

Original Research Article

Socio-economic impact of COVID-19 pandemic and its coping measures in a rural area of central Kerala

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ABSTRACT

Background: The COVID-19 pandemic is certainly considered one among the largest human disaster in the current decade, causing simultaneous health and socioeconomic suffering. This study was conducted to study the socioeconomic impact of COVID-19 pandemic at the household level and the coping measures among adults in a rural area.

Methods: A cross-sectional study was conducted in a rural area of Thrissur district for a period of eight months. Cluster sampling was done. Among the total subcentres in a rural primary health centre (PHC), one subcentre was selected using lottery method. The consecutive houses were included till the calculated sample size was obtained. After establishing a rapport with the subject, data was collected using a semi-structured interview schedule from the participant using questions in local language.

Results: Mean age was 47.6±13.7 years. The common social impacts due to the pandemic were loss of job (53.8%), difficulty in finding jobs (47.1%) difficulty due to inability to travel (37%), skipping of at least one of the meals (27.5%), difficulty in travelling back to permanent home (20.7%), difficulty in getting health services (14.4%). The major economic impacts were losing your wage due to lockdown (74%) and difficulty in repaying loans (63%). The main coping measure was government's public distribution system 72.3%.

Conclusions: There were social issues and economic crisis due to COVID-19 pandemic and its lock down measures among the population. Both government and non-governmental sectors should understand the magnitude of the problem and should find the ways to tackle the situation.

Keywords: Socioeconomic, Impact, COVID-19, Coping, Lock down

INTRODUCTION

The COVID-19 pandemic is certainly considered one among the largest human disaster in the current decade, causing simultaneous health and socioeconomic suffering all around the world. It was said to originate from a seafood market in Wuhan city, Hubei Province, China. From there, the disease has spread across the globe thereby affecting more than 216 million, with more than four million people having lost their lives.¹

In addition, the pandemic is expected to regress some of the gains that many countries have made in poverty reduction and towards social indicators. As per World bank details, the poverty rate of Pakistan declined during the last two decades by 40 percent to 24.3 percent in 2015.² However, estimates by international monetary fund suggest a sharp rise in the poverty rates to 40 percent and the real gross domestic product (GDP) growth has also slow down by 3% for financial year (FY) 2019-2020. Based on United Nations development programme

(UNDP) assessment, coping strategy used in Nepal during the lockdown of COVID-19 were reducing number of meals per day (10.3%), 18.8% borrow food and 33% borrowed money from a formal/informal lender.³

The Government of India had enforced a lockdown, beginning 24 March 2020, along with travel restriction and social distancing, resulting in closure of many production facilities to slow the spread of virus. While the lockdown might have been successful in slowing infection rates, it had resulted in a significant socioeconomic impact across the country. Thousands of individuals were without jobs and lost income, the country's economic growth rate had declined. Hotels, tourism, aviation and transportation were greatly affected bringing their earnings to near zero.⁴ The international monetary fund has forecasted that Indian GDP will register a negative growth of -4.5 in the FY 2020-21. In addition, quarantine and isolation policies could also add to loss of wages for the public. The pandemic had the worse disproportional impacted on the vulnerable population: informal sector workers, daily labourers, small enterprises and migrants.

According to the Centre for Monitoring Indian Economy, more than 122 million people lost their jobs in April 2020; most of them were the small traders and daily wage labourers. While regular permanent employees may continue to receive their salaries during lockdown, the daily wage earner and unskilled labourers' earnings are severely affected.⁵

Kerala is a state of southern India is having large number of emigrants across the world. The state had been receiving large number of foreign remittances every year from the emigrants. The pandemic had caused financial crisis and loss of employment for Keralite's in Gulf and other countries. Though the exact figure is unavailable, it is likely that two to three lakh migrant workers may lose jobs and return to Kerala.⁶ This can led to, thus worsen the level of unemployment further and will have serious economic consequences in Kerala. In this scenario this study was conducted to study the socioeconomic impact of COVID-19 pandemic at the household level and the coping measures among adults in a rural area.

