

**COVID 19:  
INDIAN ECONOMY  
AND SOCIETY**

*Editors*

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**ECONOMIC PLANNING FORUM**

**Department of Economics  
Barbhag College**

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## *From the desk of Editors*

In December, 2019 some pneumonia cases were detected in Wuhan city of China and later, the World Health Organization (WHO) identified the virus causing it as Corona virus and named the disease as Covid-19. The disease spread very fast to other parts of the World and on 11th March 2020, WHO declared it as a pandemic and from 24th March, 2020, the Government of India announced a nation-wide lock down to control the spread of the pandemic. As a result of Covid-19 and the subsequent lockdown, normal lives of people and socio-economic activities of the country got disrupted. A global crisis including health, economic, educational, psychological and professional crisis occurred all over the World due to the pandemic. The lives and livelihoods of the people are seriously threatened and different sectors of the economy have suffered a lot due to restriction and limitation of the business activities. The book entitled '**Covid-19: Indian Economy and Society**' aims to cover the impacts of Covid-19 pandemic on the economic and social life of the people of the country.

We are indebted to the authors, members of the editorial board, the reviewers namely Prof. Nivedita Goswami, Dr. Anup Kumar Das and Dr. Prasenjit Bujar Baruah who assisted by conducting detailed peer review, Dr. Kishore Kalita who helped us in checking plagiarism, Dr. Birinchi Choudhuri, Principal and esteemed colleagues of Barbhag College, Kalag, Nalbari for their support in publishing the book.

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# COVID 19 and India's Fiscal Deficit Financing: An Assessment

*Manisha Devi*

## Abstract

*Fiscal balance has been portrayed as an important policy variable since the advent of the Keynesian philosophy. Influence of fiscal stance on the economic stability of a country depends more on its financing provisions than magnitude. It is the means of financing that determines which sector of an economy could be at risk. The current paper is an attempt to spread some light on the financing trajectory of India's fiscal slacks putting emphasis on the pandemic period. The study reveals that the country's increased recourse to the loans from the RBI has heightened its already higher general price level. Appropriation of larger extent of national income by the fiscal authority of the country to finance its engulfed expenses has resulted crowd out of India's domestic private investment and thereby a degradation in its GDP growth rate.*

**Keywords:** *Fiscal Deficit, Investment, Money Supply, Price.*  
**JEL Classification:** *H6, E22, E51, E31.*

## **Introduction**

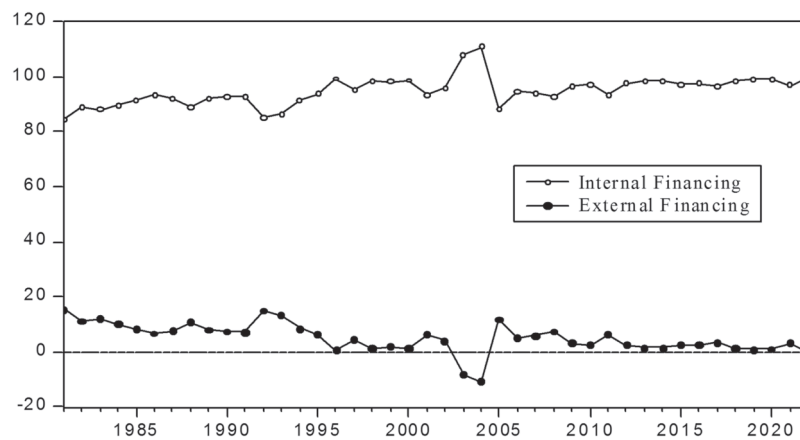
While COVID-19 has cropped out as an undefeatable threat on the mankind since its appearance in 2019, the chaotic situation created by the virus is found to exert some dreadful effect on the world economy as well. In keeping with the world's experience some threats are also found to loom around the Indian economic arena. Despite being economically poor the nation has to feed a huge mass which is hardly fully achievable in a normal situation. In this forefront following the economic sluggishness and slow functioning of the production sector of the economy owing to the enforced COVID restriction the government has to release a considerable amount of subsidized services causing hardship for its fiscal front. If we observe the fiscal stance of the national economy, persistent deficits are evident to be a common event. In fact, for a growing country like India such figures were never surprising. But, tension comes in regarding the financing of these emerged expenses. The apprehension becomes crucial because in India the government has been resorting to market borrowings to finance its prolonged fiscal deficits since long. But, following the pandemic there has been a significant drop in India's national private investment. In such a situation, the question arise is how the government is covering its financial mismatches with the declining private investments? Whether the government's acquired mode of financing has any possibility to jeopardize the national economy? The write up tries to enquire the aforesaid issues for the South Asian economy. However, before preceding towards any analysis the question of utmost importance is-

## **What Does India's Deficit Financing History Reveal?**

Practical macroeconomics reveals that the effect of fiscal debacle depends more on how the emerged shortages are matched than on its magnitude. Fiscal deficit of a country could be financed

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either through drawing funds from its internal sources or borrowing from external sources. In India, government is primarily found to finance its enormous fiscal deficits by generating funds from the internal sources and this is evident from figure 1. Again, under internal financing provisions, the government can generate funds either by issuing treasury bills or government bonds/ dated securities or through the creation of money by the central bank of the country. In India, among different sources of internal finance, there has been a continuous decline in the share of draw down cash balances, i.e., the funds drawn by the central government from the RBI issuing ad hoc treasury bills, since the late 1990s (Figure, 2). The effort has its own importance because injection of money and the general price level of a country are asserted to have a direct positive association.



Source: Reserve Bank of India (RBI)

**Figure 1: Financing India's Gross Fiscal Deficit  
(% of Gross Fiscal Deficit)**

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**Table 1 Government Securities as Share of Market Loans**

| <b>Year</b> | <b>T- Bills</b> | <b>Dated Securities</b> |
|-------------|-----------------|-------------------------|
| 1981        | 82.6            | 17.4                    |
| 1982        | 55.4            | 44.6                    |
| 1983        | 78.4            | 21.6                    |
| 1984        | 60.0            | 40.0                    |
| 1985        | 64.1            | 35.9                    |
| 1986        | 73.8            | 26.2                    |
| 1987        | 48.7            | 51.3                    |
| 1988        | 17.2            | 82.8                    |
| 1989        | 26.9            | 73.1                    |
| 1990        | 41.5            | 58.5                    |
| 1991        | 11.4            | 88.6                    |
| 1992        | 16.4            | 83.6                    |
| 1993        | 36.0            | 64.0                    |
| 1994        | 37.0            | 63.0                    |
| 1995        | 30.9            | 69.1                    |
| 1996        | 27.8            | 72.2                    |
| 1997        | 35.2            | 64.8                    |
| 1998        | 8.2             | 91.8                    |
| 1999        | 4.1             | 95.9                    |
| 2000        | 4.4             | 95.6                    |
| 2001        | 4.2             | 95.8                    |
| 2002        | 4.8             | 95.2                    |
| 2003        | 5.8             | 94.2                    |
| 2004        | 4.7             | 95.3                    |

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|      |      |      |
|------|------|------|
| 2005 | 4.5  | 95.5 |
| 2006 | 6.0  | 94.0 |
| 2007 | 7.5  | 92.5 |
| 2008 | 6.5  | 93.5 |
| 2009 | 10.6 | 89.4 |
| 2010 | 7.7  | 92.3 |
| 2011 | 6.5  | 93.5 |
| 2012 | 10.6 | 89.4 |
| 2013 | 10.0 | 90.0 |
| 2014 | 9.9  | 90.1 |
| 2015 | 9.0  | 91.0 |
| 2016 | 8.5  | 91.5 |
| 2017 | 7.2  | 92.8 |
| 2018 | 7.6  | 92.4 |
| 2019 | 7.5  | 92.5 |
| 2020 | 7.3  | 92.7 |

**Source:** Reserve Bank of India (RBI)

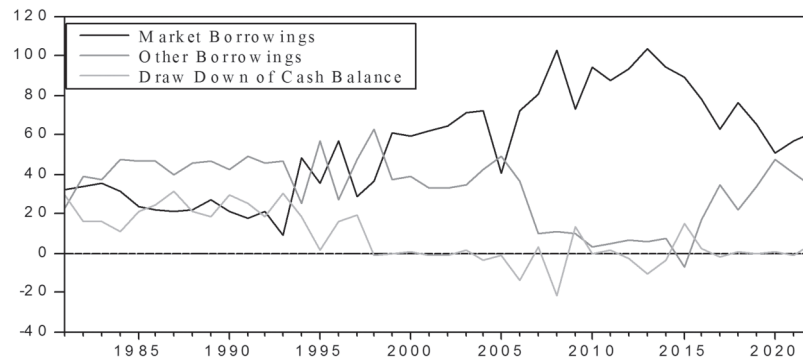
Again, if we observe the contribution of market borrowings<sup>1</sup>, which mostly include government dated securities i.e., government bonds and 364 day T- bills, the component is evident to experience a spectacular increase since 1992, the year when the 364 days T- bills came into force. This indicates the country's increased recourse to bond financing particularly during the post-1991 era (Table, 1). The share of market borrowings to finance the gross fiscal deficit has

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<sup>1</sup> In India prior to 2017-18 market borrowings comprise dated securities, 364-day treasury bills and net impact of switching off of securities, however, since 2017-2018 onwards, it only includes dated securities.

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increased from 19.30 percent in 1991 to 85.61 percent in 2007. In fact, during the years 2008 and 2013, the share was even more than 100 percent. This increased reliance on bond financing that has a long gestation period has lessened the risks associated with market volatility as the bonds are less volatile in comparison to short-term funds that are more prone to market risk (Lakshmanan & Kausaliya, 2015). Apart from this, India's growing emphasis on the component is thought as a strategy of the country's fiscal authority to keep a check on the nation's rate of inflation. However, despite being less volatile, unlike treasury bills, the bonds charge a significantly higher rate of interest (RBI) that tenaciously keeps the quota of interest payment high in the country's gross fiscal deficit and hence a cause of further borrowings.



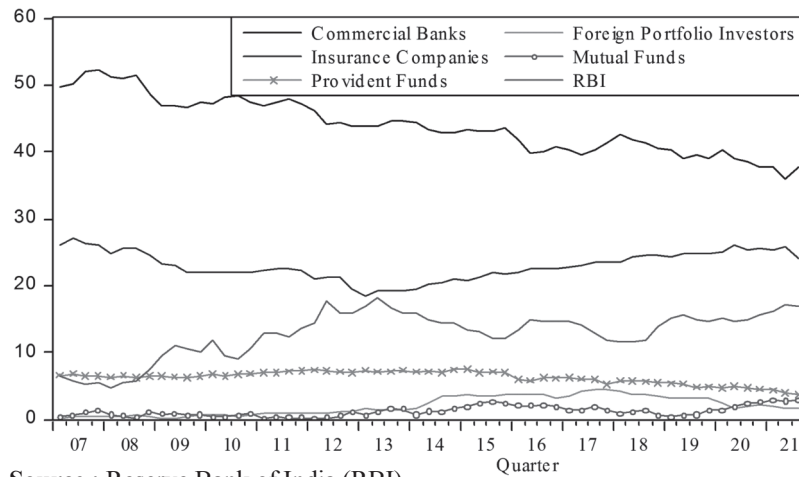
Source : Reserve Bank of India (RBI)

**Figure 2:** Components of Internal Financing of India's Gross Fiscal Deficit (% of Gross Fiscal Deficit)

Besides the aforesaid sources, government's reliance on other borrowings that includes small savings, state provident fund, special deposits, reserve funds, and all other T- Bills except 364 days was significantly high up till 2005. Of the funds drawn from this source, more than 60 percent, with some upward (mostly) and downward

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variations, comes from the small savings and special deposits (dominated by small savings) up to 1999 that charges a comparatively higher interest rate (RBI). However, since the late 1990s, there has been a persistent decline in its share till 2009. The decline becomes more robust during post-2004, the year of enactment of the FRBM (Fiscal Responsibility and Budget Management) Act. The share again started boosting up since 2010, but this time at a smaller rate.



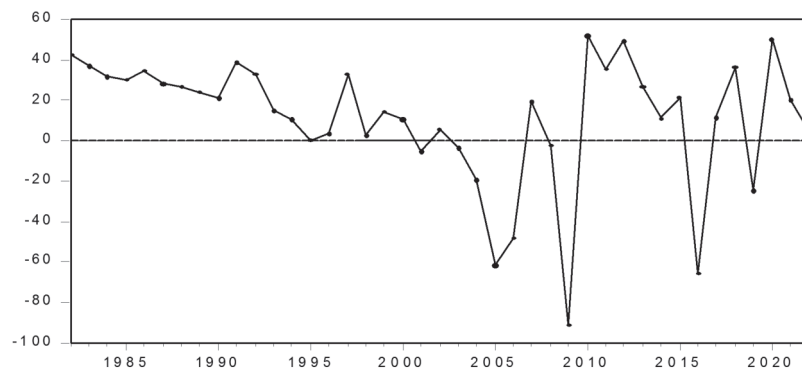
Source : Reserve Bank of India (RBI)

**Figure 3:** Leading Investors on Indian Government Dated Securities (in %)

Thus, from the pattern of financing the fiscal deficits of the Indian central government, it is evident that during the fiscal deregulation era, government becomes dependent on the dated securities or bonds to finance its persistent budgetary mismatch. But, the question is whose funds are in use to mitigate the mismatch? Or put in a different way, who are the holders of or investors on the government securities as the fiscal authority has diverted their reliance onto market borrowings?

### **Ownership Pattern of the Government Securities: Whose Funds are in Use?**

Despite being the manager of the central government's finances, investments in the government securities are not made by the reserve bank alone, rather there exist some other captive investors which include the commercial banks, corporate, other financial institutions (both domestic and foreign), etc. In India, the dominant investor on the central government securities is the commercial banks followed by insurance companies and RBI (Figure, 2). The investment made by the reserve bank on the government securities is considered as the direct monetization<sup>2</sup> of government deficit as RBI does these investments only through the creation of fresh money. In India, the practice is quite evident (Figure, 4). In spite of the incentives of both



**Source :** Reserve Bank of India (RBI)

**Figure 4:** Monetised Deficit of India (% of Gross Fiscal Deficit)

<sup>2</sup> Monetized deficits or RBI's net credit to the central government represents those portions of fiscal deficit that has been financed by the creation of new notes by the reserve bank. It consists of not only the RBIs holding of 91 days T- Bills but also includes other securities issued by the central bank such as dated securities along with rupee coins net of increase in the cash balances of the central government. Monetized deficits are the difference between the funds government credited to RBI and RBIs loans to the government.



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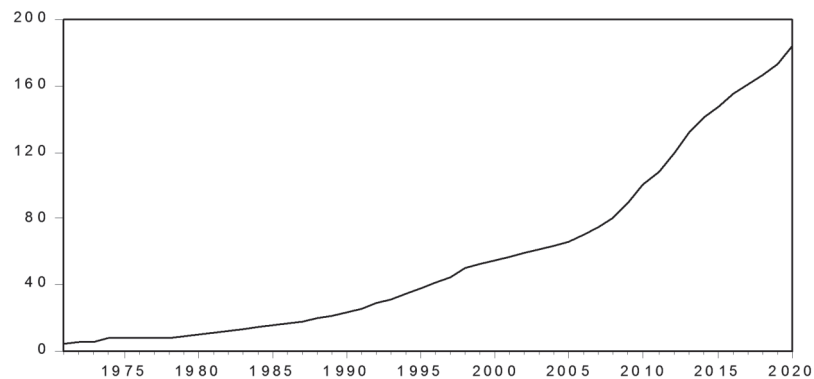
the fiscal and monetary authorities of the country to reduce the government's dependence on monetized deficits to ensure the country's economic stability, the decline in the share is initially very meager. However, with the implementation of the Wage Means and Advances (WMA) scheme in 1998, there has been a gradual decline in the share of monetized deficit in the country (Figure, 4). Even during the period 2000 to 2008, the contribution has registered some negative figures, except for the years 2001 and 2006. The corresponding implementation of the FRBM Act has also paved the way towards this realization. The FRBM Act has imposed some restrictions on RBIs lending to the central government. For instance, according to this act, RBI cannot hand over any credit to the country's central government directly.

Despite these provisions to reduce the government's reliance on RBI's funds to finance its continuous budgetary shortfalls, it is indeed the responsibility of the central bank to manage funds to meet the financial needs of the government as a banker to the latter. In correspondence to that to comply with their responsibility, the Reserve bank has launched the Market Stabilization Scheme in 2004. Under this scheme, the government used to issue the Market Stabilization bonds to maintain stability in both the money and foreign exchange market of the country. In fact, during 2009-10, the government has used one-third of the funds created through this bond to finance its borrowings (Shastri, 2013).

However, post-global financial crisis, government's dependence on RBI's newly created money has again soared up. This happens because following the crisis, the foreign investors, whom are the prominent stakeholders of government securities, has sold their securities in India to support their parent nations in the time of crisis (IMF database). Another reason for this hike could be the large spike in the revenue deficits of the government aroused in the process to

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insulate the domestic economy from the emerging global financial headwinds. But, during the post-crisis period, the share of monetized deficits again started to decline following the increased inflow of portfolio investment to India. Thus, apart from the domestic investors, foreign portfolio investors have also emerged as a crucial player in the list of stakeholders of the Indian government dated securities (Figure, 3). The share of foreign portfolio investors' increased significantly especially post-global financial crisis and after the initiation of the U.S. unconventional monetary policy called Quantitative Easing in 2008, wherein India comes under the five targeted fragile emerging economies (Bhattarai *et al*, 2021).



**Source :** Reserve Bank of India (RBI)

**Figure 5:** *Consumer Price Index of India (2010=100)*

Thus, despite the government has tried to finance its deficits by issuing bonds or securities which are an internal instrument, a significant portion of those securities are procured by foreign portfolio investors. Such behaviour becomes more prominent after the global financial crisis and with the initiation of U.S. quantitative easing policies. In such a situation, as the financing of the country's fiscal

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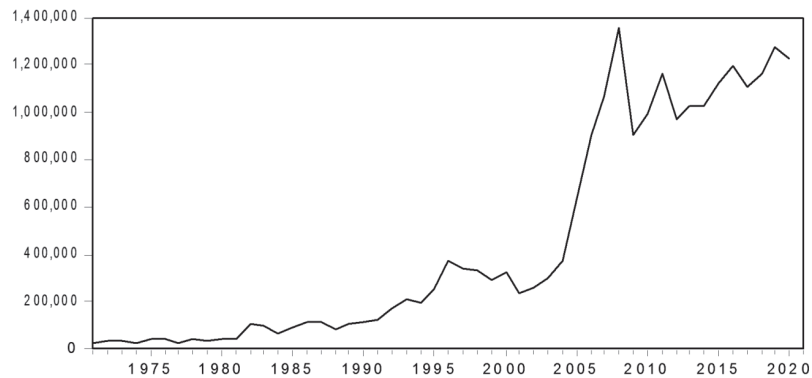
deficit has also become dependent on foreign investment, as stated by Lakshmanan & Kausaliya (2015), there emerges the possibility that the internal account of the country becomes vulnerable to the global economic shocks and India seems to have experienced a glimpse of it during the post-global financial crisis of 2008. The involvement of foreign investors in the government securities market increases the possibility of linkages of the country's internal financial account to global economic shock and thereby, fortifies the possibility of the existence of the twin deficit problem in the country. But, as specified, the current study is an effort to shed light on the financing provisions India has adopted to finance the pandemic induced cost of the government. Hence, the issue is whether the nation still accustomed to the earlier mode of finances? Or the economic rigidities followed by the virus have compelled the fiscal authority as well the monetary authority to compromise their policy oriented perspectives.

#### **Story during the Pandemic**

If we observe India's reliance on the two prime mode of financing then no robust changes are evident during the pandemic period. Likewise the earlier periods the country continues to rely almost entirely on the internal financing sources. However, some compositional changes are evident. Likewise earlier years India still depends upon market borrowings, but, a close look reveals that the share of market borrowings has registered a hike making a distraction on its declining trend. On the contrary, other borrowings have documented a downfall. Again, despite the share of draw down of cash has maintained its sluggish trend, but, some upward variation is evident.

Again, if we look into the investors on government securities as the fiscal authority becomes reliant on market borrowings it emerges that the authority's dependence on the loans received from the Reserve

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Source : Reserve Bank of India (RBI)

**Figure 6:** Real Private Investment of India (in Rupees Crore)

Bank of India has registered a significant hike. However, the loans received from the commercial banks still dominate the share. It is well known that the borrowings by the government from the RBI to finance its budgetary mismatches come under monetized deficits. Corresponding to the introductions of strict restrictions owing to COVID, while RBI's loan to the centre has hiked, the share of monetized deficits has also registered an up charge. Consequently, the consumer price index that measures the general price level of the country has shown a steep growth. No doubt India has persistently recorded a hike in its price level, but post COVID 19 the rate of growth appears to be higher as the curve registering the price level has shown a steep increase (Figure, 5).

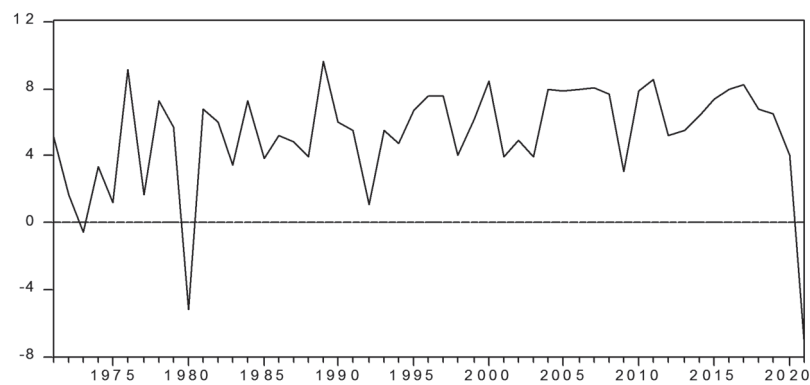
**Table 2: Correlation between India's Domestic Private Investment and Real GDP of India**

| Variables       | Coefficient |
|-----------------|-------------|
| RealGDPandp_inv | 0.97 ***    |

**Note:** \*\*\* implies significant at 1%.

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Apart from this, following the growing market borrowings by the fiscal authority, the private investment of the country has shown a declining trend which is a cause of concern for the South Asian economy (Figure, 6). This probably happens because the increased share of market borrowings by the authority has reduced the funds available for the private sector. Again, the shrinking private investment because of its positive correlation with the country's GDP (Table, 2), has emanated degradation in India's GDP growth rate (Figure, 7).



**Source :** Reserve Bank of India (RBI)

**Figure 7:** GDP Growth Rate of India

### **Conclusion**

Trying to discern about the repercussion of the mode of financing of India's expansionary fiscal policies during the COVID 19 phase, the study found that following the chaos created by the pandemic the Indian economy is going through some rollercoaster. Extended demand of India's health sectors has made the nation compromise its economics whereabouts. However, it would be very early to make any statement on the righteousness of the adopted policies. Indeed it

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is the need of the hour. Again, if we follow the theoretic Keynesian economics, then the policy adopted by the authority cannot be straightly claimed as unnecessary. It is evident that the fiscal authority of the country has approached towards the a-cyclical policies to control the possible dreadful effect of the crisis on its economic stability. Keynes himself has prescribed a- cyclical policies as a booster to upgrade a crisis driven downgraded economy. Hence, any legitimate judgment on the upshot of the government policies, undertaken during the pandemic period, on India's economic health demands time.

### **References**

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1. Bhattarai, S., Chatterjee, A., & Park, W. Y. (2021). Effects of US quantitative easing on emerging market economies. *Journal of Economic Dynamics and Control*, 122 (C).
2. Lakshmanan, L., & Kausaliya, R. (2015). Public debt management in India and related issues. RBI Working Paper Series (02).
3. Shastri, R. (2013). Backdoor Monetization. Retrieved 12 25, 2019, from [https://www.businessstandard.com/article/economy-policy/backdoor-monetization-110042600081\\_1.html](https://www.businessstandard.com/article/economy-policy/backdoor-monetization-110042600081_1.html).

# Impact of Covid-19 Pandemic on People's Livelihoods in Nalbari District

*Jhonmani Rajbongshi*

## Abstract

*The corona virus (Covid-19) pandemic has devastated normal people life and led to a massive humanitarian crisis. The lockdown imposed in India as containment measures has created unprecedented disruptions to economic activities and has been recognized as the biggest economic crisis after the Great depression in 1929. This research paper assesses impacts of the lockdown on employment loss and earnings loss who continued to work. The study is conducted by undertaking field survey of five different villages of Pub-Nalbari block and five different wards of municipal area in Nalbari district of Assam through direct interview of 957 respondents. We find that an increase in employment loss in both rural and urban areas but the impact being more severe in urban area in non-agricultural activities. In terms of earnings loss, the vast majority of the workers who retained the jobs during the lockdown in urban area being more severe as compared to rural area.*

**Keywords:** Covid-19, Employment loss, Earnings Loss, Rural, urban, Nalbari.

## **Introduction**

Covid-19 pandemic is not only a public health threat but also an economic threat. This was initiated from the information of the World Health Organization (WHO) on 31 December 2019 there was a case of cluster of pneumonia with a new etiology in Wuhan city, Hubei Province China and later expanded other parts of the world on 30 January 2020, Covid-19 was set to become the public health emergency of international concern (PHEIC), on March 2020, Covid-19 was designated as a pandemic. This pandemic has created largest disruption to the world economy, India is no exception. Closing border, canceled international flights were the first most governments took to stop the spread of corona virus followed by complete lockdowns. The lockdowns imposed in India as containment measures has created unprecedented disruptions to economic activities and has been identified as the biggest economic crisis after the Great depression in 1929. The strict lockdown has resulted in large scale economic distress and food insecurity as large sections of the population experience high vulnerability and subsist on daily earnings without any savings to tide them over the halt in economic activity (Ray and Subramanian 2020, CSE working paper 2020-21). The most attackable section of society includes poor people and those dependent on informal activities which includes daily wage earners, small shopkeeper and many more who have acquired less protection because of lower savings and limited alternatives source of income both in rural and urban areas. In rural area, most of the poor are casual labor engaged in agricultural activities and other few are vegetable vendors, tailors, carpenter, shopkeeper etc. All those people are losing their prime income sources because those who are associated with agricultural activities can't sell their agricultural products in the market while in urban area poor people are completely dependent on incomes from labor or self-employed not do work that



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ultimately resulted in stress, fear of death from hunger. This pandemic leads to devastating socio-economic disruption of people's both lives and livelihoods.

#### **Review Literature:**

Some of the most related literatures discussed as below:

San Malik and Khansa naeem examined the gendered impacts of Covid-19 in the context of Pakistan and also understand how women's livelihoods are impacted due to financial challenges caused by the pandemic situation. The findings in this examined that female workers are mostly engaged in the informal sectors where they are paid minimal wages. This is the sector which is severely affected by this crisis. Likewise, this pandemic has also impacted the daily wage earners in the formal sectors (construction, textile and other manufacturing industries) have become unemployed.

The researchers Kesar, Surbhi, Abraham etc have examined the impact of Covid-19 pandemic containment measures on employment, livelihoods, food security and access to relief measures. The findings is that a massive increase in unemployment, an equally dramatic fall in earnings among informal workers, large increase in food insecurity and increase in dis-saving.

Mckinsey global Institute, in an article highlighted that the pandemic leads to one-third of US jobs and vulnerable. A nationwide lockdowns could leave 44 million to 57 million jobs vulnerable to inactivity that could lead to reduced income. Among the estimated 13.4 million jobs that could be affected in the restaurant industry, 3.6 million involve food preparation and serving are vulnerable.

**Significance of the study:** Considering the literature review. It has been found that a few number of studies have been conducted in this area. The Covid-19 pandemic situation highly affects the

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livelihood of both rural and urban people. Therefore, we promoted to conduct a study in the rural and urban area in Nalbari District.

**Objective of the study:** The general objective of the study is to understand how people's livelihoods are affected in terms of employment loss and earning loss caused by the pandemic.

**Research Methodology:** The Methodology adopted in the study described as follows -

- a) Area of the study:* Nalbari district is the study area selected for this research. Nalbari is an administrative district in the state of Assam, India. The district has seven community development blocks. In these blocks, there are 407 villages as per 2011 census. The Nalbari town is divided in 12 wards. Out of Seven blocks, we selected Pub- Nalbari block as the present study. This block consist of 84 villages, out of which we selected five different villages namely-Budrukuchi, Nizbahjani, Jaha, Charia and Janigog and out of 12 wards in Nalbari town, we selected five different wards namely-Ward no-1,ward no-2, ward no-5, ward no-11 and ward no-12.
- b) Population of the study:* The population of the present study consists of 14,271 working people in the selected villages of Pub-Nalbari block and 4890 working people in the selected wards of municipal area.
- c) Sample of the study:* Based on simple random sampling, the number of selected respondents in the working category was proportional to the total working people in each .The sample was selected respondent representing 5 percent of the five different villages in Pub-Nalbari block and five different wards in Nalbari for the purpose of study. Now, we present demographic profile of total number of respondents taken for study which is equal to 957.

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**Demographic Profile of the respondents (N=957)**

| <b>Age (Years)</b>               | <b>Rural<br/>(n=713)</b> | <b>Urban<br/>(n=244)</b> |
|----------------------------------|--------------------------|--------------------------|
| 19-29                            | 106                      | 30                       |
| 30-39                            | 214                      | 145                      |
| 40-49                            | 229                      | 42                       |
| 50-59                            | 164                      | 27                       |
| Self-employed in Agriculture     | 180                      | 0                        |
| Self-employed in non-agriculture | 214                      | 48                       |
| Salaried person                  | 45                       | 105                      |
| Casual labour in agriculture     | 74                       | 0                        |
| Casual labour in non-agriculture | 190                      | 91                       |

The above table describes the demographic profile of the respondents for the study. The total number of respondents taken for our study was 957, out of which 713 respondents were from villages and 244 respondents were from urban area whose age group was 19 to 59 years. The profile of total no. of respondents in rural area in terms of activities-180 and 74 respondents were engaged in agricultural work as self-employed and casual work respectively, 45 respondents worked in salaried jobs while another 214 respondents and 190 respondents were self-employed and casual labour in non-agricultural work respectively. Similarly, in urban area none of respondents were in agricultural work, 48 and 91 respondents were engaged in non-agricultural work as self-employed and casual work respectively while another 105 respondents worked in salaried jobs.

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**Table-A: Distribution of job loss in Rural area during lockdown (n=713)**

| <b>Category</b>                  | <b>Job loss (Percent)</b> | <b>Total (Percent)</b> |
|----------------------------------|---------------------------|------------------------|
| Self-employed in agriculture     | 8                         | 25.24                  |
| Casual labour in agriculture     | 4                         | 7.71                   |
| Self-employed in non-agriculture | 21                        | 30                     |
| Casual labour in non-agriculture | 18                        | 26.65                  |
| Salaried person                  | ---                       | 10.37                  |

**Table-B: Distribution of job loss in Urban area during lockdown (n=244)**

| <b>Category</b>                  | <b>Job loss (Percent)</b> | <b>Total (Percent)</b> |
|----------------------------------|---------------------------|------------------------|
| Self-employed in non-agriculture | 17                        | 19.67                  |
| Casual labour in non-agriculture | 30                        | 37.29                  |
| Salaried person                  | ---                       | 43.3                   |

Table-A and Table-B shows a comprehensive representation of job loss in rural and urban area during the time of nationwide lockdown in terms of three types of activities– self-employed persons (such as business owners, insurance agents, farmers, accounts, teacher running their own tutorial or coaching centers and other professionals), casual workers who received payment a weekly or daily basis(such as carpenters, masons, sweet makers, plumber etc) and salaried persons who received a fixed monthly payment provided by Government/private sectors. In rural area, total number of sampled respondents

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were 713, out of which most of the respondents were engaged in non-agricultural activities where 30 percent and 26.65 percent respondents were self-employed and casual labour in non-agricultural activities, about 25.24 percent of the total rural sampled were self-employed in agriculture and about 7.71 percent were casual labour while 10.37 were worked in salary. The total percentage of self-employed in non-agriculture, 21 percent loss employment and 18 percent casual labour in non-agriculture loss their employment out of total. Again, 8 percent and 4 percent workers of self-employed and casual labour in agriculture were loss their employment out of total respectively and none of salaried person were loss their employment. On the other hand, in urban area, out of total sampled most of the respondents were salaried which occupied 43.3 percent, 19.67 percent and 37.29 percent of total sampled were self-employed and casual labour in non-agriculture respectively. About 17 percent self-employed and 30 percent casual labour in non-agriculture were loss their employment respectively.

In this analysis, we find that in rural area around 70 percent self-employed in non-agricultural activities lost their employment while in urban area 86.64 percent self-employed in non-agriculture lost their employment. On the other hand, in rural area 67.75 casual labor in non-agriculture lost their jobs while in urban area about 80 percent casual labor in non-agriculture lost their employment. Therefore, urban area is highly affected than rural in terms of job loss in non-agricultural activities

**Impact on earnings:** The forgoing analysis clearly shows that nationwide lockdown as a containment measure of Corona virus pandemic lead to a huge number of employment loss in both rural and urban areas in terms of non-agricultural activities in Nalbari district clearly point to a large negative income shock in our sample. Now, we move to analyses the impact on non-agricultural self-employed

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and casual worker who retained the job in both areas in terms of earnings prior to lockdown and during the lockdown with the help of table.

**Table: 3 Distribution of Weekly earnings in rural area out of 127 sample (n=127) in INR**

| Category                         | Pre-lockdown | During lockdown | Drop in earning |
|----------------------------------|--------------|-----------------|-----------------|
| Self-employed in non-agriculture | 1800         | 600             | -1200           |
| Casual labour in non-agriculture | 930          | 482             | -448            |

**Table: 4 Distribution of Weekly earnings in urban area out of 23 sample (n=23) in INR**

| Category                          | Pre-lockdown | During lockdown | Drop in earning |
|-----------------------------------|--------------|-----------------|-----------------|
| Self-employed in non-agriculture  | 3200         | 318             | -2882           |
| Casual workers in non-agriculture | 1500         | 200             | -1300           |

Table-1 and Table-2 compares the weekly earnings for non-agricultural self-employed and casual workers prior to and during the lockdown in rural area and urban area. For clarity and simplicity, the sample here has been restricted to those earnings up to Rs 13000 per month. In rural area, non-agricultural self-employed earning per week Rs 1800 and that drops to Rs 600 during the lockdown which almost 66.66 percent drops in earnings and casual workers earnings per week in Rs 930 that drops to Rs 482 during the lockdown which approximately 48.17 percent. In Urban area non-agricultural self-employed workers earnings per week in Rs 3200 prior to lock down

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that drops to Rs 318 which almost the 90 percent drop in earnings and casual workers earnings per week in Rs 1500 per week prior to lockdown that drops to 200 which almost the 86 percent drop in earnings. Using this information of earnings loss, we find that the vast majority of the workers who retained the jobs during the lockdown in urban area being more severe as compared to rural area.

#### **Conclusion:**

This research looked at the impact of the Covid-19 outbreak on the livelihoods in terms of employment loss and earnings loss who continued to work during the time of lockdown in rural and urban area basis. Our findings reports expressed covid-19 would badly affect the livelihood of the people's in rural and urban area. But, the impact is more severe in urban area in terms of loss of employment and earnings.

#### **References**

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1. Dev, S. M. and Sengupta, R. (2020). Covid-19: Impact on the Indian Economy.
2. Malik, S. and Naeem, K. (2020). Impact of Covid-19 Pandemic on Women, Health, livelihoods & domestic violence
3. Paul, A., Nath, T. K., Mahanta, J. and Sultana, N. (2021). Psychological and livelihood impacts of Covid-19 on Bangladesh lower income people.

# COVID-19 Pandemic: Tourism Sector and the Indian Economy

*Bidyajyoti Borah*

## Abstract

*Tourism in India is an important source of employment and foreign exchange earnings. In the last few decades, it was growing at faster pace as compared to any other sector. Indian travel and tourism industry ranked 5th in terms of expected long-term (10-year) growth and was expected to be the second largest employer in the world by 2019. Its contribution to GDP reached to about 6 percent and 6.4 percent of total employment (i.e., 1 in every 15.6 jobs) in 2009. Its contribution has been growing over time and was expected to generate around 40,037,000 jobs i.e., 7.2% of total employment (1 in every 13.8 jobs) by 2019.*

*The outbreak of novel corona virus had a calamitous impact on Indian economy, and the tourism sector is no exception. The present study is an attempt to analyze the impact of COVID-19 pandemic on the tourism sector in the Indian economy. The study finds a massive decline in Foreign Exchange Earnings (FEEs) and Foreign Tourist Arrivals (FTAs) during this pandemic period and taken the sector to a decade back. The*



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*study is further extended by providing recovery strategies for the revival and restoration of the tourism sector.*

**Keywords:** *COVID-19, Indian Economy, Tourism Sector*

## **Introduction**

The rapid spread of novel coronavirus, an infectious disease caused by the SARS-CoV-2 virus, has led to a substantial reduction in all forms of economic activities all over the world. The first case of COVID-19 was reported in December 2019 in Wuhan China and spread all over the world within March. The COVID-19 pandemic has triggered an unprecedented crisis in the tourism industry all over the world. Governments around the world have implemented various containment measures, such as travel bans and lockdowns, to prevent the spread of the disease due to movement of people from one place to another and personal contacts. These travel restrictions and associated disruptions have created a direct and huge impact on travel activities.

The United Nations World Tourism Organization (UNWTO) declared the travel industry to be one of the hardest-hit by the outbreak of the coronavirus disease (COVID-19). India is now the second worst - hit nation by the Pandemic after United States of America. The Federation of Associations of Tourism and hospitality industry estimated the loss to the tune of Rs10 lakhs crore due to COVID-19 pandemic. The World Tourism Organization reported the loss of revenue during this pandemic. The complete lockdown imposed in response to the pandemic led to a 98% fall in international tourist numbers in the month of May 2020, when compared to the year 2019.

