

Lockdown and Social Distancing: Pivot role for Public in Covid-19 pandemic

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Abstract

We study how the recommendation of lock down complies with covid-19 epidemic in India. Based on secondary data, we find out that this virus is more likely to be increase the number of patients. As there is no vaccine developed to prevent the virus people have to follow the instructions given by government and mostly people are willing to follow this lockdown to flatten the number of cases in upcoming time. This study answers three different research questions in a comprehensive manner. It has been reported that with the help of control measures like lockdown it helps to control the virus so that it is not transmitted from one person to other. Our findings help general public to insight on how well government manages the public expectations in emergency situation.

Keywords: covid-19, pandemic, lockdown, social distancing, Paired sample t test

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1. Introduction

Covid -19 is a virus that spread all over the world. It was first reported in Wuhan, China. First person who got infected by coronavirus is 55 years old men from Hubei. Cases increases because of travelers from China to other countries. Many of the scientists also suspect that it was originated from bats and pangolins. It is a pandemic declared by world health organization. China, Spain, USA, Germany, Italy, Dubai, UK, France many other countries affected by this virus and worldwide number of infected people is approx 2,656,680 till 23 April 2020. India is among one of the country ranked 22 in the world which is affected by this virus. First case in

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India was suspected in Kerala (The Economics Times, 2020). At present i.e. 23 April 2020 total cases in India rose to 21,797(worldometers information). It is transmitted through the surface touch by the infected person so According to the report there are rapidly increase in number of active cases and deaths in India till date.

Indian government announced nationwide lockdown on 25th March, 2020 which is extended till 03 may 2020 (The Indian Express, 2020) fear of recession and economic crisis. In this context people also take precautionary measures to avoid the disease like use of sanitizers, masks, social distancing, use of digital payments like Pay tm, NEFT etc instead of deal in cash.

India has not yet entered the third phase of this outbreak instead of that Covid-19 also triggers an economy of our country. Overall it affects the tourist, employment, education, financial markets, mobility of workers, crude oil, apparels, food industry and so on. Now in this context it is very much important to study the impact of current situation in India. The current study prospects various directions related with outbreak COVID-19 in India .The specific set of Research questions (RQ) search in this study are as:

RQ1) How lockdown and social distance able to control this epidemic?

RQ2) Is lockdown one of the effective measure in India?

RQ3) How people affected due to lockdown?

2. Review of literature

Due to this pandemic Indian government adopt some measures to control virus. For any communicable disease social distancing is one of the effective measures so Indian Government announced lockdown in whole country. Various researchers started doing research to figure out the facts to control the virus.

2.1

Lockdown and social distance

Chih-Cheng Lai, Tzu-Ping Shih, Wen-Chien Ko, Hung-Jen Tang, Po-Ren Hsueh (2020) in this paper examine that there is no proper knowledge and information is available for this virus yet it becomes a major threat worldwide. Moreover vaccination for this virus is still under development so to control transmission of this disease there is need to follow prevention measures .Study concludes that meanwhile social distancing is one effective measure which prevents transmission of disease from one person to another. In the same context ,Binlei Gong, Shurui Zhang, Lingran Yuan & Kevin Z. Chen (2020) concludes that Information reaches to general public is not true and effective which also creates panic among people and disturbs the whole system .Practice of dissemination is one of the effective measure to reduce the economical and societal cost (Levine and McKibbin)(2020).

(Aylward) study and analyze that hope rest of the countries will experience and learn from China. (John and kaikupferschimdt) undertook the study and analyze that this virus is unstoppable and examine that China considers one of the effective measure adopted to control covid-19 is lockdown, no gathering , suspend airways , transports etc as a controlled experiment by which there is decrease in number of infected people.

Ferguson in his research work analyze that second plan isolation + social distancing could “reverse transmission” for a few months, also point that if the cases drop down then only we might take breathe because no of deaths tends to be increasing. (Singh, Jaspreet and Singh, Jagandeep) examine that lockdown also creates other issues as well like panic buying, stress, anxiety, uncertainty, and recession. Further they conclude that to contain covid-19 public have to cooperate with the guidelines issue by WHO and Government.

According to one article by (Deblina Roy, Sarvodaya Tripathya, Sujita Kumar Kara,*, Nivedita Sharma, Sudhir Kumar Vermaa, Vikas Kaushalb) study that this practice of social distancing are taken by Government to decrease in the spike rate of infected patients and control the virus in same context people are worried in terms of their daily needs and health issues. Also they consider effective planning and strategy is required to control the virus.