METHODS

This cross-sectional study was conducted among 535 adult members of more than 18 years old and less than 65 years during the period January 2021 to August 2021. The study was conducted in households of Avanur panchayath of Thrissur district in Kerala. It was done using cluster sampling technique. Each subcentre area was considered as a cluster. Among the total subcentres in the PHC under Avanur panchayath, one subcentre was selected using lottery method. Sample size was calculated using the formula given below.

$$n = Z_{\alpha}^2 pq/d^2$$

With an absolute precision of 5, prevalence of remittance fall among the workers was 23% and design effect - 1.9 and was found to be 517.⁵ Assuming a non-response rate of 10%, the sample size was calculated to be 569. In this study 535 (response rate of 94%) participated. Power of the study was calculated after study using the proportion of persons who availed moratorium and was found to be 85.6%.

Data collection was started only after getting approval from institutional research committee and ethical committee. It was decided to entrust ASHA workers to collect the data. After getting an informed consent regarding the study from the local authority, hands on training were given to ASHA workers on data collection. After reaching the selected sub centre area, a prominent road was identified by the ASHA worker and the first house in that road was selected as first house for data collection. The consecutive houses were included till the calculated sample size was obtained. Locked houses were excluded after three visits. All eligible adults from each household satisfying the inclusion criteria in the house hold were the study participants. Written informed consent was obtained from the selected participants. After establishing a rapport with the subject, data was collected using a semi-structured interview schedule from the participant using questions in local language. Timely monitoring of data collection was done by one of the investigators. Information obtained was used for the purpose of the study only and strict confidentiality was maintained throughout. Bed ridden patients, mentally subnormal patients and those who cannot comprehend were excluded from the study. Visits to the households where persons were in quarantine or home isolation due to COVID-19 were postponed till their period of isolation was over.

Operational definitions of COVID-19 confirmed case was defined as laboratory confirmed case of severe acute respiratory syndrome coronavirus-2 (SARS CoV-2) infection either by reverse transcriptase polymerase chain reaction (RT PCR) or rapid antigen test. Quarantine meant the restriction of movement either in home or a facility of the persons who were exposed to COVID confirmed cases/travelled from outside Kerala or India/place from large number of COVID cases. Isolation was defined as preventing contact with all persons due to infection with COVID-19 either in home or admitted in first line treatment centre of a hospital. Socio economic impact was assessed as per UNDP. Social impacts included loss of job, problem in transportation, domestic violence and crime, reverse migration, skipping meals and poverty. However, the economic impacts included loss of wage, inability to repay loans, difficulty in paying for health services, difficulty in paying for food, difficulty in paying off debts if any and difficulty in paying for child's education.

The study variables include general demographic information, details regarding COVID-19 infection, isolation, quarantine and impact of lockdown on the

households (social and economic impact) and the coping mechanisms adopted by the households. Qualitative data were expressed in proportions and quantitative data were expressed in means and standard deviation.

RESULTS

Among the 535 study participants 63% were males. The mean age of study participants was 47.6±13.7 years. In this study 71.6% were Hindus, 27.9% Christians and rest Muslims. Among the participants 59.3% were head of the family. The number of family members of the study participants varied from 1 to 9 individuals, more than 50% had 4 or 5 family members. 18.3% of the study participants belonged to some disadvantaged groups of which 9% were widows, 2.3% unmarried women (>40 years), 1.5% physically disabled persons and the rest 5.5% included mental handicap, elderly with no support and others. More than half of participants had studied less than or up to 10th standard (54.8%), 21.7% up to 12th standard in school, 15.9%-degree, 5% post-graduation and 1.7% professional. 1.7% had not studied in school. The details of socio demography are given in Table 1.

Social and economic impact and coping mechanisms

Loss of job was one of the commonest (53.8%) impact due to the pandemic in this study. People had difficulty in finding new jobs in the period of locked down. In the study

people had difficulty in travel due to locked down so that they couldn't go back to their permanent home or they had to migrate back from work place. Some had psychological stress during this period. People had to skip at least one meal was also found in this study. The proportion of the social impacts noted in the study is given in the Table 2.