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It has also reported about 56% year-on-year drop in tourist arrivals between January and May. This translate into a fall of 300 million tourists and US \$320 billion lost in international tourism receipt, which is three times the loss incurred during the Global Economic Crisis 2009. Thus, it can easily be understood what would be the consequences of COVID-19 on India's tourism sector as the first case of the Covid-19 pandemic in India was reported on January 30, 2020. After the first reported case government start the passenger's scanning at all the airports. The Indian Government has taken immediate and first action on the air transport to shut down completely to fight against the disease Covid-19 and implemented lockdown on March 25, 2020. World Health Organization (WHO) reported the total confirmed cases of Covid19 in India are 1.64 million, with 35.75 thousand deaths till July 31, 2020.

Indian travel and tourism industry ranked 5th in terms of expected long-term (10-year) growth and was expected to be the second largest employer in the world by 2019. Its contribution to GDP reached to about 6 percent and 6.4 percent of total employment (i.e., 1 in every 15.6 jobs) in 2009. Its contribution has been growing over time and was expected to generate around 40,037,000 jobs i.e., 7.2% of total employment (1 in every 13.8 jobs) by 2019.

Tourism in India has noteworthy potential by looking at its rich cultural and historical heritage, variety of ecology, terrains and places of natural beauty spread all over the country. It is considered to be the largest and rapidly growing industry. The aim of this study is to analyze the tremendous impact of COVID-19 on the Indian economy and its tourism sector. This study also presents the real scenario of tourism industry during COVID-19 pandemic which will help to know

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the update knowledge regarding the impacts of COVID-19 on tourism industry and to take proper recovery steps.

#### **Review of literature**

In the past, global tourism is affected by many disruptive events, such as terrorist attacks 9/11, epidemic outbreaks like SARS, Ebola, Swine Flu, and many others (Wen et al., 2020). But, the recent outbreak of epidemic (COVID-19) originated from Wuhan, China has severely affected almost every industry, including tourism worldwide. The new coronavirus outbreak had a calamitous impact on global tourism (Yeh, 2020; Kumar, 2020).

The World Travel & Tourism Council predicts a tourism related loss of up to US\$ 2.1 trillion in 2020 and up to 75 million jobs (WTTC, 2020). The current outbreak of COVID-19 disease has developed into a global health threat with continuously rising numbers of confirmed cases (Lau et al., 2020). COVID-19 disease among individuals and related deaths continues to rise rapidly (Soof et al., 2020). Therefore, the WHO announced the COVID-19 outbreak a pandemic on 11 March (Zhang et al., 2020).

As tourism industry is inter-linked with too many other industries such as transportation, accommodation, telecommunication, and entertainment, it's not possible to any single industry to recover the entire loss of tourism and hospitality industry. Therefore, the pandemic will have spillover to these industries (Hafsa, 2020; Rukh et al., 2020). Ohlan (2017) analyzed that tourism and economic growth has great relationship in short and in long run. The adverse impact of Covid-2019 on the India economy has also been highlighted by Khan et al (2020). Gossling et al. (2020) have commented that with the ban and halting of operations of international flights has led to lay off in the

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tourism industry. Not only that, COVID-19 has posed operational, commercial, and financial crises to the tourism sector (Thams et al., 2020). Both public and private relevant organizations are advised to come forward to take proper recovery plans (Hafsa, 2020). Upadhyaya and Mishra (2020) observed that maintaining an effective balance between environmental sustainability and economic growth is a policy challenge.

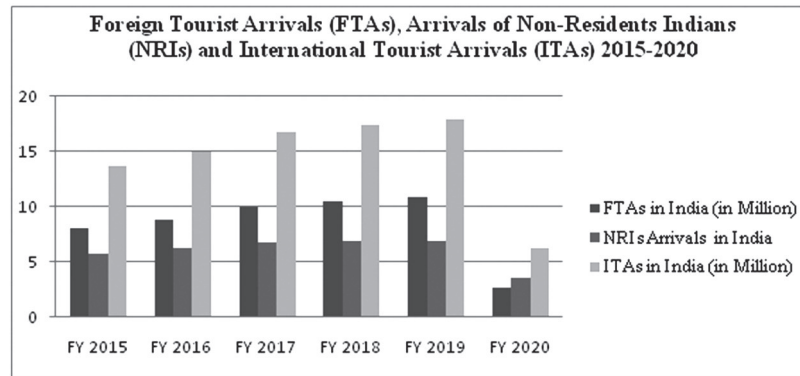
#### **Methodology**

The present study is qualitative and descriptive in nature. The research tool used for analyzing the data combined from different secondary sources is content analysis and comprehensive literature review. To understand the effect of COVID-19 outbreak on the Indian tourism sector, various published government reports, World Health Organization statistics, working papers, company websites, research papers, scholarly articles, historical records, as well as statistical databases are reviewed.

#### **COVID-19 Pandemic and its Impact on Indian Tourism Sector**

Tourism in India has been a significant source of foreign exchange earnings. Foreign exchange earnings increased from USD 3.4 billion in 2000 to USD 28.59 billion in 2018, showing positive signs of growth. Ministry of Tourism (2019) has targeted to reach USD 50 billion in earnings from tourism by 2022 from USD 28.6 billion in 2018. However, during 2020 alone, due to pandemic, the foreign exchange earnings fell to US\$ 6.15 billion (Statista, 2020).

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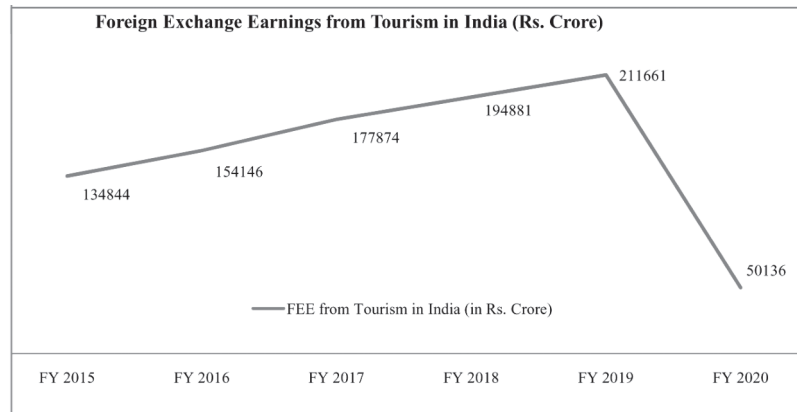
**Fig.1: FTAs, NRIs and ITAs arrival to India during the financial period 2015-2020.**

**Note: FY stands for Financial Year**

**Source:** Bureau of Immigration, Govt. of India.

Figure 1 accounts the changes in foreign tourist arrivals in India, arrivals of non-resident Indians and international tourist arrivals during 2015 to 2020. It has been observed that the FTAs, NRIs and ITAs have increased over the years from 2015 and 2019. However, after the outburst of Covid-19 in 2020, the FTAs, NRIs and ITAs have declined significantly. Due to lockdown and imposed restrictions, significant loss of tourist arrival was seen in 2020.

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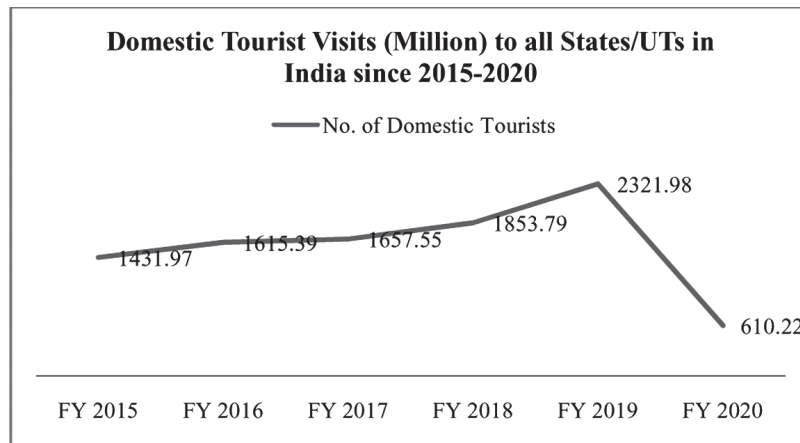
**Fig. 2: Foreign Exchange Earnings from Tourism in India (in Rs. Crore), 2015-2020**

**Note: FY stands for Financial Year**

**Source: Ministry of Tourism, Govt. of India**

The decline in Foreign Tourist Arrival (FTAs) and Foreign Exchange Earnings (FEEs) from inbound tourism are visible. Previously, the SARS outbreak led to travel restrictions and advisories. Once again, the vulnerabilities of the tourism industry are exposed due to travel restrictions imposed by various countries keeping public health in mind (Zhang et al., 2020).

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**Fig. 3 & 4: Foreign & Domestic Tourist Visits (Million) to all States/ UTs in India 2015-2020**

**Note: FY stands for Financial Year**

**Source: Ministry of Tourism, Govt. of India**

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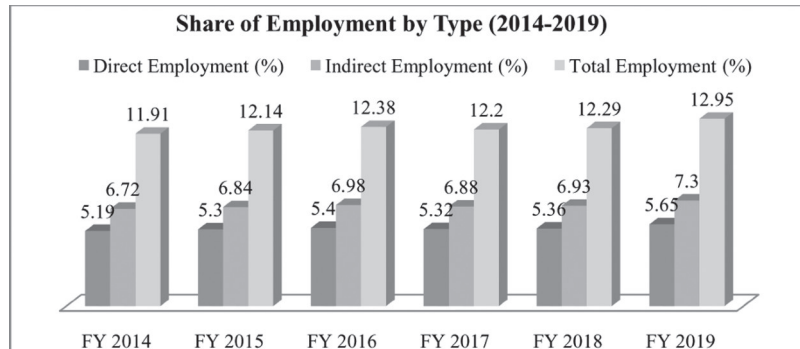
Muthukrishnan (2020) has pointed out that this pandemic will end up damaging industries for successive years. As the travel restrictions on both international and national flights continue, foreign and domestic tourists' arrivals continued to decline which is shown in fig.3 & 4. The impact of the multiplier effect of tourism on the Indian economy, and simultaneous decline in the Foreign Tourists Arrivals (FTAs) and Foreign Exchange Earnings (FEEs) from tourism caused devastation for the Indian economy. Therefore, scholars have phrased this pandemic outbreak as 'a recipe of disaster' (Singh & Neog, 2020).

During the lockdown period, India had cancelled travel to over 80 countries, due to which the international flights were being suspended. The domestic flights were operational with regulations. Recently, after a decision of reopening international flight operations, the government retreated again and all international flight operations have been suspended till 30th January 2022 with the apprehension of new variant Omicron. The Indian domestic travelers and FTAs witnessed a significant decline in 2020 (Fig.3). India's foreign tourists (FTA) arrival stood at 10.9 million and the foreign exchange earning stood at Rs. 210,971 crores during 2019 (Fig. 3&4). Along with this, the cancellation of various events, functions and festivals caused a great job loss to many organizers and companies.

Pandemic has caused a catastrophic impact on revenue and employment in Indian economy (Suman & Kumar, 2021). Before the pandemic, India's travel and tourism industry was growing rapidly. The Indian tourism industry reckon for ₹16.91 lakh crore that is 9.2% of India's GDP in 2018 and braced 8.1% of its employment. Tourism has significant contribution to GDP and supported an extensive job



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**Fig. 6: Distribution of employment in the travel and tourism sector across India from 2014 to 2019**

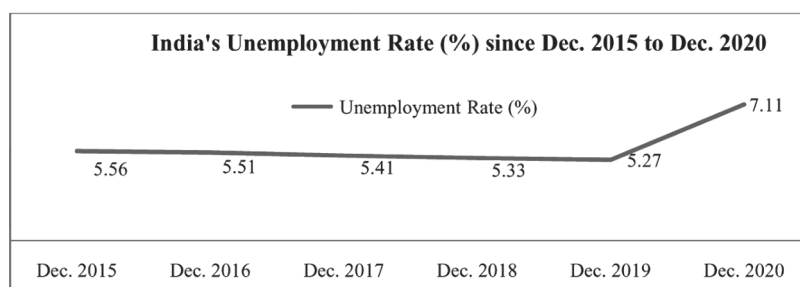
**Note: FY stands for Financial Year**

**Source: Statista, 2021**

India is a major destination for many international tourists, creating several employment opportunities and generating taxes in India. According to the World Travel and Tourism Council (WTTC), tourism, being a strong driver for economic growth in the country, has created about 87.5 million jobs, with 12.29% of total employment in 2018-19, thereby contributing INR 194 billion to India's GDP in the year 2019. Moreover, the sector recorded a 3.2% growth from 2018, with 10.8 million foreign tourists arriving in India and a foreign exchange earning of USD 29.9 billion in 2019. In financial year 2019, the tourism industry of India contributed to nearly 13 percent of the total employment of the country. Thereby, the share in employment slightly increased compared to the previous year (Fig. 6). The share of indirectly employed people in the industry is higher than the share of directly employed people. In comparison to financial year 2014, the share increased by more than one percent. In total, nearly 90

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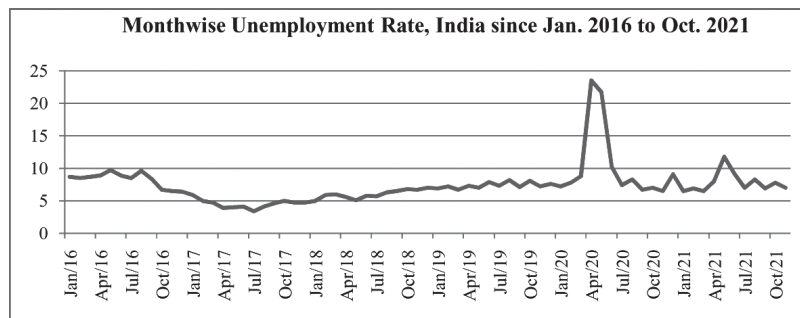
million people had been employed in the tourism industry in 2019. Unfortunately, it has been one of the worst-hit sectors by COVID-19, compelling people to confine themselves to the safety of their homes. Almost all the countries across the globe have commenced strict travel and tourism restrictions to fight against the pandemic's spread. The WTTC is estimating losses of up to \$2.7 trillion around the world in 2020, with up to 100 million jobs at risk. Due to emerging lockdowns, restrictions, there is a 66.4% decline in overseas tourists' arrivals in India in March 2020 as compared to previous year (TAN, 2020). COVID-19 has rendered every unit of the tourism sector inactive. According to the Indian Association of Tour Operators (IATO), the hotel, aviation and travel sector together may incur losses of about INR 8,500 crore due to travel restriction imposed on foreign tourists by India. It has been estimated that there would be about 40-50 million direct and indirect job losses in India, with an annual loss in revenue of around USD 17 billion in India (FICCI, 2020, Scroll 2020). It is expected that 70% of the jobs would be lost in the tourism sector during the pandemic (Radhakrishnan, 2020).



**Fig. 5: Unemployment Rate in India (2015- 2020)**  
Data Source: World Bank

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Fig. 5 shows the changes in unemployment rate in India during the period 2015 to 2020. There is always decline in unemployment till December 2019, but due to pandemic, India's unemployment rate for 2020 increased to 7.11%, showing an increase of 1.84% over 2019 figure. Unemployment rate in India is increasing due to massive job losses in tourism market as tourism is a multidisciplinary sector offering huge job opportunities from grass root to higher level offering significant contribution to the growth of an economy. Along with tourism, other interlinked sectors like local transportation, airline, railway, hospitality sector, entertainment, food and beverage, manufacturing and other connected industries are also adversely affected. As a result, there is hike in the unemployment rate because of the suspension of commercial activities for a long time leading to people losing jobs countrywide. With the tourism industry among the hardest hit due to the pandemic, it is estimated that about 21.5 million people working in the sector lost their jobs during the nine-month period from April 2020-December 2020 (The Hindu, July 28, 2021).



**Fig. 7: Month-wise Unemployment Rate in India, Jan.16- Oct. 21**

**Source:** Centre for Monitoring Indian Economy Survey

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The Indian tourism and hospitality industry are gazing at a likely job loss of around 38 million, which is 70% of the total workforce due to the pandemic (Scroll, 2020). The travel and tourism companies in India are dealing with the miserable journey of canceled bookings from travelers which led to a "complete paralysis" in the market. The situation was worse between the periods February 2020 to late March 2020. If this shift resume as the Covid-19 destruction progresses, it will obstruct nation employment. Therefore, the lockdown throughout at simultaneous time impacted the overall economic activities and tourism activity which resulted in huge loss to this industry and comprehensive job loss.

The facts and analysis indicate that tourism industry keeps tight correlation with the economic growth of the economy of a nation, since tourism is linked with every sector of the economy. COVID-19 has severe adverse impact on the travel and tourism industry all over the world. Both domestic and international tourists cancelled their bookings due to the pandemic, and simultaneously, businesses are losing their revenue, and employees are losing their jobs. For the Indian travel and tourism industry, special stimulus package from the government is necessary to survive the current situation and revive after the pandemic. This is possible only after complete reopening of the international flights for tourists.

### **Policy Recommendations and Conclusions:**

Due to the global impact of coronavirus disease, it is expected that many international flights will not be operational in the upcoming months, and even if it continues, foreign tourists will be apprehensive of possible infection and health concerns and thus would restrict traveling. Various governments also have started controlling

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international travel again because of the third wave of COVID-19, after the first two waves. In such a case, under the new normal situation, only the promotion of domestic tourism can edge the rage of this global crisis to some extent.

For sustainable development of the tourism industry government need to come forward by helping the sector with contactless (as far as possible) scientific mechanism for the hospitality sector, which needs working capital, soft loans and adjournment on loan repayments. All these are inevitable in this condition to revive the tourism economy of India.

Tourism industry also needs to offer different stimulus and discount packages for attracting domestic tourist, which will help to recover the losses. As the travel and tourism sector relies heavily on trust, thus, it may take a longer time to return to routine in the recovery period because tourists need to ensure that the situation is safe and secure before they step out to travel again. Companies need to regain the trust of travelers and ensure disinfecting major tourists' destinations, including hotels and restaurants to accommodate them safe from Covid-19. The future of tourism sector depends on how the virus transmission would happen and how it is contained. Thus, the policymakers in the tourism industry must develop a new crisis-readiness mechanism to fight the present pandemic crisis and its future movement.

### **References**

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1. Chuo, H.Y. (2007). Theme Park Visitors' Responses to the SARS Outbreak in Taiwan. *Advances in Hospitality and Leisure*. 3. 87- 104. [https://doi.org/10.1016/S1745-3542\(06\)03006-2](https://doi.org/10.1016/S1745-3542(06)03006-2)
2. Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: A rapid assessment of COVID19. *Journal of Sustainable Tourism*, 29(1), 1- 20.

*Covid 19: Indian Economy and Society*

3. <https://doi.org/10.1080/09669582.2020.1758708>
4. Hafsa, S. (2020). Impacts of COVID-19 Pandemic on Tourism & Hospitality Industry in Bangladesh. SSRN. <http://dx.doi.org/10.2139/ssrn.3659196>
5. Khan, N., Hassan, A. U., Fahad, S., & Naushad, M. (2020). Factors affecting tourism industry and its impacts on global economy of the world. Available at SSRN: <https://ssrn.com/abstract=3559353> or <http://dx.doi.org/10.2139/ssrn.3559353>
6. Khan, N., Fahad, S., Faisal, S., Naushad, M., & Akbar, A. (2020). COVID-2019 Review and Its Impact on Indian Economy. Available at SSRN: <https://ssrn.com/abstract=3661625> or <http://dx.doi.org/10.2139/ssrn.3661625>
7. Kumar, V. (2020). Indian Tourism Industry and COVID-19: Present Scenario. *Journal of Tourism and Hospitality Education*, 10, 179-185.
8. Ministry of Tourism, India (2019). *India Tourism Statistics 2019*. New Delhi: Government of India.
9. Muthukrishnan, M. (2020). COVID-19 and its impact on Indian economy. Available at: <https://bfsi.eletsonline.com/covid-19-andits-impact-on-indian-economy/> (Accessed at 25 November, 2021)
10. Ohlan, R. (2017). The relationship between tourism, financial development and economic growth in India. *Future Business Journal*. 3(1). 9-22.
11. <https://doi.org/10.1016/j.fbj.2017.01.003>.
12. Radhakrishna, S. A. (2020). COVID-19| Post-pandemic, India's Tourism Sector Stares at 70% Job Loss.
13. Retrieved from <https://www.thehindu.com/news/national/kerala/coronavirustourism-sector-stares-at-70-job-loss/article31310234.ece> (Accessed on 10 November, 2021)
14. Rukh, L., Khan, F., & Mohammad, N. (2020). Potential Economic Impacts of COVID-19 on Tourism Industry of Pakistan: A Review. *Gaziantep University Journal of Social Sciences*, 19 (COVID-19 Special Issue), 601-611. <https://doi.org/10.21547/jss.740036>
15. Safoora (2020). After Zomato, Swiggy sacks 1,100 workers. Available at <https://www.siasat.com/after-zomato-swiggy-sacks1100-workers-1890707/> (Accessed on 25 November, 2021)

### *Covid 19: Indian Economy and Society*

16. Scroll. (2020). India's Covid-19 lockdown may cause 38 million job losses in the travel and tourism industry, <https://scroll.in/article/959045/indias-covid-19-lockdown-may-cause-38-million-job-losses-in-the-travel-and-tourism-industry>
17. Singh, M. K., & Neog, Y. (2020). Contagion effect of COVID-19 outbreak: Another recipe for disaster on Indian economy. *Journal of Public Affairs*, 20(4), e2171. <https://doi.org/10.1002/pa.2171>
18. Statista. (2020). <https://www.statista.com/statistics/1104835/coronavirus-travel-tourism-employment-loss/> (Accessed on 25 November, 2021)
19. Suman, R., & Kumar, V. (2021). A Preliminary Study of the Impact of Novel Coronavirus Disease (COVID-19) on Tourism Sector of India. *Brazilian Annals of Tourism Studies-ABET*. 11. 1- 12. <https://doi.org/10.34019/2238-2925.2021.v11.32318>
20. TAN. (2020). Foreign tourist arrivals to India tumble over 66% in March owing to coronavirus pandemic. <https://travellandnews.com/foreign-tourist-arrivals-to-india-tumble-over-66-in-march-owing-to-coronavirus-pandemic/>
21. Thams, A., Zech, N., Rempel, D., & Ayia-Koi, A. (2020). An initial assessment of economic impacts and operational challenges for the tourism & hospitality industry due to COVID19 (No. 2/2020). *IUBH Discussion Papers-Tourismus& Hospitality*.
22. UNWTO. (2020). *UNWTO World Tourism Barometer* (Vol. 18, Issue 2, May 2020). Madrid, Spain: UNWTO.
23. Wen, J., Wang, W., Kozak, M., Liu, X., & Hou, H. (2020). Many brains are better than one: The importance of interdisciplinary studies on COVID-19 in and beyond tourism. *Tourism Recreation Research*, 1-4. <https://doi.org/10.1080/02508281.2020.1761120>
24. World Health Organization: WHO Coronavirus Disease (COVID-19) Dashboard. (2021). World Health Organization. Available at: <https://covid19.who.int>
25. Worldometers. Report coronavirus cases. (2021). Worldometer Available at: <https://www.worldometers.info/coronavirus>
26. WTTC. (2020). Latest research from WTTC shows a 50% increase in jobs at risk in Travel & Tourism. Available at <https://wttc.org/News-Article/Latest-research-from-WTTC-shows-a-50-percentage-increase-in-jobs-at-risk-in-Travel-and-Tourism> (Accessed at 23 November, 2021)

*Covid 19: Indian Economy and Society*

27. Yeh, S. S. (2020). Tourism recovery strategy against COVID-19 pandemic. *Tourism Recreation Research*, 1-7. <https://doi.org/10.1080/02508281.2020.1805933>
28. Zhang, H., Cho, T., & Wang, H. (2020). The impact of a terminal high altitude area defense incident on tourism risk perception and attitude change of Chinese tourists traveling to South Korea. *Sustainability*, 12(1), 7. <https://doi.org/10.3390/su12010007>



## **Double Pandemic and Women: Domestic Violence in India**

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### **Abstract**

*Double pandemic or shadow pandemic is faced by the Indian women as the worst form of human rights violation in the age of COVID-19. December, 2019 brought a new health pandemic COVID-19 to the world marking the death of millions of people around the world. The global outbreak of this pandemic unquestionably challenges public health and global economy and questions the potentiality of the international crisis management system. With the major implications on public health and economy, the COVID-19 also brought major psychological sufferings for the people as lockdown method imposed to fight against the spreading of COVID-19 forced them to remain confined to the four walls with limited income sources, expanded mental pressure, travel limitations, expanded conjugal friction, stress, nervousness, money-related emergency, and substance misuse. The "Stay home, stay Safe" mantra imposed under lockdown became a paradox in the context of domestic violence of women. They are forced to live in abusive relationship where they have to face intimate partner violence aggravated*

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*by loss of job or financial income. In India, the lockdown carried brutal violence of women's right and the primary caretaker of every family gone through severe household violence. But, unfortunately there has not been any gender analysis of the pandemic by any government or health organizations for the assessment of domestic violence in India. The article is an attempt to explore the effects of ongoing pandemic over Indian women through statistical interpretation of domestic violence and also suggests recommendations to combat such situation.*

**Keywords:** *COVID-19, Double Pandemic, Domestic Violence, India.*

#### **Introduction:**

In the month of December, 2019, the world populace witnessed the emergence of a severe threat to humankind in the form of COVID-19. The new COVID-19 pandemic is the new ongoing worldwide pandemic of the coronavirus family of disease caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). There were several cases of pneumonia of unknown causes reported in Wuhan City of China and the Chinese authority identified the novel coronavirus as the cause on 7 January 2020 and the new strain of the novel coronavirus was subsequently named the "COVID-19" virus. The outbreak quickly spread all over the world. Seeing its severity and loss of human life, Dr. Tedros Adhanom Ghebreyesus, WHO Director-General declared the novel coronavirus outbreak as "public health emergency of international concern"<sup>1</sup> on 30 January 2020, and as a pandemic on 11 March, 2020.

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<sup>1</sup> Wikipedia, "COVID-19 Pandemic", in [https://en.wikipedia.org/wiki/COVID-19\\_pandemic](https://en.wikipedia.org/wiki/COVID-19_pandemic)

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With the outbreak of the virus, the countries were left with no option than to adopt lockdown as the strategy to prevent the spread of COVID-19. Along with the financial crisis, the lockdown itself has severe socio-psychological consequences among people, which has led to an alarming increase in many psychiatric conditions. Along with this, the process of lockdown and subsequent isolation procedures implemented by the affected countries of the world, have its extreme consequences on women, who had to fight against the double pandemic in the form of domestic violence. India is not an exception in this problem and reports provided by different organisations strongly pointed this aspect of domestic violence in the lockdown period. The need of the hour is to formulate strict policies related to women rights and sensitise women for their own development.

#### **Research Objectives:**

The objectives of this research article are:

- To understand the gendered impacts of COVID-19 and to assess how women are affected in the community under the lockdown and isolation period in special context of India.
- To explore the causes of domestic violence in India during the prolonged pandemic of COVID-19.
- To interpret and analyse the statistical data provided by different international and national bodies to understand how the socks of double pandemic penetrated the women section, especially in India.
- To recommend effective policies and interventions as a means to be prepared and prevent the outbreak by in cooperating women in the various processes

**Research Methodology:**

The approach to this research article is exploratory in nature and to serve the purpose of the research topic, both conventional and analytical methods of investigations are followed. For the purpose of collecting data, secondary sources of data have been used as there is no abundance of published academic works and government survey reports on the research topic. Statistical data provided by different international bodies, like UNO, UN Women, WHO and national bodies and reports of different organs of government, National Commission on Women, National Crime Record Bureau, journals, e-journals, articles, books, annual reports, and newspaper based on qualitative and descriptive in nature have been used as source to explore the crisis of domestic violence during the COVID pandemic.

**Domestic Violence during COVID-19 and Indian Experience:**

Like other countries, the Government of India imposed countrywide lockdown from 25th March, 2020 as part of the global preventive measures against the spread of COVID-19 that entails the observance of physical distancing and isolation of people. All services and shops were closed except pharmacies, hospitals, banks, grocery shops and other essential services. Again, commercial and private establishments were also closed allowing only work-from-home method. Educational institutions, places of worships, public and private transport were banned and gathering of people in other social, religious, political, sports, entertainment etc. all were prohibited to adhere strictly to the norms of isolation and social distancing. As consequence of the lockdown, the country had to face severe economic hardship. Contraction in GDP, unemployment and other related financial issues marked major economic crisis for the country. Along with these issues people had to face serious psychological

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problems as fuelled by mandatory stay-at-home rules, physical distancing, economic uncertainties, and anxieties caused by the pandemic which made bitter social expressions in Indian society.

One such group that faced the evil side of lockdown is the women. Women of underdeveloped and developed countries as well had to face domestic violence and intimate partner violence (IPV). Domestic abuse, also called "*domestic violence*" or "*intimate partner violence*", can be defined as a pattern of behaviour in any relationship that is used to gain or maintain power and control over an intimate partner. Abuse is physical, sexual, emotional, economic or psychological actions or threats of actions that influence another person. This includes any behaviours that frighten, intimidate, terrorize, manipulate, hurt, humiliate, blame, injure, or wound someone.<sup>2</sup> In 1993, the UN Declaration on the Elimination of Violence Against Women defined domestic violence as "*Physical, sexual and psychological violence occurring in the family, including battering, sexual abuse of female children in the household, dowry-related violence, marital rape, female genital mutilation and other traditional practices harmful to women, non-spousal violence and violence related to exploitation.*"<sup>3</sup> Thus, it is generally understood that domestic violence is the physical, sexual and psychological violence against women. It is shown that domestic violence has increased at an alarming level during the pandemic compared to pre corona times. It may be noted here that the lockdown induced stress, the disruption of social and protective networks, and loss of income and decreased access to services all the responsible for the increased risk of violence against

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<sup>2</sup> What-is-domestic-abuse United Nations, COVID-19 Response in <https://www.un.org/en/coronavirus/what-is-domestic-abuse>

<sup>3</sup> 85th plenary session: declaration on the elimination of violence against women, December 20, 1993, United Nations General Assembly, September 24, 2013.

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women. Countries like China, United States, United Kingdom, Brazil, France, and Australia all reported cases of increased domestic violence. The Statistics Division of the Department of Economic and Social Affairs, United Nations, has produced the "World's Women report" provides the latest data on the state of gender equality worldwide. According to its report, *during COVID-19 lockdowns, many women and girls have been isolated in unsafe environments where they are at heightened risk of experiencing intimate partner violence. Around one third of women worldwide have experienced physical and/or sexual violence by an intimate partner; and 18% have experienced such violence in the past 12 months. In the most extreme cases, violence against women is lethal: globally, an estimated 137 women are killed by their intimate partner or a family member every day.*<sup>4</sup>

India has also become the fertile ground for this evil along with the other socio-economic and psychological issues faced by the Indians during the pandemic. According to the Human Development Report (HDR), 2020 which was launched in December of that year, India Ranked at 131 among 189 countries in the Human Development Index (HDI) which is two positions down relative to the HDR of previous year. The most shocking factor that played crucial role in degrading India's position in this report is the intimate Partner Violence (IPV) or Domestic Violence (DV). The "Protection of Women from Domestic Violence Act" (2005) is the landmark in the history of legal measures adopted in India against Domestic Violence that recommends domestic violence as punishable offence in India. However, in spite of this, the cases of domestic violence are increasing day by day even during the pandemic period. Many factors that

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<sup>4</sup> Report on "The World's Women 2020: Trends and Statistics" produced by the Statistics Division of the United Nations Department of Economic and Social Affairs, October 20, 2020

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contributed in domestic violence in India during the pandemic are manifold in nature, like chronic entrapment with families, increased substance abuse, overcrowding, unemployment, isolation, loss of income, poverty, anxiety and stress increased the risk of domestic violence. In India, majority of women go through knowledge and practice gap, in which they never take actions against such violence. Thus, this evil of domestic violence is normalised in Indian society. The monetary and financial recession of COVID-19 makes human behaviour more impulsive, reckless, controlling, and aggressive. But more specifically, lack of awareness on the availability of helpline, role of social media, lack of healthcare access, lack of sexual and reproductive health services, fear of the police or legal hassles and stigma, difficulty in managing family, objectification of women, lack of livelihood all created endless loop of domestic abuse, especially during the pandemic. As reported, 86% of women in India do not report domestic violence.<sup>5</sup>

As per the official report of National Commission for Women (NCW), the number of complaints of domestic violence it received rose sharply from 2,960 in 2019 to 5,297 in 2020, the year of the lockdown when most people were confined to their homes due to COVID-19. The trend continues in the year 2021 as well. The NCW received a total of 19,730 complaints of crimes against women in 2019 as compared to 23,722 in 2020. A year after the lockdown, the NCW continues to receive over 2000 complaints in every month of crime against women of which one-fourth is related to domestic violence. According to the NCW data, 1,463 complaints of domestic violence against women were received from January, 2021 to March 25, 2021. The maximum number of complaints received by the NCW was

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<sup>5</sup> EPW Engage. 2020. COVID-19, Domestic Abuse and Violence: Where Do Indian Women Stand? [Internet, cited 2021 Jul 26]. Available from: <https://www.epw.in/engage/article/covid-19-domestic-abuse-and-violence-where-do>.

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registered as a violation of the right to live with dignity and in the year 2020-21 a total of 8,688 women approached the Commission saying that this right was violated. The official website of NCW shows the following statistics:

**Table: Complaints received by NCW from aggravated Women during COVID pandemic**

| Sl. No | Categories                                    | Year (2019-20) | Year (2020-21) |
|--------|---|----------------|----------------|
| 1      | Cyber Crimes Against Women                    | 458            | 797            |
| 2      | Harassment of Married Women/ dowry harassment | 3,963          | 4,209          |
| 3      | Domestic Violence                             | 3,369          | 6,049          |
| 4      | Right To Live With Dignity                    | 5061           | 8688           |
| 5      | Police Apathy                                 | 1968           | 1460           |

**Source:** National Commission for Women (official website)

Again, a WhatsApp number 72177135372 was launched on April 10, 2020 by NCW in order to easy reporting of domestic violence cases through chats, understanding the ordeal of those who may not be able to access the online portal or call for help in front of their abusers. The Commission has constituted a special team to handle these complaints on a fast track basis considering the urgency in the matter and to provide immediate security to the survivors. These complaints received from the chats were processed without any formal registration of cases with the Commission. Within a weeks' time of the helpline launch, NCW had addressed 40 cases of violence against women.<sup>6</sup>

Again, the data provided by National Crime Records Bureau (NCRB) which works under the Union Ministry, also highlighted the intensified scenario of domestic violence during the pandemic in India.

<sup>6</sup> Rashtra Mahila, National Commission for Women, Vol 1, No.244, April 2020



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The NCRB, 2019 reports that a majority 1.26 lakh around 30.9% of the total 4.05 lakh cases are registered under crimes against women in Section 498A of the Indian Penal Code (IPC) which deals with 'cruelty by husband or his relatives'. Rajasthan marked the highest reported case of domestic violence in India with 18,432 cases followed by Uttar Pradesh with 18,304 cases.<sup>7</sup> In 2020, a total of 371,503 cases of crime against women were reported across the country. Such crimes include cases of rape, outraging modesty, dowry deaths and harassment, acid attacks and kidnapping. Among states and Union territories, Uttar Pradesh topped the list with maximum number (49,385) of such cases followed by West Bengal (36,439), Rajasthan (34,535), Maharashtra (31,954) and Madhya Pradesh (25,640). Of the total cases of crimes against women during the COVID pandemic-induced lockdown, there were 28,046 incidents of rape involving 28,153 victims. Out of the total victims, 25,498 were adults, while 2,655 were below the age of 18 years, the report stated.<sup>8</sup>

The National Family Health Survey (NFHS), the large-scale survey conducted in a representative sample of households throughout India by the Ministry of Health and Family Welfare, Government of India presented surprising data on domestic violence in India. According to the gender based violence data of NFHS-5 (2019-21) , a total of 29.3% of women aged between 18-49 years experienced spousal violence, about 3.1 % of women aged between 18-49 years experienced physical violence during any pregnancy and 1.5% of Young women aged 18-29 years experienced sexual violence by age 18.<sup>9</sup> It has also taken into account state-wise records on women who faced spousal violence during this period:

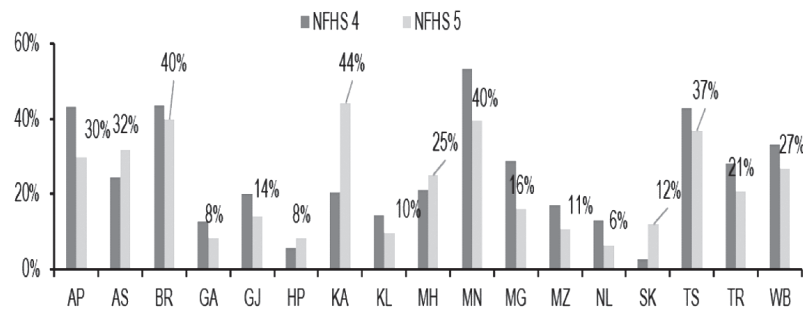
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<sup>7</sup> The Times of India, October 5, 2020

<sup>8</sup> Hindustan Times, March 05, 2022

<sup>9</sup> India Fact Sheet, National Family Health Survey-5 (2019-21)

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**Fig. Proportion of women who have ever faced spousal violence**

Source: NFHS-5

All the statistical analysis made by different organisations is crucial to understand the dynamics of domestic violence in the pandemic period in India. It can be also noted here that the factual data presented may be far less than the actual data as social stigma and fear make women not to register case against any kind of violence. The COVID situation made it more difficult as women had to live with the abusive partner with financial worries and without access to social help.

#### **Strategic Recommendations:**

Domestic violence or intimate partner violence has rooted very deeply in Indian society. As the government announced lockdown to stop the transmission of Corona Virus from people to people, at the same time the government must adopt strategic planning to ensure women rights against domestic violence during this pandemic:

- It is recommended that an intersectional women rights approach should be adopted by the Government of India to ensure easy access of the victims for necessary information, support and necessary resources to fight with the crisis of

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violence. The "Protection of Women from Domestic Violence Act, 2005" should be strictly implemented. The perpetrators of such cases of domestic violence must be brought to trail and punished according to the provisions of the Act. The national and state government should develop sensitive and comprehensive messages in the form of audio, video, and written methods such that maximum message can be circulated among women. There must be legal aid cells that work 24 × 7 to provide any kind of emergency service for such women. Helpline numbers should be opened by the governments so that women can easily access telemedicine and digital health amidst lockdown.

