

Original Research Article

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COVID-19 transmissibility: lockdown a forced agenda or need of hour?

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ABSTRACT

Background: A corona virus identified in 2019, SARS-CoV-2, has caused a pandemic of respiratory illness, called COVID-19. COVID-19 has been cited responsible for over more than four million deaths across the world. Consequentially, COVID-19 had resulted in various residual health problems in infected individuals during the illness period and in some even after the recovery.

Methods: A cross-sectional survey having 10-item questionnaire was developed using Google forms. The questionnaire was made available to the participants through all available social networking platforms such as email, WhatsApp etc. according to the suitability of the participant. Data were collected and entered in a Microsoft Excel spreadsheet, cleaned for errors and analysed using Epi-info version 7.2.1.0 software.

Results: The study found that majority of people agreed to the implementation of lockdown and only 6.1% said that lockdown should not be implemented. Among those who agreed to the implementation of lockdown, 50.2% had opined that the lockdown should be implemented only based on the number of cases in the individual state.

Conclusions: India, still as a developing nation has giant leaps to take to clear through this pandemic crisis. This study concludes that the general population was clear about the essentiality of the lockdown however a segment of the population had the implications in a way that was affecting their livelihood hence acutely changing their perception otherwise.

Keywords: Acceptance of lockdown, COVID-19, Lockdown, Perceptions

INTRODUCTION

A corona virus identified in 2019, SARS-CoV-2, has caused a pandemic of respiratory illness, called COVID-19. COVID-19 has been cited responsible for over more than four million deaths across the world.¹ Consequentially, COVID-19 had resulted in various residual health problems in infected individuals.² The management of COVID-19 has addressed the comorbidities and the associated aspects along with the various signs and symptoms of this illness. A patient may receive a combination of treatments that could include steroids, oxygen, mechanical breathing support and others

but preparedness has been the critical factor in the appropriate management at the country level.³

World Health Organization (WHO) declared it, as a public health emergency of international concern and called global imperative efforts to prevent the escalation.⁴ WHO develops the most up-to-date technical guidance for clinical care of COVID-19 patients based on ongoing assessment of new evidence generated by the international community and first responders.⁵ As on 5 of August 2021, 200 million cases had been reported globally, which is just six months after reaching 100 million cases. The largest proportionate accentuation was

reported by the region of the Americas (14%) and Western Pacific region (19%), with 1.3 million and over 375 000 new cases reported, respectively from June to August 2021.⁶

COVID-19 is continuing to spread around the world, with more than 200 million confirmed cases to date. The US, India and Brazil have seen the highest number of confirmed cases, followed by Russia, France, the UK and Turkey. Asia, which was the centre of the initial outbreak that spread from Wuhan in China in early 2020, has seen another recent rise in cases. That has been driven by a spike in infections in several countries, including Indonesia, Thailand, Malaysia and Japan.⁷

India is in a state of war with unprecedented health emergency. While the magnitude of cases and sudden spike, in the second wave, has pushed many countries into insurmountable shortages but what is so far documented helps understand the complexities we may encounter in near future.⁸

In India, where the number of new daily cases has fallen recently, the official death toll is 430,000 and it has recorded 32 million cases- second only to the US.⁹ COVID-19 treatments in development when the severe disease develops. Non-pharmacological interventions like hand hygiene, social distancing and mask-wearing and vaccination are the best viable strategies to date, to control the quagmire created by the malevolent virus. People's observance of the prevention measures is essential for controlling the spread of COVID-19, which is affected by their knowledge, attitudes, and practices (KAP) towards COVID-19. Therefore, amidst the ongoing pandemic, a survey to investigate the KAP towards COVID-19 among the medical students of various medical colleges and their close relatives during the rapid rise period of the COVID-19 outbreak was carried out.

METHODS

It was a cross-sectional survey. Study tool was a 10-item questionnaire was developed using Google forms. A pilot study was conducted to understand the barriers faced by participants and keeping in mind, the key principle of prevention of COVID-19 disease transmission, the questionnaire was made available to the participants through all available social networking platforms e.g. email, WhatsApp etc. The cover page of the questionnaire included a consent form, a declaration of confidentiality, and anonymity and we conformed to all the other guidelines mentioned in the Declaration of Helsinki.