The economic impacts studied were loss of their wages due to locked down. Due to this pandemic period whether they had suffered from any difficulty in repaying loan, paying any bills, paying for food, paying for health services, for children's education was studied in the present study. 74% lost their wages in the present study. The detailed result on economic impacts was given in the Table 3.

Only 17.9% could find an alternate source of income during the phase of locked down and pandemic. 72% in this study availed the government's public distribution system food kits. Among the study participants, 42% had to borrow money either from a formal or informal money lender. 94% in this study got monthly ration of food from the government. 47% got health care support during the locked down period also. Some reported difficulty in implementing control measures due to economic constraints. Result of this given in Figure 1. Some obtained different types of support in the form of rent/tuition fees/loan waver. Coping mechanism and support obtained during pandemic and locked down period was given in the Tables 4 and 5 respectively.

Table 1: Socio demographic details of study participants.

Socio demographic variables	Frequency (n=535)	Percentage (%)
Age distribution (years)		
Less than 30	68	12.7
31-40	100	18.7
41-50	163	30.5
51- 60	132	24.6
More than 61	72	13.5
Gender distribution		
Male	337	63
Female	198	37
Religion		
Hindu	383	71.6
Christian	149	27.9
Muslim	3	0.5
Education		
Illiterate	5	0.9
Up to 10th standard	293	54.8
12th standard	116	21.7
Degree	85	15.9
Post-graduation	27	5.0
Professional	9	1.7
Monthly income		
Less than Rs 5,000/-	218	40.7
Rs 5,000 to 10,000/-	162	30.3
Rs 10,000 to 15,000/-	78	14.7
Rs 15,000 to 20,000/-	42	7.9
Rs 20,000 to 25,000/-	17	3.1

Continued.

Socio demographic variables	Frequency (n=535)	Percentage (%)
More than Rs 25,000/-	18	3.3
Occupational status of respondent		
Self-employed in agriculture	95	17.8
Self-employed in non-agriculture	69	12.9
Dailylabor in agriculture	151	28.2
Dailylabor in non-agriculture	59	11
Formal employment	61	11.4
Returnee migrant from foreign employment	16	2.9
Housewife/students	24	4.5
Unemployed	34	6.4
Others	26	4.9
Types of payments		
Fixed monthly salary	168	31.4
Fixed weekly salary	26	4.9
Daily per hour of work	90	16.8
Payment for job/task	136	25.4
In kind payment	102	19.1
No payment	13	2.4

Table 2: Distribution of study participants based on social impact of lockdown.

Social impact of lockdown	Number (n=535)	Percentage (%)
Lost your job due to lockdown	288	53.8
Experience any difficulty in finding jobs	252	47.1
Difficulty/problem due to inability to travel	198	37.0
Experience any psychological stress	195	36.4
Experience any skipping of at least one of the meals	147	27.5
Experience difficulty in travelling back to permanent home	111	20.7
Experience difficulty in getting health services	77	14.4
Migrate from abroad due to lockdown	29	05.4
Experience any kind of discrimination due to your gender/cast/ religion/social level	13	2.4
Domestic violence/crime in your house	9	01.7