- Emphasis must be given in creating awareness among women of different socio-economic groups to make them aware about their legal rights. There must be awareness campaign to encourage them for the early identification and reporting of abuse against them. Here, Media can play key role in publicise messages and sensitising women against gender-based violence.
- Government must ensure access of women for necessary and comprehensive sexual and reproductive health services during the crisis.
- To report the cases of domestic violence and take immediate action, the most important task to do is to end the social stigma associated with it. Strategies should be adopted by the government in association with mental and public health experts to develop strong social and mass media campaign to educate the community about the prevention of such abuses.
- In addition to the COVID-19 measures, the government at national and state level must ensure that the response teams

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should be used to impart safety trainings to women, especially medical staff, who are at the frontline to deal with COVID patients.

- Actions must also be taken against various forms of adjustment disorders, stress reactions, and post-traumatic stress disorders in domestic violence victims. Here, measures must be taken to help them in availing counselling and other related treatment facilities necessary to fight the stigma and to preserve their autonomy and self-esteem. Here, the government must also adopt measures to ensure employment of such victims.

### **Conclusion:**

The COVID-19 along with other related health issues brought new challenges for women in the form of increased domestic violence. In India, this significant social part had to go through serious physical and mental harassment for. To fight against it, we, the government, people and the other stakeholders along with NGOs must put our hands together to create a society free of crime against women. Such a society would lead to women emancipation, which is important to realise the worth of women.

### **References**

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1. Bourgault, S., Peterman, A., & O'Donnell, M. (2021, April 12). Violence Against Women and Children During COVID-19-One Year On and 100 Papers In on JSTOR. <https://www.cgdev.org/publication/violence-against-women-and-children-during-covid-19-one-year-and-100-papers-fourth>. <https://www.jstor.org/stable/resrep30898>
2. Crisis Group Special Briefing. (2020, April 17). COVID-19 and Conflict: Seven Trends to Watch. Crisis Group. <https://www.crisisgroup.org/global/sb4-covid-19-and-conflict-seven-trends-watch>

### *Covid 19: Indian Economy and Society*

3. Lopez, C. B., & Bro, A. (2020, May 12). A Double Pandemic: on JSTOR. <https://www.jstor.org/stable/resrep29816>
4. Malik, S., & Naeem, K. (2020, May 8). Impact of COVID-19 Pandemic on Women: Health, livelihoods & domestic violence on JSTOR. <http://www.jstor.org/stable/resrep24350>
5. McKeon, L. (2021). Women of the Pandemic: Stories from the Frontlines of COVID-19. McClelland & Stewart.
6. Nanthini, S., & Nair, T. (2020). COVID-19 and the Impacts on Women. S. Rajaratnam School of International Studies. <http://www.jstor.org/stable/resrep26875>
7. Neil, J. (2020, June 11). Domestic violence and COVID-19: Our hidden epidemic. <https://pubmed.ncbi.nlm.nih.gov/32539247>
8. Sarkar, D., Suri, S., & M. (2022, January 17). Domestic Violence and Women's Health in India: Insights from NFHS-4. ORF. <https://www.orfonline.org/research/domestic-violence-and-womens-health-in-india-insights-from-nfhs-4/>
9. UN Women & World Health Organisation. (2020, April 17). Violence against women and girls data collection during COVID-19. [Www.Unwomen.Org. https://www.unwomen.org/en/digital-library/publications/2020/04/issue-brief-violence-against-women-and-girls-data-collection-during-covid-19](https://www.unwomen.org/en/digital-library/publications/2020/04/issue-brief-violence-against-women-and-girls-data-collection-during-covid-19)
10. United Nation Office on Drugs and Crime (UNODC). (2020, November 25). What crime and helpline data say about the impact of the COVID-19 pandemic on reported violence against women and girls. [https://www.unodc.org/documents/data\\_andanalysis/covid/Violence\\_against\\_women\\_24Nov.pdf](https://www.unodc.org/documents/data_andanalysis/covid/Violence_against_women_24Nov.pdf)
11. United Nations Women. (2020, September 24). From Insights to Action: Gender Equality in the Wake of COVID-19 | United Nations iLibrary. <https://www.unilib.org/content/books/9789210053396>
12. Wani, W. J. V. R. J. (2021, August 30). Violence Against Women and COVID Pandemic- Double the Trouble! | The Indian Practitioner. <http://articles.theindianpractitioner.com/index.php/tip/article/view/1229>
13. World Health Organization. (2020). Addressing Violence Against Children, Women and Older People During The Covid-19 Pandemic: Key Actions. World Health Organization. <http://www.jstor.org/stable/resrep28197>

# Human Rights Violations During Covid-19

*Jeuti Nath*

## Abstract

*Originating in the city of Wuhan, China, the virus spread all over the world rapidly and made huge loss for humankind. To stop the spread of the virus the whole world undergoes the situation of lockdown. As a result of these countries faced multifaceted loss. One side losses of life, on the other hand socio economic problems rise as a result of lockdown. The World Health Organization declared covid-19 as pandemic in 2020. Covid-19 has had an unprecedented impact on societies, livelihoods, communities and the wellbeing of families, redefining the overall everyday life of people all around the world. All of this covid-19 has a brutal impact on human rights. While covid-19 poses a huge challenge to the whole society, the impact on vulnerable groups is in the peak. This paper is study about impact of public health policies on enjoyment of human rights. The worsening of such human rights violations increases the need to utilize a human rights approach in response to covid-19.*

**Keywords:** covid-19, human rights, women, children, elderly people, employees.

**Introduction:**

Covid-19 prevention and mitigation efforts were abrupt and challenging for most countries with the extended lockdown straining socioeconomic activities. Poor marginalized groups and individuals are particularly vulnerable to adverse effects of the pandemic such as human rights abuses and violations. On March 11, 2020, the World Health Organization (WHO) declared a public health emergency of international concern in response to the global pandemic of the covid-19. To reduce the spread of the virus, countries have implemented urgent emergency health measures. These measures include stay at home orders and the closure of schools which have led people to reorganize their lives and necessitated changes in livelihood and health service. In response to public health services government need to navigate a balance between protection of public health and safeguarding their human rights including education, freedom of movement and access to healthcare. Measures adopted by the government to prevent the spread of covid-19 increase human rights violations in different parts of the world. The UN defines human rights as..." fundamental to all human beings, regardless of race, sex, nationality, ethnicity, language, religion or any other status. These rights include the right to life and liberty, freedom of opinion and expression, the right to work and education and many more such as a safe and clean environment have become important to uphold. Everyone is entitled to these rights, without discrimination or threat of any kind." Although covid-19 pandemic has had a global impact on human rights violations but it worsens the living condition of the poor people. Different age groups of people are affected differently and the nature of their human rights violations are also different.

**Objective:**

The present paper aims to study-

**1) Human rights violations in covid-19 pandemic**

**Methodology:** The conducted study follows the descriptive method. Data are collected through direct non participant observation .The present study was carried out in the village Barkapala under sarukhetri development block.

**Result and analysis:** The conducted study revealed various cases of human rights violation in the adopted village area. Most of the people in the adopted village work in private sector. In the time of covid-19 pandemic all working people find themselves in a state of economic insecurities which also led other forms of insecurities and threat to their life. Human rights violation is another noticeable issue in pandemic period in the village. People mostly vulnerable to human rights violations are elderly people, women, children and private employees.

**Human Rights violations of children:** Children are at less risk of severe disease from covid-19 and lower mortality rates than other age groups. But a countless other ways, the covid-19 crisis is having a devastating effect on children, with potentially far reaching and long term negative impacts. Many children are out of school and widespread job and income loss and economic insecurity are likely to increase rates of child labor, sexual exploitation, teenage pregnancy and child marriage. Stresses on families particularly those living under quarantines, lockdowns and other restrictions on freedom of movement may increase, large numbers of children will be orphaned and vulnerable to exploitation and abuse.

According to UNESCO, more than 1.5 billion students in 188 countries were out of school due to covid19 on April 8, 2020, reporting



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over 91% of world's student population. The crisis has exposed vast disparities in internet access for children and availability of learning materials. School closures may disproportionately affect children who already experience barriers accessing education or who are at higher risk of being excluded for a variety of reasons. These include children with disability, students in remote locations, asylum seekers and refugees and those whose families have lost income as a result of job cuts.

The present study exposes various cases of human rights violations of children, including right to education, right to have nutritious food, child labor and early marriage and child abuse etc. In the village students studying in both government and private school lack the opportunity of online classes. Many students don't have the facility of smart phone; many have been facing the problems of internet connection. At the same time schools of that area doesn't have the facility to organize online classes both in public and private sector. Parents of many students don't know how to use internet. Teacher provides notes in whatsapp group, which is also not effective learning for students read in lower and upper primary level. It is also came in to focus that teacher does not provide notes on regular basis lack regularity in teaching learning process in lockdown time.

#### **2. Human rights violations of elderly people:**

Human rights are equally enjoyable for all regardless of age. However, the covid19 pandemic might pose distinct threats to the equal enjoyment of human rights by older persons. Older persons are at higher risk of serious complications due to covid19 and targeted actions may be necessary .Older persons will need additional support to access essential goods, services and to maintain human interaction. States must take additional social protection measures so that support reaches those who are at most risk of being disproportionately

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affected by the crisis. Failure to deliver essential support during the crisis amounts to a breach of human rights.

During lockdown physical distance create social isolation for older people. Social contacts are necessary to maintain people's health and wellbeing. Whilst digital social networking is now being widely used by families to communicate during the lockdown time, many older people do not have access to a PC, table or smart phone, an internet connection or the necessary digital skills to maintain remote contacts with family and friends. It is also found that limiting movement disproportionately affected medically and socially vulnerable populations. Older people are among them experience reduced access to health care which can result delayed detection of disease.

#### **3. Human rights violations of women:**

Since the outbreak of covid19 emerging data and reports from those on the front lines, have shown that all types of violence against women and girls, particularly domestic violence has identified. The latest figures from the UN Entity for Gender Equality and Empowerment of Women confirm that during the Covid19 pandemic levels of violence against women and girls have increased.

It is came in to focus in the conducted study that women began to experience gender based violence during pandemic than before and household conflicts had become more frequent. The most common form of violence are verbal abuse, sexual harassment, physical abuse, denial of basic needs and denial of means of communication. Another fact is that economically dependent women face more problems than working women. Among those women whose partner has no earnings has at highest risk of violence.

#### **4. Human rights violations of private sectors employees:**

Covid19 pandemic create a tremendous effect on private sectors employees. Many of them were throughout from their jobs during the

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pandemic situation. Salary cut is another issue deal by the private employees. Many private organizations take the advantage of the situation and exploitation reach at the peak. The World Inequality Report, produced by the World Inequality Lab , found that the covid19 crisis has exacerbated inequalities between the very wealthy and the rest population. India stands out as a " poor and very unequal country, with an affluent elite" , where the top 10% holds 57% of the total income, including 22% held by the top 1%, while the bottom 50% holds just 13% in 2021, according to World Inequality Report 2021.

Suggestion and conclusion: Analyzing the facts and findings of human rights violations during covid19 pandemic, study revealed various issues that need special concern. A human rights violation is not just a violations of rights but violation in itself. International human rights law guarantees everyone the right to the highest attainable standard of health and obligates governments to take steps to prevent threats to public health and to provide medical care to those who need it. Human rights law also recognizes that in the context of serious public health threats and public emergencies threatening the life of the nation, restrictions on some rights can be justified when they have a legal basis, are strictly necessary, based on scientific evidence and neither arbitrary nor discriminatory in application, of limited duration, respectful of human dignity, subject to review and proportionate to achieve the objective. The scale of severity of covid19 pandemic clearly rises to the level of a public health threat that could justify restrictions on certain rights, such as limiting freedom of movement. At the same time, careful attention to human rights such as non discrimination and human rights principles such as transparency and respect for human dignity can foster an effective response.

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**Reference** 

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- 1) [hrw.org/news/2020/04/09/covid19](https://www.hrw.org/news/2020/04/09/covid19) and children rights
- 2) <https://doi.org/10.3389/fpsyg.2020.605875>
- 3) <https://doi.org/10.1016/j.ijjfmgt.2020.102183>
- 4) [age-platform.eu/publication/covid19](https://age-platform.eu/publication/covid19) and human rights concerns for older person
- 5) [www.ohchr.org](https://www.ohchr.org)
- 6) [nhrc.nic.in](https://nhrc.nic.in)

# **Covid-19 and Socio-economic Impact on Sarania Kachari in Baksa District of Assam**

*Dr. Manik Chandra Nath  
Hemanta Deka*

## **Abstract**

*The emergence of Corona viruses (CoV, Covid-19) in 2019 was started as a great pandemic for human civilization. This global pandemic has impacted several countries, affecting more or large family of viruses that causes illness ranging from the common cold to more severe diseases. A noval coronavirus (nCoV) is a new strain that has not been previously identified in human body. After the initial outbreak, Covid-19 continued to all provinces in China and very quickly spread to other countries and affected the human body. As the number of cases of infected individuals has risen rapidly, the death ratio increases day by day and it became uncontrolled disease. The government and health department of different countries are tried to make some awareness programme among the peoples to understand the root causes of Covid-19 and make a motto 'stay home stay safe'. This paper is intended to find out the history of Covid-19 and its impact in India.*

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*Secondly, to find out the impact on socio-economic life of Sarania Kachari in Baksa district of Assam. To formulate the necessary data interview schedules, face to face interaction, primary and secondary sources are used. The study is historical and analytical.*

**Keywords:** covid-19, pandemic, death, sarania, disease, impact.

#### **Introduction:**

The Covid-19 pandemic is an ongoing global pandemic of corona-virus disease 2019 which was caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS- CoV-2). It was first identified in china in the city of Wuhan in December 2019. The WHO declared Covid-19 on 11 March 2020 as a Pandemic. As on 20 December 2021, the continuing pandemic had caused more than 275 million peoples and 5.35 million deaths. During the initial outbreak in Wuhan, the virus and disease was commonly known by several names. It is often referred to as its colloquial name, "the corona-virus pandemic" despite the existence of other human corona-viruses that have caused epidemics and outbreaks. It has referred as 'corona-virus', 'Wuhan corona-virus' and 'Wuhan pneumonia'. WHO finalized the official names Covid-19 and SARS-CoV-2 on 11 February 2020 explained as CO for corona, VI for virus, D for disease and 19 for when the outbreak was first identified (31 December 2019) WHO additionally uses "the Covid-19 virus" and "the virus responsible for Covid-19" in public communications.

#### **Background:**

The origin of the virus is still unknown, the first known outbreak started in Wuhan, Hubei, China, in November 2019. Many early cases

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of Covid-19 were linked to people who had visited the Huanan Seafood Wholesale Market in Wuhan but it is possible that human-to-human transmission was happening before this. SARS-CoV-2 is a newly discovered virus that is closely related to bat corona-viruses, pangolin corona-viruses and SARS-CoV. The earliest known infected person fell ill on 1 December 2019. That person did not have visible connections with the Wuhan city. However, an earlier case may have occurred on 17 November 2019. Two-thirds of the initial cases were linked with the Wuhan market in China. The Scientist were analyzed that the index of corona-virus cases is likely to have been infected between mid-October and mid-November 2019. The symptoms of Covid-19 are variable, ranging from mild symptoms to severe illness. On the other hand, the common symptoms includes headache, loss of smell and taste, nasal congestion and runny nose, cough muscle pain, fever, diarrhea and breathing difficulties. People with the same infection may have different symptoms, and their symptoms may change over time. Three common clusters of symptoms have been identified: one respiratory symptom cluster with cough, sputum, shortness of breath, and fever; a musculoskeletal symptom cluster with muscle and joint pain, headache, and fatigue; a cluster of digestive symptoms with abdominal pain, vomiting, and diarrhea. In people without prior ear, nose, and throat disorders, loss of taste combined with loss of smell is associated with Covid-19 and is reported in as many as 88% of cases. As is common with infections, there is a delay between the moment a person first becomes infected and the appearance of the first symptoms. The median delay for Covid-19 is four to five days. Most symptomatic people experience symptoms within two to seven days after exposure, and almost all will experience at least one symptom within 12 days. Most people

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recover from the acute phase of the disease. However, some people over half of a group of home-isolated young adults continue to experience a range of effects, such as fatigue for months after recovery, a condition called long Covid; long-term damage to organs has been observed. Multi-year studies are underway to further investigate the long-term effects of the disease.

The disease is mainly transmitted via the respiratory route when people inhale droplets and small airborne particles that infected people exhale as they breathe, talk, cough, sneeze, or sing. The infected people are more likely to transmit Covid-19 when they are physically close. However, infection can occur over longer distances, particularly indoors. The first confirmed death was in Wuhan on 9 January 2020. The first reported death outside of China occurred on 1 February 2020 in the Philippines, and the first reported death outside Asia was in the United States on 6 February 2020

The pandemic led many countries and regions to impose quarantines, entry bans, or other restrictions, either for citizens, recent travelers to affected areas, or for all travelers. Travel collapsed worldwide, damaging the travel sector. The effectiveness of travel restrictions was questioned as the virus spread across the world. One study found that travel restrictions are most useful in the early and late phase of an epidemic. So, many countries attempted to slow or stop the spread of Covid-19 by recommending, mandating or prohibiting behavior changes, while others relied primarily on providing information. Measures ranged from public advisories to stringent lockdowns. The first case in India was reported on 30 January 2020. India ordered a nationwide lockdown starting 24 March 2020 with a phased unlock beginning 1 June 2020. Again, the second wave Covid-19 hit India in April 2021, straining healthcare services. Due to



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pandemic the entire world economy as well as social structure faced lots of problems. The peoples were suffered not only health, economy, social but also they lost their mental strange. The socio-economic sector all over the country faced huge problems to maintain their daily life.

Assam is a land of harmony and branches of various ethnic tribes. From the past, various ethnic groups migrated to Assam and they were settled in the different parts of the state. Most of the original groups were Mongloids who included the Bodos and Sarania Kachari is a branch of Bodo tribe, a major Mongoloid group. From the ancient period, the historical sources described about inhabitant of the entire region to be Mlesh, Nisad or Kirat who belonged to the Mongoloids. Those Mongoloids included Bodo-Kacharis, Rabha, Hajong, Moran, Motok, Karbi, Demasa, Sonowal-Kachari, Deuri, Chutiya, Daonia, Fakial, Mikir, Lalung etc. Bodo-Kacharis is a major tribe living in Brahmaputra valley and Sarania kachari is a branch of them. Because of some social, political and religious reasons, a section of Mongoloid people adopted Hinduism and consequently mingling of Mongoloids and Aryan resulted a new tribe named Sarania Kacharis. However, after the advent of Shankardev's Neo-Vaishnavite religions this term was used. Sankardev and his disciples preached Neo-Vaishnavite religions among the various tribal people and those are called Sarania Kacharis. Of course, before Sankardeva also some tribal took Hinduism who was initiated by Brahmins and they accepted Aryan culture and introduced themselves as Khatriya. Actually, some Bodo-Kacharis came under the influence of any Neo-Vaishnavite gurus during Neo-Vaishnavite age and abandoned 'Kairataja' and accepted Vaishnavism. They were later called 'Sarania'. Sarania Kacharis have been living mainly at the North Bank of the

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Brahmaputra. They are scattered in Kamrup (Metro), Kamrup (Rural), Udalguri, Darrang, Sonitpur, Baksa, Chirang, Bongaigaon, Barpeta, Nalbari, Goalpara, Kokrajhar, Lakhimpur, and in Morigaon district of Assam.

In recent time, some people have brought a controversy that Sarania Kachari is not a tribal, rather a non-tribal community. But this allegation is not found to be a true. Bhaben Narzy in his book 'Boro Kacharir Samaj aru Sanskriti' mentions that some Boro-Kachari people became disciples of any Aryan Goswami and thus initiation to God made them well known as Sarania. They believed that this initiation made them sacred. They abandoned their own language and accepted Assamese language as their own mother tongue. Although they changed their food habits in some extent but later they remained intact with their old cultures (P-17). This recognition of the researcher like Bhaben Narzy is certainly a miles- stone in support of genuineness of Sarania Kachari as a tribal group. Ratneswar Basumatary also affirms in his article 'Boro Janajati Samikhyatmak Adhyan' that Sarania Kachari belongs to the greater Bodo or Bodo origin. He says that these Bodos are named differently in different states in India.

#### **Objectives:**

The main objectives of the research paper is to be the followings

- i) To find out the history of Covid-19 and its impacts in India
- ii) To find out the Covid-19 and its impact on socio-economic people of Saraniya Kachari in Baksa district of Assam

#### **Methods:**

The method consist mainly both primary and secondary data. The primary data is collected from the field survey of the study area

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of Baksa district and secondary source which collect; analyses and interpret the data from books, journals, government websites and government published reports and newspapers. The method of preparation data for study is historical and analytical.

#### **Field Study:**

Sarania Kachari is a place of Baksa district of Assam. Sarania Kachari is originally linked with the Bodo Kachari, they lived in different parts of the region and mostly lived in rural areas. The majority of the people are cultivators, businessman, traders, daily workers, shopkeepers, and a few of them i.e., Sarania kachari are teachers and other service holders. The study revealed that the Sarania Kachari liked to engage in different farming in present days. During the Covid pandemic the unemployed youth peoples are back to their home due to the economic crisis in their work place. The young educated persons are engaged in private company in different states but due to lost of their job they returned to home and became as unemployed person. So, Covid-19 and post Covid period, the Sarania Kachari faced lots of economic as well as social problems in their daily life.

#### **Data Interpretation:**

The pandemic triggered severe social and economic impact on society around the world including our country in general and Assam in particular. The data has been interpreted in this research study is based on field survey and a face to face interaction with the people of Sarania Kachari in the district of Baksa in Assam. The case study shows some major issues among the Sarani Kachari are facing during and after the great pandemic Covid-19 as the followings:

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#### **Family:**

From the past to present days, Sarania Kachari formed into joint families as small units. Joint families considered of grandfather, the parents, children and grand child. Joint families work in cooperative of all the members of the family. They became self reliant in production. In recent period the joint families are now in non-existence. During the pandemic and post pandemic time the families and household peoples faced so many problems but still they are unable to recover their daily life.

#### **Food supply:**

The pandemic triggered severe social and economic impact on society around the world including shortages of food supply. The entire country suffered lots of problems during the pandemic period but major issue is shortage of foods. During the case study it revealed that among the Sarania Kachari scarcity of food is major problems. So, the families were faced economic as well as foods problems.

#### **Education:**

Education is the backbone of a society to develop their mentality as well as their quality in the field of society. But, Covid-19 causes a huge set back to our education system. The school and colleges were closed down. The students of all society are facing major problems in their study. Sarania Kachari students were also unable to continue their study. The government has taken lots of measures to sort out the problems but due to some technical reason it failed. Therefore education is also a problematic cause during the pandemic.

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#### **Health:**

The Covid-19 is primarily related with health. The Covid-19 diseases mostly affected the all class of people in our society. The basic reason to illness of health is oxygen level decreased in our body and it gradually controls our body and lastly the man died. In Baksa district of Assam, the Sarania Kachari peoples also affected by pandemic. So, they were staying at home to protect from Covid-19. In the case study, it has found that the peoples were remained in their home and the earning money became limited one for shake their life.

#### **Farmer:**

Sarania Kachari is very dependent on agriculture. The rice is their prime production. The peoples always used rice as daily meal. During the survey period, the report shows that maximum numbers of family person related with the cultivation of different crops. The daily workers and farmers rely on their production of foods. So, the Covid-19 pandemic affected in the field of paddy production, different crops production etc. and it has become as a big problem among them. During the pandemic, the harvesting a branch of paddy is taken but due to closed down markets, the farmer unable to buy and sell their goods. The demand of crops production became high but food production is limited. It has suffered all the peoples of study area.

#### **Shopkeeper:**

The pandemic is responsible for damaged the global economy due to lock down, the shopkeeper in the Baksa district of Assam faced lots of problems. The daily income of the business persons gradually decreased. The cloth selling has become an important source of income for thousands of rural families. The cloth shops are providing

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employment to the rural youths and income generating opportunities particularly for male person of the family. Shopkeeper family members are dependent to produce more and earn money for their livelihood. Some of the small shops are also a source of the family income but the lockdown create problems to earn their daily wages. This activity not only leads to employment generation, but also regulates monthly income. It provides nutritious food, generates opportunities especially to daily workers.

#### **Handicraft Industry:**

The nationwide lockdown severely impacted on their livelihood of Sarania Kachari in Baksa district of Assam. The handicraft industry was one of a source of their daily income but due to Covid-19 pandemic this small scale industries suffered very badly. The raw materials and production has stagnant. The small scale handicraft industries owner faced lots of problems to manage their productions. During the pandemic period they also took loan from different government and private banks. Sarania Kachari family of handicrafts industries lost their profits and unable to earned daily wages from their business.

#### **Dairy Farm:**

In the lockdown period, the dairy industry in Baksa district as in other parts faced lots of difficulty which impacted the livelihood of several dairy farmers. As per reports, the dairy farmers had to throw away their milk in the river and pond due to loss of supply provision. Before Covid-19 pandemic, the scenario of milk farming is uplifting living condition and economic status of the dairy farmers in the case study area. The field report reveals that covid-19 virus

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had a severe impact on dairy farmer's livelihood. Corona-virus had negative impact on their daily activities and even milkmen could neither sell milk nor could buy fodder for the cattle. The study revealed that rearing cattle was part of their culture, milking the cattle as livelihood option and it was the basic source of income. The household income was dependent on the amount of milk sold in the market. The more the milk production, the higher they are sold in the market, which led to surplus household income. Farmers kept limited amount of milk for own consumption and major part of milk was marketed along with use in production of other milk products. Dairy farmers preferred to employ their family members as labor to operate dairy activities. This nationwide lockdown severely impacted their livelihood. In Baksa district of Assam, Sarania Kachari during lockdown period in the year 2020, the dairy farmers faced problem in distribution and selling of milk. As the lockdown period was extended, difficulties arose among the farmers. Farmers on large scale threw away milk on the roads and river as they could not sell it due to restriction on transport, closure of market and due to lockdown.

#### **Boiler Farm:**

In Assam during lockdown period in the year 2020, the boiler farmers faced problem in distribution and selling of chickens. As the lockdown period was extended, difficulties arose among the small boiler farmers in the district of Baksa. The Sarania Kachari boiler farmers on large scale production threw away and shut down their shops. The restriction on transportation was another reason for closed down the farms. They could not sell production due to closure of market and due to lockdown. It created financial problems and they took extra family burden for sort out the economic crisis in their daily

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life. They took loan from small banks i.e., Bandhan, Northeast Small Finance and so on.

#### **Tourism Sector:**

Tourism collapsed due to travel restrictions, closing of public places including travel attractions, and advice of governments against travel. The tourism sector faced lots of problem in Assam. The Baksa district also trouble for tourism and people remain home for their safety. Due to cancel of all the vehicles, the transportation faced problems and it impact on daily life of Sarania Kachari in the case study area. The tourist and tourism industry lost economic pursuit.

#### **Conclusion:**

This article presents the scenario of Sarania Kachari of Baksa district of Assam during Covid-19 pandemic and post Covid impact on the particular tribes. The case study revealed that the condition of particular caste faced so many problems like other people of Assam. The economic as well as social condition of Sarania Kachari became worst during pandemic. When the post pandemic period was started the government and private bank gave loans and help them to survive their economy. The small farms are uplifting living condition and economic status of daily worker of Sarania Kachari. The field report reveals that covid-19 virus had a severe impact on their livelihood. Corona virus had negative impact on their daily activities and even socio-economic condition of the Sarania Kachari in Baksa district of Assam.



**References** 

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1. Deka, N., (2002), *The Sarania Kachari Samaj Aru Sanskhiti*, Tamulpur, Nalbari.
2. Endle, S.L., (1911), *The Kacharis*
3. Nazari, B., (1957), *Boro-Kachari Jana-Sahitya*, Bina Library Guwahati.
4. Nazari, B., (2001), *Boro-Kachari's Samaj aru Sanskriti*, Bina Library, Guwahati.
5. Mahalia, D.,(2012), *Sarania Kachari Janagosthir Ruprekha*, (Ed.) Sarania Kachari Development Council, Assam.
6. Mahalia, D.,(2019), *Smiriti Gantha*, Souviner (Ed.) (11th Biennial Conference, All Assam Sarania Kachari Student Union.
7. Patel, B. M., & Rogole D. N., (2021), *Covid-19 Pandemic and India*. Notion Press.

# **Covid-19 and Its Impact on Pre-primary Education with Special Reference to Nalbari District of Assam**

*Pratyasha Talukdar*

## **Abstract**

*The Covid-19 pandemic since its first outbreak in Wuhan, China in December 2019 has caused unprecedented setback to health, education, economy and society. As reported by WHO, India has witnessed 42,780,235 cases of the virus and 510,905 deaths from early 2020 till 18 February 2022.*

*The pandemic has led to total closure of schools and institutes of higher education causing widespread anxiety. The government has tried to bridge the learning gap through teaching in remote mode and expansive usage of internet. Amongst all the chaos and concerns regarding teaching and learning, the early childhood and education care (CARE) services coming to a complete halt is yet to receive adequate attention.*

*The paper attempts to study the repercussions of the closure of pre-primary schools, both Anganwadis and private, in Nalbari district of Assam. The information attained through primary, secondary sources and multiple interviews stands privy to the fact that the*

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*children aged 3- 5 years have experienced serious delay in their education, social and cognitive development.*

*Experts have opined that televising the pre-primary curriculum would have helped to minimise the losses. Starting support training for suffering parents could be another crucial step to plan a healthy future for the young children.*

**Keywords:** *Pre-primary, education, Covid-19, pandemic, social, cognitive, children, parents*

#### **Introduction:**

As the education system in India, like elsewhere in the world had come to a complete halt, the sudden transition to a remote mode came with its own set of challenges. While learners of every age group has been severely hit by the pandemic, the society often tend to ignore the concerning costs being borne by the pre-primary students, their families and teachers.

The New Education Policy 2020 states that education starts at the age of 3, where a child spends 3 years in pre-primary classes and 2 years in primary classes. There are 1683 Anganwadi centres and 27 mini- Anganwadis in the district of Nalbari which cater to the needs of women and children from pregnancy till childcare. However, the Anganwadis have been closed since March 2020 and continues to be so till 13th February 2022. While related works are up to date in the centres, teaching has suffered near closure as online education in rural areas is a distant dream considering shortage of resources, poor network and the young age of the children. Although many private institutions held online classes throughout the pandemic, it can barely make up for the loss of person to person interaction among

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the children. Issues like loss of income in families, absence of internet facilities, disturbances in the households add to that.

The problems being faced by the middle class and higher income families are to be considered equally serious. The children in these families are losing their skills when it comes to language, emotions and social behavior. It can be attributed to the fact that they have working parents and thus are unable to listen to someone speaking frequently to them.

#### **Objectives:**

- The paper attempts to study the effects of Covid-19 pandemic and resultant school closures on pre-primary education, how it has led to stagnant growth and delay among kids in terms of knowledge and emotional intelligence.
- The paper focuses on not just the children of age group 3-5 but the dilemma of their parents and teachers. It discusses how remote mode of education is better than no education but brings with it numerous challenges.
- Apart from the description of how the steps taken towards assisting pre-primary education during the pandemic was not enough, the paper attempts to find viable solutions to lessen the costs to be borne by children in the near future.

#### **Methodology:**

A descriptive analytical approach was adopted to give shape to the paper. Primary and secondary sources were studied to obtain relevant information. Interviews with Anganwadi workers, private preschool teachers and parents with children of age 3-6 were conducted to understand the issues at grassroot level. APA 7th edition style has been used for citations and references in the paper.

### **Result and analysis:**

The repercussions left by the pandemic on children, parents and pre-primary institutions have been summarized below:

Enrollment in schools: Since its initial closure in March 2020, the Anganwadis remain close till 13th February 2022, the date of interview with the workers of an Anganwadi Kendra in Bihampur(no. 4) a village in Nalbari.

In the case of private pre-schools, it has been observed that the admissions have drastically come down as explained by the interviewee - "I had received 250 applications in the year 2019. I have around 150 students at present who are learning in remote mode. Not all of them are going to pay the fees, which makes it difficult to pay my staff working from home. Many parents were reluctant to enroll their kids in school, even though classes were continuing. As reopening in phases have started, parents are now pressurizing us to take their kids in, when some children are clearly past the age of Preparatory and Nursery classes. Even if I admit them in higher classes, they will face difficulties with the syllabus."<sup>1</sup> - Principal, Private pre-school in Nalbari (town)

Medium of instruction during the pandemic and its effects on children: In the private schools of the town, education was primarily continued through the popular social media platform, Whatsapp. Educational videos, pdfs, messages were used to teach and evaluate, and online classes were held on Zoom app. Apart from network issues, the other major challenges were decreased concentration and attendance of children in online classes, eyesight and weight gain issues, addiction and resultant changes in temperament.

"My daughter had a set routine before closure of schools. She is no longer easy to discipline and throws frequent tantrums as I take

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<sup>1</sup> Bayan, Nijara. (Personal Communication, 2022, January 29)

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the phone back after her classes. She refuses to go out to indulge in any outdoor activities"<sup>2</sup> - Parent of a girl child,aged 5, enrolled in a pre-school Nalbari( town).

Parents have also raised issues regarding addiction to televisions, degrading dietary habits in the absence of a pattern generally set by the schools.

When interviewed, the in-charge and caretaker of Number 4 Bihampur Anganwadi Kendra, it came to light that they manage to visit students once a month, which is not nearly enough for guiding the children. "We manage to cover nearly fifteen houses every month in total. The other official work such as surveys of pregnant women, checking nutrition and weight of women and children, recording the finds do not leave us with ample time to visit children more frequently for educating them."<sup>3</sup> - Supervisor,Anganwadi. Number 4 Bihampur, Nalbari(rural)

To add to this, children in the Anganwadis no longer had access to regular nutrition during the pandemic. Food items like potato, rice, eggs, soyabean were only distributed every 3 months due to lockdown and non-availability issues.

Covid-19 and delay of children's societal skills: According to centre on the Developing Child at Harvard University, the emotional and physical health, social skills and cognitive, linguistic capacities that emerge in early years are all important prerequisites for success in schools and later in workplace and community.<sup>4</sup> Young children learn their language mostly through peers and attending school helps it to a great extent. As parents were busy with work from home, kids

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<sup>2</sup> Parent A, (Personal Communication, 2022, February 2)

<sup>3</sup> Talukdar, Dhanada. (Personal Communication, 2022, February 13)

<sup>4</sup> ANI Press Release. (2021, May 18)Pre schools are key to bridge toddlers learning gap during the pandemic.[Press release]. <https://timesofindia.indiatimes.com/home/education/news/pre-schools-are-key-to-bridge-toddlers-learning-gap-during-the-pandemic/articleshow/82708708.cms>

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barely had someone to listen to in nuclear families. Face to face interaction was replaced by increased screen time in terms of online classes.

Dr. Swati Papat Vats, President, Early Childhood Association of India opines that loss of learning in the age of 3 in the aspects of language, social interactions and emotions is a major loss. We can never make up for peer to peer interaction and the onus is onto the teachers to tackle it as school reopens.<sup>5</sup>

Dilemma faced by parents and families amidst school closure: A child's mind is not designed to stay in confined spaces for duration as long as two years. The absence of a set routine was reflected quickly in their daily habits. As the families and spaces are getting smaller, children are able to access open spaces and friends only in their schools on a regular basis. The lack of physical activities has resulted in lethargy and weight gain. Private schools often have a strict diet chart consisting of healthy food options and on the other hand, Anganwadis provides nutritious food at schools. Children were often bound to eat whatever was served and packed for them. School closures have given the children the liberty to be picky eaters, often causing distress to their health and the parents.

Increased access to platforms like Video apps, Netflix, Amazon Prime along with newfound leisure time also enabled children to view contents violent in nature and inappropriate for their age. "As our school reopened for a short duration amidst the pandemic in November 2021, a parent requested us to be lenient towards her child as he had fainted the day before out of shock. Apparently, he watched a web series showing gruesome murders."<sup>6</sup> - Principal, Private pre school in Nalbari(town).

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<sup>5</sup> Education World Films.(2021) Eduleader speaks: Dr Swati Papat Vats, President, Early Childhood Association of India [Video].YouTube. <https://www.youtube.com/watch?v=zt5C2oTvxo4&t=550s>

<sup>6</sup> Bayan, Nijara. (Personal Communication 2022 January 29)

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Another issue that is subtle but important is the complete lack of discipline in children as seen in few joint families. Though fewer in numbers, young parents often find it difficult to be stern with their kids in the presence of grandparents and relatives, as commonly seen in Indian joint families.

Apart from these, parents who were struggling financially during the pandemic often chose to not enroll their children at all. "We were planning to enroll our son at a pre-school last year but money was tight and we have had reservation regarding online classes at such a young age"<sup>7</sup>. – Parent (female) of child aged 4, Nalbari (town)

While the reservations of the parents are valid, online learning is better than zero learning or delayed learning.

**Economic impact of delayed learning and reopening of schools:** Robert Jenkins of UNICEF has said that recent research related to COVID -19 cons of pre-primary education reveal 1.6 trillion dollars in lost future earnings.<sup>8</sup> The only way to minimize further loss is to build back strong school system and invest more in early childhood education as school reopens.

Jaimi Saavedra, World Bank Group, talks about most profitable social investment in Early Childhood Care which are preparing schools for re-enrollment, guidance to parents, preparing teachers to address challenges in term of social-emotional needs, planning for future solutions.<sup>9</sup>

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<sup>7</sup> Parent B. (Personal Communication, 2022, February 2)

<sup>8</sup> Jenkins, Roberts., Giannini, Stefania., Saavedra, Jaime., & Devercelli, Amanda. (2021 July 21) Reopening the future-Prioritizing pre-primary education.[Webinar] UNICEF Innocenti. <https://www.youtube.com/c/UNICEFINnocenti>

<sup>9</sup> Jenkins, Roberts., Giannini, Stefania., Saavedra, Jaime., & Devercelli, Amanda. (2021 July 21) Reopening the future-Prioritizing pre-primary education.[Webinar] UNICEF Innocenti. <https://www.youtube.com/c/UNICEFINnocenti>



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As pre-primary education switches back from hybrid mode to physical mode, it is a matter of urgency to assess children and the extent of delays faced by them and guide them and the parents accordingly.