Questionnaire and scoring

The questionnaire consists of two parts- demographic details and questions related to perceptions regarding COVID. Demographic variables included: age, education level, region to which they belong (different states of

India). The perception section consisted of questions related to lockdown, effect on livelihood, herd immunity and COVID cases.

Statistical analysis

Data were collected and entered in a Microsoft Excel spreadsheet, cleaned for errors and analysed using Epiinfo version 7.2.1.0 software. Descriptive statistics were used to summarize the demographic data. Frequencies, percentages and their 95% confidence intervals were used to describe categorical variables. Pearson Chi-square and Fischer Exact test were used for univariate association analysis. A two-sided p value of <0.05 was considered as statistically significant.

RESULTS

This cross-sectional survey was conducted pan India (Figure 1), a total of 1527 responses were received from the participants.

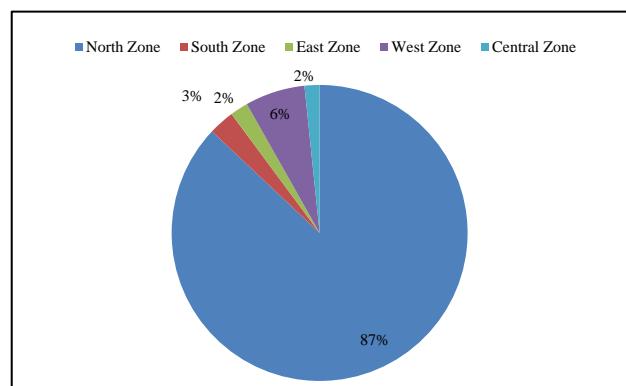


Figure 1: Participant distribution zone wise.

Table 1: Demographic information of participants (n=1527).

Variables	N	%
Age (years)		
15-29	651	42.6
30-44	544	35.6
45-59	282	18.5
>60	59	3.9
Education		
Matric	32	2.1
Senior secondary school	231	15.1
Graduate	647	42.4
Postgraduate	617	40.4
Region		
North zone	1329	87.03
South zone	43	2.82
East zone	30	1.96
West zone	100	6.55
Central zone	25	1.64

The highest numbers of participants were in the age group of 15-29 years and only 3.9% belonging to above 60 yrs of age. Among all participants, 82.8% were having an educational background of graduation and above and most of the participants (87.0%) were from the northern region of the country.

Table 2: Responses on COVID gathered.

Variables	N	%
Should lockdown be implemented in the country?		
Yes	502	32.98
No	93	6.11
Depending on cases in individual state	717	47.11
Depending on total cases in India	210	13.80
Is your livelihood (sources of income) affected by the lockdown?		
Yes	702	45.97
No	825	54.03
Other possible ways to control this pandemic		
Testing	129	8.45
Lockdown	124	8.13
Improve health care	40	2.62
Awareness	268	17.56
Social distancing	187	12.25
Vaccine	142	9.31
No idea	94	6.16
No way	542	35.52
Do you know what herd immunity is?		
Yes	978	64.05
No	549	35.95
How much % of the population should be infected to reach herd immunity?		
40%	520	34.05
60%	412	26.98
80%	250	16.37
100%	72	4.72
Don't know	273	17.88
In absence of lockdown number of covid-19 cases in India would		
Increase by 2 times	186	12.62
Increase by 10 times	580	39.35
Increase by 100 times	618	41.93
No change	90	6.11

In this study, we found that when participants were asked about whether the lockdown should have been implemented or not, the majority of people agreed to the lockdown and only 6.1% said that lockdown should not be implemented. Among those who agreed to the implementation of lockdown, 50.2% had opined that the lockdown should be implemented only based on the number of cases in the individual state, whereas every third participant endorsed the government directive of imposition of the lockdown implementation which was not based on the cases in the state or at the national level. In response to, whether there is any other way to control

the pandemic apart from the measure of lockdown, 35.5% suggested that there is no any other alternative, 12.3% suggested social measures and around 10% suggested vaccination. The majority of the study participants (64.1%) were aware of the term 'herd immunity' in the context of the pandemic. About 45% of the study participant's earnings were impacted by the imposition of the lockdown. Around 12% of the participants said that in the absence of lockdown no of cases could have doubled, whereas 39.4% said it would be increased by 10 times and around 42% had the view that it might increase by 100 times.