Barkur G, Vibha, Kamath GB(2020) undertook this study to examine the sentiments of people during covid-19 . Findings of the study provide that people are worried during lockdowns.

Further concludes that mostly people are agreeing with the government decision because it helps to fight against virus.

As from above review of literature study has been conducted and tries to examine the impact of government decision through two phase: a) before lockdown b)after lockdown . So Based on above studies, the study posits the following hypothesis:-

H0- No difference in the cases before and after lockdown

H1- There is a significant differences in the cases .

3. Research Methodology

The public data portal is utilized from the website to extract the data for the study .In this paper ORM have been used like internet, data sources etc to answer the above research questions. This study focus on descriptive research statistics through the secondary data obtained from official websites. The time period analyzed for the study is divided into 3 parts according to research questions. For the above RQ data is divided into two parts first is before lockdown period in India and second is after lockdown period in India. After that 2 phase analysis has been done .Paired Samples Statistics –T test is used to analyze is there any significant difference in various phases or not.

The null hypothesis is formulated and thus being accepted and rejected accordingly. Further the data is analyzed according to the data set taken from online mode.

4. Analysis and Interpretation.

When government of India realized that we have entered the second stage of corona virus many steps have been initiated to protect general public from this pandemic because number of infected person is approx 200 in India, spike has been reported on 21st march 2020.

After this 21-day lockdown was announced by the central government where restricting people not to go out from house and maintain social distance is recommended by the government. All the schools, institutions, transports, cinema hall, markets remain shut down. Permission is given to the people in case of some emergency situation by Local Administration. Government

imposes instructions to avoid contact in between people so that there is no transmission of disease from an infected person to other.

According to Fig 2 number of active patients in India is 562 and within every five days number of infected person is twice in number. On 22nd April active cases in India is 19984 which shows that there is a spike in increasing number of patients and our Indian government take quick and sensible decision of maintain social distancing and lockdown to control covid-19 .

Table 1: Date wise Number of covid-19 infected patients before lockdown in India. (Source – internet)

Before lockdown	
date	infected cases in India
1/1/2020	0
1/8/2020	0
1/15/2020	0
1/22/2020	0
1/29/2020	0
2/5/2020	3
2/12/2020	3
2/19/2020	3
2/26/2020	3
3/4/2020	6
3/11/2020	50
3/18/2020	137

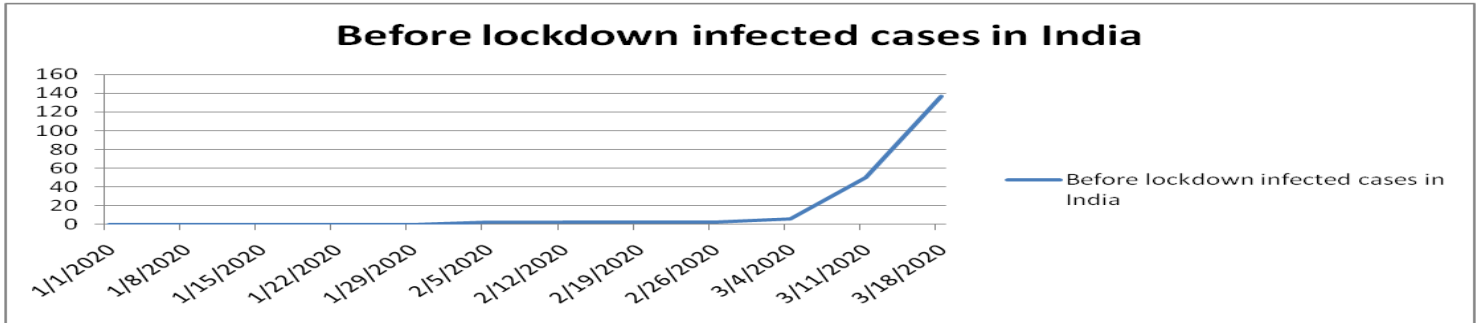


Fig-1

Interpretation

Figure 1 and Table 1 represents the research question 1st - data is taken from 1st Jan 2020- 18th march 2020 that is before lockdown period in India. Fig 1 clearly represents that during this period January and February there is not much spike reported in case of infected patients'. As we have entered in March number of active patients tends to be increased day by day.