#### **Conclusions:**

Covid-19 has been the most unpredictable challenge to humankind in the present day. While it has not been biased towards any age-group, children are naturally vulnerable amongst all. The higher education has experienced a setback in learning and what the children at pre-primary education have witnessed is an unprecedented delay in acquiring knowledge.

The issue of early childhood education did not receive the required attention during the pandemic. The children at Anganwadis suffered the most of all as private preschoolers were most likely to use tech enabled learning tools. The damage cannot be undone but the government, schools and society can minimize the cost.

What the Anganwadis require is increased interaction with parents and students, usage of teaching tools for the cognitive development of children. Health and education need to go hand in hand for all round growth of the children. Availability of nutritious food on a regular basis could be another way to make sure that the health requirements of the children from underprivileged families are met. While the pandemic imposed restrictions are nearly over and Anganwadis will soon reopen, the government can be advised to televise the curriculum and activities so that it acts as guidance for the parents as well.

Private pre-schools have more or less continued teaching through remote and hybrid mode during the closure and subsequent openings till schools were closed again. As classes resume, it would

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be beneficial to focus more on reading lessons, storytelling, and recitation along with writing to combat the loss of speaking skills. Increased play time with peers under supervision is another way to motivate the children to embrace outdoor activities again and regain a healthy temperament for learning. Frequent parent-teacher meetings will help to assess the development of the pre-primary children both at home and outside.

Another crucial step to be taken is to introduce appropriate training and counseling for teachers to help them deal with children who have delayed speech, anger issues and difficulty in adjusting with peers at schools. Mental health support to the children is as important as they are soon getting exposed to new interactions, routine, rules and a completely different way of life.

### **References**

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- "The state of the Global Education Crisis: A path to recovery".(2021, December 3) A Joint UNESCO, UNICEF and a World Bank Report.<https://www.worldbank.org/en/topic/education/publication/the-state-of-the-global-education-crisis-a-path-to-recovery>
- ANI Press Release. (2021, May 18)Pre schools are key to budge toddlers learning gap during the pandemic.[Press release]. <https://timesofindia.indiatimes.com/home/education/news/pre-schools-are-key-to-bridge-toddlers-learning-gap-during-the-pandemic/articleshow/82708708.cms>
- EducationWorldFilms.(2021) Eduleader speaks: Dr Swati Papat Vats, President, Early Childhood Association of India [Video].YouTube. <https://www.youtube.com/watch?v=zt5C2oTvXO4&t=550s>
- Jenkins, Roberts., Giannini, Stefania., Saavedra, Jaime.,& Devercelli, Amanda. (2021 July 21) Reopening the future-Prioritizing pre-primary education.[Webinar] UNICEF Innocenti. <https://www.youtube.com/c/UNICEFInnocenti>
- <http://nalbari.gov.in/>

# Awareness and Knowledge about COVID-19 among Students in Nalbari

*Pulama Talukdar*

## Abstract

*The causative pathogen of pandemics SARS CoV-1 (Severe Acute Respiratory Syndrome Corona Virus-1) in 2002, MERS (Middle East Respiratory Syndrome) in 2012 and current COVID-19 are different variant of corona viruses having pandemic potential (Choudhury et al, 2020). The present pandemic emerges initially in 31st December 2019 in Wuhan province of China and affects 424,822,073 patients in 224 countries with 5,890,312 deaths (WHO Dashboard updated to 22. 2.2022). The present study was conducted to assess the knowledge and awareness of COVID-19 among the students of 10th to Undergraduate level of different academic institutions of Nalbari through an online survey. A total number of 256 students responded in the study. Among the respondents 150 (58.6%) were male and 106 (41.4%) were female. Majority of the respondents (120 i.e. 46.9%) were from 10th standard, whereas 86 (33.6%) from Higher Secondary level and 50 (19.5%) from undergraduate level. Most of the students have adequate knowledge and awareness of the disease. Practical implementation of the theoretical*

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*knowledge and awareness in their day to day life may be helpful in preventing the new wave of COVID-19 in near future.*

**Keywords:** *COVID-19, corona virus, knowledge and awareness.*

#### **Introduction:**

Human Corona virus SARS CoV-1 (Severe Acute Respiratory Syndrome Corona Virus-1), MERS (Middle East Respiratory Syndrome) and SARS CoV-2 have been found to have pandemic potential (Choudhury et al, 2020). First pandemic of present century was caused by SARS CoV-1 in 2002, novel Corona virus identified in the pandemic named MERS in 2012 and currently the pathogen of COVID-19 (Corona Virus Disease-2019) is identified as SARS CoV-2. The complete picture of SARS- CoV-2 pandemic is still evolving. The present pandemic emerges initially in 31st December 2019 in Wuhan province of China and affects 424,822,073 patients in 224 countries with 5,890,312 deaths (WHO Dashboard, updated to 22. 2.2022). As the pandemic COVID-19 is spread by inhalation or contact of infected droplet it can be prevented by appropriate knowledge and awareness of the people. Isolation, quarantine, sanitisation are different methods to break up the chain of the viral spread. Personal protection by mask, hand washing, maintaining physical distance between person to person in addition to adequate vaccination are proved helpful (CDC, 2022). The disease may be fatal in elderly people and those having co-morbid condition like diabetes, heart disease, hypertension and immunosuppressive conditions etc (WHO, 2020). Balance diet, regular exercise, good sleeping may be helpful to improve the individual immunity to fight against the disease (Lange and Nakamura, 2020). Knowledge of the disease and diagnostic tools in the society may be helpful in seeking early treatment, better outcome and prevention.

**Aim and objective:**

The study is conducted among students to

1. Assess their knowledge of the disease.
2. Aware them about the preventive measures.

**Methodology:**

This cross sectional study was conducted during the month of February 2022 among the students from 10th standard to undergraduate level, studied in different institutions of Nalbari (26.44460 N, 91.44110 E). A self administrative, close ended questionnaire was developed in Google Form and it was sent to different WhatsApp groups of the students. The questions were prepared in such a way that the knowledge and awareness of the respondents about COVID-19 can be assessed. Questions about the transmission process of the virus, different symptoms of the disease, preventive measures, and co-morbidity factors were included.

**Result and Discussion:**

Among 256 respondents 150 (58.6%) were male and 106 (41.4%) were female. Majority of the respondents (120 i.e. 46.9%) were from 10th standard, whereas 86 (33.6%) from Higher Secondary level and 50 (19.5%) from undergraduate level. The response of the students against each question is shown in the table.

Among the 256 respondents 50 (19.5%) have suffered from COVID-19. Most of the students (206 i.e. 80.5%) knew the correct name of the disease whereas 50 (19.5%) students were not aware about it. They even did not know the proper name of the disease. They have confused the name of the virus with the disease. Initially the disease was named as 2019 novel corona virus (Lu et al, 2020) but later the corona virus study group renamed it as Severe Acute

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Respiratory Syndrome Corona Virus-2 (SARS-CoV-2). The disease was named as Corona Virus Disease 2019 (COVID-19) by the WHO (Gorbalenya et al, 2020).

**Table: Questions and responses.**

| Questions                                       | Correct response |      | Wrong response |      |
|---|------------------|------|----------------|------|
|   | Number           | %    | Number         | %    |
| Name of the disease                             | 206              | 80.5 | 50             | 19.5 |
| What is isolation                               | 208              | 81.3 | 48             | 18.8 |
| What is sanitization                            | 72               | 28.1 | 184            | 71.9 |
| What is Quarantine                              | 138              | 53.9 | 118            | 46.1 |
| Symptoms of Covid-19                            | 246              | 96.1 | 10             | 3.9  |
| Fever, Cough, Running nose, Headache, body ache |                  |      |                |      |
| Whether spread by insect                        | 186              | 72.7 | 70             | 27.3 |
| Screening test                                  | 154              | 60.2 | 102            | 39.8 |
| Confirmatory test                               | 174              | 68   | 82             | 32   |
| Co-morbid condition can worsen Covid-9          | 220              | 85.9 | 36             | 14.1 |
| Can Infected Mother breastfed her baby          | 98               | 38.3 | 158            | 61.7 |
| Proper way of wearing mask                      | 222              | 86.7 | 34             | 13.3 |
| Should under 5 wear a mask                      | 78               | 30.5 | 178            | 69.5 |
| Distance maintaining in physical distancing     | 246              | 96.1 | 10             | 3.9  |
| How hand washing can prevent the disease        | 232              | 90.6 | 24             | 9.4  |

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|   |     |      |     |      |
|---|-----|------|-----|------|
| what is used for hand washing   | 82  | 32   | 174 | 68   |
| Balance diet, regular exercise and good sleep can prevent the disease | 202 | 78.9 | 54  | 21.1 |

Isolation is the oldest communicable disease control measure (Park, 2005). It has been defined as, "the separation of people who have been diagnosed with a contagious disease from people who are not sick" (Samantha et al, 2020). The concept of Quarantine began from 14th Century as an effort to protect coastal cities from Plague. "Quarantine is the separation and restriction of movement of people who have potentially been exposed to a contagious disease to ascertain if they become unwell, so reducing the risk of them infecting others" (Samantha et al, 2020). In the present study 208 (81.3%) respondents had proper knowledge about Isolation and 138 (3.9%) correctly responded on Quarantine. Surprisingly 184 (71.9%) students did not know what Sanitization means. 53.1% (136) of students thought Sanitization means elimination of germs and 18.8% thought it as removal of dirt. Sanitization means removal of dirt as well as reduction of germs. It differs from sterilization which means complete removal of germs or microbes (Paediatric environmental Health, 2012).

Commonest symptoms of COVID-19 disease as described by WHO are Fever, Cough, Tiredness and Loss of taste while Sore throat, Headache, Aches and pains are less common (WHO, Corona virus disease, Symptoms). In the present study almost all the respondent (246 i.e. 96.1%) knew the symptoms of COVID-19.

Transmission of the disease occurred by inhalation or inoculation of infected droplet through the respiratory passage or in the conjunctiva of eyes respectively. Aerosols (Droplets) are generated by sneezing, coughing or even talking. Distance travelled by it depends

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on size and force of expulsion of the droplets (Choudhury et al, 2020). 72.7% (186) of respondents of this study knew the mode of transmission. However 27.3% (70) believed that the disease can be transmitted through insects.

In this study 60.2% (154) students correctly answered about the screening test of the disease whereas 39.8% (102) students answered RTPCR as screening test. Among the total respondents 68% (174) correctly answered about the confirmatory test. 8.6% of the students selected RAT for both screening and confirmatory test and thus 12.5% selected RTPCR for both.

Elderly people and those having co-morbid condition like diabetes, heart disease, Cancer, hypertension and other immunosuppressive conditions etc. are at the high risk of severe COVID-19 illness (WHO, 2020, May 7). Co-morbidity factors were well known to the students in our study. The question about co-morbidity was correctly answered by 96.1% (246) of students.

Though 38.3% (98) of respondent confirmed that COVID-19 positive mothers can breastfed their baby, many of them 61.7% (158) answered that a COVID-19 positive mother should not give breastfeeding. As per recommendation of WHO a COVID-19 mother can breastfed her infant (WHO, 2020, May 7).

Some questions are prepared to assess the level of awareness of the students about the preventive measure of COVID-19. Awareness to the measures can help to control the spread of the disease.

To suppress the transmission of COVID-19 and to safe life mask must be used in proper way along with other comprehensive strategy. It should be well fitted and properly cover nose, mouth and chin. Mask with valve should not be used (WHO, 2021). The study reveals that 220 (86.7%) students knew the proper way of wearing



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mask while 13.3% (34) didn't know the practice properly. Among these students 11.7% (30) selected "covering mouth and nose loosely" as the proper way of mask wearing while a few 1.6% (4) selected "covering mouth" as the proper way.

In general, child under 5 years of age need not require wearing a mask. This is for safety of the child (WHO, 2020, August 21). Most of the students 69.5% (178) believed that the child under 5 years of age should also wear a mask to prevent COVID-19.

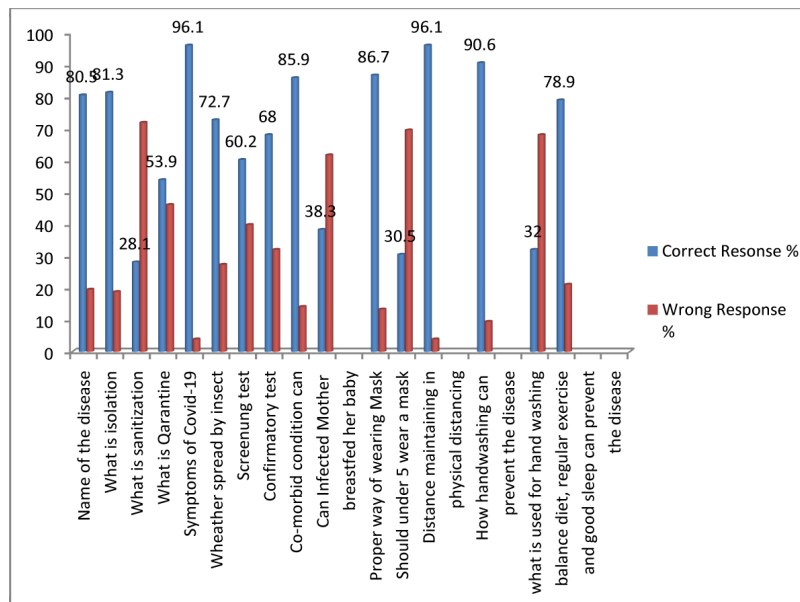
As the infected droplet generated by infected person can directly land in mouth and noses or can be inhaled through the respiratory system of nearby person, physical distance plays an important role in preventing the transmission. Respondents of this study were well aware to social distance. Among them 96.1% (246) correctly selected 1 meter as proper social distance (WHO, Covid-19, Physical distancing) while a few 3.9% (10) selected 2 feet as effective social distance.

Infected droplet produced from coughing, sneezing or by talking can also contaminate the household objects and surfaces. A healthy person may be infected indirectly by touching this contaminated surface. Frequent hand washing with soap and water after coming back to home from outside or after sneezing and coughing can prevent the infection (WHO, 2020, Oct 15). Unnecessary touching of mouth, nose and eyes should be avoided. Any soap for hand washing available in the market or detergent for washing clothes can be used. Among the respondents 90.6% (232) knew how hand washing prevent transmission and 32% (82) of the respondent knew that soap and detergent both are useful for hand washing.

Balance diet, regular exercise and good sleep are helpful to prevent non communicable diseases and to improve immunity. Immunity is utmost important to abort the communicable diseases like

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COVID-19 (Lange et al, 2020). Most of the respondents 78.9% (202) knew that balance diet, regular exercise and good sleeping help a person to prevent COVID-19 while 21.1% (54) did not aware to these practices.



**Figure:** showing the number and percentage of response against each question.

The figure depicted an overall picture of knowledge and awareness of the students. The students have sufficient knowledge about the most common symptoms of the disease which will help them in seeking early intervention and reduce the seriousness of the disease. They were also well known to the hand washing, social distancing and mask wearing practices. Proper use of these practices protects them not only from the COVID-19 but also from other infectious

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diseases. Their knowledge about co-morbidity helps them to make alert the elderly family members as well as the persons in their surroundings. Students gather this knowledge from social media and from the television. However most of the students have no adequate knowledge about quarantine and sanitization as these are not well explained in the social media and Television. Moreover, most of the students (more than 70%) were not concern about the WHO's recommendation for child health during pandemic.

#### **Conclusion:**

The present study reveals that most of the students have adequate knowledge about COVID-19 and they are aware of the preventive aspect of the disease. It is the proper time to implement the theoretical knowledge in the practical aspect of their day to day life. In the educational institution the COVID-appropriate behaviour may be strictly ordered by the Authority within the campus. The knowledge and awareness that are lacking to the students may be informed to them in the classroom or by other popular social media. Thus sufficient knowledge and awareness and its proper practical implementation may be helpful to prevent Covid-19 wave in near future.

#### **Acknowledgement:**

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## Reference

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1. CDC (2022,Jan 11), Benefits of getting a COVID-19 Vaccine, website: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/vaccine-benefits.html>
2. Choudhury J., Dhanalakshmi, K.(2020).Corona virus: what do we know. Indian Journal of Practical Pediatrics ,22(2) , 121-130
3. Gorbalenya, A.E., Baker, S.C., Baric, R., Groot, R.J. de., & Drosten, C.(2020). Sever acute respiratory syndrome -related coronavirus: the species and its viruses- a statement of the coronavirus Study Group. BioRxiv website: <http://hdl.handle.net/10261/212994>
4. Lange, K.W.,Nakamura,y.(2020).Lifestyle factors in the prevention of COVID-19.Global Health Journal,4(2),146-15.
5. Lu, R., Zhao, X., Li, J., Niu, P., Yang, B., & Wu, H. (2020). Genomic characterisation and epidemiology of 2019 novel coronavirus: Implication for virus origins and receptor binding. Lancet , 395, 565-574.
6. Park, K.(2005). Preventive and Social Medicine, Prem Nagar, Jabalpur:
7. M/S Banarsidas Bhanot.
8. Pediatric environmental health. (2021).American Academy of Pediatrics, ISBN: 978-1-58110-313-7
9. Samantha,K.B.,Rebecca,K.W.,Louise,E.S.,Lisa,W.,Simon,W.,Neil,G.& Gideon,J.R.(2020).The psychological impact of quarantine and how to reduce it: rapid review of the evidence.The Lancet, 395(10227)
10. WHO. coronavirus disease(COVID-19) website: [/https://www.who.int/health-topics/coronavirus#tab=tab\\_3](https://www.who.int/health-topics/coronavirus#tab=tab_3) Accessed 27 Feb 2022
11. WHO. Covid-19, Physical distancing, website:<https://www.who.int/westernpacific/emergencies/covid-19/information/physical-distancing>
12. WHO (2020),Report of the WHO-China Joint Misson on Corona Virus Disease 2019 (COVID-19), Available online at: [https://www.who.int/publications/i/item/report-of-the-who-china-joint-mission-on-coronavirus-disease-2019-\(covid-19\)](https://www.who.int/publications/i/item/report-of-the-who-china-joint-mission-on-coronavirus-disease-2019-(covid-19))
13. WHO. (2020, May7). Coronavirus disease (COVID-19): Breastfeeding .website: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19-breastfeeding>

*Covid 19: Indian Economy and Society*

14. WHO.(2020, August 21). Coronavirus disease (COVID-19): Children and masks .website: <https://www.who.int/news-room/questions-and-answers/item/q-a-children-and-masks-related-to-covid-19>. Access 27 Feb 2022.
15. WHO.(2020, October 15) Handwashing an effective tool to prevent COVID-19, other diseases, website: <https://www.who.int/southeastasia/news/detail/15-10-2020-handwashing-an-effective-tool-to-prevent-covid-19-other-diseases#:~:text=To%20stop%20the%20spread%20of,handling%20animals%20or%20animal%20waste>.
16. WHO. (2021, December) Coronavirus disease (COVID-19) advice for the public: When and how to use masks, website: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/when-and-how-to-use-masks> Accessed 27 Feb 2022.

# **The Impact of Covid-19 on Hospital Management Practices in Guwahati City Using SWOT Analysis**

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Babita Lahkar*

## **Abstract**

*Covid -19 pandemic created enormous, exceptional, and financial torment situation in different sectors of economy especially to the hospital sector. This pandemic situation is not only creating hazardous problems in the health care systems and on peoples' lives but also impacting world economy, resulting in business loss, creating more jobless people , reducing population in the world and causing disruptions in GDP and FDI inflows making us head towards one of the worst times ever faced by the people on earth. Almost, all the industries are undergoing massive declines in their businesses profits, and the impact is that much gigantic of that they are projecting. This paper gives us an definitive and conceptual view on the impact of covid-19 on hospital management practices in Assam through SWOT analysis and critical factor are put in the form of self-structured*

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*questionnaire, through various Ministry of Health and Family welfare of the state and central and various report published in various sites of controlling and prevention of Covid-19 board. The study concludes that SWOT Analysis is an important tool and guideline for the hospital decision-makers during this pandemic situations and it reflect the hospital Strength, Weakness, Opportunities, Threat.*

**Keywords:** *Hospital, health, Corona virus, impact.*

#### **Introduction:**

World Health Organization define Coronavirus is an infectious disease caused by the SARS-CoV- 2-virus. It affects different people in different ways. The most common symptoms' were: fever, cough, and tiredness, loss of taste and smell, headache, body pain etc. The SARC CoV- 2 was first notified in Wuhan in China's Hubei province in 2019. World Health Organization (2020) declared it as a pandemic, a warning signal to the World and India as well as other state declared complete lockdown to overcome the pandemic situations. The first case was predicted on March 31st 2020 and major cases were confirmed from august 2020 onwards. This impacted hard on overall Assam economy as GST collection dropped to 80 %.( bulletin news). Assam the total gross state domestic product loss was 32167 crore (bulletin news) due to covid-19. According to the economic survey 2020-21 says that healthcare services has dropped since three consecutive years but now it has gradually been increasing. Assam estimates to be 42.37 in 2019-20 and its growth in services are only 8.08 in the year 2019-2021 compared to other states (India budget). Assam has allocated 7.1% of its total expenditure on health, which is higher than the average allocation for health by other states. Thus,

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it says that the healthcare service sector contributes huge funds in the economy and growth of the state.

The health care services in Guwahati city involves in improving the health status of the population and deliver effective and efficient services. It operates in the context of the socio-economic and political framework of the country and involves management and organizational policies and matters. The health care delivery system can be grouped into 5 types:

- a) Public Health Sector which includes Primary Health care, Hospitals/Health Centers, Health Insurance Schemes and other agencies such as Defense Services and Railways.
- b) Private Sector
- c) Indigenous Systems of Medicine such as Ayurveda, Siddha, Unani, Tibbi, Homeopathy and unregistered practitioners.
- d) Voluntary Health Agencies
- e) National Health Programmers.

### **How coronavirus treated in the hospitals?**

Majority patients experiences mild or moderate symptoms that does not require any serious treatment are incubated for 14 days with maintain the isolation protocols and social distancing and antibiotics, antiviral drugs, steroids, convalescent plasma, disease-modifying antirheumatic drugs are used in treatment but for some patients whose immune system becomes too weak and their fighting cells becomes less active and further if there existed any historical or past serious disease, may make the patients severely unwell and are admitted to the hospital where they often requires breathing and other organ support system. Firstly, they are given supportive care which aims to maintain the function of the vital parts to be working and keeping the patient alive in the normal ward. Then breathing support is given



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when the patients becomes more serious through non-rebreather mask and then oxygen provided from machine to the lungs, here the patients is shifted to ICU to get continuous positive airway pressure. At this stage the hospital should have enough storage of equipments, oxygen mask , cylinders and other consumables and non-consumables medical products such as PPE kit, gloves, masks etc. If the patient becomes severely serious then Extracorporeal membrane oxygenation and other organ support system is required but this required many specialist centers with experts. They acts as artificial lungs and give better chance to heal.

#### **What is SWOT analysis?**

SWOT analysis is a strategic management tool for evaluating the strength, weakness, opportunities and threats of the organization. The opportunities are external factors that shows positive results and threats are those results which need the maintenance of the existence of the organization and strength are the organizational abilities that makes them superior and weakness are the shoddier qualities which the organization has to undergo and makes it inferior to its competitors. It is an important tool for healthcare organization for strategic planning and vigorous development of the healthcare organization. A consistent study on the environment in which the hospital operates helps in forecasting and predicting the patterns of changing trends which helps in decision-making processes.

#### **Significance of the study:**

Covid -19 pandemic has transformed the process and structure of both government and private hospitals planning and strategic decision- making system. Through SWOT analysis the study on covid impact on the hospital industry will provide an insight view on the management handling system of healthcare services and many new

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innovations and adopted strategies may evolve in future which will give a new directions and way for new investment like medical tourism, proper use of technology and infrastructure, telemedicine facilities, health insurance awareness, policies and process etc. This will contribute a positive impact on delivering quality care services to the people and generate good revenue for the economy as well.

#### **Statement of problems:**

Government must bring revolutionary changes in providing quality care services and infrastructural facilities keeping the covid situations in mind. Covid has taught to focus on other sectors too otherwise there will be loss of human resources too which contributes a lot in developing the nation as a whole. The current situation showed to focused on strengthening the hospital overall services like availability of ICU, beds, medicine's, equipments, too much dependent on raw-materials made them rely on other's support. Therefore, it is necessary to look into the impact of covid -19 on hospital management practices for future review and guidance so that if, the any such pandemic arise in future they could handle the situation precisely and actively without any failure.

**A brief summary on review of literature:** A good number of literature reviews has been conducted on covid-19 addressing different issues. The studies which are considered in this study are: Jadhav (2020) is a working paper on the potential impact of the Covid on various sectors like manufacturing, financial services, banking, infrastructure, companies of real estate, and services and put forward a set of policy for specific sectors. Lovaglio (2020) proposed strategies dealing with hospital effectiveness focuses on methods for effectiveness and analyses it within a strategy comparing different healthcare institution. It also demonstrates the feasibility of the proposed strategies. Raman R, Rajalakshmi R, Surya J, et al., (2021)

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studied Impact on health and provision of healthcare services during the COVID-19 lockdown in India and found that the amplification of income inequality during lockdown that is the interactions between the red zones and lockdown showed that all five dimensions of healthcare provision were negatively affected (non- affordability, non-accessibility, inadequacy, inappropriateness and discontinuity of care and associated depression and social loneliness. Sidhu G S , Rai JS , Khaira K S and Kaur S,( 2020) studied on the Impact of COVID-19 Pandemic on Different Sectors of the Indian Economy and concluded that all types of industries are generating huge loss in their businesses. This paper focuses on different industries, which are mostly affected and hindered in the economy. Vijayaraghavan B T, Myatra S N , Mathew M et al. (2021 )studied the challenges faced in the delivery of critical care in India during the COVID-19 pandemic and concluded that with coordination effort from various public health organizations and the ISCCM will be crucial for ensuring adequate delivery of intensive care to critically affected patients.

**Research gap :** From the above literature, it is also striking that there are good number of studies done on the present topic and on COVID-19 whereas, such types of studies are lacking in case of hospital in Assam; in addition to the studies related to the impact of covid -19 on hospital management practices using SWOT analysis.

#### **Objectives of the study:**

**1. The impact of covid-19 on hospital management practices using SWOT analysis.**

#### **Research Methodology:**

- *Nature of the study:* Theoretical research study and convenience sampling is used.

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- **Data collection tools and analysis:** Primary data is collected through 5point scale in a self-structured questionnaire and the SWOT analysis is applied and Respondents includes: one medical superintendent, one director, one hospital admin in charge, one covid doctors, one covid nurse, two covid officials from technical and non-technical from the 32 hospitals. Total number of hospital taken is 32 from Kamrup metro in Guwahati city area and is referred as H1 to H32. The secondary data were collected through various government websites and state government portals, annual reports, statistical reports, financial reports etc.

**Findings and discussions:**

**Strength analysis:**

**a. Improvement in telemedicine technology in healthcare sector.**

The tele-consultation market is expected to expand from US\$ 100 to 700 million (48%) in the future years 20. Many people worked on online accessibility mode and this has lead to the innovation and development of tele-medicine consultancy. The sample hospitals shows that 60% respondents were agreed and

36.4 % strongly agree that telemedicine app installed and free consultancy is provided by the hospitals and many sub-centers were also uses to consult the doctors in the Guwahati city.

**Table 1: Improvement in telemedicine technology in healthcare sector**

|              |                | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|----------------|------------|--------------|---------------|--------------------|
|              | neutral        | 7          | 3.1          | 3.1           | 3.1                |
| Valid        | agree          | 135        | 60.0         | 60.3          | 63.4               |
|              | strongly agree | 82         | 36.4         | 36.6          | 100.0              |
|              | Total          | 224        | 99.6         | 100.0         |                    |
| Missing      | System         | 1          | .4           |               |                    |
| <b>Total</b> |                | <b>225</b> | <b>100.0</b> |               |                    |

Source : Field survey 2022

**b. Health practices and training are in appropriate manner with up-to-date information:**

All medical institutions are strengthening the capacity through training and mentoring and collecting data and information analyzing it through statistical methods, epidemiology, quality assurance, analysis of big data, modeling and forecasting, inequality monitoring, and effective ways to communicate and use data to drive policies and strategies' impacted and 72.9 % respondents were agreed with it that such training and practices are also going in an appropriate manner in the selected sample hospitals in Guwahati city.

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**Table 2: Health practices and training are in appropriate manner with up-to-date information:**

|              |                | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|----------------|------------|--------------|---------------|--------------------|
| Valid        | neutral        | 10         | 4.4          | 4.5           | 4.5                |
|              | agree          | 164        | 72.9         | 73.2          | 77.7               |
|              | strongly agree | 50         | 22.2         | 22.3          | 100.0              |
|              | Total          | 224        | 99.6         | 100.0         |                    |
| Missing      | System         | 1          | .4           |               |                    |
| <b>Total</b> |                | <b>225</b> | <b>100.0</b> |               |                    |

Source : Field survey 2022

**c. Full-Support from top officers and management:**

The management activated the safety committee and Infection Control Committee (ICC) under NHRM and ensured compliance with the decisions of the committees. They acted as a role model to the hospitals that work sensitively about the pandemic and the relevant process. The hospital management makes quick implementation of decisions , ensured a fast purchase process, and provided full support for the fast application of procedures compliant with the "Health and

**Table 3: Full-Support from top officers and management:**

|         |                | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|----------------|-----------|---------|---------------|--------------------|
| Valid   | agree          | 168       | 74.7    | 75.0          | 75.0               |
|         | strongly agree | 56        | 24.9    | 25.0          | 100.0              |
|         | Total          | 224       | 99.6    | 100.0         |                    |
| Missing | System         | 1         | .4      |               |                    |
| Total   |                | 225       | 100.0   |               |                    |

Source : field survey 2022

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Safety Signs Regulation" in the pandemic process, and for paying attention to the quality care services. In the studied hospital it is found 74.7 % respondents agreed of getting full support by the top officers and management committee with 24 × 7 operations to work on covid patients.

**d. Effective communication process:**

The studied hospital says 60.4% agreed and 39.1% strongly agreed that operation process has strong communication channels and protocols of covid-19 with the ability to hold meetings and conferences on all units. Newly appointed personnel's are placed quickly in the required field with appropriate training facilities to them along with determination and planning of personnel in those areas where Covid-19 diagnosed patients are. It shows good communication skills and adaptive to the hospital environment in the Guwahati city.

**Table 4: Effective communication process:**

|              |               | <b>Frequency</b> | <b>Percent</b> | <b>Valid Percent</b> | <b>Cumulative Percent</b> |
|--------------|---------------|------------------|----------------|----------------------|---------------------------|
| Valid        | agree         | 88               | 39.1           | 39.3                 | 39.3                      |
|              | strngly agree | 136              | 60.4           | 60.7                 | 100.0                     |
|              | Total         | 224              | 99.6           | 100.0                |                           |
| Missing      | System        | 1                | .4             |                      |                           |
| <b>Total</b> |               | <b>225</b>       | <b>100.0</b>   |                      |                           |

Source : field survey 2022

**e. Strong institutional structure:**

58.0 and 42.0% respondents agreed that the employees showed active participation in the trainings and practices, planning, completion of shortages in the process, directing the personnel in the routine to

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the covid field units, supporting other areas and thereby reducing staff imbalance, fast determination of area disinfection and cleaning rules, staff symptom are daily followed-up, and health screening application are done at a fast track mode. This ensured the fast performance of the hospitals and update the risk analysis in the process, daily controls and checks the health of the employees and makes them feel safe and motivated to work on sensitive situations and also gives much attention on their recommendations, decisions ,implementations and rapidly taking the precautions for occupational health and safety against spread of infection.

**Table 5: Strong institutional structure :**

|         |                | <b>Frequency</b> | <b>Percent</b> | <b>Valid Percent</b> | <b>Cumulative Percent</b> |
|---------|----------------|------------------|----------------|----------------------|---------------------------|
| Valid   | agree          | 94               | 41.8           | 42.0                 | 42.0                      |
|         | strongly agree | 130              | 57.8           | 58.0                 | 100.0                     |
|         | Total          | 224              | 99.6           | 100.0                |                           |
| Missing | System         | 1                | .4             |                      |                           |
| Total   |                | 225              | 100.0          |                      |                           |

**Source :** field survey 2022.

**f. Experiences of staff workers:**

48.4% respondents agree and 51.1%strongly agreed that only the experienced staff workers are appointed to treat the critical covid patients.



**Table 6: Experiences of staff workers**

|              |                | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|----------------|------------|--------------|---------------|--------------------|
| Valid        | agree          | 109        | 48.4         | 48.7          | 48.7               |
|              | strongly agree | 115        | 51.1         | 51.3          | 100.0              |
|              | Total          | 224        | 99.6         | 100.0         |                    |
| Missing      | System         | 1          | .4           |               |                    |
| <b>Total</b> |                | <b>225</b> | <b>100.0</b> |               |                    |

Source : field survey 2022

**g. Collaboration and cooperation's :**

All respondents says that public and private hospitals are collaborated and cooperated with various schemes launched like Ayushman health cards for BPL people and free treatment in private hospitals, Health Department of Assam has started "Assam Community Surveillance Program (ACSP) for more cooperation etc.

**Table 7: Collaboration and cooperation's**

|              |        | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|--------|------------|--------------|---------------|--------------------|
| Valid        | agree  | 224        | 99.6         | 100.0         | 100.0              |
| Missing      | System | 1          | .4           |               |                    |
| <b>Total</b> |        | <b>225</b> | <b>100.0</b> |               |                    |

Source : field survey 2022

**Weakness analysis:**

**h. Shortage of doctors, health-workers and clinicians still continues:**

51.6% and 38.8% respondents says that there existed shortage of qualified doctors , nurses etc to work in the pandemic situations and 9.4% were neutral on it.

**Table 8: Do Sufficient doctors, health-workers and clinicians are existed?**

|              |                   | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|-------------------|------------|--------------|---------------|--------------------|
| Valid        | strongly disagree | 116        | 51.6         | 51.8          | 51.8               |
|              | disagree          | 87         | 38.7         | 38.8          | 90.6               |
|              | neutral           | 21         | 9.3          | 9.4           | 100.0              |
|              | Total             | 224        | 99.6         | 100.0         |                    |
| Missing      | System            | 1          | .4           |               |                    |
| <b>Total</b> |                   | <b>225</b> | <b>100.0</b> |               |                    |

Source : field survey 2022

**i. Lack advanced technology feasibility:**

89.3% says that hospitals are lacking of advanced technical feasibility due to cost associated and become prone to past techniques. The hospitals depends mostly on budgets and other collaborative schemes and funding sources and they have to give serious thought on implementing any new digital technology .As, they still adopts those outdated technologies and worked within the comfort zones.

**Table 9: Advanced technology feasibility**

|         |                   | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|---------|-------------------|------------|--------------|---------------|--------------------|
| Valid   | strongly disagree | 200        | 88.9         | 89.3          | 89.3               |
|         | disagree          | 17         | 7.6          | 7.6           | 96.9               |
|         | neutral           | 7          | 3.1          | 3.1           | 100.0              |
|         | Total             | 224        | 99.6         | 100.0         |                    |
| Missing | System            | 1          | .4           |               |                    |
|         | <b>Total</b>      | <b>225</b> | <b>100.0</b> |               |                    |

Source : Field survey 2022

**j. Health infrastructure and emergency department is still in developing conditions :**

Assam and the State government has proposed plantation of oxygen cylinders but it is still in development stage and is slow compare to India. (Bulletin news). As health infrastructure ensures basic service delivery, particularly for the poor, while protecting people against having to pay out-of-pocket costs for health services. But

**Table 10: Health infrastructure and emergency department are in developing conditions**

|         |                   | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|---------|-------------------|------------|--------------|---------------|--------------------|
| Valid   | strongly disagree | 200        | 88.9         | 89.3          | 89.3               |
|         | disagree          | 17         | 7.6          | 7.6           | 96.9               |
|         | neutral           | 7          | 3.1          | 3.1           | 100.0              |
|         | Total             | 224        | 99.6         | 100.0         |                    |
| Missing | System            | 1          | .4           |               |                    |
|         | <b>Total</b>      | <b>225</b> | <b>100.0</b> |               |                    |

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there seem inequalities in service coverage and financial protection (world health statistics 2020). The studied hospitals 89.3 and 7.6 % also emphasis on this.

**k. Risk of spreading rumours :**

The conspiracy theories among political and other sources many demoralizing rumours and untouchability concept's were spread and many people and faced social discrimination resulted in anxiety and depression because of such gossips without any scientific proof and sources to prevent such pandemic and existed in Guwahati city (88.8% and 7.6%).

**Table 11: No Risk of spreading rumours**

|              |                   | <b>Frequency</b> | <b>Percent</b> | <b>Valid Percent</b> | <b>Cumulative Percent</b> |
|--------------|-------------------|------------------|----------------|----------------------|---------------------------|
| Valid        | strongly disagree | 199              | 88.4           | 88.8                 | 88.8                      |
|              | disagree          | 17               | 7.6            | 7.6                  | 96.4                      |
|              | neutral           | 8                | 3.6            | 3.6                  | 100.0                     |
|              | Total             | 224              | 99.6           | 100.0                |                           |
| Missing      | System            | 1                | .4             |                      |                           |
| <b>Total</b> |                   | <b>225</b>       | <b>100.0</b>   |                      |                           |

**Source:** Field survey 2022

**l. Shortage of stock are anticipated in records and documentation process:**

Insufficient of exact data on risk analysis, threats and biasness in the published report from the hospital side to the disaster management which has no poof where the shortage of stock exist or disappear and 89.3 and 7.6 strongly disagree and disagree that effective and efficient records and documentation process are done on any shortage of stocks.