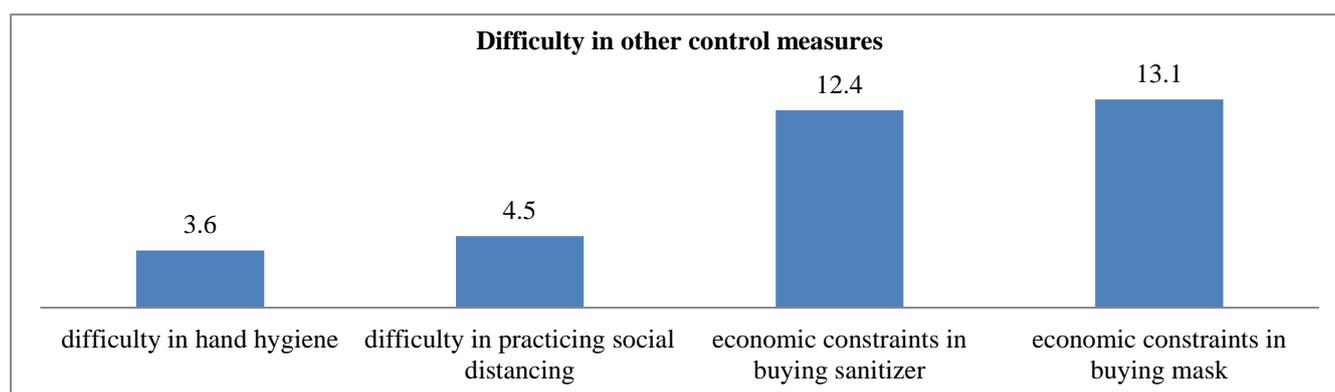


Figure 1: Impacts with other control measures of COVID-19 among study participants (%).

Table 3: Distribution of study participants based on economic impact during lockdown.

Economic impact of lockdown	Number (n=535)	Percentage (%)
Lose your wage due to lockdown	396	74.0
Difficulty in repaying loans	339	63.9
Difficulty in paying any bills	336	62.8
Experienced difficulty in paying for food or essential items	261	48.8

Continued.

Economic impact of lockdown	Number (n=535)	Percentage (%)
Experienced difficulty in paying for health services	220	41.1
Availed moratorium for loan during lockdown	139	26.0
Difficulty in paying school tuition for children	106	19.8
Get salary /daily wage during lockdown	92	17.2
Any difficulty in paying rent during lockdown	66	12.3

Table 4: Distribution of study participants based on coping mechanism during lockdown.

Coping mechanism	Number (n=535)	Percentage (%)
Find any alternative source of income	96	17.9
Availed government's public distribution system (food kit)	387	72.3
Borrow money from a formal/informal lender (bank, relatives, and neighbours)	225	42.1
Sell household assets including animals	35	6.5
Start harvesting crops during lockdown	55	10.3
Received any other support during lockdown	190	35.5

Table 5: Distribution of study participants based on type of support they received during lockdown.

Type of support	Number (n=535)	Percentage (%)
Monthly ration of food	504	94.2
Monthly financial support	96	17.9
Healthcare support	253	47.3
Loan waiver	38	7.1
Rent waiver	17	3.2
School tuition waiver	20	3.7
Others (e.g. bills)	22	4.1

DISCUSSION

It is reported in the advisory of National Human Rights Commission on rights of women in the context of COVID-19 that COVID-19 and lock down measures resulted in sudden loss of employment.⁷ Loss of job and loss of wages due to lock down were major impacts identified in this study. In a study "social economic impact of COVID-19 outbreak in India" by Kumar et al reported that in metropolitan areas, there is a significant loss of wages and employment for migrant workers and the homeless.⁸ The loss of job and wages among the population was found during lockdown in the study "health, psychosocial and economic impacts of the COVID-19 pandemic on people with chronic conditions in India: a mixed method study" conducted by Singh et al.⁹ As per the report by Institute of Human Development, UNICEF in October 2021 unemployment and loss of wage were the important economic impacts in the lock down period.¹⁰ 76.2% of the total workforce working in the informal economy in India was at a risk of falling deeper into poverty due to catastrophic consequences of the virus. International Labour Organisation, 2020 reported that many are in low-paid, low-skilled jobs where sudden loss of income is catastrophic.¹¹

People were forced to skip at least one of the meals due to the loss of job and wages in the present study which has to be addressed. This is similar to the study by Singh et al where one third of the respondents did not adhere to their recommended diet plan. Moreover, they faced difficulty in coping with the stress.⁹ In addition, they faced difficulty in repaying loans, bills, and school/tuition fees. Due to the economic crisis among the population, they had difficulty in buying sanitizers and mask which were the important measures to control the infection transmission. UNICEF also reported that the people faced difficulty in wearing mask and maintaining social distancing. They reported that only 52% were wearing mask and 46% maintained social distance while outside.¹⁰

Singh et al reported that the people faced difficulty in coping with the stress.⁹ More than one third of the people had psychological stress in the present study. Most reported psychological reactions due to COVID and lock down measures were a specific and uncontrolled fear, pervasive anxiety and frustration according to G Serafini.¹² A small proportion of people in the study reported social discrimination due to gender, caste, religion, social level and domestic violence which has to be addressed.

