/pm-launches-employment-scheme-for-migrant-labourers/articleshow/76479291.cms>.

- The Economic Times. 2020b. Covid-19 outbreak: States asked to transfer funds to construction labourers' accounts. <https://economictimes.indiatimes.com/news/politics-and-nation/covid-19-outbreak-states-asked-to-transfer-funds-to-construction-labourers-accounts/articleshow/74802336.cms>.
- The Economic Times. 2020c. FM Nirmala Sitharaman announces Rs 1.7 lakh crore relief package for poor. Retrived from- <https://economictimes.indiatimes.com/news/economy/policy/fm-nirmala-sitharaman-announces-rs-1-7-lakh-crore-relief-package-for-poor/articleshow/74825054.cms?from=mdr>.
- The Scroll. 2020. Covid-19 Lockdown: 90% of Migrant Labourers Got No Help From Government or Employers, Shows Survey. <https://scroll.in/latest/959271/covid-19-lockdown-90-migrant-labourers-received-no-help-from-government-or-employers-shows-survey> November 2020.
- The Wire. 2020. For Bengali Muslim Migrants in Wadala, Discrimination and Hunger Go Hand in Hand. <https://thewire.in/rights/bengali-muslim-migrant-workers-lockdown-wadala>.
- Uddin, M.S., and A.A. Mohammed. 2021. Adjustment Factors on the Work Performance of Bangladeshi Temporary Contract Labourers in Malaysia. *The Indian Journal of Labour Economics*. <https://doi.org/10.1007/s41027-021-00309-x>.
- United Nations. 2020. COVID-19. Department of Economic and Social Affairs. <https://www.un.org/en/desa/covid-19>.
- United Nations Human Rights. 2020. COVID-19: Urgent help for India's forgotten migrant labourers must follow Supreme Court ruling, say UN experts. Geneva. <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25926>.
- Unni, J. 2020. Impact of COVID-19 on Informal Economy: The Revival. *The Indian Journal of Labour Economics* 63 (1): 113–118.
- Walter, D. 2020. Implications of Covid-19 for Labour and Employment in India. *The Indian Journal of Labour Economics* 63 (1): 47–51.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.