**Table 12: Shortage of stock are anticipated in records and documentation process**

|         |                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|-------------------|-----------|---------|---------------|--------------------|
| Valid   | strongly disagree | 200       | 88.9    | 89.3          | 89.3               |
|         | disagree          | 17        | 7.6     | 7.6           | 96.9               |
|         | neutral           | 7         | 3.1     | 3.1           | 100.0              |
|         | Total             | 224       | 99.6    | 100.0         |                    |
| Missing | System            | 1         | .4      |               |                    |
| Total   |                   | 225       | 100.0   |               |                    |

Source : Field survey 2022

### Opportunities

#### m. Vaccine :

Assam completed 3 crore of covid vaccine dose despite of poor growth and lack of resources. This has helped to prevent the spread of coronavirus and many employees were facilitated with credibility,

**Table 13: Vaccine**

|              |                | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|----------------|------------|--------------|---------------|--------------------|
| Valid        | neutral        | 11         | 4.9          | 4.9           | 4.9                |
|              | agree          | 23         | 10.2         | 10.3          | 15.2               |
|              | strongly agree | 190        | 84.4         | 84.8          | 100.0              |
|              | Total          | 224        | 99.6         | 100.0         |                    |
| Missing      | System         | 1          | .4           |               |                    |
| <b>Total</b> |                | <b>225</b> | <b>100.0</b> |               |                    |

Source : Field survey 2022

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for contributing tremendous hard-working services, to motivate them and to create balances in the work field and 84.8 % strongly agrees with it.

**n. Improvement and Inspection of the Emergency Health System:**

It is critical that covid hospital do not overlooked the demand safety and emergency facilities and with the help of continuous auditing and inspection helped them to abide according the guideline set by the Assam state disaster management and the protocols set within. Based on the findings they try to bridge the gap so that hospitals maintained safety standards at a reasonable time. Many Standard operating procedures and guidelines are set in flexible mode so that they can make changes and 90% agrees on it.

**Table 14: Improvement and Inspection of the Emergency Health System**

|              |         | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|---------|------------|--------------|---------------|--------------------|
| Valid        | neutral | 21         | 9.3          | 9.4           | 9.4                |
|              | agree   | 203        | 90.2         | 90.6          | 100.0              |
|              | Total   | 224        | 99.6         | 100.0         |                    |
| Missing      | System  | 1          | .4           |               |                    |
| <b>Total</b> |         | <b>225</b> | <b>100.0</b> |               |                    |

Source : Field survey 2022

**o. Funding :**

The government provides funds to treat and purchased covid products for treatment that were given by US\$ funds and the private hospitals purchased at some below or considerate rate .Many schemes

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are launched to give free or subsidy the cost of treatment are: Janni Suraksha Scheme, JSSK, HBNC, NSSK, ASHA kiran, Assam Arayga Niddhi, India mental health schemes , mrtitunjoy108 etc.

**Table 15: Funding**

|              |                | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|----------------|------------|--------------|---------------|--------------------|
| Valid        | neutral        | 40         | 17.8         | 17.9          | 17.9               |
|              | agree          | 43         | 19.1         | 19.2          | 37.1               |
|              | Strongly agree | 141        | 62.7         | 62.9          | 100.0              |
|              | Total          | 224        | 99.6         | 100.0         |                    |
| Missing      | System         | 1          | .4           |               |                    |
| <b>Total</b> |                | <b>225</b> | <b>100.0</b> |               |                    |

Source : Field survey 2022

**p. Job opportunities:**

Recently Assam government sets records of recruiting 269 specialist doctors for six medical colleges and rural health centers. All respondents strongly agree that there existed ample opportunities to the young and experienced doctors in the Guwahati city and many hospitals are further extended with more additional department and clinics with health care hospitals.

**Table 16: Job opportunities**

|              |        | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|--------|------------|--------------|---------------|--------------------|
| Valid        | agree  | 224        | 99.6         | 100.0         | 100.0              |
| Missing      | System | 1          | .4           |               |                    |
| <b>Total</b> |        | <b>225</b> | <b>100.0</b> |               |                    |

Source: Field survey 2022 Threats

**q. No Poor ward environment and shortage of medical equipments and supplies.**

All respondents says that the hospital environment are not standards according to the standards of WHO and there are no exact documents and proofs regarding stock storage .

**Table 17: No Poor ward environment and shortage of medical equipments and supplies**

|              |                   | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|-------------------|------------|--------------|---------------|--------------------|
| Valid        | Strongly disagree | 224        | 99.6         | 100.0         | 100.0              |
| Missing      | System            | 1          | .4           |               |                    |
| <b>Total</b> |                   | <b>225</b> | <b>100.0</b> |               |                    |

Source : Field survey 2022

**r. Long hours of workflows and management protocols do not exist:**

All respondents say that the duty hours are very long and stressful causing harms to their heath and mind. To recover this each hospital has found its own ways and strategies to recover gaps and absentee.

**Table 18 : Long hours of workflows and management protocols do not exist**

|              |                   | Frequency  | Percent      | Valid Percent | Cumulative Percent |
|--------------|-------------------|------------|--------------|---------------|--------------------|
| Valid        | strongly disagree | 224        | 99.6         | 100.0         | 100.0              |
| Missing      | System            | 1          | .4           |               |                    |
| <b>Total</b> |                   | <b>225</b> | <b>100.0</b> |               |                    |

Source : Field survey 2022 Actionable Strategies :



## **Actionable Strategies :**

### **1. Strength - opportunities strategies :**

Using internal strength to avail the opportunities as there are lot of potentialities in all over the world. Many new training committees can be formed and teaching hospitals can be opened to reduce the shortage of doctors and other medical officers along with the collaboration of experienced or retired doctors to share their knowledge and ideas to overcome the pandemic and new strategies are developed in research portal of various health organization department. This will help the developed nations to overcome the competitions and fight against the pandemic.

The role of Development Partners like World Health Organization (WHO), NRHM, Piramal Swasthya (Saathi-re) etc, facilitates state's initiatives in combating COVID and have been working very closely with the state /district officials on daily basis and assisting technical facilities and information as per the need of the state.

Weakness -opportunities strategies : Massive Information , education and communication plays a key role in creating awareness on COVID-19 by campaign informing community on DO's and DON'Ts of COVID-19 and distributing IEC Materials on signs & symptoms, preventive measures : hand washing and maintain social distancing and isolation using different media to reduced rumors and other types of negativity.

Strength- threats strategies : Strong intuitional infrastructure existed in the hospitals of the state which give arise to funding various schemes and active participation of Donors, such projects improves and strengthen the services , capacity to handle emergency department. The ayushman bharat mission provides solution to the digital health services with digital ID, record-keeping and

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documentation and electronic medical record (EMR) system were developed to access historic patients data completely. This will minimise the errors in documentation processes. Many welfare schemes like with several new initiatives were spend on medical and public health and demand for health insurance schemes were rising up to 32.25 % to amid on the pandemic.

#### **2.Weakness**

**Threats strategies:** Shifting of duty hours are imposed to reduce the long working hours and digital information system were developed. Many strategies are proposed by the WHO establishing connection among primary care centres, setting realist targets etc, adopting contingency capacity staffing plan and cries staffing plan according to NCIRD29.

#### **Conclusion:**

Medical professional have updated information with administration support who are continuously monitoring situations in the city. Though the health system faces lots of challenges like shortage of drugs and devices, labour cost, outsourcing products, race-to the bottom pricing due to deterred competition, lack of financial incentive, transportation barriers, food instability and service collaboration along with to provide stress and mental health services but they are still mitigating to cope up with this pandemic through strictly following up all the SOP's and guidelines given to give quality , accessible and affordable services to covid patients and reduce the spreading of such disease and death rate. Thus, we can conclude that SWOT analysis ensures positive impact in building up decision-making tools and guidelines. Psychological supports are effectively taken into consideration while dealing and continuing the SWOT process.

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Future scope: More detailed and analytical study with different factors and areas can be done for further study on different sectors of economy, social or political scenario

**Note:** patient opinion is not taken into consideration

### **References**

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1. World Health Organizations (n.d.), 'Coronavirus Disease (COVID-19)', Retrieved from [https://www.who.int/health-topic/coronavirus#tab=tab\\_1](https://www.who.int/health-topic/coronavirus#tab=tab_1)
2. World Health Organizations (2020), ' Novel Coronavirus (2019-nCoV) Situation Report', Retrieved from <https://www.who.int/docs/default-source/coronavirus/situation-reports/20200121-sitrep-1-2019-ncovpdf>.
3. [https://en.m.wikipedia.org/wiki/COVID-19\\_pandemic\\_in\\_Assam](https://en.m.wikipedia.org/wiki/COVID-19_pandemic_in_Assam)
4. <https://www.who.in/emergencies/disease/novel-coronavirus-2019>.
5. Nath Hemanta kumar (2020), "India Today", retrieved from <https://www.indiatoday.in/india/story/assam-s-gst-collection-drops-by-80-percent=amid-covid-19-pandemic-1672646-2020-04-30>
6. Sentinel digital desk(2020), "The Sentinel of this land, for its people" retrieved from <https://www.sentinelassam.com/topheadlines/assam-economy-suffes-loss-of-rs-32167-crore-due-to-covid-19-lockdown-480633> <https://www.indiabudget.gov.in/economicsurvey/doc/eschapter/echap09.pdf>
7. Assam Budget Analysis (2021-22)-PRS India retrieved from <https://prsindia.org/budgets/states/assam-budget-analysis-2021-22>
8. Dutta I, and bawari, S., (2007), 'Health and healthcare in Assam -a status report'. Mumbai:
9. Satam Udyog Parel Press.
10. Demirkol M et al., (2020), 'An Evaluation of Hospital Practices using SWOT Analysis during Covid-19'. JAREN, Vol.6,No 2 pp 341-51.
11. UK Reseach and innovation (2020), 'How coronavirus disease treated in hospital?' retrieved from <https://coronavirusexplained.ukri.org/en/article/vdt008/>

*Covid 19: Indian Economy and Society*

12. Fink J, L.W., RN, BSN (2021), 'How hospitals treat COVID-19 patients'. retrieved from <https://www.healthgrades.com/right-care/coronavirus/how-hospitals-treat-covid-19-patients> SWOT Analysis- definition, advantage and limitations retrieved from <https://www.managementstudyguide.com/swot-analysis.htm>
13. Jadhav, (2020), 'Impact of COVID-19 on Indian Industry: Challenges and Opportunities(Working paper)' . Navinchandra Mehta Institute of Technology and Development, Dadar.
14. Lovaglio, (2012), 'Benchmarking Strategies for Measuring the Quality of Healthcare: Problems and Prospects. The Scientific World Journal, pp13.
15. Raman R, Rajalakshmi R, Surya J, et al., (2021), 'Impact on health and provision of healthcare services during the COVID-19 lockdown in India: a multicentre cross-sectional study'. .BMJ. <https://bmjopen.bmj.com/content/bmjopen/11/1/e043590.full.pdf>
16. Sidhu G S , Rai JS , Khaira K S and Kaur S,( 2020), 'The Impact of COVID-19 Pandemic on Different Sectors of the Indian Economy: A Descriptive Study, International Journal of Economics and Financial Issues'. International Journal of Economics and Financial Issues, 10(5), pp113-120.
17. Vijayaraghavan B T, Myatra S N, Mathew M et al. 2021, 'Challenges in the delivery of critical care in India during the COVID-19 pandemic'. Journal of the Intensive Care Society, Vol. 22(4) pp 342-348.
18. Jain S, (2020), 'Healthcare goes mobile: Evolution of teleconsultation and e-pharmacy in new Normal' retrieved from <https://assests.ey.com/content/dam/ey-sites/ey-com/en-in/topics/health/2020/09/healthcare-goes-mobile-evolution-of-teleconsultation-and-e-pharmacy-in-new-normal.pdf>.
19. World health statistics report on 2020, 2021) , <https://www.who.int/publications> <https://timesofindia.timesindia.com/city/guwahti/assam-completes-3-crore-covid-vaccine-dose-despite-hesitancy/articleshow/87688121.cms>
20. World Health Organization retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/donors-and-partners-funding>

*Covid 19: Indian Economy and Society*

22. Ministry of health and family welfare and Directorate of health services  
<https://hfw.assam.gov.in>
23. Centre for Science and Environment retrieved from <https://www.cseindia.org/best-practices-shared-by-development-partners-for-covid-19-response-10068> <https://www.piramalswasthya.org>
24. IBEF, <https://www.ibef.org/industry/healthcare-india.aspx> <https://www.aaas-assam.in/index-2html>
25. National Centre for Immunization and Respiratory Disease(NCIRD)  
retrieved from <https://www.cdc.gov/ncird/index.html>.

# Rise and Fall of Indian Economy During Covid 19

*Dr Padmaja Chetia*

## **Abstract**

*The covid 19 pandemic in India is a part of the world-wide pandemic of corona virus disease. To reduce the transmission of the virus, the Indian government announced a sudden lockdown throughout the country that started on March 25th, 2020. Such a lockdown though essential to control the pandemic had adverse effect on the Indian economy. This paper is an attempt to discuss the various impact of Covid 19 pandemic on the Indian economy. This study is based on authentic secondary sources.*

**Keywords:** *covid 19, lockdown, impact*

## **Introduction**

India being the second largest populated country in the world with a high density, there was a fear that the transmission potential of Covid 19 could be high. In the absence of both a vaccine and a treatment if India failed to impose timely restrictions on the free movement of individuals, the pandemic would have exposed the population to a contagious threat, thereby leading to deaths in enormous numbers.

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The economic effects of lockdowns were both positive and negative but the negative effects outweighed the positive. On the negative side, lockdowns constrain social interactions and thus dampen economic activities. But on the positive side, lockdowns delayed the temporal effect of the pandemic, reducing the number of cumulative deaths, providing maximum valuable time for production and distribution of pandemic strain vaccine and anti viral medication and decreasing the burden on healthcare services and critical infrastructure.

#### **Methodology**

This study is based on the information from authentic secondary sources and print, electronic and social media.

#### **Discussion**

The economic impact of the Covid 19 pandemic in India has been largely disruptive. This was the worst performance of the Indian economy since independence.

#### ***Gross domestic product***

The Indian economy witnessed its first ever technical recession in the year 2020, with GDP growth remaining in the negative for two consecutive quarters. GDP contracted by a record 24.4% in the first quarter of the last fiscal. On 26th May, CRISIL announced that this is India's fourth recession since independence, the first since liberalisation and perhaps be India's worst recession after independence. As per State Bank of India reports, it built contraction of the Indian economy upto 40% of the GDP in the first quarter. On 1st September 2020, the Ministry of Statistics released the GDP figures for the first quarter (April to June) FY21, which showed contraction of 24% as compared to the same period the year before and further

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to 7.4% in the second quarter (July to September) of the FY21. This was hugely due to stringent nationwide lockdowns during April and May 2020 which stalled economic activities. Consumption and investment came down which led to loss of jobs and income for many. However, with the easing of covid restrictions and resumption of economic activities, India came out of the technical phase of recession with a growth of 0.4% and 1.6% increase in GDP in the third and fourth quarters respectively.

According to Nomura, India Business Activity Resumption Index economic activity decreased from 82.9 on 22nd March 2020 to 44.7 on 26th April. By 13th September 2020 economic activity was nearly back to pre-lockdown levels.

#### ***Unemployment***

The coronavirus crisis proved to be a major blow for the job market too as large companies have stopped their operations. Small businesses have died down. Unemployment rate shoot up from 6.5% on 15th March to 26% on 19th April 2020 as several firms recorded job losses. The unemployment rate started diminishing from June 2020 onward when it was recorded at 10.2% and further declined to 7.4% in July 2020. During the lockdown, an estimated 140 million people lost employment while salaries were cut for many others. Compared to the previous year, more than 45% of households across the nation have reported an income drop. Less than a quarter of India's \$2.8 trillion economic movement was functional.

Those people in the informal sectors and daily wage groups have been at the most risk. A large number of farmers around the country who grow perishables also faced uncertainties.

Young start-ups have been impacted as funding has fallen. Indian start-ups have fallen over 50% in Q1 2020 from Q4 2019.



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In 2020 an estimated 10 million migrant workers to their native places after the imposition of national lockdown. Their conditions were the worst, Due to imposition of lockdown, there were restrictions on the movement of buses and trains. So walking back to their villages was the only option left with the migrant workers. But neither the state governments nor the central government had any data regarding the migrant workers who lost their jobs and lives during the lockdown.

#### ***Wealth and income inequality***

The households were badly affected. Both wealth and income inequality widened in India. A study of Oxfam suggests that in 2020, the top 1% of the population held 42.5% of the total wealth while the bottom 50% had only 2.5% of the total wealth. During India's first stringent national lockdown between April and May 2020, individual income dropped by approximately 40%. Three months' worth of income was lost by the bottom decile of households.

#### ***Per-capita consumption spending***

Microdata from CMIE, the largest private survey in India, points out that per capita consumption spending dropped by more than GDP and did not return to pre-lockdown levels during periods of reduced social distancing. Average per capita consumption spending continued to be over 20% lower after the first lockdown (in Aug 2020 compared with Aug 2019) and remained 15% lower year-on-year by the end of 2020.

#### ***Sectoral trends***

The agricultural sector was the least impacted by the covid 19 pandemic related disruptions. It is estimated to grow 3.9% in 2020-2021 against 3.6% and 4.3% respectively in the previous two years. The strong performance of the sector was supported by the

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government policies that ensured timely supplies of seed and fertilisers despite pandemic related disruptions. It was also helped by good monsoons.

The industrial sector went through a big swing by first contracting in 2020-2021 and then expanding by 11.8% in 2021-2022. The manufacturing, construction and mining sub-sectors went through the same swing although the utilities segment experienced a more muted cycle as basic services such as electricity and water supply were maintained even at the height of national lockdown. Since January 2021, the widely used Purchasing Managers Index (PMI)-manufacturing has remained in the expansionary zone (i.e above 50).

Services account for more than half of the Indian economy and was the most impacted by the Covid 19 related restriction, especially for activities that need human contact. This sector which contributes a large portion to India's annual GDP has been hit hard. Although the overall sector just contracted by 8.4% in 2020-2021. Though some segments like finance, real estates and the public administration are now well above pre-covid levels, however segments like travel, trade and hotels are yet to recover fully. This is due to restrictions and curfews of repeated pandemic waves which makes these sub-sectors especially difficult to gather momentum.

#### ***External sector***

Despite all the disruptions caused by the global pandemic, India's balance of payments remained in surplus throughout the two years. This allowed the Reserve Bank of India to keep accumulating foreign exchange reserves which stands at US\$634 billion on 31st December 2021. This is equivalent to 13.2 months of imports which is higher than country's external debt. In the end of November 2021, India was the fourth largest foreign exchange reserves holder in the world after China, Japan and Switzerland.

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### **Fiscal balance**

The financial support given to the economy as well as the health response caused the fiscal deficit and caused the government debt to rise in 2020-2021. Moreover, government revenue has been severely affected with tax collection going down and as a result the government has been trying hard to find ways of reducing its own costs. However, there has been a strong rebound in government revenues in 2021-2022 so far.

### **Stock Markets**

Stock markets in India posted their worst losses in history on 23rd March 2020. However, on 25th March, one day after complete lockdown 21-day lockdown was announced by the Prime Minister, SENSEX and NIFTY posted their biggest gains in 11 years.

### **Conclusion**

The impact of coronavirus pandemic on India has been largely disruptive in terms of a loss of human lives as well as economic activities. Almost all the sectors of the economy have been adversely affected. The Indian economy, as seen in quarterly estimates of GDP, has been staging a sustained recovery since the second half of 2020-2021.

### **References**

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1. [https://en.m.wikipedia.org/wiki/Economic\\_impact\\_of\\_the\\_COVID-19\\_pandemic\\_in\\_India](https://en.m.wikipedia.org/wiki/Economic_impact_of_the_COVID-19_pandemic_in_India)
2. <https://timesofindia.indiatimes.com/readersblog/shreyansh-mangla/impact-of-covid-19-on-indian-economy-2-35042/>
3. <https://www.economicsobservatory.com/how-has-covid-19-affected-indias-economy>

4. [http://www.scielo.org.mx/scielo.php?script=sci\\_arttext&pid=S0185-16672021000100003](http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0185-16672021000100003)
5. [https://en.wikipedia.org/wiki/Economic\\_impact\\_of\\_the\\_COVID-19\\_pandemic\\_in\\_India](https://en.wikipedia.org/wiki/Economic_impact_of_the_COVID-19_pandemic_in_India)
6. <https://www.indiabudget.gov.in/economicsurvey/>

# Online Teaching-Learning During Covid-19 Pandemic: An Analysis

*Dr. Nitumoni Das*  
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## **Abstract**

*Covid-19 pandemic has brought a revolutionary change in the educational field by removing traditional offline classes to a new one by adopting online strategies for the better benefit of the student community. Therefore an attempt has been made to study the impact of this pandemic on online learning of the students. The finding of the study reveals that there exists difference between male and female students in regard to some aspects of online teaching and learning. Moreover, the paper reveals the positive and negative impact of online learning on student's learning.*

**Keywords:** *online learning, higher education*

## **Introduction**

Covid-19 was first identified in December 2019, in Wuhan, China and then it gradually started spreading in other parts of the world. It has created a serious and deep rooted impact on the social, economic and psychological life of people in different parts of the world. This pandemic has made the public aware about certain things and adopts

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certain strategies like hand washing, wearing face masks, physical distancing and avoiding mass gathering etc. Lockdown and staying home strategies have been put in place as the needed action to flatten the curve and control the transmission of the disease (Sintema, 2020).

The Covid-19 outbreak had a devastating impact on human life. It has affected the education systems of both developed and developing countries of the world to a large extent. According to IAU Global Survey Report it has affected nearly 1.6 billion learners in more than 200 countries and more than 94% of student population in the world. It has led to the closure of all educational institutions as instructed by the Government to reduce the spread of this airborne disease to break the chain of this pandemic. One of the most important pandemic precautions called "social distancing" or "physical distancing" has attempted to reduce interpersonal contact and thereby minimise the kind of community transmission that could develop quickly in dense social networks like the university campus (Weeden & Cornwell, 2020). Therefore, all the educational institutions with face to face contact have been discontinued.

Therefore, an alternative measures in the name of digital learning have been adopted to meet this challenge. The teaching learning and evaluation methodologies have been completely altered by this pandemic and digitalization of the whole education system became a necessity.

#### **Objectives of the paper**

This paper is designed to study the following objectives:

1. To find out the differences in viewpoints with regard to online learning between male and female students.
2. To study the impact of online learning during covid-19 pandemic on higher education.

### **Delimitation of the study**

The study is limited to the students of higher education. Only one college i.e. Barbhag College of Nalbari District under Gauhati University have been selected for the study.

### **Methodology**

Descriptive survey method is followed in the study. A total of 40 students has been selected using random sampling technique. A self structured questionnaire has been developed for collecting data. Data have been analysed using simple statistical technique viz. Percentage for the study.

### **Analysis and Interpretation of Data:**

Analysis of data means studying the organized material in order to discover inherent facts. The data are studied from as many angles as possible to explore the new facts. Data analysis and interpretation are two important phases in any research work. The objective of present study is to study the difference between male and female college students with regard to online teaching-learning. Another objective of this study is to make a study on impact of COVID-19 on higher education. To achieve the objective of study following tables has been used.

**Table No 1: Showing the Percentage of male and female college students in regard to online teaching and learning by using a self structured questionnaire**

|   | Questions  | Responses of the students |     |      |       |        |       |    |     |      |       |        |       | Total |
|---|--|---------------------------|-----|------|-------|--------|-------|----|-----|------|-------|--------|-------|-------|
|   |  | Yes                       | %   | male | %     | female | %     | No | %   | male | %     | female | %     |       |
| 1 | Are you satisfied with online teaching during Covid 19 pandemic? | 24                        | 60% | 10   | 25%   | 14     | 35%   | 16 | 40% | 6    | 15%   | 10     | 25%   | 100%  |
| 2 | Do you feel that you have to study more in online teaching?      | 12                        | 30% | 6    | 15%   | 6      | 15%   | 28 | 70% | 11   | 27.5% | 17     | 42.5% | 100%  |
| 3 | Do you feel peaceful environment at home to study?               | 28                        | 70% | 13   | 32.5% | 15     | 37.5% | 12 | 30% | 7    | 17.5% | 5      | 12.5% | 100%  |



|   |  |    |       |    |       |    |       |    |       |    |       |    |       |      |
|---|--|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|------|
| 4 | Do you feel isolated during online learning?                             | 26 | 65%   | 14 | 35%   | 12 | 30%   | 14 | 35%   | 8  | 20%   | 6  | 15%   | 100% |
| 5 | Are you feeling comfortable in studying at home in comparison to college | 08 | 20%   | 03 | 7.5%  | 05 | 12.5% | 32 | 80%   | 15 | 37.5% | 17 | 42.5% | 100% |
| 6 | Do you like online learning as compared to offline learning?             | 05 | 12.5% | 05 | 12.5% | 0  | 0     | 35 | 87.5% | 17 | 42.5% | 18 | 45%   | 100% |
| 7 | Do you think values can be developed through online learning?            | 06 | 15%   | 03 | 7.5%  | 03 | 7.5%  | 34 | 85%   | 18 | 45%   | 16 | 40%   | 100% |

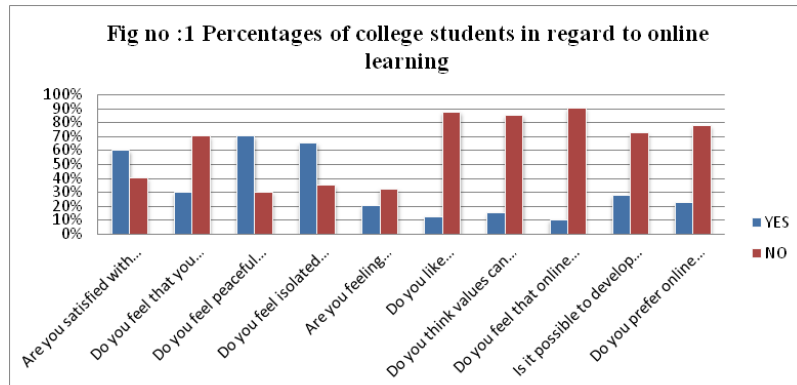
|    |   |    |       |    |       |    |      |    |       |    |       |    |     |      |
|----|---|----|-------|----|-------|----|------|----|-------|----|-------|----|-----|------|
| 8  | Do you feel that online learning can meet the learning needs of students? | 4  | 10%   | 03 | 7.5%  | 1  | 2.5% | 36 | 90%   | 18 | 45%   | 18 | 45% | 100% |
| 9  | Is it possible to develop positive mental health through online learning? | 11 | 27.5% | 07 | 17.5% | 4  | 10%  | 29 | 72.5% | 15 | 37.5% | 14 | 35% | 100% |
| 10 | Do you prefer online learning in future?                                  | 9  | 22.5% | 06 | 15%   | 03 | 7.5% | 31 | 77.5% | 15 | 37.5% | 16 | 40% | 100% |

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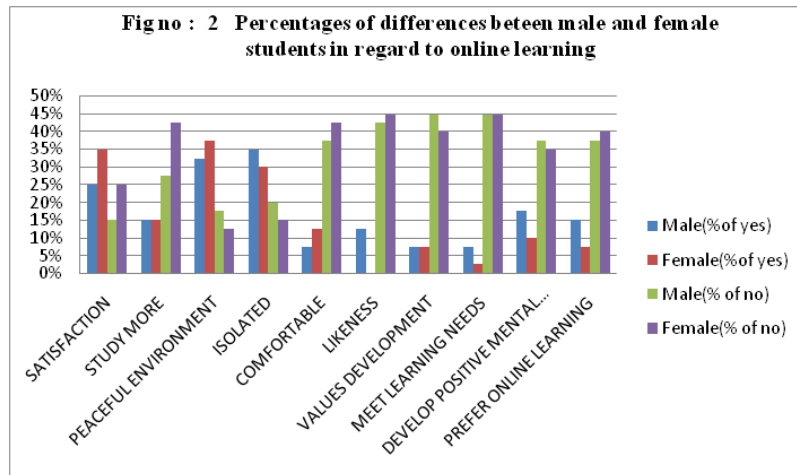
- From the above table No. 1 it can be observed that 60% of students were satisfied with their online teaching.
- From the table it can be observed that 30% of students feel that they can study more through online learning.
- Table reveals that 70% of students feel peaceful environment at home to study.
- From the table it can be observed that 65% of students feel isolated during online learning.
- As per analysis of the table 20% of students felt more comfortable in studying at home as compare to college.
- From the table it can be observed that 12.5% of students like online learning as compare to offline learning.
- As per analysis of the table only 15% of students think that values can be developed through online learning.
- From the table it can be observed that only 27.5% of students think that positive mental health can be developed through online learning.
- As per analysis of the table only 22.5% of students prefer online learning in future.

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To make the idea more clear a bar diagram has been used. (Fig No.1)



Similarly, a bar diagram is used to show the difference between male and female with regard to online learning. Fig 2



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From the above diagram it is clear that:

- There is a significant difference between male and female students in regard to different aspects of online teaching and learning. Finding reveals that 25% of male students satisfied with online learning and 25% of female students were not satisfied with online learning.
- From the study it has been found that 15% of male and 15% of female students felt that they have to study more in online learning.
- Study reveals that 35% of male and 30% of female students felt isolated during online learning.
- From the present study it has been found that only 7.5% male and 12.5% female students felt comfortable in studying home as compare to college.
- From the study it has been observed that only 12.5% male students like online learning as compare to offline learning.
- In regard to values development through online learning equal number of male and female students shows positive response that is 7.5%.
- One of the major finding of present study is that there is zero percentage of female students in regard to likeness of online learning as compare to offline learning.
- From the present study it has been found that only 7.5% of male and 2.5% of female students felt that online learning can fulfill the learning needs of students.
- Study reveals that only 17.5% of male and 10% of female students have positive response in regard to development of positive mental health through online learning.

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- From the present study it has been found only 15% of male and 7.5% of female students prefer online learning in future which is not good at all.

#### **Impact of Online learning on students and teacher**

Students are facing many difficulties during online learning. The sample of our study is specially belongs to rural areas. Therefore network connection is not adequate in such areas. Most of the students are not economically sound to buy a smart phone to avail online learning. At home a lack of basic facilities, external distraction and family interruption during teaching are major issues. Teachers are also facing some difficulties during online learning too. Teachers personal problems including a lack of technical knowledge, course integration with technology are hamper their engagement in online teaching. Some positive impacts on education system are as follows:

#### **Positive impact of online learning on education system**

- In lockdown situation both teacher and students learn to use some innovative method of online teaching and learning such as Google meet, Google classroom, Zoom meeting ,You tube etc.
- As students were not able to collect hard copies of study material in lockdown situation they used soft copy of study materials for reference.
- In lockdown situation learning materials are shared among students through different electronic media and related queries are resolved by using e-mail, SMS, phone calls, whatsapp, telegram etc.
- The pandemic situation encourages the student and teacher

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to learn and use digital technology and resulted in increasing digital literacy.

- Students are able to manage their time more efficiently in online education during Covid-19 pandemic situation.

#### **Negative impact of online learning on education system**

- One of the most important negative impacts of online learning is that it creates a huge gap between rich and poor students as well as urban and rural students.
- Most of the teacher and students fails to make them prepared for online teaching and learning.
- There is lack of technical knowledge in operating online mode of teaching and learning among teachers and students.
- Another negative impact of online learning is that most of the students used to cheat their teacher in the name of online learning.
- In rural areas many students have limited or almost no internet access and many students may not be able afford computer, smart mobile phone to continue their online learning.
- Covid19 pandemic has negative impact on students study habits too. They almost lost their study habits during lockdown situation.

#### **Findings of the Study**

The data collected in this study reveals many interesting and relevant facts about online teaching and learning. Finding reveals that there exists difference in opinion in some aspects of online learning between male and female students. Moreover the paper also

highlights the positive and negative impact of online learning procedure and its impact on the students' education process.

### **Educational implication and Suggestions**

The findings of the present study have identified some of the issues that are needed to be focused with great care. There is an urgent need to give proper training to teachers in operating online mode of teaching. All higher education institutes now are aware of the consequence of technology and should take serious measures to conduct technology driven education through the learning management system. Therefore educational institute should use technology in all aspects. This Covid-19 pandemic shows that partnership between technology and education is going to stay forever.

Another suggestion is that each and every higher educational institute can divide the course into two sections such as conventional teaching and online teaching. It will definitely help in inculcating the technology into the classroom. As a result online teaching will increase digital literacy among teachers and students which will enhance their exposure and learning and making them employable for the digital world learning.

### **Conclusion:**

It has come to light that we need to keep ourselves updated in this ever changing world. We cannot stick to a particular system. We need to keep ourselves updated with this technologically advanced era. Recently induced lock down has proved this and online teaching become a necessity. The focus of online teaching is more on students and hence it promotes student centered learning. Indian students, teachers and parents are not habitual of a virtual classroom. Traditional classroom was the only way of learning for them. But now Indians have to shift their traditional classes to online classes. Thus



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the system is required to work on our teachers training for online classroom tool so that they can teach the students more effectively and build our future generation. India was not prepared for this dramatic change so it was a big challenge for our nation's population. Thus depending upon the findings of the study it can be concluded that both male and female students have different opinion in some aspects of online learning.

#### **References**

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1. Giorgio Morimoni, Hilligje Yan't Land, Jenson Trine (2020). IAU Global Survey Report: The Impact of Covid 19 on Higher Education around the world. International Association of Universities.
2. Toshika, Pareeka and Soni, Kiran (2020). "A Comprehensive Study on Covid-19 Pandemic: An Impact on School Education in India", Amity Journal of Management, Vol. VIII, No. 2, July-December 2020.
3. Rawal Mukesh(2021)An analysis of COVID-19 Impacts on Indian Education System, Educational Resurgence journal volume 2,issue 5, ISSN 2581-9100
4. Shazia, Rashid and Sunishtha Singh Yadav (2021). "Impact of Covid 19 pandemic on Higher Education and Research", Indian Journal of Human Development, August 2020
5. Sumitra Pokhrel and Roshan Chhetri (2021). "A literature Review on Impact of Covid 19 pandemic on teaching and Learning", Higher Education for the Future, issue 8(1).

# Impact of Covid-19 on Indian Entertainment Industry

*Barshneyee Bhattacharyya*

## Abstract

*COVID19 Pandemic has caused massive devastation, not only in terms of human life loss, but also in terms of economic disruption. Since the start of the Countrywide Lockdown on March, 2020, all sectors of the economy have come to a halt. Entertainment industry is not any exception rather it had huge impact. Those who rely on social gatherings of people, such as films and events, are the hardest hit. Television, Print, Filmed Entertainment, Digital Media, Animation -VFX, online gaming, out of home media, radio, music, advertisement, and Over The Top Media (OTT) Platforms are all part of the Indian economy's Sunrise sector. This paper tries to find out the ways in which the Covid 19 has affected the whole Indian entertainment industry.*

**Keywords:** *Covid19, Media, Entertainment, Television, OTT, India, Theaters, Audience*

## **Introduction**

India is known for the entertainment industry and movies and shows it produces. The entertainment industry has been the only source of earning for millions of Indians today. Not only the national television or the bollywood industry but also regional cinema has been the only source of income for many families. Since the first Covid-19 lockdown in March 2020, India's film industry, which is the world's largest in terms of the number of films produced and the second largest after Hollywood in terms of global reach, has been on edge. Other than that theaters and shows and concerts, stand up shows and even other events like modeling and dance shows has always been entertaining the Indian as well the as the international audience. The Media and Entertainment industry is one among the sunrise sector in Indian economy which includes television, Print, Filmed entertainment, Digital Media, Animation -VFX, online gaming, out of home media, radio, music, advertisement and Over The Top Media (OTT) Platforms. When lockdown hit India in March 2020 the whole entertainment industry had a pause. Even though everyone thought of returning to set soon but wasn't possible. Along with all the other areas within the country the entertainment industry also had seen some changes within these years. Due to social distancing crew that helps in shooting or the artist were not able to be a part of our TVs or appear on big screens. Along with the pause on shooting, movies were not even been able to release in theaters. But the audience has to get some content in the name of entertainment, the show must go on. Even though the movies and collective content like TV series which needs a huge crew and artist had seen a downfall but the OTT platforms along with content in individual level have got a huge attention. The artist or the team will change but the audience will never run out of content.

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### **Objective:**

The objective of this writing is to find out the ways in which the Covid 19 has affected the whole Indian entertainment industry. The major areas explored are impact on content on social media, bollywood and TV shows and even the less highlighted source of entertainment on a regional level.

### **Methodology:**

The methodology used in this writing is purely descriptive and analytical. The data used is mostly collected from secondary sources which includes the internet along with which some personal observations like changes in our daily life activities are also been used to make it more realistic.

### **Analysis:**

#### **Rise of Content on internet**

The content on social media has always been entertaining us. The youth is often seen being interested on social media more than TV. As the form of content present on social media is versatile and is from all around the world, it attracts mass audience. Starting from memes or vines and vlogs plus other talents that people have has been entertaining the audience from the beginning of social media. The social media platforms are open for everyone and one can interact with each other and even express one's feeling in front of the world. The entertainment on social media is both sided and also involves the audience without letting them feel left out, unlike the traditional way of entertainment which has zero interaction with the audience. Covid had put restriction on people coming to sets but couldn't stop individual or small group of creators from shooting content at homes and posting it on social media.

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The lockdown has also introduced us to a new form of interactive content creations know as the short form content. Platforms like Tiktok went popular during the lockdown as a place for craters to create individual and short form content and entertain the audience. The new normal, where many more of our daily interactions are mediated by screens, has made change the way everyone behaves on those platforms, with the messiness and realities of pandemic life crowding out some of social media's posturing and perfection. These websites have served as a social lifeline as well as a source of new information about the disease that is sweeping the globe and upending life as we know it. Twitter, in particular, shone as a source of real-time news. The pandemic rendered social media, whose utility had waned and user growth had slowed, suddenly relevant. Some even speculated that social media, despite still being heavily scrutinized for spreading misinformation and general toxicity, was good again. People suddenly had something they could all talk about after years of social fragmentation in which people were less likely to watch the same shows or even share the same reality.

If the lockdown has benefited anyone, it has been OTT streaming platforms like Netflix and Amazon Prime Video. According to a KPMG report, there has been a "secular rise in OTT consumption over time, across demographics, and across devices," with "OTT players with a large, legacy library" clearly having an advantage. According to the report, the industry in India had revenues of Rs 173 billion in 2019. To keep up with demand, major players such as Amazon Prime Video and Netflix switched from HD to standard definition to reduce the strain on bandwidth. Furthermore, with the launch of Disney+Hotstar, the audience was spoiled for choice. Special Ops, Panchayat, Marzi, Four More Shots Please Season 2 and Hasmukh were among the web series that aired. Web shows

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like Special Ops, Panchayat, Marzi, Four More Shots Please Season 2 and Hasmukh were lapped up by viewers.