Availing of moratorium was one of the coping mechanisms for repayment of loans. Majority had to borrow money from either formal or informal money lender. Majority took monthly ration from the public distribution system (PDS). UNICEF also reported that PDS was a supportive measure in the country.¹⁰ Government had distributed food kit free to all families which contained essential items for cooking.

Limitations

Detailed assessment of perceived stress, discrimination on gender or domestic violence could not be done. These are reported by the participants.

CONCLUSION

There were social issues and economic crisis due to COVID-19 pandemic and its lock down measures among the population. Both government and non-governmental sectors should understand the magnitude of the problem and should find the ways to tackle the situation. As the pandemic is not over, walking through it is most difficult thing. But considering the social and economic impacts locked down measures cannot be implemented frequently. At the same time preventive measures should be strictly followed in all sectors.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. World Health Organization. WHO coronavirus (COVID 19) dashboard. Available at: <https://covid19.who.int/>. Accessed on 11 January 2022.
2. United Nations Development Programme. COVID-19 – Pakistan socio-economic impact assessment and response plan. 2020. Available at: <https://www.undp.org/coronavirus/socio-economic-impact-covid-19>. Accessed on 11 January 2022.
3. United Nations Development Programme. Rapid assessment of socioeconomic impact of Covid-19 in Nepal. 2020. Available at: https://www.undp.org/content/dam/nepal/docs/Reports_2020/Nepal%20Rapid%20Assessment%20COVID19%20Final3.pdf. Accessed on 11 January 2022.
4. Pillai DDM, Nagappan N, Dharani SV, Subramanian K, Champakesan B, D'Cruz TM. Socio-economic impact of coronavirus disease 2019 (COVID-19) - An Indian outlook. J Family Med Prim Care. 2020;9:5103-6.
5. Gopalan HS, Misra A. Covid-19 pandemic and challenges for socio-economic issues, healthcare and national health programs in India. Diabetes Metab Syndr Clin Res Rev. 2020;14:757-9.
6. Prakash BA. The impact of Covid-19 on Kerala's economy: A preliminary assessment. 2020. Available at: <https://keralaeconomy.com/admin/pdfs/Paper%20on%20COVID19%20sept%2014%202020.pdf>. Accessed on 11 January 2022.
7. Advisory on rights of women, File No R-17/8/2020-PRP&P- Part (3) by National Human Rights Commission. 2020. Available at: https://nhrc.nic.in/sites/default/files/Advisory%20on%20Rights%20of%20Women_0.pdf. Accessed on 11 January 2022.
8. Kumar M, Maheshwari V, Prabhu J, Prasanna M, Jayalakshmi P, Suganya P, Malar BA, Jothikumar R. Social economic impact of COVID-19 outbreak in India. Int J Pervasive Computing Comm. 2020;16:4.
9. Singh K, Kondal D, Mohan S, Jaganathan S, Deepa M, Venkateshmurthy NS, et al. Health, psychosocial and economic impacts of the COVID 19 pandemic on people with chronic conditions in India: a mixed method study. BMC Public Health. 2021;685.
10. UNICEF - Report of Institute for Human Development. Assessing Impact of COVID 19 Pandemic on the Socioeconomic situation of vulnerable populations through Community Based monitoring. 2021. Available at: <https://www.unicef.org/india/reports/assessing-impact-covid-19-pandemic>. Accessed on 11 January 2022.
11. Chaudhary M, Sodani PR, Das S. Effect of COVID-19 on Economy in India: Some Reflections for Policy and Programme. J Health Management. 2020;22(2):169-80.
12. Serafini G, Parmigiani B, Amerio A, Aguglia A, Sher L, Amore M. The psychological impact of COVID-19 on the mental health in the general population. QJM. 2020;113(8):531-7.

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