Table 2: Date wise Number of covid-19 infected patients after lockdown in India

Source -internet

After lockdown	
date	infected cases in India
3/22/2020	320
3/27/2020	724
3/29/2020	979
3/31/2020	1251
4/2/2020	1965
4/4/2020	2902
4/6/2020	4067
4/12/2020	8356

4/16/2020	12380
4/19/2020	15712
4/21/2020	18600
4/22/2020	19984

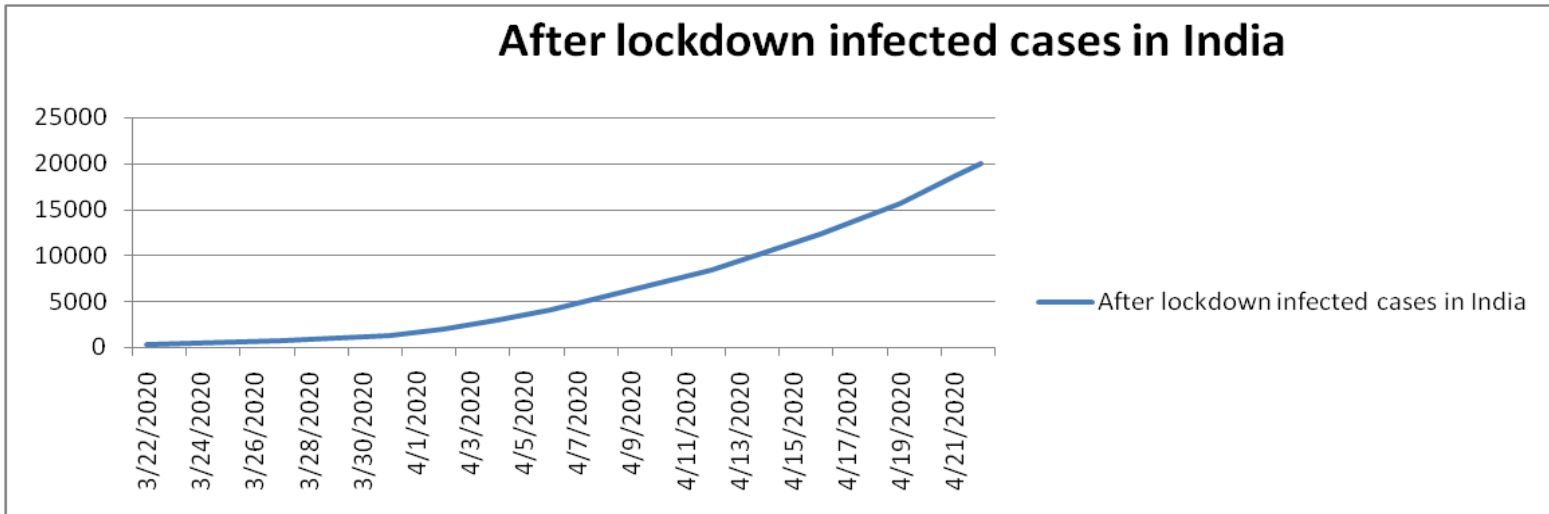


FIG-2

Interpretation

Figure 2 and Table 2 represents the research question 1st number of active patients in India is 562 and within every five days number of infected person is twice in number. On 22nd April active cases in India is 19984 which shows that there is a spike in increasing number of patients and

our Indian government take quick and sensible decision of maintain social distancing and lockdown to control covid-19 .

Phase wise Analysis

Table: 3 Phase wise analysis before and after lockdown

Source: internet

Paired sample statistics

Phases	Phase -1 (Before Lockdown)	Phase -2 (After Lock down)
Mean	17.08	7270.00
N	12	12
Std. Deviation	40.271	7465.149
Std error mean	11.625	2155.003
Correlation	.712	
Sig value	.009	
Phr t	-3.379	
df	11	
Sig (2-tailed)	.006	

Interpretation:

The Table 3 represents the phase wise data of infected patients before and after lockdown. Paired sample T test applied to check whether there is difference in cases before and after lockdown. Here all sig value that is P value is less than 0.05 .So we reject the null hypothesis (Of no difference in the cases before and after lockdown).Thus we accept the alterative hypothesis according to RQ1.

5. Conclusion

Government responsibility is to take care of well being of the society. Lockdown is an effective action taken to control pandemic. On the other hand it also effect most of the people in India like daily wage workers, migrants etc but government provide food and take care of basic amenities for the needy people. It also helps doctors and official to trace the infected person in the region. The Current study tries to examine the working of scheme through the data obtained from the Website. It has been observed from two phase analysis that within passing of each day number of infected persons also increases and there is a significant difference in the number of cases before lockdown and after lockdown.

6. Limitations of the study

Analysis was based only on Secondary Data. According to the current situation primary data is required to get more accurate and efficient results. Thus more multidimensional analysis is required for future research in India for the communicable disease like Covid-19.

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