At the moment, online video platforms are a lifeline. It is predicted that if growth continues at its current rate, the market will be worth INR 4000 crores by the end of 2025. Investors are wise enough to recognise the potential in this sector, and investment in 2020 has increased to \$700 million. The young population is responsible for the majority of the growth. The millennial generation is contributing to a shift in media consumption habits, which is yielding positive results.

#### **Impact on TV Shows and bollywood:**

The movies have seen a huge downfall during the lockdown. Some films were realized on OTT platforms like Amazon prime or Netflix but were not able to make much profit out of it. Even though the producers were somehow able to earn but the actors and the other workers at the sets were not earning anything. The OTT platforms have always been exciting the audience with great content. Therefore the shows within those platforms stood as the biggest competition for average bollywood films. The best part of watching a bollywood movie is going to theater and spending time with friends which were not possible during the lockdown. The theaters and other business related to theaters were close during the lockdown and were not gaining any profit. The popcorn sellers and other worker related to security have not been able to return to work for which they haven't received any payment. The producers have seen a huge loss during the lockdown. It's not only the producer but also actors and shot boys and all the other related to film industry. Producers are not the only ones who are in a bind. Other stakeholders, such as multiplexes, film exhibitors, and cinema owners, are also struggling. There are many daily wage workers in the industry who are being negatively impacted

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right now, and they are the ones who need the job the most. The daily wagers will face huge repercussions if work doesn't resume soon. Even the southern Indian film industry, known as 'Tollywood,' was in the grip of a crisis, with losses estimated at 9 billion rupees for the Kerala film industry as a slew of films, including potential blockbusters, remain unreleased. Major film productions have been shelved or postponed indefinitely, thousands of cinemas have been closed, supply chains and post-production have been disrupted, and significant job losses have occurred. Analysts are unsure when normalcy will return, despite the fact that a thriving industry sold 1 billion tickets per year prior to the pandemic. After an action-packed January-February that included *Tanhaji*, *Chhapaak*, *Street Dancer 3D*, *Panga*, *Malang*, *Bhoot*, and *Shubh Mangal Zyada Saavdhan*, March-April was supposed to be reserved for *Sooryavanshi* and Ranveer Singh's sports drama *83*, with the extended Easter weekend expected to help Box Office collection. Now it appears that Salman Khan's Eid release *Radhe* and Akshay Kumar's Diwali release *Prithviraj* may also suffer a setback. *Takht*, Karan Johar's long-awaited period drama, was set to begin filming in the coming months. Even the magnum opus is in jeopardy right now.

Despite the fact that channels' episode libraries have been depleted, overall media consumption during the self-isolation period has increased by 60%, according to research firm Nielsen. In addition, Doordarshan's plan to re-air iconic shows such as *Ramayan*, *Mahabharat*, and *Byomkesh Bakshi* has been well received, prompting other channels to bring their popular shows such as *Hum Paanch*, *CID*, and *Siya Ke Ram*. In one week, DD's viewership increased by 650 percent, and it became the most-watched channel for two weeks in a row. According to the Broadcast Audience Research Council, it even broke its own record with 1.9 billion viewers across all GECs for Week 14.

**Impact on Regional Theaters and Concert and Shows:**

Among all of the above, the regional artists who have been entreating a smaller section of the society which is at a regional level were affected the most in a negative way. These artists were never as rich as an actor or singer who works on national television or bollywood plus the lockdown have made them financially weak. This includes various regional singers who produces songs on their own and are invited for concert or functions at a local level and standup comedian (which was a trend few years back) and also mobile theater which has been the only source of income for many families. The gym and yoga academies along with dance classes or music classes were close during the lockdown. Few enthusiastic people still continued it through zoom or Google meet but that wasn't possible for everyone as the internet facilities are not fully efficient in India. The teachers and mangers of these institutions were not gaining any profit during the lockdown. The students were also not able to learn or maintain their body as they were locked inside their houses. The learning about one's culture had a paused during the lockdown as we were exploring other's culture on the internet. Concerts were not taking place but singers and bands were still doing online shows which were not that interactive but still they were taking place. Comedians are seen everywhere these days and as a career it's very risky. One of the toughest times was faced by comedians during the lockdown. They were having online shows and were available on social media but those who were not that famous on social media before lockdown had to face huge challenges. The mobile theaters with small actors and actresses have no profit for the last two years. The workers starting from light man to sound checking and even makeup artists or dresser were completely jobless.



### **Conclusion:**

The lockdown has finally ended and theaters are opening up and everything is back to normal. Jobs within the entertainment industry are not secure. Maybe it would take years to fulfill this financial gap the industry faced during the lockdown. The show must go on even if a pandemic hits is what this whole situation has proven. The shift of entertainment is real and might also change in future. Bollywood or regional entertainment might not be able to take back the audience from OTT platforms and nowadays the audiences even prefer to watch a TV series on their phones. The concept of watching something on TV is not very popular these days, rather everyone prefers laptop or phone. Online platforms for entertainment are preferred over television, which aired old or repeated episodes during the lockdown period. During the lockdown, there is no direct relationship between income levels and entertainment/media consumption patterns. So the effect was not only financial. Something like entertainment is considered as secondary in such a tough time and was not paid much attention.

### **References**

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1. Sunitha.S, & Sudha.S.(2020), Covid-19 Conclusion: A Media and Entertainment Sector Perspective In India, Vichar Manthan (A Peer Reviewed Journal), 8(24).
2. Moon. Sarah (2020), Effect of COVID-19 on the Entertainment Industry, IDOSR publication, 5(1) 8-15.
3. Krishnan. Murali (2021), Covid-19 crisis hits India's booming film industry hard, rif.fr.
4. Shekhar. Mimansa (2020), COVID-19 impact explained: How India's film industry got hit and is preparing for a new normal, the Indian Express.

# Impact of Covid-19 on the Students of Primary Level

*Jumi Kalita*

## Abstract

*The Covid-19 pandemic adversely affected all the sectors of the World. The education system of all countries over the World was badly affected by the pandemic. The educational institutions were closed down in most of the countries around the World to control the spread of the Covid-19. India has also badly suffered from the Covid 19 pandemic. During this period, the education system completely shifted from offline to online mode. The paper mainly tries to trace the impact of Covid 19 on the students of primary level both on their educational performance and mental health. The study is mainly based on primary data collected from 50 students and their parents of different primary schools of the Barbhag Block of Nalbari district, Assam. The study finds that both the educational performance and mental health of the students are severely affected by the pandemic.*

**Keywords:** *Covid-19, pandemic, students, primary level, educational performance, mental health.*

**Introduction:**

Covid-19 was first detected in Wuhan city of China in December 2019. On 11<sup>th</sup> march 2020, Covid- 19 was declared as pandemic by World health Organisation (WHO). This disease was spread among various countries around the world. In order to curb the spread of this disease, the governments of different countries adopted various measures, such as lockdown, Social distancing and imposed restrictions on immigration etc. All the sectors were adversely affected by the pandemic. The education system of all countries over the World was badly affected by the pandemic. The educational institutions were closed down in most of the countries around the World to control the spread of the Covid-19. Due to the closing down of educational institutions, around 600 million school going students were affected in the whole World (Goyal, 2020). In India, around 320 million learners were affected (UNESCO, 2020).

India has also badly suffered from the Covid 19 pandemic. In India, the first positive case of Covid 19 was reported on January 27, 2020 in Kerala. After that, the disease spread very rapidly in the country. The Government of India took various measures to control the spread of Covid 19, such as on 24<sup>th</sup> March, 2020, a nationwide lockdown for 21 days was announced by the Prime Minister of India. Further, on 14<sup>th</sup> April, 2020, the lockdown was extended to 3<sup>rd</sup> May, 2020 by the Indian Government. The nationwide lockdown was further extended to 17<sup>th</sup> May and then to 31<sup>st</sup> May, 2020. After that, from 1<sup>st</sup> June, 2020, unlock 1.0 was introduced, but the schools remained close. During this period, the education system completely shifted from offline to online mode.

The paper mainly tries to trace the impact of Covid 19 on the students of primary level.

### **1. Objectives:**

The main objectives of this paper are as follows:

- i) To study the impact of Covid 19 on the educational performance of the primary school students
- ii) To analyse the impact of the pandemic on the mental health of the students.

### **2. Methodology:**

In the study, both primary and secondary data are used. The primary data are collected from the students of different schools by using a structured interview schedule. About 50 students were selected from different primary schools of the Barbhag Block by using simple random sampling. The information are also collected from the parents of the students personally by using interview schedule.

The secondary data are collected from various reports, journals, internet, newspaper etc.

### **3. Analyses:**

In analyzing the impact of Covid 19 on the students, it is analyzed its impact on educational performance of the students and their mental health.

#### **3.1 Impact on the educational performance of the students:**

Covid 19 has deep-rooted impacts on the education system across the World. A study conducted in Africa revealed that in Africa, pandemic related disruptions threaten to stall progress made in recent decades as students felt more difficult to attend schools which created challenges for African Government. Students' dropout rates are increasing across Africa due to Covid-19 (Africa Watch, 2021). Most of the students in Sub-Saharan Africa are in primary and secondary schools (about 91 percent of learners) where only 55

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percent of primary and secondary schools depend on digital remote learning during this pandemic. This pandemic has disrupted educational performance of the students in Africa.

Another study reports that younger students are more inversely affected than the older students in their learning process (Tomasik et al, 2020). They state that the slower pace of students in primary school may be due to younger students depend more on cognitive scaffolding during instruction, because their capability for self regulated learning are not developed sufficiently. From the socio-emotional perspective, younger students might have been more sensitive stressors about Covid-19 pandemic.

A study conducted in the Delhi National Capital Region (NCR) states that the closure of school has adversely affected the educational activities of the students. New teaching methods for online delivery of education are introduced to prevent further interruption of studies (Johnson et. al, 2020 and Di pietro et. al, 2020). But these methods have a long term effect on the students' live (Cohen et. al, 2020). Moreover, the time table of the online classes did not match with the guidelines issued by the Ministry of Human Resource Development (MHRD). The limited class interaction and inefficient time table reduce the satisfaction level of the students.

Most of the studies reported negative effects of Covid-19 on the educational performance of the students. Further, the younger students are affected more than the older ones.

In the present study, it is found from the information collected from the parents of the student that 60 percent schools conducted their education through online mode. Of the students, 65 percent used smart phones and about 15 percent used laptop for the online learning but the rest 20 percent have no smart phones or laptop or internet access. Most of the parents say that schools did not follow the proper

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time table for the online classes and some of them also argued that the learning processes were conducted through only whatsapp. However, the speed of the internet is very slow in the area and this is the major problem for online education in the area. Most of the students have limited data packs. Several classes in a day can bring substantial costs for the students with low family income. Moreover, the environment of the school gives motivation to the younger students to work hard and to learn communication skills which cannot be possible in online study.

The students do not attend the online classes properly. During online class, with the cameras turn off and mice off, there is a disconnection between students and teachers. It is also reported that some parents attend their children's class. Moreover, some subjects like Mathematics, Science etc are difficult to learn through online mode. Therefore, the students do not understand the concepts properly. Therefore there are large learning losses among the students. This may lead to large disparity of quality of education among the students. During the online learning, students face difficulties to focus on screen for long time. Because, there are various distracting or more attracting content available in online which often distract the students during study. Moreover, during online classes, the screen timing increases which affect their health such as the eyes can get dry and irritated during long stretches of screen use and also causes headaches, pain of neck and shoulder etc.

Thus the study indicates that most online learning methods developed during the lockdown period were not very effective for the students. From the study, it is found that there is a negative effect of Covid-19 related school closures on the students' educational performance.

### **3.2 Impact on the mental health of the students:**

There is a serious implication of Covid-19 and its subsequent lockdown on mental health which results in psychological problems like stress, depression etc. A study conducted by National Capital Region (NCR) in Delhi, India states that the closure of schools has a significant effect on the social life and mental health of students (Odriozolagonzalez et. al, 2020). They reported that majority of respondents did not utilize their time properly during the period. Further, the sleeping habit of the students, their daily fitness routine were adversely affected which will affect their health condition. Further, it was found that the young students have relatively more fear about the family member getting affected. The children behave fearful, uncertain and felt lonely during this lockdown period.

In the present study it is found that significant changes have arisen in the behaviour of the children. The parents state that their children are very depressed in the pandemic period. Some students feel very inferior and isolated because they are not able to play outdoor games, meet their friends and go to schools. It is also reported that changes in duration of sleeping, body weight, meals per day, hours spent on mobile and T. V. have also arisen. The average time spent on sleep has increased from 7.5 hours to 9.5 hours per day and 39 percent of the respondents reported an increase in weight, 21 percent reported a decrease in weight and 40 percent reported no change in weight. Further, it is found that as the students cannot go to school, meet their friends to play outdoor games during the lockdown period, they remain busy in mobile and the time spent on mobile increases. Youtube becomes the most preferred platform among them and besides youtube, the students use various gaming platforms. They even ignore the elders if someone calls them when they are with mobile. Moreover, their time spent on physical activities got disrupted. There is a change in eating habits among the children.

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Some of the parents reported that their children do not want to eat. They do not enjoy the food they received. It is also reported that there is increase in consumption of sweet, packaged snacks, processed meat, bread, and pizza and bakery products among the children. Some parents say that consumption of homemade food also increases. However, it is reported that most of the children do not get the proper nutrition during the pandemic and their unhealthy eating habits affect their health condition. Because of these changes in daily routine, the mental health of the students was negatively affected.

#### **5 Conclusion:**

In the study, it is found that the Covid-19 pandemic has a significant impact on the educational achievement, daily routine and physical activities of the students. The mental health of the students is also significantly affected through depression, loneliness etc. Thus, Covid-19 has significant impact on education as well as on all other sectors of the society.

#### **References**

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1. Aucejo, E. M., French, J., Araya, M. P. U. and Zafar, B. (2020). The impact of Covid-19 on student experiences and expectations: Evidence from a survey. *Journal of Public Economics*, 191, 1-15, [www.elsevier.com/locate/jpube](http://www.elsevier.com/locate/jpube).
2. Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J. And Zheng, J. (2020). The psychological impact of the Covid-19 epidemic on college students in China. *Psychiatry Res*, 287:112934. [https://doi: 10.1016/j.psychres.2020.112934](https://doi.org/10.1016/j.psychres.2020.112934)
3. Chaturvedi, K., Vishwakarma, D. K., Singh, N. (2020). Covid-19 and its impact on education, social life and mental health of students: A survey. *Children and Youth Services Review*, 121, <https://doi.org/10.1016/j.chilyouth.2020.105866>



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4. Hammersten, S., Konig, C., Dreisorner, T. and Frey, A. (2021). Effect of Covid-19 related school closure on student achievement – A systematic review. *Frontiers in Psychology*, <https://doi.org/10.3389/fpsyg.2021.746289>
5. Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R., Barman, B., Das, P. And Chouhan, P. (2020). Impact of lockdown on learning status of under graduate and post graduate students during Covid-19 pandemic in West Bengal, India. *Children and Youth Services Review*, 116, <https://doi.org/10.1016/j.chilyouth.2020.105>.

# Pandemic Characteristics of Novel Corona Virus Disease (Covid-19)

*Prativa Deka*

## Abstract

*In December 2019, a new disease with pneumonia like symptom was spreading throughout Wuhan in China which was entitled as novel corona virus disease or COVID-19 caused by the virus SARS Co-V-2 within a span of a few days, this disease become a global threat and was termed as a pandemic by the World Health Organization (WHO) on March 11, 2020. The origin of the Covid-19 disease has been traced back to the bats, but the intermediary contact is unknown. In most cases the virus shows mild symptoms like fever, fatigue, dyspnea, cough etc. Which may become severe if appropriate precautions are not adhered to estimate of the true prevalence of Covid-19 in a population can be made by random sampling and pooling of RT-PCR tests.*

**Keywords:** *pneumonia, SARS Co-V-2, Covid-19, RT-PCR.*

## Introduction:

The current global pandemic is caused by the novel corona virus disease (2019-nov) or severe acute respiratory syndrome coronavirus-2(sars-cov-2) popularly known as Covid-19 disease originated in the

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city of Wuhan in Hubei Province, China, during December in 2019. The virus quickly spread throughout the world. Many countries reacted too late to implement preventive measures leading to a sudden upsurge in the number of cases worldwide. Genomic analysis of the virus SARS-COV-I and MERS-COV, these by confirming that bats are the primary reservoir of the virus, however, in the month of July 2020 certain organizations worldwide are claiming to be working on a vaccine to threat the novel corona virus. Drugs like Remdesivir (GS-5734) and Denamethasone are being evaluated in late stage clinical trials but have not been approved anywhere. The transmission of Covid-19 is confirmed to be through human to interactions, the maximum amount of viral load shedding is done by symptomatic carriers and however, there are confirmed cases of asymptomatic carriers also transmitting the disease.

#### **Aim and Objective:**

1. When Covid-19 was first identified.
2. To study the global pandemic caused by the "Novel Corona virus".
3. The place from it originated.
4. To study if it is transmitted via human interactions.
5. The type of symptoms it shows.
6. To study about the origin of the disease.
7. The types of organs damage by it.
8. To study the symptoms and effects of Covid-19.
9. To study the genomic analysis of the virus SARS-COV-2.
10. What is a PCR Covid-19 test?
11. What are some of the types of covid-19 tests?

### **Methodology:**

We conducted a systematic review according to our protocol registered in Prospero (CRD 42020197100) and following Cochrane's guidelines for diagnostic accuracy tests covid-19 prevalence estimation by random sampling in population, optimal sample pooling under varying assumptions about true prevalence. The numbers of confirmed Covid-19 cases divided by population size is used as a course measurement for the burden of disease in a population and pooling of RT-PCR tests.

Here I use simulations to explore how experiment sample size and degrees of sample pooling impact precision of prevalence estimates and potential for minimizing the total number of tests required to get individual level diagnostic results.

### **Results:**

Sample pooling can greatly reduce the total number of tests required for prevalence populations, it is theoretically possible to pool hundreds of samples with only marginal loss of precision. Even when the true prevalence is as high as 10% it can be appropriate to pool up to 15 samples. Sample pooling can be particularly beneficial when the test has imperfect specificity by providing more accurate estimates of the prevalence than an equal number of individual level tests.

An infected covid-19 patient can have two major states of infection the asymptomatic state and the symptomatic state. The symptomatic stage can develop into an acute respiratory disease. The symptoms of covid-19 illness range from very mild (fever and respiratory symptoms such as cough and shortness of breath) to severe pneumonia, severe acute respiratory syndrome and kidney failures with a mortality rate 4%. Elderly persons and those with disease, lung disease and diabetes are at higher risk of developing severe

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covid-19 illness. Covid-19 vaccines are huge step forward in our global effort to end the pandemic hand washing and wear mask to reduce the risk of covid-19.

#### **Discussion:**

Social mobilizes community workers and volunteers have an important role in providing timely and actionable health information so that people know how to protect themselves and reduce the risks associated with the corona virus disease 2019 (covid-19). These tips for community engagement from UNICEF, the world health organization (WHO) and the International Federation of Red Cross and Red Crescent. The development of safe and effective covid-19 vaccines is huge step forward in as global effort to end the pandemic. The epidemiological characteristics of the SARS-COV-2 virus its phylogenetic relationship with the previous pandemic causing viruses such as SARS-COV-I and MERS-COV and analyzes the various responses to this global pandemic worldwide focusing as the actions taken by India and their outcomes .This paper discusses the pandemic characteristics of the covid-19 disease.

#### **Conclusion:**

This study showed that sample pooling should be considered in covid-19 prevalence estimation efforts attempts to estimate the true current prevalence of covid-19 by PCR tests can benefit from sample pooling strategies such strategies have the potential to greatly reduce the required number of tests with only slight decreases in the precision of prevalence estimates.

The current global pandemic is cause by the "Novel Corona virus disease" originated in the city of Wuhan in Hubei province China. The transmission of Covid-19 is confirmed to be through human to human interaction the maximum almost of viral load. Shedding is done by

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symptomatic carries. It tends to hit the poorest weakest and most marginal the hardest, lying bare the most acute societal and political weakness of countries around the world.

The transmission of Covid-19 occurs mainly through respiratory droplets generated during coughing and sneezing mostly by symptomatic patients; however studies suggest that asymptomatic patients also possess the ability to transmit the virus.

The highest amount of viral load is found in the nasal cavity as compared to the throat. These respiratory droplets may spread from 1m to 2m and get deposited on various surfaces, where they can remain viable for days.

### **References**

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1. Hogan CA, Sahoo MK , Pinsky BA sample polling as a strategy to detect community transmission of SARS-COV-2 JAMA 2020.
2. <https://doi.org/10.1001/Jama.20205445>
3. Mizumook,Kagaya,Zarebski A,Chowell G. Estimating the asymptomatic proportion of coronavirus disease 2019(COVID-19).
4. Adolphs R, The biology of fear cure boil. 2013; 23(2); R79-93.
5. POPPSG Kiriaze I S, Criannakis P, Flages ME. Psychosocial consequences of infections disease.

# **Covid-19 Pandemic and Street Vendors: A Study in Nalbari Municipality Area of Assam**

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## **Abstract**

*Covid-19 pandemic has threatened both the lives and livelihoods of the people and especially of the informal workers. The informal workers who are already in a vulnerable condition are affected more by the pandemic. In the present study, an attempt is made to find out the affects of Covid-19 and its subsequent lockdown on the economic conditions incorporating the occupational changes, changes in income, consumption and savings of the street vendors of Nalbari Municipality area of Assam. The study is mainly based on primary data collected from 50 different types of street vendors of the Nalbari Municipality area. The collected data are analyzed by using descriptive statistics, paired t test and pie diagram. It is found that the street vendors are badly affected by the pandemic. After lockdown, some of the vendors have to switch over to other business. During the lockdown period, the income and so the consumption expenditure and saving of the vendors have fallen down significantly and the percentage*

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*reduction of savings is more than that of income and consumption expenditure. During the period, they dis-saved or took loan from friends, relatives, neighbours or even from the village money lenders and depended on Government reliefs or bought food items from the grocery shops on credit.*

**Keywords:** *Covid-19, Pandemic, Street vendor, Occupation*

#### **1. Introduction:**

Some pneumonia cases were detected during December, 2019 in the Wuhan city of China and World Health Organization (WHO) identified the causing virus of these cases as Corona virus and the disease was named as Covid-19. After then, the disease spread to almost each and every country of the World and WHO declared it as a pandemic on 11th March, 2020. The Government of India announced country wide lockdown for 21 days from 24th March, 2020 to control the spread of the disease. Subsequently the lockdown was extended in different phases to 31st May, 2020 and from 1st June, 2020, it was declared unlock with some relaxations. Again, in April, 2021, some states like Uttar Pradesh, Delhi etc declared complete lockdown due to large infection of the disease. These measures of lockdown and unlock to control the spread of the disease and to save the lives of the people, threats the livelihood of the people. Thus, the Covid-19 pandemic is a curse not only for the lives but also for the livelihoods of the people.

In this paper an attempt is made to find out the affects of Covid-19 and its subsequent lockdown on the economic conditions incorporating the occupational changes, changes in income, consumption and savings of the street vendors of Nalbari Municipality area of Assam.



## **2. Review of literatures:**

Some studies are found to be conducted dealing with the effects of Covid-19 lockdown on the different sections of people of the society. Mitra and Singh (2021) study the effects of the lockdown which is treated as the dominant strategy to contain the spread of Covid-19 pandemic on livelihood loss, particularly in view of regional variations. Though lockdown was implemented without any discrimination, it is found significant variations in the rise of unemployment rate across regions due to variations in the nature of economic activities. The regions with higher rate of migration and urbanization and greater dependency on casual wage employment and non-agricultural employment witness more hunger and greater loss of livelihood. The urban workers are found to be more vulnerable to employment and income shocks. Mehta and Kumar (2020) also find that the informal workers of the non farm sector of urban areas are affected more by the lockdown due to the halt of their economic activities. Among them, the casual workers are the most vulnerable and the self employed persons like street vendors and other small entrepreneurs may not be left with capital to restart their business. Only the persons engaged to online delivery services, highly skilled professional and technology interface sectors are positively affected by lockdown. The few persons in regular salaried and essential services business are able to receive their regular income. The study conducted by Youth for Unity and Voluntary Action (2021) on the effect of 54 days lockdown on the vulnerable urban poor of Maharastra Municipality Region finds that the urban poor are adversely affected by the lockdown and there arises conflicts in accessing the PDS, cash transfer, loans and social security during lockdown with the existing entitlements and documentation. Identifying the increasing vulnerabilities of poor due to lockdown, the study suggests for a strong welfare net for them. Azad, Jamal and Refeque

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(2021) empirically analyses the impact of Covid-19 and its subsequent economic crisis on the income of the people of Kerala, India. Though all the categories of people are affected by the pandemic, the vulnerable sections of the society, those are the informal workers are affected more. In the study, education is found as a stabilizing factor which acts as a shield against the shocks of the pandemic. The study suggests the authorities to play an active role to help the people affected by the pandemic.

Behera and Dassani (2021) find that Covid-19 and its subsequent lockdown have threatened the livelihood of tribals and forest dwellers of India. Due to remote geographical location, poor infrastructure, malnutrition and existing morbidities among them, they are affected more in terms of decline in income, food insecurity and health concerns which have aggravated their inequalities. The authors suggest for ensuring food security, basic health facilities, routine vaccinations and to impart employability training skills to tribal migrants for minimizing the impact of the pandemic. The lives of the Adivasis of Dahanu, Maharashtra have been further marginalized by the Covid-19 pandemic and its subsequent lockdown (Lobo, 2020). The Adivasis returned from the brick kilns, construction sites and salt pans and some others are deprived from receiving the benefits of Public Distribution System for not having ration cards.

Identifying lockdown as a conflict between lives and livelihood, Chatterjee, Dey and Jain (2020) suggest an exit strategy from lockdown. They recommend three steps to identify the districts and industries in which economic activities can be resumed with necessary precautions so that economic pain can be lessen. Firstly, districts have to identify with their current rate of infections and then the industries have to categorize on the basis of their percentage of workforce who can work from home and in the third step industries have to rank on

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the basis of their centrality that is their interlinkage with other industries.

From the above review of literatures it is found that the Covid-19 and its subsequent lockdown have affected the different sections of the society in different ways. Compared to the workers working in the formal sector, the informal workers are affected more. An important segment of the informal workers are the street vendors, who are also found to be affected hard in terms of without capital to restart their business (Mehta and Kumar, 2020). Moreover, the urban workers are found to be affected more than their rural counterparts. Keeping in view the significant impact of Covid-19 and its subsequent lockdown on the urban informal workers, the present study is conducted with the following objectives.

### **3. Objectives:**

The main objective of the study is to find out the effect of Covid-19 and its subsequent lockdown on different aspects (as identified below) of the street vendors of the study area.

- i) To find out the impact on the occupations of the street vendors
- ii) To find out the impact on income, consumption and saving of the street vendors

### **4. Methodology:**

The study is mainly based on primary data. Secondary data, collected from different articles, reports, newspapers, websites etc are used only for the background of the study. The primary data are collected from 50 selected street vendors of the Nalbari municipality area incorporating various types of street vendors like vegetable vendors, vendors of fruits, cloths, accessories, fish and meat, food

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items like tea, snacks etc. The collected data are analyzed by using descriptive statistics, paired t test and pie diagram.

#### **5. Analyses of the study:**

From the theoretical framework described above, we find that socio-economic condition of informal workers all over the globe is affected by the lockdown for Covid-19 pandemic. In India, lockdown started on 24th March 2020, when factories, workplaces, markets, and everything was closed.

Street vendors help by providing goods and services at a cheaper rate near to the places. However, the Street vendor's level of income is low and working conditions are poor. As their income is low they are unable to save much. Millions of street vendors who are like daily wage earners faced an uncertain future during the lockdown period. To understand the problems faced by street vendors during the lockdown, a survey is conducted among 50 street vendors of Nalbari town of Assam.

**5.1 Socio Economic and demographic profile of the respondents:** The Socio Economic profile of 50 respondents is collected through personal interview with the street vendors. Table 1 provides a complete representation of the demographic characteristics of the street vendors and their vending business in the study. It shows that the majority of the street vendors belong to the age between 6years-60 years as they have a percentage of 44 percent.

Among the respondents, 24 percent vendors are female. Only 16 percent of the street vendors are HSLC pass, which implies that the street vendors are not educated enough to understand the schemes, loans, and laws which are passed by the government and education is found to be a stabilizing factor to act as a shield against the shocks of the pandemic (Azad, Jamal and Refeque, 2021).

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**Table 1**

| Age Distribution          |                    | Frequency | Percentage |
|---------------------------|--------------------|-----------|------------|
| 1                         | Below 18           | 5         | 10         |
|                           | 18-25              | 8         | 16         |
|                           | 26-45              | 12        | 24         |
|                           | 46-60              | 22        | 44         |
|                           | Above 60           | 3         | 6          |
| Sex                       |                    | Frequency | Percentage |
| 2                         | Male               | 38        | 76         |
|                           | Female             | 12        | 24         |
| Educational Qualification |                    | Frequency | Percentage |
| 3                         | Illiterate         | 12        | 24         |
|                           | Primary            | 20        | 40         |
|                           | Below HSLC         | 10        | 20         |
|                           | HSLC Pass          | 8         | 16         |
| Types of vendors          |                    | frequency | Percentage |
| 4                         | Street food vendor | 15        | 30         |
|                           | Vegetable vendor   | 11        | 22         |
|                           | Cloth vendor       | 5         | 10         |
|                           | Fruits vendor      | 10        | 20         |
|                           | Fish vendor        | 9         | 18         |

**5.2 Occupational change of the street vendors:** In this study 50 street vendors were interviewed, out of which 30 percent are food vendors, 22 percent vegetable vendors, 10 percent cloth vendors, 20 percent fruit vendors and 18 percent fish vendors. These are their primary occupation, but some of them also work in their

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neighborhood area as daily wage worker in their free time. During lock down, when workplaces, markets, and everything was closed, millions of street vendors who are like daily wage earners faced an uncertain future. To analyze how the street vendors survived and are there any occupational change during the Lockdown the following questions were asked.

**Table: 2**

| Questions   | Response                            | Frequency | Percentage |
|---|-------------------------------------|-----------|------------|
| Do you have any Secondary Occupation?                       | Yes                                 | 18        | 36         |
|   | No                                  | 32        | 64         |
| During the lockdown, did you shut down/close your business? | Yes                                 | 22        | 44         |
|   | No                                  | 28        | 54         |
| During Lockdown did you switch off to other works           | Yes                                 | 10        | 20         |
|   | No                                  | 40        | 80         |
| Whether your Debt increased in this period or not?          | Yes                                 | 35        | 70         |
|   | No                                  | 15        | 30         |
| During the lockdown, how did you manage livelihood          | Government aid                      | 5         | 10         |
|   | Help from relatives and Friends     | 4         | 8          |
|   | Loan from Village money lender      | 6         | 12         |
|   | Credit from grocery and other shops | 5         | 10         |
|   | All of the above                    | 30        | 60         |

The study reveals that only 36 percent of the respondents have secondary source of income. They work for daily wage in nearby area. But during lockdown these opportunities were also limited due to restrictions in their movements. 44 percent of the vendors had to close down their business. Some of them switched off to other business. Therefore, a large number of people have to face financial crisis. Their debt increased and they took loans even from the village money lenders.

During lockdown, among the street vendors, only fruits and vegetable vendors were allowed to carry out their vending activity

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only for a limited time. Most of the food and cloth vendors who could not work had managed to work from home or switch to some other work. With the loss of income, they faced financial difficulties which forced them to consider starting other businesses. It was even not easy to sell vegetables and fruits at that time, as food and cloth vendors and migrated labourers also started selling vegetables and fruits; as a result existing fruits and vegetable vendors also faced tough competitions. Fruits and vegetable vendors also faced difficulties since, as per the government orders, they had to roam and sell their goods rather than being stationary. Vendors mentioned that in their traditional stationary kind of shop customers were familiar but during the lockdown, they had to go around the town and nearby area to find new customers. It was naturally time-consuming and due to high competition, vendors were compelled to sell their goods cheap, leading to losses. Also, customers preferred buying from vendors who were reaching at their doorsteps. As a result, many regular customers of these vendors had reduced. The majority expressed that their daily income had reduced to less than half. Now, an attempt is made to find out the impact of Covid-19 and its subsequent lockdown on the income, consumption and saving of the street vendors.

**5.3 Impact on the levels of income, consumption and savings of the street vendors:** To analyze the impact of Covid-19 and its subsequent lockdown on the income of the street vendors, their average amount of income before, during and after lockdown period are compared by using paired t test. For that the monthly income of the vendors for June, 2019 (before lockdown), June, 2020 (during lockdown) and for June, 2021 (after lockdown) are taken. The comparisons of average monthly income of the vendors are shown in table 3.

**Table 3: Comparison of average monthly income of the street vendors**

| Table 3: Comparison of average monthly income of the street vendors |       |                    |                         |                 |           |         |
|---|-------|--------------------|-------------------------|-----------------|-----------|---------|
| Period  | Mean  | Standard deviation | Pair period             | Mean difference | t value   | P value |
| June, 2019  | 11250 | 2880               | June, 2019 & June, 2020 | -8700 (-77.3)   | -6.864*** | 0.00    |
| June, 2020  | 2550  | 2852               | June, 2020 & June, 2021 | 5000 (196)      | 5.953***  | 0.00    |
| June, 2021  | 7550  | 2386               | June, 2019 & June, 2021 | -3700 (-32.9)   | -5.442*** | 0.00    |

**Source:** Field survey

Figures in brackets show the percentage change in average income between the periods \*\*\* indicates significant at 1 percent level

Table 3 shows that, the monthly incomes of the street vendors differ significantly in the three periods. During the lockdown period, their income fell by almost 77 percent than the before lockdown period. The average income of the street vendors in the post lockdown period has increased than the lockdown period but it is almost 33 percent less than the before lockdown period. That is, the street vendors are not able to achieve their previous condition even after the completion of the lockdown period. The vendors who sell fruits and vegetables were allowed to sell their products to some extent, while the others were completely restricted in their activities.

As the incomes of the street vendors fell during and after lockdown period, their consumption expenditure and saving would also fall. Now, we have proceeded to find out the impact of Covid-19 and its subsequent lockdown on the average consumption expenditure of the street vendors and also on the compositions of their consumption expenditure. To find out the impact of Covid-19 and its subsequent lockdown on the average consumption expenditure of the street vendors, paired t test is used and the results are shown in table 4.



**Table 4: Comparison of average monthly consumption expenditure of the street vendors**

| Year       | Mean  | Standard deviation | Pair period             | Mean difference | t value   | P value |
|------------|-------|--------------------|-------------------------|-----------------|-----------|---------|
| June, 2019 | 10220 | 2725               | June, 2019 & June, 2020 | -3030 (-29.6)   | -4.041*** | 0.003   |
| June, 2020 | 7190  | 3137               | June, 2020 & June, 2021 | 1780 (24.8)     | 2.372**   | 0.042   |
| June, 2021 | 8970  | 4715               | June, 2019 & June, 2021 | -1250 (-12.2)   | 0.954     | 0.365   |

**Source:** Field survey

Figures in brackets show the percentage change in average consumption expenditure between the periods

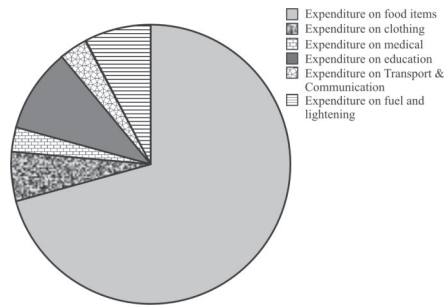
\*\*\* and \*\* indicates significance at 1 percent and 5 percent level respectively.

Table 4 shows that average consumption expenditure of the street vendors during the lockdown period is significantly lower than the before lockdown period. And the consumption expenditure of the street vendors increases significantly at 5 percent level when the lockdown period was over. Though the level of income of the street vendors fell drastically (77 percent) during the lock down period, they could not reduce their average consumption expenditure so much and the reduction in consumption expenditure is almost 30 percent. After the lockdown period, they again increased the consumption expenditure. This is because, during the lockdown period, people had to keep themselves at their home in idle and the fear of Covid compelled them to take nutritious food for enhancing immunity. They had to manage their consumption expenditure especially on food items even at credit or by borrowing. Though the consumption expenditure did not fall to the level of income of the vendors, compositions of the consumption expenditure might change due to their changing daily routines, necessities and economic conditions during the lockdown

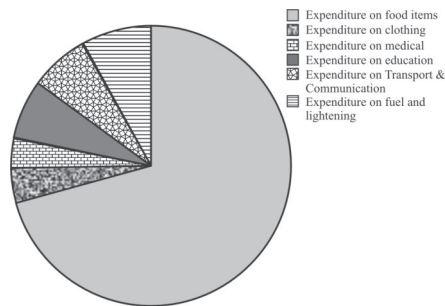
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period. The composition of consumption expenditure of the street vendors during the three time (before, during and after lockdown) periods is shown in the following figures.

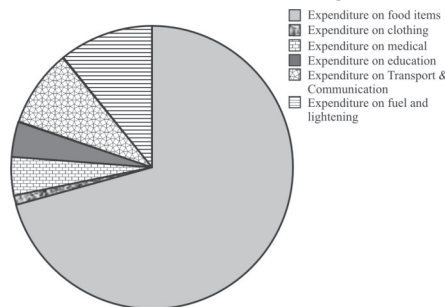
**Consumtion expenditure of the vendors before Covid-19**



**Consumtion expenditure of the vendors after Covid-19**



**Consumtion expenditure of the vendors during Covid-19**



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The above figures show that there are some changes in the composition of consumption expenditure in the three periods. Expenditure on food items has the highest share in all the periods. During the lockdown period, the shares of expenditure on clothing and education are less and that of transport and communication is more than the other two periods. This is because, as the income of the vendors fall during the period, they could not buy cloths and during the lock down period, the shops of cloths were closed. As the educational institutions and coaching centers remain closed, the expenditure on education felt. But, though the transportation remained closed, people have to spend more for communication especially in terms of charges of recharges of mobile and internet mainly to access the facilities of online education and its expenditure increased. Though, some of the vendors were infected by Covid-19, their treatment was done in either Government medicals or Covid care centers or remained home quarantine and the expenses were borne by the Government and so the share of medical expenditure remained constant during the lockdown period. But after the lockdown period, some physical complications of the Covid infected persons arose and the share of medical expenditure increased.

Regarding saving, the monthly saving of the vendors during June, 2019 (before lockdown), June, 2020 (during lockdown) and in June, 2021 (after lockdown) are taken in the study and their comparison is shown in table 5.

**Table 5: Comparison of average monthly saving of the street vendors**

| Year       | Mean  | Standard deviation | Pair period             | Mean difference | t value   | P value |
|------------|-------|--------------------|-------------------------|-----------------|-----------|---------|
| June, 2019 | 1420  | 565                | June, 2019 & June, 2020 | -5620 (-395.8)  | -6.543*** | 0.00    |
| June, 2020 | -4200 | 2474               | June, 2020 & June, 2021 | 4830 (115)      | 5.935***  | 0.00    |
| June, 2021 | 630   | 397                | June, 2019 & June, 2021 | -790 (-55.6)    | -8.437*** | 0.00    |

**Source:** Field survey

Figures in brackets show the percentage change in average saving between the periods

\*\*\* indicates significant at 1 percent level

Table 5 shows that, there arose significant difference in average savings of the street vendors in the three periods. During the lockdown period, their savings fell by almost 396 percent than the before lockdown period. This is because; during the lockdown period the income of the street vendors felt, their consumption expenditure also felt but they have to maintain the minimum level of consumption either through loan or by withdrawing their past savings. The average saving of the street vendors in the post lockdown period has increased than the lockdown period but it is almost 56 percent less than the before lockdown period. That is, the street vendors are not able to achieve their previous condition even after the completion of the lockdown period. Their savings felt more than the income. It is also found that the standard deviation of saving of the street vendors is too high during the lockdown than the other periods. It implies that the inequalities in saving of the street vendors also increased during the lockdown period.

## **6. Conclusion:**

Covid-19 pandemic has threatened both the lives and livelihoods of the people. The informal workers who are already in a vulnerable condition are affected more by the pandemic. The street vendors of the Nalbari Municipality area are also badly affected by it. After lockdown, some of the vendors have to switch over to other business or has become daily wage earners for survival. During the lockdown period, the income and so the consumption expenditure and saving of the vendors have fallen down significantly. Though, the level of income, consumption expenditure and savings felt due to Covid-19 and its subsequent lockdown, the percentage reduction of savings is more than that of income and consumption expenditure. This goes with the Keynes' (1936) psychological law of consumption. As, the income fell or even became zero for some vendor, they dis-saved or took loan from friends, relatives, neighbours or village money lenders or depended on Government reliefs or bought food items from the grocery shops on credit. Thus, the economic condition of the street vendors has deteriorated due to Covid-19 pandemic.

## **References**

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1. Azad, P., Jamal, M. A. and Refeque, M. (2021). Covid-Induced Economic Shock and Its Impact on the Income of the People in India. *Journal of Rural Development*, 40 (1), 1-13.
2. Behera, M. and Dassani, P. (2021). Livelihood vulnerabilities of Tribals during Covid-19: Challenges and Policy Measures. *Economic and Political Weekly*, LVI (11), 19-22.
3. Chatterjee, P., Dey, S. and Jain, S. (2020). Lives and livelihood: An exit strategy from lockdown. *Economic and Political Weekly*, LV (22), 38-44.
4. Lobo, B. (2020). Locked down and left out: Adivasis in Dahanu. *Economic and Political Weekly*, LV (28 & 29), 207-208.
5. Mehta, B. S. and Kumar, A. (2020). Impact of the lockdown on urban livelihoods. *Economic and Political Weekly*, LV (26 & 27), 4-5.

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6. Mitra, A. and Singh, J. (2021). Covid-19 pandemic and livelihood loss: Lessons for the future. *Economic and Political Weekly*, LVI (24), 51-60.
7. Youth for Unity and Voluntary Action (2021). Living with Multiple Vulnerabilities: Impact of Covid-19 on the Urban Poor in the Mumbai Metropolitan Region. *Economic and Political Weekly*, 56 (4), 23 January.

# Impact of Covid-19 on Small Enterprises

*Dr. Bishnu Bhattacharyya*

## Abstract

*The COVID-19 pandemic has led to a dramatic loss of human life, food supply, physical and mental health as well as world economic condition. It is well known that micro, small and medium enterprises punch hardest by the impact of Covid -19 in the form of lockdown, curfew and other preventive measures. The effects on business performance, revenue earn, economic and mental conditions of the labour and entrepreneur, maintenance of family members are disturbing*

*The paper try to find out the impact of Covid 19 on small enterprises in different levels of endurance and to find out some counteractive measures for their upliftment.*

*For the study simple random sampling methods is used. At the beginning 75 units of small enterprises from three different fields (food processing, cane and bamboo and pottery) of Assam are selected on the basis of simple random sampling.*

*It seems that during this period the demand for the product reduces and the study reveals that demand*

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*reduces by 50 percent and the entrepreneur also drop the customer order due to scarcity of product and for other reasons. It is observed that half of the entrepreneur temporarily closed the business by following instructions from the district authorities or others and some others closed temporarily due to reduction in demands, scarcity of labours and infection of staff on Covid 19 etc.*

*Some measures can be adopted to reduce the impacts of Covid pandemic. Governmental plan and the joint effort of human beings can help to overcome the entangled health, social and economic impacts of pandemic with the potential loss of previously achieved improvement.*

**Keywords:** *Pandemic, Covid-19, Social and economic impact, enterprises, infection.*

#### **Introduction:**

The outbreak of COVID-19 has changed the economic, political, social and cultural life of all of the people in the world. In India also every part of people's has been affected, as well as the economy, politics, culture, and social set up is disturbed. The impact on each of these areas has been well-documented and several recommendations has been comes out about the effect of Covid-19.

The COVID-19 pandemic has led to a dramatic loss of human life, food supply, physical and mental health as well as the economic condition. The economic and social disturbance caused by the pandemic is very much shocking. Millions of people in different parts are at risk of falling into extreme poverty, job insecurity, loss of



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educational year of the children's, disturbance of mental and physical health, increasing number of malnourished people, loss of life etc. The number of malnourished people is estimated at nearly 670 million. In the same way the number of unemployment increases. According to the writings of Centre for Monitoring Indian Economy (CMIE) the rate of urban unemployment rate is as high as 32.8 percent. The overall unemployment rate is jumping from 9.35 percent in the mid of March 2020 to 24.6 percent in end of April 2021.

The pandemic has been affecting the entire system of the society and has laid exposed its vulnerability. Border closures, lock down, trade restrictions and confinement measures have been preventing producers from accessing markets, including for buying inputs and selling their final product, and agricultural workers from harvesting crops. Thus disrupting domestic and international food supply chains and reducing access to healthy, protected and varied diets. The pandemic has destroyed job opportunities and placed millions of livelihoods at risk. As income earners lose their jobs, fall ill and even also die. The food security and nutrition of millions of women and men are under danger, with those in low-income earners, particularly the most marginalized populations, which include small-scale farmers and indigenous peoples, being hardest hit. Unfortunately, small businesses (micro and small scale enterprises) are being hit hardest by the fall-out of the pandemic.

In case of Assam also the pandemic hits rigorously in different aspect. The effects on business permanence, demand for the product, personal as well as national income, labour force, revenues and occupational health and safety have been, and continue to be, devastating. This paper tries to analyse the impact of Covid-19 on small enterprises of Assam. For this 50 entrepreneurs from three sectors namely food processing, cane and bamboo and pottery industry

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as sample enterprises are selected from different districts of Assam to discuss different issues which reflects impact of Covid-19 with the help of following objectives.

#### **Objectives of the Study:**

The main objective of the paper is to focus on the impact of covid-19 on small enterprises of Assam. The specific objectives are

1. To study the impact of Covid-19 on micro and small scale enterprises and its socio economic consequences.
2. To focus on the remedial measures of these impacts.

#### **Methodology:**

The paper is analytical and based on both primary and secondary data. Primary data is collected from different industrial units of Assam and secondary data is taken from different publications and also from web sources.

#### **Discussions:**

The impact of Covid-19 pandemic on small scale industrial sector can be discussed from different perspective. This study it reveals that around 55 percent of the businessmen have shutdown their business operations during Covid pandemic period. Among them more than fifty percent have temporarily closed their business activities according to the instructions from the competent authorities. The remaining have closed temporarily due to reduction in demand of the finished product, less amount of private orders, absence of working staff, problems of collecting raw materials due to transportations, fear of infections and administrative restrictions.

Thus the analyses can be made as impact of the pandemic on stability of the business, impact on revenue earnings, decrease in

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income impact on consumer demand, problem in collecting raw materials, shortage of cash flow, fear for infection on Covid-19, shortage of labour, problem of transportations etc.

#### **Stability of the Business:**

Regarding stability of the enterprises it is seen that among the three categories, food processing is more unstable in comparisons to the other two that is cane and bamboo and pottery. Here it is seen that in case of food processing industry 21 percent have closed down but it is 16 and 18 percent in case of bamboo and cane and pottery industry.

#### **Decrease in income:**

Decrease in income is one of the most important impacts of Covid-19 on small scale enterprises. In this study it reveals that more than 65 percent of the sample units are practicing a reduction in revenues during the period 2020-21. In some cases the reduction of revenue is very high, even more than 50 percent of the sample entrepreneur's lose almost 50 percent of their revenue. The survey reveals that the revenue loss is very high in case of food processing industry. In this category all the sample entrepreneurs reported that they are unable to get return more than 75 percent of their invested capital. But it is 27 and 31 percent in case of bamboo and cane and pottery industry respectively.

#### **Reduction in demands:**

The demand for the product is reduced during that period. More than 70 percent of the enterprise of food processing, 45 percent for cane and bamboo and 52 percent of pottery industry are suffering from reduction in demand. The situation is similar for customer orders, with a large percentage of entrepreneurs sufferings from reduced

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demand and one fourth (25%) experiencing a more than 40 percent drop in customer orders.

#### **Shift in business activity:**

In some cases the entrepreneur compelled to shift their original occupation to others. Most of the entrepreneur shifts their activity from business to cultivations. In case of food processing it is 49 percent and on the other hand all entrepreneurs of cane and bamboo and pottery industry had shifted their occupation to agricultural activities for survival.

#### **Shortage of cash in hands:**

The economic condition of the entrepreneur becomes very pathetic during the outbreak of the pandemic and even in the post Covid period the situation remain worse. More than 35 percent of the entrepreneur in food processing industry confesses that they are unable to hold little amount of ready money in their hands for transaction or even for daily expenses. Same situation prevails in case of pottery or bamboo and cane industry.

#### **Impact on labour force:**

Fegarding labour force the study reveals that thousands of people, which is almost 59 percent of employees in sample industrial workforce faces deep job insecurity. There is massive job insecurity through discharge and pay cuts in most of the enterprises. In some cases the Government and the Judiciary have interfered and asked the employee not to discharge or pay cuts during this pandemic situation. But it is not a sufficient measures for the solving the problem. The pay cuts create several problems among the labour. The covid 19 catastrophe has punch young people harder in the labour market because of several factors. Young workers are over-

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represented in industries and sectors most affected by the crisis and are more likely to work on temporary contracts to a higher risk of job loss

#### **Reduction in savings:**

It is very common that the amount of savings of the small enterprises decreases due to outbreak of Covid -19 pandemic. It is seen that the difference between the saving during the mid of 2019 (Before pandemic) and 2021 is almost 32 percent. It is mainly due to decrease in demand, less amount of production due to lockdown, restrictions on festivals like Bihu, puja etc, postponement of different conferences, seminars, exhibitions, melas, meetings etc. the reduction in sales reduce the income as well as the savings.

#### **Change in standard of living:**

The standard of livings of the entrepreneurs are more or less remain unstable as a result of the occurrence of the pandemic because the income is irregular during the pandemic period. Same situation prevails in case of different levels of workers. Their production and sale have stopped, which means their income has also stopped. Most of them are worried about their futures as their pre-existing contracts are getting over. The workers who are the owners of small units are also unable to pay their workers and as a result of this the standard of living decreases. Almost all the sample food processing enterprises faces this situation in our study.

The famous Assamese cane and bamboo entrepreneurs and pottery workers too, are victims of this crisis, especially the self-employed ones. It is important to understand how the owners of small scale enterprises and the self-employed are charging amidst this pandemic and lockdown. Most of these economic undertakings navigate the boundaries of the formal and informal sectors. The people

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working in these sectors have been generally excluded from debates on the economic impact of the COVID-19 pandemic. While there have been discussions about paying daily workers, security guards, cleaners and others.

It is very clear that the impacts on Covid-19 on business permanence, labour force, revenues and occupational health and safety have been, and continue to be, devastating. Solutions are needed to give them the support they need to survive and continue to contribute to the global economic development.

Entrepreneurs are responding to the economic fall-out from COVID-19 in several ways. Some entrepreneurs can reduce their production of goods and services to match demand reductions and constraints on their production or they can divert their production to other uses. Most of them are trying to diversify their sales channels to reduce the effects of the crisis on their business activities.

Measures to solve the problems:-It is very clear from the above discussion that the spread of Covid-19 deficiently punch the socio economic condition of the people involved in small industrial sectors.

By adopting new principles like shift of production with local raw materials may help the entrepreneurs to revive their enterprises.

Each of the entrepreneurs must adopt the multiple production technique to increase their income as well as the employment opportunity. In some cases the demand for the product is sessional and raw material is also seasonally available. Therefore multi product enterprise may increase the income and employment.

Cash conservation, supply chain flexibility and modernization will help businesses in treading a new path in this uncertain environment.

Government should adopt tax concession and subsidy policy for a specific period for improving the economic condition of the

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entrepreneurs as well as the labour force. Donations and other types of harassments should be avoided as far as possible.

Vaccine for Covid-19 should be compulsory for all class of workers and employees without failed.

State government of Assam has already allowed free movement of fruits, vegetables, milk etc. Online supply of processed food or other product may help the producer to increase the sale as well as the demand. RBI and Finance Minister announced measures will help the industry and the employees in the short term. Insulating the rural food production areas in the coming ages will hold a great answer to the macro impact of COVID-19 on processed food sector as well as larger economy.

#### **Conclusions:**

This pandemic has been an eye-opener in terms of remembering us that planning is a necessary to take step for future planning. Launching schemes with attractive tag-lines like Stand up India, Start-Up India seemed perfect for a happy economy. But with great uncertainties comes great responsibilities. There must be provisions for emergency and relief funds for small business and other self-employed workers. The COVID-19 crisis is not going to go away anytime soon, and thus, we must be prepared for more lockdowns and hence policy measures. The governments must take initiatives to save them. Unfortunately these small entrepreneurs and self-employed workers have received a very poor amount of substantial financial assistance from the government. Some of them have received little amount under the "Pradhan Mantri Garib Kalyan Package" but there is no specific policy for them. They need urgent protection and relief from the Government for survival.

It is clear from the study that occupational health and safety and business continuity preparation are essential to help entrepreneurs

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to survive the pandemic. But the activities of different departments, government officials and non government organisations are essentials for survivals of these enterprises in the midst of this pandemic.

**References** 

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1. Chaturvedi R. and Karri A. 'Entrepreneurship in the Times of Pandemic: Barriers and Strategies' Sage publication (2021)
2. Corona virus outbreak, from URL:[https://www.worldometers info / coronaviurs/](https://www.worldometers.info/coronaviurs/) assessed 12 February 2021.



# **An Analysis of Short-Run Impact of Covid-19 on Tax Revenue Collection**

*Saurav Kalita*

## **Abstract**

*Covid-19 is a curse to recent contemporary human history. It not only impaired human life but also the living standard. It has affected the global economy badly creating disruptions in the global supply chain by hampering individual economies' activities. Govt. over the world have been taking various measures from strict to moderate. In India too, considering the overpopulation Govt. adopted strict measures like lockdowns. As it is viewed that Covid-19 related measures adversely causes economic activities and thereby GDP, therefore, it is also important to know how it affects tax revenue as there is a positive causal relationship between GDP and tax revenue. It is found that in the short-run there is no significant impact of Covid-19 on tax revenue collection. The main reason here put forward is inflation due to supply rigidities which makes tax revenue ineffective of Covid-19.*

**Keywords:** *ARDL, Covid-19, GST, Tax revenue*

## **Introduction**

One of the most draconian forces that shook the entire human history in recent times is Covid-19, which was spread from Wuhan province of China in the latter part of 2019. However, the history of this virus is not new, it was first identified in 1960 (Joshi et al., 2020) but during that time the spread was not significant as what is happening now. World Health Organization could understand the severity of this virus therefore they changed the status of Covid-19 from Public Health International Emergency on 30th January 2020 to the pandemic on 11th March 2020. The total Covid-19 affected cases worldwide till 1st November 2021 were 18,2885,588 and total deaths were 5,024,073.<sup>1</sup> In a similar tune if we look for India then we find that the total affected cases were 34,295,381 and total deaths were 4,58,909.<sup>2</sup> Along with human lives, this pandemic has severely affected the global economy. IMF<sup>3</sup> projected a sharp decline in the global economy by 4.9 percent that was worse than the global financial crisis of 2008. Mckibbin et al., (2020) in their estimation, used the CGE method and found that Covid-19 would cause a reduction of US\$2.4 trillion globally in 2020 in case of low-end effect however a full fall out would cause US\$9 trillion. The Indian economy was not spared from this Covid as well. The contraction in the Indian economy during 2020-21 in real terms was 7.3 percent.<sup>4</sup> The GDP growth rate of India during the fourth quarter of 2020-21 was just 1.6 percent along with a 3.7 percent growth rate in GVA.<sup>5</sup> This shows how the Indian economy was badly affected due to Covid-19. The reason for

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<sup>1</sup> <https://www.worldometers.info/coronavirus/#countries>

<sup>2</sup> *ibid*

<sup>3</sup> (World Economic Outlook Update, June 2020: A Crisis Like No Other, An Uncertain Recovery, n.d.)

<sup>4</sup> (The Pandemic in Data: How Covid-19 Has Devastated India's Economy, n.d.)

<sup>5</sup> (India's GDP Shrank by 7.3% in 2020-21; up by 1.6% in Last Quarter - The Hindu, n.d.)

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such ill effect on the economy was due to strict measures that were taken by the Govt in the form of complete lockdown created a standstill in the economy. Being a densely populated country, the Govt had no option but to go for the complete lockdown to halt the spread of the virus (Sahoo & Ashwani, 2020). In India, the Covid-19 related lockdown was first announced on 24th March 2020 by Prime Minister Narendra Modi from midnight (Joshi et al., 2020). This lockdown had stopped the business activity in the country. The Covid-19 related shutdown measures could make a permanent loss of 4 percent to Indian GDP (Das and Patnaik, 2020). Covid-19 related measures could have spillover effects as social distancing and closure of business activities like offices, production networks, financial markets, etc. severely damaged economic functions and affected growth rate (Ozili, 2020). There is a significant relationship between the fall in the Indian economy and Covid-19 happenings (Kumar Poddar & Singh Yadav, 2020). The impact of Covid was so severe that it could decelerate the manufacturing sector at most 20 percent, export 20.8 percent, import 25 percent, and MSME net value added by 5.7 percent (Sahoo & Ashwani, 2020). The fall in GDP has many economic implications. One such important implication is the tax revenue. There is a strong positive relationship between economic growth and tax revenue (Saibu & Saibu, 2013). A higher growth rate implies growing economic activities which resulted in the expansion of the tax base thus the tax revenue grows. Brender & Navon (2010) analyzed the Israeli economy and found that in the long-run GDP and tax revenue are elastic. This is very much evident in the case of developed countries. In the high-income earned countries tax revenue to GDP is higher than the low middle-income countries (Hakim & Bujang, 2011). Thus, it shows that a growing economy can fetch more tax revenue without much changes in the tax rate. This indicates that tax buoyancy is comparatively higher in developed countries and lower in developing

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countries. However, the elasticity of tax is critical to economic growth. As the increase in the tax rate to gain more tax revenue sometimes adversely affects the economic activities. As in case of increase in income tax beyond a point would cause a downturn in economic activities as discussed by Laffer curve. As in the case of indirect tax like VAT, an increase in the rate would cause a dramatic fall in aggregate consumption and economic growth (Miki, 2011). Therefore, expansion of tax base as GDP expands is more favorable for economic growth. The importance of tax revenue lies in the fact that a progressive state requires to undertake many expenditures such as social and infrastructural. In the case of developing nations, these expenditures are higher compared to developed countries. Therefore, the Govt requires revenue and tax is the most important source of Govt revenue. A progressive Govt can't sustain a long-run deficit, it requires a strong tax base. In India, over the period Govt has been taking many steps for fiscal consolidation, and in this process, the Govt enacted FRBM act 2003. Taha et al, (2008) found for the Malaysian economy that falls in tax revenue would cause Govt spending in the future. Zortuk M and Uzgoren N, (2008) analyzed the causal relationship between tax revenue and Govt expenditure for the oil-exporting countries from 2000 to 2009 and found a positive relationship. So, tax revenue plays a crucial role in an economy. It can be said that there is a cyclical relationship between economic growth and tax revenue through expenditure. Higher economic growth would mean higher tax revenue and this revenue could be spent on social and infrastructural activities which will further create human and non-human capital and consumption demand that led to further economic growth. As it is viewed that Covid-19 adversely causes GDP, therefore, it is also important to know how it affects tax revenue as there is a positive causal relationship between GDP and tax revenue. And due to the cyclical relationship between economic

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growth and tax revenue through Govt spending, it is very important to analyze the impact of Covid-19 on the tax revenue collection of India. However, no such attempt has been carried out in this regard. So, in this paper, an attempt has been made in this direction.

#### **Objectives and Methodology**

In the paper to estimate the effect of Covid-19 on tax revenue collection, monthly data are considered from January 2020 to August 2021. The reason for choosing the period from January is because the first Covid case in India was detected on 30th January 2020 (Joshi et al., 2020). The study is completely based on secondary data. The tax revenue data is collected from CEIC database and Covid-19 cases are taken from covid19india.org. The size of the time series observations may vary but 20 observations can be considered at least long, however for some models it can be 50 (McCleary, Retal., 1980).

Since, in the paper, the objective is to estimate the effect of Covid-19 on tax revenue collection, the short-run dynamic model is considered as following:

$$Y_t = \alpha + \beta_0 X_t + \sum_{i=1}^p \beta_i X_{t-i} + \varepsilon_t$$

Here  $Y_t$  refers to tax revenue in million (US\$)

$X_t$  refers to active Covid cases on the last date of each month as a proxy of Covid-19 related measures cause as active cases rise Govt implements various measures from strict to moderate

$\alpha$  is the intercept and  $\beta_i$  is the coefficient

$\varepsilon$  refers to the shock

Likely, the revenue is also dependent on its past effect, so the Autoregressive structure of the dependent variable is considered as following:

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Here,  $\alpha$  is the intercept and  $\gamma$  is the coefficient  
Combining both the effects we get a model like

This is the form of autoregressive distributed lag or ARDL model.

In this model, one important aspect is to choose the optimum lag length. For choosing the lag length two important criteria are considered- 1. Akaike Information Criterion and 2. Schwarz Information Criterion. As a rule of thumb, the criterion which has a lower value will be chosen for determining the optimum lag length.

For the dynamic model stationarity of the variables considered is an important criterion. In non-stationary variables, the OLS regression is mostly misleading or gives a spurious relationship. So, the variables are also tested for stationarity using the Augmented Dicky Fuller test for unit root and to decide the order of integration. These two variables are integrated of order 1 so, the model estimated to see the relationship in this paper is

**Impact of Covid-19**

As mentioned in the methodology, in this paper the optimum lag for both the variables are considered based on AIC.

For variable tax revenue it is found that the optimum lag is 4.

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**Table 1**

| Lag | LogL      | LR        | FPE       | AIC       | SC        | HQ        |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|
| 0   | -155.5811 | NA        | 68325844  | 20.87748  | 20.92468  | 20.87697  |
| 1   | -155.5524 | 0.049683  | 77882317  | 21.00699  | 21.10140  | 21.00598  |
| 2   | -155.5513 | 0.001826  | 89322006  | 21.14017  | 21.28178  | 21.13866  |
| 3   | -152.4162 | 4.598050* | 67715963  | 20.85550  | 21.04431  | 20.85349  |
| 4   | -149.6622 | 3.672049  | 54310661* | 20.62163* | 20.85764* | 20.61911* |
| 5   | -148.9289 | 0.879952  | 57460556  | 20.65719  | 20.94041  | 20.65417  |

Similarly for variable Covid-19 active cases

**Table 2**

| Lag | LogL      | LR       | FPE       | AIC       | SC        | HQ        |
|-----|-----------|----------|-----------|-----------|-----------|-----------|
| 0   | -224.9944 | NA*      | 7.15e+11  | 30.13259  | 30.17979* | 30.13209  |
| 1   | -223.7363 | 2.180796 | 6.91e+11  | 30.09817  | 30.19258  | 30.09716  |
| 2   | -222.5675 | 1.869960 | 6.79e+11* | 30.07567* | 30.21728  | 30.07416* |
| 3   | -222.5415 | 0.038232 | 7.79e+11  | 30.20553  | 30.39434  | 30.20352  |
| 4   | -222.3572 | 0.245756 | 8.80e+11  | 30.31429  | 30.55031  | 30.31177  |
| 5   | -222.3510 | 0.007432 | 1.03e+12  | 30.44680  | 30.73002  | 30.44378  |

It is found that the optimum lag is 2.

So, from the AIC it can be said that tax revenue collection has an optimum lag length of 4 and Covid-19 case has 2 respectively and the model is estimated accordingly.

Before proceeding to estimation stationarity checks for both the variables are very important to avoid spurious regression. Both the variables are integrated into order 1.

For tax revenue at 1st difference the variable becomes stationary.

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**Table 3**

|  |           | t-Statistic | Prob.* |
|--|-----------|-------------|--------|
| Augmented Dickey-Fuller test statistic |           | -7.962787   | 0.0000 |
| Test critical values:                  | 1% level  | -3.886751   |        |
|  | 5% level  | -3.052169   |        |
|  | 10% level | -2.666593   |        |

For Covid-19 cases at 1<sup>st</sup> difference the variable becomes stationary.

**Table 4**

|  |           | t-Statistic | Prob.* |
|--|-----------|-------------|--------|
| Augmented Dickey-Fuller test statistic |           | -8.413414   | 0.0000 |
| Test critical values:                  | 1% level  | -4.057910   |        |
|  | 5% level  | -3.119910   |        |
|  | 10% level | -2.701103   |        |

So, the model is estimated with 1st difference of the variables with lags 4 and 2 respectively.

The result of the short-run model is as follow

**Table 5**

| Variable                      | Coefficient | Std. Error | t-Statistic | Prob.  |
|-------------------------------|-------------|------------|-------------|--------|
| C                             | 10527.57    | 6567.552   | 1.602967    | 0.1476 |
| CORONA1                       | 0.001700    | 0.003254   | 0.522538    | 0.6155 |
| TAX_COLLECTION_IN_MILLION(-1) | -0.448260   | 0.256958   | -1.744487   | 0.1192 |
| TAX_COLLECTION_IN_MILLION(-2) | -0.270546   | 0.201167   | -1.344883   | 0.2155 |
| TAX_COLLECTION_IN_MILLION(-3) | 0.548992    | 0.204409   | 2.685753    | 0.0277 |
| TAX_COLLECTION_IN_MILLION(-4) | -0.543707   | 0.254019   | -2.140417   | 0.0647 |
| CORONA(-1)                    | 0.001537    | 0.002900   | 0.529999    | 0.6105 |
| CORONA(-2)                    | 0.000942    | 0.002913   | 0.323537    | 0.7546 |



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|                    |           |                       |          |
|--------------------|-----------|-----------------------|----------|
| R-squared          | 0.765854  | Mean dependent var    | 174.5885 |
| Adjusted R-squared | 0.560976  | S.D. dependent var    | 10920.03 |
| S.E. of regression | 7235.491  | Akaike info criterion | 20.91824 |
| Sum squared resid  | 4.19E+08  | Schwarz criterion     | 21.30453 |
| Log likelihood     | -159.3459 | Hannan-Quinn criter.  | 20.93802 |
| F-statistic        | 3.738095  | Durbin-Watson stat    | 2.425508 |
| Prob(F-statistic)  | 0.042161  |                       |          |

Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 2 lags

|               |          |                     |        |
|---------------|----------|---------------------|--------|
| F-statistic   | 0.904862 | Prob. F(2,6)        | 0.4535 |
| Obs*R-squared | 3.707633 | Prob. Chi-Square(2) | 0.1566 |

Heteroskedasticity Test: Breusch-Pagan-Godfrey

Null hypothesis: Homoskedasticity

|                     |          |                     |        |
|---------------------|----------|---------------------|--------|
| F-statistic         | 0.208466 | Prob. F(7,8)        | 0.9736 |
| Obs*R-squared       | 2.468287 | Prob. Chi-Square(7) | 0.9295 |
| Scaled explained SS | 1.186451 | Prob. Chi-Square(7) | 0.9912 |

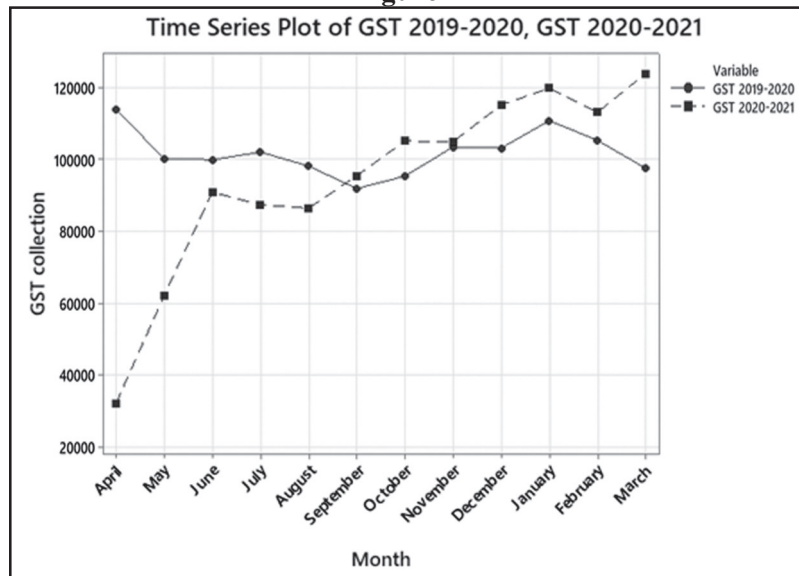
The model estimated is not a spurious one as according to Granger and Newbold (1974) a regression is spurious if R square is greater than DW statistic however in the estimated model R square is lower than DW. Therefore, the model is not spurious similarly from LM test and BPG test it is found that the model is neither suffers from serial correlation nor heteroscedasticity.

If we look at the table5 we found that the coefficients of Covid variables are insignificant. Only two lag variables of tax collection lag at 3 and 4 are significant. From the above result, it can be said that in the short-run Covid-19 cases and thereby related measure has no impact on the tax revenue collection. The reason for such an

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insignificant result can be attributed to indirect tax collection which shares a major portion of tax revenue of India, measured through GST.

**Figure 1**



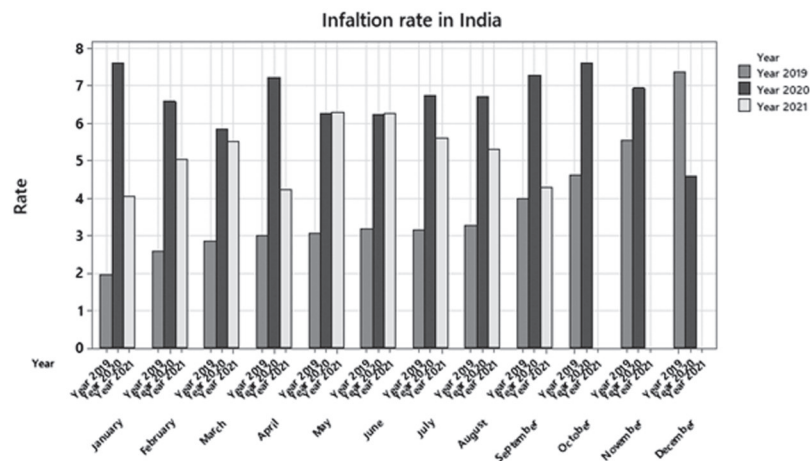
**Source:** Computed from MOSPI

From the above time series plot, it can be found that though during the initial days of Covid-19, GST collection was very low as it can be seen from the above figure, in April it was very low however it improved significantly even during the peak of Covid-19, it grew drastically. And comparing the overall trend with the financial year 2019-20, in 2020-21 the GST collection shows a positive trend. Thus, it can be inferred that Covid-19 related measures have very little impact on GST collection. One important argument that can be put forward for high GST revenue collection is inflation. If the price level

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of the commodities increases then automatically the proportionate collection of GST increases condition that the price is relatively inelastic. In India elasticity of price is relatively very less for food commodities (Kumar et al., 2011). And a major portion of food items is part of GST and constituent of tax revenue.<sup>6</sup> In all India inflation weightage, food and beverages have the maximum weight of 45.86 combined.<sup>7</sup> In such a case a rise in inflation due to supply rigidities causes a higher amount of GST revenue overall.

**Figure 2**



Source: Computed from RBI data

From the above figure, it is found that compared to 2019 inflation in Covid-19 periods i.e. 2020 and 2021, inflation is higher. Even in 2019, it shows a positive trend over the months. Thus, it can be inferred that inflation also plays an important role in tax revenue during Covid-19 time.

<sup>6</sup> [https://mofpi.nic.in/sites/default/files/product-wise\\_gst\\_rates.pdf](https://mofpi.nic.in/sites/default/files/product-wise_gst_rates.pdf)  
<sup>7</sup> [https://mospi.gov.in/documents/213904/0/CPI-Changes\\_in\\_the\\_Revised\\_Series.pdf/a558cbf8-afa8-3711-112b-4da6b6ce0124?t=1595850076188](https://mospi.gov.in/documents/213904/0/CPI-Changes_in_the_Revised_Series.pdf/a558cbf8-afa8-3711-112b-4da6b6ce0124?t=1595850076188)

## **Conclusion**

As discussed Covid-19 is a curse to recent contemporary human history. It not only impaired human life but also the living standard. It has affected the global economy badly creating disruptions in the global supply chain by hampering individual economies' activities. Govt over the world have been taking various measures from strict to moderate. In India too, considering the overpopulation Govt adopted strict measures like lockdowns. And that created a total standstill in the economic activities. So, a fall in economic activities creates an economic recession. In a progressive state tax revenue plays a crucial role in economic development as already discussed in the paper.

The main objective of this paper is to investigate the short-run impact of Covid-19 on tax revenue collection as it is viewed that there is a positive relationship between economic growth and growth in the tax base. However, after estimating the relationship through ARDL model, it is found that in the short-run there is no significant impact of Covid-19 cases on tax revenue collection. The main reason here put forward is inflation due to supply rigidities which causes a rise in GST revenue. Thus, it can be inferred that though Covid-19 has not shown any negative impact directly on tax revenue collection however indirectly it affects the economy very badly. Cause due to various measures that Govt implemented to curb Covid-19's spread created supply chain problems which causes a rise in inflation and due to the inelastic nature of demand this causes higher total spending of the people. However, this phenomenon is very dangerous in the long run in a country like India. As discussed, since the inflation problem is created due to supply rigidities so along with inflation unemployment also rises and this can be termed as stagflation. Sustained stagflation will cause deterioration in the economy. So, it is recommended that since in India tax revenue is showing an upward trend even during

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the Covid-19 period, this revenue should be spent on income-generating activities in the post-covid situation.

### **References**

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1. India's GDP shrank by 7.3% in 2020-21; up by 1.6% in last quarter - The Hindu. (n.d.). Retrieved November 6, 2021, from <https://www.thehindu.com/business/Economy/indias-gdp-grows-16-in-january-march-shrinks-73-in-2020-21/article34690310.ece>
2. The pandemic in data: How Covid-19 has devastated India's economy. (n.d.). Retrieved November 6, 2021, from <https://scroll.in/article/999275/the-pandemic-in-data-how-covid-19-has-devasted-indias-economy>
3. World Economic Outlook Update, June 2020: A Crisis Like No Other, An Uncertain Recovery. (n.d.). Retrieved November 6, 2021, from <https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020>
4. Brender, A., & Navon, G. (2010). PREDICTING GOVERNMENT TAX REVENUES AND ANALYZING FORECAST UNCERTAINTY. In *Israel Economic Review* (Vol. 7, Issue 2).
5. Hakim, T. A., & Bujang, I. (2011). The impact and consequences of tax revenues' components on economic indicators: Evidence from panel group data. *International Research Journal of Finance and Economics*, 63, 82-95. <https://doi.org/10.5772/48415>
6. Joshi, A., Bhaskar, P., & Gupta, P. K. (2020). Indian economy amid COVID-19 lockdown: A prespective. In *Journal of Pure and Applied Microbiology* (Vol. 14, pp. 957-961). *Journal of Pure and Applied Microbiology*. <https://doi.org/10.22207/JPAM.14.SPL1.33>
7. Kishore Kumar Das and Shalini Patnaik. (2020). THE IMPACT OF COVID 19 IN INDIAN ECONOMY-AN EMPIRICAL STUDY. [http://Www.Iaeme.Com/IJEET/Index.Asp194editor@iaeme.ComInternational Journal of Electrical Engineering AndTechnology, 11\(3\), 194-202](http://Www.Iaeme.Com/IJEET/Index.Asp194editor@iaeme.ComInternational Journal of Electrical Engineering AndTechnology, 11(3), 194-202).
8. Kumar, P., Kumar, A., Parappurathu, S., & Raju, S. S. (2011). and "Developing a Decision Support System for Agricultural Commodity Market Outlook" (NAIP-subproject at NCAP) Estimation of Demand

### *Covid 19: Indian Economy and Society*

- Elasticity for Food Commodities in India §. *Agricultural Economics Research Review*, 24, 1-14.
9. Kumar Poddar, A., & Singh Yadav, B. (2020). Impact of COVID-19 on Indian Economy- A Review. *Journal of Humanities and Social Sciences Research*, 2((S)), 15-22. <https://doi.org/10.37534/bp.jhssr.2020.v2.nS.id1033.p15>
  10. McCleary, R., Hay, R. A., Meidinger, E. E., and McDowall, D. (1980). *Applied Time Series Analysis for the Social Sciences*. Beverly Hills, CA: Sage, pp.20
  11. Mckibbin, W., Fernando, R., Lee, J.-W., & Sidorenko, A. (2020). The Global Macroeconomic Impacts of COVID-19: Seven Scenarios \*.
  12. Miki, B. (2011). Working Paper Series The Effect of the VAT Rate Change on Aggregate Consumption and Economic Growth. [www.gsb.columbia.edu/cjeb/research](http://www.gsb.columbia.edu/cjeb/research)
  13. Ozili, P. (2020). Munich Personal RePEc Archive Spillover of COVID-19: Impact on the Global Economy Spillover of COVID-19: impact on the Global Economy.
  14. Sahoo, P., & Ashwani. (2020). COVID-19 and Indian Economy: Impact on Growth, Manufacturing, Trade and MSME Sector. *Global Business Review*, 21(5), 1159-1183. <https://doi.org/10.1177/0972150920945687>
  15. Saibu, O., & Saibu, F. (2013). Macroeconomic Determinants of Tax Revenue in Nigeria (1970-2011). *World Applied Sciences Journal*, 28(1), 27-35. <https://doi.org/10.5829/idosi.wasj.2013.28.01.1189>
  16. Zortuk M and Uzgoren N. (2008). The relationship between the taxation and government expenditure in Turkey-bounds test approach. *Banks and Bank System*, 3(1).

### **Notes**

- (i) India's GDP shrank by 7.3% in 2020-21; up by 1.6% in last quarter - The Hindu. (n.d.). Retrieved November 6, 2021, from <https://www.thehindu.com/business/Economy/indias-gdp-grows-16-in-january-march-shrinks-73-in-2020-21/article34690310.ece>

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- (ii) The pandemic in data: How Covid-19 has devastated India's economy. (n.d.). Retrieved November 6, 2021, from <https://scroll.in/article/999275/the-pandemic-in-data-how-covid-19-has-devasted-indias-economy>
- (iii) World Economic Outlook Update, June 2020: A Crisis Like No Other, An Uncertain Recovery. (n.d.). Retrieved November 6, 2021, from <https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020>

# ক'ৰোণাৰ ইতিহাস

ড° মহানন্দ পাঠক

বিজ্ঞান প্ৰযুক্তিবিদ্যাৰ যুগত চিকিৎসা বিজ্ঞানক প্ৰত্যাহ্বান জনাই সমগ্ৰ বিশ্বৰ জীৱশ্ৰেষ্ঠ মানুহৰ মানৱ অধিকাৰ ভংগ কৰি লজ্জাৰত কৰা ক'ৰোণা জীৱাণুৰ পৰা সৃষ্টি হোৱা ৰোগ হ'ল ছাৰ্ছ ক'ভ-২ অথবা ক'ভিড-১৯।

ক'ৰোণা (Corona)ৰ অসমীয়া আভিধানিক অৰ্থ হ'ল সৌৰ মুকুট। প্ৰকৃততে ক'ৰোণা হ'ল এবিধ জীৱাণু (Virus) অৰ্থাৎ সংক্ৰামক ক'ভিড-১৯ ৰোগৰ বীজ। ইয়াক আমি সাধাৰণে ইলেকট্ৰন মাইক্ৰ'স্কোপৰ সহায়ত গোলাকাৰ দেখো যদিও, এই জীৱাণুবিধ দেখিবলৈকে ধুনীয়া সৌৰ বা ৰাজ মুকুটৰ দৰে। সেয়েহে ইয়াৰ কাম বা ধৰ্ম হ'ল সূৰ্যৰ ৰশ্মিৰ দৰে সকলো ঠাইতে সিচৰতি হৈ পৰা। বহুকেইজন বিশিষ্ট বিজ্ঞান-সাহিত্যৰ লেখকে “ক'ৰোণা (Corona) শব্দটো লেটিন ভাষাৰ পৰা অহা বুলি ক'ব খোজে। ইয়াৰ ইংৰাজী পৰিভাষা হ'ল Crown আৰু Crownৰ অসমীয়া পৰিভাষা হ'ল ৰাজ মুকুট। গতিকে ক'ৰোণা জীৱাণুৰে ৰাজকীয় পৰিচৰ্যা বিচৰাটোৱেই স্বাভাৱিক।

মূলতঃ ক'ৰোণা হ'ল বাৰ্তাবাহী নিউক্লিক এছিড সংযোজিত ৰাইব'নিউক্লিক এছিড (RNA) বিশিষ্ট জীৱাণুহে। ই ৰোগ বা বেমাৰ নহয়। সেয়েহে ইয়াক ভিৰিয়ন অৰ্থাৎ সম্পূৰ্ণৰূপে বিকশিত আৰু পৰিপক্ব হৈ উঠা ভাইৰাছ বুলি কোৱা হয়। এই ভিৰিয়নত প্ৰ'টিনৰ আৱৰণে ‘কেপছিড’ অৰ্থাৎ ভাইৰাছৰ বহিঃখোলা তৈয়াৰ কৰে। ই প্ৰটিনৰ উপ একেকেৰে গঠিত। নিউক্লিক এছিড আৰু প্ৰটিনৰ সংমিশ্ৰণত ‘নিউক্লীয় কেপছিড’ বোলা হয়। ভিৰিয়নৰ চাৰিওফালে এক বিশেষ প্ৰ'টিন, চৰ্বি আৰু শ্বেতসাৰ নিৰ্মিত আৱৰণ থাকে আৰু বিশেষ বিশেষ গুণ অনুসৰি এনে জীৱাণুৰ আক্ৰমণ জীৱকোষ বিশেষে অৰ্থাৎ আৰ।



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এন. এ. ডিঅক্সিৰাইব'নিউক্লিক এছিড (DNA) আৰু পলিমাৰ সাপেক্ষে নিৰ্ভৰশীল অৰ্থাৎ ইয়াৰ আক্ৰমণ ভিন ভিন ধৰণৰ হ'ব পাৰে বুলি অনুজীৱ বিজ্ঞানী সকলে ঠাৱৰ কৰিছে। কিন্তু এটা কথা নিশ্চিত যে আৰ. এন. এ থকা জীৱাণুৰ ক্ষেত্ৰত উৎপৰিৱৰ্তন (mutation) প্ৰক্ৰিয়া বেছিকৈ হয় বাবে এই ক'ৰোণা জীৱাণু বহুৰূপী অৰ্থাৎ বহু প্ৰকাৰৰ হ'ব পাৰে।

জলবায়ু পৰিৱৰ্তন আৰু ভৌগোলিক পৰিৱেশ সাপেক্ষে মানুহৰ খাদ্যাভ্যাস অনুসৰি ক'ৰোণা জীৱাণুৰ ক্ৰমবিকাশত উৎপৰিৱৰ্তন আৰু সংক্ৰমণ প্ৰক্ৰিয়া অৰ্থনীতিবিদ তথা জনসংখ্যা বিজ্ঞানী মালথাছৰ নীতি মতে ক'ৰোণা ভাইৰাছ গাণিতিক হাৰত উৎপৰিৱৰ্তন হয় আৰু ইয়াৰ সংক্ৰমণ তথা আক্ৰমণ জ্যামিতিক হাৰত হয়। গাণিতিক হাৰত উৎপৰিৱৰ্তিত হোৱা আৰু জ্যামিতিক হাৰত সংক্ৰমিত হোৱা ক'ৰোণা ভাইৰাছৰ মূল ৰূপ হ'ল বৰ্তমানলৈ তিনিটা। চিকিৎসা বিজ্ঞানৰ বিজ্ঞানীসকলে ক'ৰোণা ভাইৰাছৰ ৰূপবোৰক সময় আৰু অৱস্থান অৰ্থাৎ দশা (Phase) সাপেক্ষে ই মহামাৰী ৰূপ ধাৰণ কৰা বাবে ইয়াক তিনি প্ৰকাৰে নামকৰণ কৰিছে। যেনে -

(ক) ২০০২ চনৰ “ছিভিয়াৰ একিউট ৰেছপিৰেটৰি ছিন্‌ড্ৰম, চমুকৈ ছাৰ্ছ-ক'ভ” (Severe Acute Respiratory Syndrome Cov. SARS-COV)

(খ) ২০১২ চনৰ “মিডিল ইষ্ট ৰেছপিৰেটৰি ছিন্‌ড্ৰ'ম, চমুকৈ ম্যাৰ্চ-ক'ভ” (Middle East Respiratory Syndrome Con-MERS-Cov) আৰু

(গ) ২০১৯ চনৰ “ছিভিয়াৰ একিউট ৰেছপিৰেটৰি ছিন্‌ড্ৰম- ক'ভ-২ , চমুকৈ ছাৰ্ছ-ক'ভ (Severe Acute Respiratory Syndrome-COV2-SARS COV2)।

ইয়াৰ আন্তৰ্জাতিক নাম হ'ল SARS-COV2। অৱশ্যে ই কভিড'-১৯ (COVID-19) হিচাপে বেছি খ্যাত।

মূলতঃ মানুহৰ শ্বাসতন্ত্ৰত বিভিন্ন ৰোগৰ সৃষ্টিত ক'ৰোণা ভাইৰাছৰ উৎপৰিৱৰ্তন (mutation) ঘটি উৎপন্ন হোৱা ছাৰ্ছ ৰোগবিধ ১৯৬০ চনতে ফ্ৰ'ব

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নিচিনা ৰোগত প্ৰথমতে চীন দেশত ধৰা পৰিছিল। চীন দেশত ক'ৰোণা ভাইৰাছৰ গাণিতিক হাৰত উৎপৰিৱৰ্তন হোৱাৰ মূল কাৰণ আছিল হয়তো- চীন দেশৰ মানুহৰ খাদ্যাভাস। সেই সময়ত বিশেষকৈ চীন দেশৰ কিছুমান ধৰ্মীয় পৰম্পৰা ৰক্ষা কৰিবৰ বাবে মানুহে মৃত জীৱ-জন্তু খাদ্য হিচাপে গ্ৰহণ কৰিছিল। পোহনীয়া জীৱ-জন্তু, যেনে- কুকুৰা চৰাই, গাহৰি, মেকুৰী আদিৰ উপৰিও কেঁকোৰা জুইত সেকি বা পুৰি খাদ্য হিচাপে গ্ৰহণ কৰা তেনে জীৱৰ পৰাই ক'ৰোণা ভাইৰাছ মানুহৰ গালে সংক্ৰমিত হৈছিল বুলি চীনৰ চিকিৎসকসকলে গোপনে ব্যক্ত কৰিছিল যদিও, বিভিন্ন দেশৰ মানুহৰ যোগাযোগৰ বাবে চীন দেশৰ অৰ্থনীতিৰ ক্ষতি হোৱাৰ খাতিৰত তেনে কথা লুকুৱাই ৰখাত ১৯৬০ চনৰ পৰা ১৯৭০ চনৰ ভিতৰত মাৰ্কিন যুক্তৰাষ্ট্ৰৰ বহুকেইখন দেশৰ লগতে ইংলেণ্ডৰ কেইবা হাজাৰ জনতা ক'ৰোণা ভাইৰাছৰ দ্বাৰা অৰ্থাৎ ছাৰ্ছৰোগৰ আদি ৰূপ নিউমোনিয়া আৰু ফ্লু'ৰ নিচিনা ৰোগত আক্ৰান্ত হৈছিল যদিও, সেই অনুপাতে মৃতকৰ সংখ্যা তেনেই তাকৰ আছিল। কাৰণ সেই সময়তে ক'ৰোণা ভাইৰাছৰ উচ্চ উষ্ণতাত আৰু খুব কম সময়তে ধ্বংস কৰিব পৰা যায় বুলি চিকিৎসা গৱেষণাত স্বতঃসিদ্ধ হৈছিল। আৰু সেই সময়তে বিভিন্ন দেশৰ মানুহে ফ'ৰমেলিন, ক্ৰিছল আদিৰ উপৰিও ইয়াৰ ক্ল'ৰফৰ্ম আদি লিপিড দ্ৰৱক ব্যৱহাৰ কৰি ক'ৰোণা ভাইৰাছ প্ৰতিহত কৰিছিল। আনহাতে সেই সময়ছোৱাত বহুকেইখন দেশৰ মানুহে ক'ৰোণা ভাইৰাছক লৈ অন্ধবিশ্বাসীও হৈ পৰিছিল আৰু তেনে অন্ধ বিশ্বাসী লোকেই জন্ম দিছিল ভূত (evil)ৰ। ক'ৰোণা-ভূতক লৈ সেই সময়তে বহুকেইখন ঐতিহাসিক উপন্যাসৰ সৃষ্টি হৈছিল। এই আটাইবোৰ পৰিঘটনাৰ ক্ষেত্ৰত ৰাষ্ট্ৰসংঘৰ অনুমোদন মৰ্মে বিশ্ব স্বাস্থ্য সংস্থাই চীন দেশক কঠোৰ ভাষাৰে সমালোচনা কৰিছিল।

২০০২ চন, ডিচেম্বৰ মাহ, চীন ৰাষ্ট্ৰৰ গুৱাং দং (Guangdong) প্ৰদেশত অৱস্থিত হেয়উন (Heyuan) মৌজাৰ এজন বয়সস্থ লোকৰ শ্বাস-প্ৰশ্বাসজনিত ৰোগ হৈ তেওঁৰ হৃদপিণ্ডটো প্লাষ্টিকৰ দৰে অৰ্থাৎ স্থিতিস্থাপকতা গুণ হেৰুৱাই পেলায়। প্ৰথমতে, চিকিৎসকসকলে তেওঁ কি ৰোগত ৰোগাক্ৰান্ত হৈছিল তাকে

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লৈ বিপাণ্ডত পৰিছিল যদিও, পিছত ডাক্টৰ যোগে এবিধ বিশেষ নিউমোনিয়া ৰোগ বুলি চিহ্নিত কৰাৰ পিছত দেখা গ'ল যে ৰোগীজনৰ পৰিয়ালবৰ্গৰ লগতে চিকিৎসক, নাৰ্ছ আনকি তেওঁক কঢ়িয়াই নিয়া এম্বুলেন্সৰ চালকজনেও সেই একেটাই ৰোগত আক্ৰান্ত হোৱাত উক্ত ৰোগীজনক ছাৰ্ছ ৰোগৰ কাৰক ক'ৰোণা ভাইৰাছৰ দ্বাৰা আক্ৰান্ত হোৱা বুলি গুৱাং দং প্ৰদেশৰ চৰকাৰে ছাৰ্ছ-ক'ভ সংক্ৰমিত বুলি ঘোষণা কৰিছিল যদিও, ইতিমধ্যে এই ৰোগ নিয়ন্ত্ৰিত বুলি উদ্দেশ্য প্ৰণোদিত ভাৱে ভুৱা বাতৰি প্ৰচাৰ কৰিছিল। এনে ভুৱা বাতৰি প্ৰচাৰৰ ফলস্বৰূপে ছাৰ্ছ ৰোগৰ লগত জড়িত ক'ৰোণা ভাইৰাছৰ উৎপৰিৱৰ্তন গণিতিক হাৰত আৰু সংক্ৰমণ জ্যামিতিক হাৰত বৃদ্ধি হৈ হংকঙ পালেগৈ। ফলত, চীনৰ জনবহুল নগৰ হংকঙলৈ অহা-যোৱা কৰা পৃথিৱীৰ বিভিন্ন দেশৰ মানুহে কঢ়িয়াই লৈ গ'ল ছাৰ্ছ-ক'ভ ৰোগৰ জীৱাণু ক'ৰোণা বীজ। ক'ৰোণা ভাইৰাছে চীনৰ ৰাজধানী বেইজিং চহৰত বিভীষিকাৰ সৃষ্টি কৰাৰ পিছত অৰ্থাৎ চীন দেশৰ ৭৭৪ জন লোক মৃত্যুবৰণ কৰাত চীন ৰাষ্ট্ৰৰ কেন্দ্ৰীয় চৰকাৰে জনগণক পৃথকীকৰণ (Isolation) অৰ্থাৎ স্বতন্ত্ৰীয়ভাৱে ৰখাৰ উপৰিও বন্ধকৰণ (Quarantine) অৰ্থাৎ সংক্ৰামিক ৰোগীৰ ওচৰলৈ অহা-যোৱা বন্ধকৰণ পদ্ধতি আৰোপ কৰাৰ লগতে ২০০২ চনৰ এপ্ৰিল মাহত বেইজিংত মেয়ৰ আৰু কেন্দ্ৰীয় স্বাস্থ্যমন্ত্ৰীক শাস্তিমূলক অপসাৰণৰ দ্বাৰা ছাৰ্ছ-ক'ভৰ জীৱাণু ক'ৰোণা ভাইৰাছ নিয়ন্ত্ৰণ কৰিবলৈ সক্ষম হৈছিল। কিন্তু এইৰোগ ইতিমধ্যে ২৬ খন ৰাষ্ট্ৰলৈ বিয়পি গৈ ত্ৰাসৰ সৃষ্টি কৰিছিল আৰু প্ৰায় ৮,০০০ জন লোক ৰোগাক্ৰান্ত হৈছিল। ৰোগ চিকিৎসা কৰা চিকিৎসকসকলৰ লগতে চিকিৎসা কৰ্মীসকলকো ধৰি বিভিন্ন দেশৰ প্ৰায় ৯০০ জন মানুহৰ প্ৰাণ হানি হৈছিল। অৱশ্যে, কিছুমান দেশৰ মৃত চিকিৎসকৰ লগতে চিকিৎসাকৰ্মীক ৰাষ্ট্ৰীয় সন্মানেৰে শেষকৃত্য কৰা হৈছিল। ই এক বৃহৎ স্বীকৃতিৰ নিদৰ্শন আছিল, যাৰ ফলস্বৰূপে চিকিৎসা কৰ্মীসকলে স্বঃ ইচ্ছাই মৃত্যুৰ কথা জানিও চিকিৎসা কৰ্মত নিয়োজিত হৈছিল।

২০১২ চন, জহকালি এই ৰোগৰ জীৱাণু (Virus) সুপ্ত অৱস্থাত নাথাকে যদিও, জাৰ কালি ঠাই বিশেষে ই সুপ্ত অৱস্থাপ্ৰাপ্ত হয়। ফলত ক'ৰোণা ভাইৰাছ

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উৎপৰিবৰ্তন ঘটাবলৈ আৰম্ভ কৰে। সেয়েহে জাৰকালি এই ৰোগৰ সংক্ৰমণ বেছি হয় বুলি চিকিৎসা বিজ্ঞানে নুই নকৰিলে ৰাষ্ট্ৰযন্ত্ৰ-কূটনীতিৰ বাবে চিকিৎসকসকলে একেচাতে নুই কৰিলেও জৈৱ প্ৰযুক্তি বিদ্যা আৰু অনুজীৱ চিকিৎসা বিজ্ঞানৰ বাস্তৱভাৱে প্ৰতিফলন ঘটা ই এক স্বতঃ সিদ্ধ প্ৰক্ৰিয়া। ইৰাক, ইৰাণ, পাকিস্তান আদি দেশৰ লগতে ইউৰোপীয় দেশবোৰ ব্যৱসায় বাণিজ্যৰ ক্ষেত্ৰত চীন ৰাষ্ট্ৰৰ লগত বেছি ঘনিষ্ঠতালৈ আহিব লগাত পৰে। ইয়াৰ ফলস্বৰূপে ২০১২ চনৰ ছেপ্তেম্বৰ মাহত চৌদি আৰৱত শ্বাস-প্ৰশ্বাসজনিত ছাৰ্ছৰোগীৰ প্ৰাদুৰ্ভাৱ হয় আৰু এই ৰোগ নিমিষতে জৰ্ডান দেশলৈ বিয়পি পৰে। এইবাৰ ক'ৰোণা ভাইৰাছৰ উৎপৰিবৰ্তিত আৰু সংক্ৰমিত হোৱা ৰোগবিধৰ নামকৰণ কৰা হয় ম্যাৰ্চ-ক'ভ (MERS-COV)। ম্যাৰ্চ-ক'ভ সোঁচৰা ৰোগবিধ দক্ষিণ কোৰিয়া, চৌদি আৰৱকে ধৰি প্ৰায় ২৭ খন দেশলৈ বিয়পি পৰে। ম্যাৰ্চ-ক'ভ মহামাৰীয়ে ২০১২ চনৰ পৰা ২০১৫ চনলৈকে এৰি এৰি বিভিন্ন দেশত মানে ২৭ খন দেশৰ মানুহক জ্বালা-কালি কৰিছিল। কাৰণ যথাযথ ৰোগ নিয়ন্ত্ৰণ কৰিব পৰা দৰৰ আৱিষ্কাৰ হোৱা নাছিল। বহুকেইখন দেশক পৃথকীকৰণ (Isolation) আৰু বন্ধকৰণ (Quarantine) কৰিব পৰা ব্যৱস্থাও সূচল নাছিল। ফলত ২০১২ চনত প্ৰায় ২৪০০ জন আৰু ২০১৫ চনত দক্ষিণ কোৰিয়াত ১৮৬ জন মানুহ এই ৰোগৰ দ্বাৰা ৰোগাক্ৰান্ত হৈ তাৰে ৩৬ জন মানুহ উশাহ-নিশাহ ল'ব নোৱাৰা হৈ চৰ্ফটাই মৃত্যুবৰণ কৰিবলগীয়া হৈছিল। সেয়া এক মৰ্মান্তিক পৰিৱেশেই নহয়, এনে বিপৰ্যয়বোৰ হ'ল মানৱ জাতিৰ এক চূড়ান্ত ব্যৰ্থতা। আচলতে ই হ'ল মানুহৰে কৃতকৰ্মৰ ফল। এইক্ষেত্ৰত ঈশ্বৰৰ লগত সম্পৰ্ক থকা বুলি ভবাটো এক ধৃষ্টতাৰ বাহিৰে অন্য একো নহয় অৰ্থাৎ এইক্ষেত্ৰত ঈশ্বৰৰ প্ৰসংগ অপ্ৰয়োজনীয়।

২০১৯ চন, পুনৰ চীন দেশৰ য়ুহান প্ৰদেশত সাগৰীয়া মাছ বিশেষকৈ কেৰ্কাৰাৰ উপৰিও বাদুলী আৰু গাহৰি আদি ভক্ষণ কৰা কাৰ্য্যত ক'ৰোণা ভাইৰাছৰ উৎপৰিবৰ্তন ঘটি মানুহৰ শৰীৰত ছাৰ্ছ-ক'ভ-২ হিচাপে থিতাপি ল'লে। প্ৰথমতে, নিউমোনিয়া জ্বৰৰ ৰূপ লৈ হাঁচি, হামি, শুকান কাহ, থু-খেকাৰ

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আদিৰ উপৰি মানুহৰ শৰীৰৰ পৰা নিঃসৰিত হোৱা দুৰ্গন্ধময় বায়ুৰ জৰিয়তে ছাৰ্ছ ৰোগ সংক্ৰমিত হ'ল। ২০১৯ চনতে য়ুহান প্ৰদেশৰ হাজাৰ হাজাৰ লোক ক'ৰোণা ভাইৰাছৰ দ্বাৰা আক্ৰান্ত হয় আৰু পৰৱৰ্তী পৰ্যায়ত ২৮ ফেব্ৰুৱাৰীলৈকে সমগ্ৰ এছিয়া, ইউৰোপ, আমেৰিকা, অষ্ট্ৰেলিয়া আদি মহাদেশত সংক্ৰমিত তথা সোঁচৰা ৰোগৰ জীৱাণু বিয়পি পৰে বাবে ইয়াৰ চমু নাম হয়গৈ ক'ভিড-১৯ (COVID-19: Corona Virus Diseases-19)। ক'ভিড-১৯ ৰ উৎপত্তিৰতন আৰু সংক্ৰমণ ইমানেই বেছি যে ই সমগ্ৰ বিশ্বৰ প্ৰত্যেকজন মানুহৰ মন আলোড়িত কৰিছে। জনবহুল দেশ চীন আৰু ভাৰতবৰ্ষত ক'ভিড-১৯ ৰ দ্বাৰা আক্ৰান্ত ৰোগীৰ বাবে যথাযথ দৰৰ নোহোৱা কাৰণে তাক মোকাবিলা কৰাৰ অন্য পথ বিচাৰিব লগা হৈছে। তদুপ আমেৰিকা, জাপান, ইটালী আদি দেশৰ মানুহৰো সেই একেই অৱস্থা হৈছে, বৰং বেছি বেয়াহে হৈছে, কিয়নো তেনেবোৰ দেশৰ ৰোগাক্ৰান্ত ৰোগীৰ মৃত্যুৰ হাৰ বাঢ়ি গৈ আছে। ভাবিবলৈ বাধ্য হৈছে- সকলো দেশে একেলগে একে সময়তে দেশীয় সীমা কিছুদিনৰ বাবে সম্পূৰ্ণ বন্ধ মঞ্জুৰ কৰি অৰ্থাৎ চীল (Seal) কৰি দি ক'ভিড-১৯ ৰ দ্বাৰা আক্ৰান্ত ৰোগী চিনাক্ত কৰিব পাৰিব নেকি? (যিটো ৰাজনৈতিক তথা অৰ্থনৈতিকভাৱে সম্ভৱপৰ নহয়)। নে, ৰোগ প্ৰতিষেধক ঔষধ উদ্ভাৱনলৈ বাট চাব? (যিটো কম সময়ত নিশ্চিত নহয়)। নে, প্ৰত্যেক ৰাষ্ট্ৰই প্ৰত্যেকগৰাকী ব্যক্তিকেই যাদৃশ্বিকভাৱে (উদাহৰণস্বৰূপে) মানে ৰাণ্ডমলী (Randomly) পৰীক্ষা-নিৰীক্ষা কৰিব? (যিটো প্ৰত্যেকখন ৰাষ্ট্ৰৰে, সমানুপাতে, বৈজ্ঞানিক পৰীক্ষা-নিৰীক্ষাৰ দিশ সূচল নহয়।)

অণুজীৱ বিজ্ঞানৰ সূত্ৰ অনুসৰি ছাৰ্ছৰোগৰ দ্বাৰা আক্ৰান্ত হোৱা ৰোগীৰ হাঁচি, কাহ, থু-খেকাৰ, প্ৰস্ৰাৰ আদিৰ পৰা হেজাৰ হেজাৰ ক'ৰোণা অণুজীৱ অৰ্থাৎ জীৱাণু প্ৰত্যক্ষভাৱে আৰু পৰোক্ষভাৱে পইতাচোৰা, কোণা বাদুলী, মেকুৰী আদিৰ দ্বাৰা অইন নিৰোগী লোকলৈ সংক্ৰমিত হোৱাৰ পিছত ক'ৰোণা ভাইৰাছৰ নিমিষতে উৎপত্তিৰতন ঘটি ছাৰ্ছ ৰোগ সংক্ৰমিত হয় বুলি চিকিৎসা বিজ্ঞানীসকলে ঠাৱৰ কৰিছে। ক'ৰোণা ভাইৰাছৰ উৎপত্তিৰতন ঘটি সংক্ৰমিত

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হোৱা ছাৰ্ছ ৰোগ ইমান বেছি সোঁচৰা ৰোগ তথা মহামাৰী ৰোগ, য'ত এনে ধৰণৰ জীৱাণু (Virus) প্ৰতিৰোধ কৰিবলৈ শতকৰা ৩০ শতাংশ (বিশেষকৈ শিশু আৰু বুঢ়া) মানুহৰ দেহত প্ৰতিৰক্ষিকা (antibody)ৰ অভাৱ পৰিলক্ষিত হয়। সঘনাই প্ৰতিৰক্ষিকা অথবা এণ্টিব'ডি সৃষ্টি কৰিব পৰা সক্ষম তথা সুস্থ মানুহৰ দেহত ক'ৰোণা জীৱাণুৱে আক্ৰমণ কৰিলেও সি বলে নোৱাৰি লুপ্ত অৱস্থাত থাকে। দেহৰ অসংক্ৰম্যতা (Immunity) কমি গ'লেই উষ্ণতাৰ হ্রাস হৈ সি সুপ্ত অৱস্থালৈ আহিব পাৰে বুলি গৱেষণা লব্ধ স্বতঃসিদ্ধ তথ্য। তেনে অৱস্থাত মানুহৰ দেহত প্ৰতিষেধক ছিটা (Vaccine) প্ৰয়োগ কৰি অসংক্ৰম্যতা ঘূৰাই আনিব পাৰি। বংশগত অনুসৰি মানুহৰ দেহত পোৱা ডি অক্সিৰাইব'নিউক্লিক এছিডে অসংক্ৰম্যতা বজাই ৰখাত সহায় কৰে আৰু এনে বংশগত অনুসৰি থকা অসংক্ৰম্যতাৰক্ষী ডি.এন.এ. য়ে ক'ৰোণা ভাইৰাছ প্ৰতিহত কৰি ইয়াৰ পৰা হ'ব পৰা নিউমোনিয়া, ছাৰ্ছ আদি ৰোগক বাধা দিব পাৰে বুলি এচাম জৈৱ প্ৰযুক্তি বিজ্ঞানীয়ে ক'ব খোজে। গতিকে ছাৰ্ছ ৰোগৰ সংক্ৰমণ আৰু বিস্তাৰ, পৰিৱেশ আৰু ঠাই বিশেষে তথা ৰাষ্ট্ৰ বিশেষে বেলেগ বেলেগ হোৱাটো স্বাভাৱিক। যিহেতু ক'ৰোণা জীৱাণুবিধ আৰ.এন.এ. (ৰাইব'নিউক্লিক এছিড) থকা এবিধ জীৱাণু (Virus) অৰ্থাৎ সংক্ৰামক ৰোগৰ বীজ (poisonous matter)। অতি সংক্ৰামিত ক'ৰোণা জীৱাণুৰ উৎপৰিৱৰ্তন ঘটি প্ৰথমে ছাৰ্ছৰোগ হিচাপে ধৰা নিদি নিউমোনিয়া ৰোগলৈকে পৰিৱৰ্তিত হ'ব পাৰে। ১০২ ডিগ্ৰী ফাৰেণহাইট তাপমান (temperature) অতিক্ৰম কৰি জ্বৰত ভোগা, গাৰ বিষ, শুকান কাহ, গলৰ খেচ্‌খেচ্‌নি আৰু উশাহ-নিশাহত কষ্ট পোৱা লক্ষণ সমূহ সম্পূৰ্ণভাৱে ফুটি উঠিবলৈকে ১০ দিনৰ পৰা ১৪ দিন পৰ্যন্ত সময় লয় বাবে এনে ৰোগত আক্ৰান্ত ৰোগীয়ে প্ৰথমতে বেমাৰক আওকাণ কৰাটো স্বাভাৱিক কথা। গতিকে তেনে লক্ষণ বিশিষ্ট ৰোগীক বন্ধকৰণ কৰি পৃথকীকৰণ কোঠাত ৰাখি লৈ মূলতঃ দুই ধৰণৰ গুৰুত্বপূৰ্ণ পৰীক্ষা কৰা হয়। চিকিৎসা বিজ্ঞানৰ ক্ষেত্ৰত ক'ৰোণা জীৱাণুৰ দ্বাৰা আক্ৰান্ত ৰোগীক পৰীক্ষা কৰা আটাইতকৈ সহজ পদ্ধতিটো হ'ল ডি.এন.এ. (DNA) আধাৰিত পি.চি.আৰ (Polymerise

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Chain Reaction-PCR) পৰীক্ষা আৰু আনটো হ'ল কোষ (Cell) আধাৰিত ইমিউন'ফ্লুৰ'ছেঞ্চ পৰীক্ষা। এই পৰীক্ষাই ১০ পৰা ১২ দিনৰ ভিতৰত পৰীক্ষাৰ ভাল ফলাফল দেখুৱাবলৈ সক্ষম হয়। সম্প্ৰতি, এণ্টিব'ডি আধাৰিত 'এলিছা' (Elisa) পদ্ধতিৰেও পৰীক্ষা নিৰীক্ষা চলাই থকা হৈছে। ইংলেণ্ড আৰু স্কটলেণ্ড ৰাষ্ট্ৰৰ চিকিৎসকসকলে 'ইবেলা হেম'ৰেথিক বেমাৰ'ৰ প্ৰতিকাৰক ৰেম্‌ডেসিভাৰ (Remdesivir) নামৰ দৰৱ জীৱাণু প্ৰতিষেধক হিচাপে ক'ভিড-১৯ আক্ৰান্ত ৰোগীৰ দেহত প্ৰৱেশ কৰাই ৰোগ নিৰাময়ৰ চেষ্টা চলাই কিছু পৰিমাণে ভাল ফল পাইছে। চীন আৰু ছ'ভিয়েট যুক্তৰাষ্ট্ৰৰ চিকিৎসকসকলে লোপিনাভিৰ (Lopinavir) আৰু ৰিটোনাভিৰ (Ritonavir) দৰৱ দুবিধ মিশ্ৰিতভাৱে ব্যৱহাৰ কৰি ক'ভিড-১৯ ক সাম্য অৱস্থালৈ আনিবলৈকে তথা সংযত কৰিবলৈ সক্ষম হৈছে বুলি ইতিমধ্যে সংবাদ মাধ্যমৰ যোগেদি প্ৰকাশ হৈছে। তাহাৰ পুৰুষ ৰাজ্যৰ জয়পুৰত ভাৰতীয় চিকিৎসকে মেলেৰিয়াৰ ঔষধ হিচাপে খ্যাত হাইড্ৰক্ল'কুইনি (Hydroxychloroquine) ক'ৰোণা ভাইৰাছৰ দ্বাৰা আক্ৰান্ত ৰোগীক সেৱন কৰাই ক'ভিড-১৯ ক বিনাশ কৰা বুলি জনোৱা বাতৰিয়ে সমগ্ৰ বিশ্বক ভবাই তুলিলে।

ষ্ট্ৰিফেন হকিংছে ভবাৰ দৰে - যি বেমাৰৰ দ্বাৰা মৃত্যু নিশ্চিত, তেনে বেমাৰৰ দ্বাৰা আক্ৰান্ত হ'লে অনুভৱ হ'ব- জীয়াই থকাৰ কিমান প্ৰয়োজন। গতিকে মৃত্যু নিশ্চিত বুলি জনা বেমাৰৰ পৰা হাত সাৰিবলৈকে আমি পাঁচটা 'স'ৰ পৰা সাৰ কথা জানি বুজি নীতিগতভাৱে পালন কৰিলে আমাৰ জীৱন যাপন প্ৰক্ৰিয়া সূচল হ'ব। যিহেতু শীতৰ আগমনৰ লগে লগে ছাৰ্ছ ৰোগৰ প্ৰত্যাহৰ্তন চিকিৎসা বিজ্ঞানে নুই কৰা নাই। সেই পাঁচটা 'স' হ'ল (১) সজাগতা, (২) সতৰ্কতা, (৩) সচেতনতা (৪) সাৱধানতা আৰু (৫) সহযোগিতা। এনেবোৰ নীতি কথা কাৰ্যকৰী হ'লেই প্ৰকৃতিৰ নীতি-নিয়ম মানি চ'লা হ'ব। যিজনে প্ৰকৃতিৰ নীতি-নিয়ম মানি চলে, তেওঁৱেই প্ৰকৃত ধাৰ্মিক লোক বুলি যোৱা সহস্ৰাব্দৰ বিশ্বশ্ৰেষ্ঠ পুৰুষ এলবাৰ্ট আইনষ্টাইনে কৈ থৈছে।



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২০২১ বৰ্ষত ভাৰতবৰ্ষৰ মুঠ জনগণৰ ১১৫ কোটি লোকক কভিড ভেকচিন প্ৰদান কৰা হ'ল আৰু দুয়ো পালি কভিড প্ৰদান কৰা লোকৰ সংখ্যা হ'ল ৩০ শতাংশ। তথাপি ৩০ শতাংশলোককো এই কভিড সংক্ৰমণৰ পৰা নিৰাপদ বুলি কবলৈ চিকিৎসা বিজ্ঞানী সকলে দ্বিধাবোধ কৰাটো আচাৰ্য জনক কথা।

#### **শব্দসূত্ৰ :**

- ১। আৰ.এন. এ-RNA-Ribo Nucleic Acid অৰ সংক্ষিপ্তৰূপ। কোষৰ কোষকেন্দ্ৰ আৰু কোষ প্ৰসত থকা এবিধ নিউক্লিক এছিড। ই বাইৰ'ছ'মৰ ভিতৰত প্ৰ'টিন সংশ্লেষণ কৰে।
- ২। ডি.এন. এ- DNA-Deoxyribo Nucleic Acid অৰ সংক্ষিপ্তৰূপ। জীৱকোষৰ নিউক্লিয়াছত এক ক্ৰম'ছ'ম'ৰ প্ৰধান উপাদান। বংশগত চৰিত্ৰ বহনত DNAৰ মুখ্য ভূমিকা আছে। কোষ বিভাজন হওঁতে DNAৰ প্ৰতিৰূপ এনেদৰে সৃষ্টি হয় যে প্ৰতিৰূপ আৰু মূল DNA ৰ মাজত অলপো পাৰ্থক্য নাথাকে। এনে প্ৰতিৰূপ এনজাইমৰ সহায়ত গঠিত হয়।
- ৩। এণ্টিব'ডি-Antibody- অসমীয়া পৰিভাষা হ'ল প্ৰতিৰক্ষিতা। ই এবিধ গ্লবিউলিন প্ৰ'টিন। শৰীৰৰ অসংক্ৰাম্যতা (Immunity) প্ৰক্ৰিয়াৰ লগত জড়িত।

#### **প্ৰসংগ সূচী :**

- ১। বিশ্বকোষ, প্ৰথম, দ্বিতীয়, তৃতীয় খণ্ড। *অসম সাহিত্য সভা*।
- ২। বিজ্ঞান জেউতি নিৰ্বাচিত কেইটামান সংখ্যা। *অসম বিজ্ঞান সমিতি*।
- ৩। 'ধাৰণা আৰু মন্তব্য' *এলবাৰ্ট আইনষ্টাইন*।

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