Table 3: Imposing the lockdown.

Should lockdown be done?		P value	
	Yes (%)	No (%)	
Age (years)			
<30	88.3	11.7	0.01
>30	81.2	18.8	
Should lockdown be done based on cases?			
	At the state level (%)	At the national level (%)	
Age (years)			
<30	69.7	30.3	<0.001
>30	82.8	11.2	
Should lockdown be imposed?			
	Yes (%)	No (%)	
Education			
Up to graduate	85.0	15.0	0.74
Post graduate and above	84.0	16.0	
Region to which belong			
North zone	85.1	89.3	
South zone	3.2	3.2	
East zone	1.6	3.2	0.37
West zone	7.8	3.2	
Central zone	2.3	1.1	
Income affected by the lockdown			
Yes	78.2	21.8	<0.001
No	90.2	9.8	

The results of our study show that the young adults were in the favour of the lockdown more as compared to adults aged >30 years ($p=0.01$). Participants aged >30 years were more in favour of the imposition of the lockdown based on the number of cases at the state level rather than at the national level ($p<0.001$). Participants whose income wasn't affected by the implementation of the lockdown were more in favour of the lockdown as compare to those whose income was affected and the difference was found to be statistically significant ($p<0.001$). Participant's level of education and the region to which the participants belonged had no significant difference in favour or against the implementation of lockdown.

Table 4: Herd immunity.

Can lockdown help in getting rid of this disease totally?		P value	
	Yes (%)	No (%)	
Age (years)			
<30	42.1	57.9	0.003
>30	49.8	50.2	
Education			
Up to graduate	47.5	52.5	0.5
Post graduate and above	45.9	54.1	
Income affected by the lockdown			
Yes	48.7	51.3	0.12
No	44.7	55.3	
Have heard about herd immunity			
	Yes (%)	No (%)	
Age (years)			
<30	60.4	39.6	0.01
>30	66.7	33.3	
Education			
Up to graduate	68.2	31.8	0.004
Post graduate and above	61.2	38.8	

Participants from the younger age group had the view that the lockdown cannot be the only way to get rid of this disease completely as compared to the participants aged >30 years and the difference was statistically significant ($p=0.003$). Opinion about the same had no difference with relation to the level of education and effect of lockdown on the income of the participants. Knowledge about the herd immunity was more in the elder age group and the difference was statistically significant ($p=0.01$) and the participants with the graduate or below level knew better about the herd immunity as compared to postgraduates with a statistically significant difference ($p=0.004$).

DISCUSSION

India is the second most populated country in the world, there was an increased propensity that its population would be at greater risk of transmission and mortality by COVID-19 than others. Adding to this, the community settings, the living conditions and the behavioral patterns of Indians have not much to favor in limiting the spread of the virus thus the only option left to contain the rapid transmission was lockdown implementation. However, it still remains a consequence to be understood whether lockdown was the need of the hour, a forced agenda or a time window to assess, analyse and fill the requisite gaps.

Since the emergence of the epidemic, the efforts to stop the spread of the virus worldwide are generally regulated by the knowledge, attitude and behavior of the local diaspora. This makes its immense importance to assess the acceptance of various measures taken to prevent the spread of the virus by the government. In addition to that, highlighting the points to ponder upon how community-level participation and acceptance can serve as a boon for

a nation like India where human resources and capacity building with limited constraints had remained a challenge that too in a forced condition of the lockdown.

In our study, predominantly the study participants were from the age group of (15-44 years) as this age group is predominantly more at ease with accessing technologies and our study responses were based on the same.¹⁰ Majority of the responders in this study were from the North India region, as digital questionnaire outreach to various social platforms was more in a northern region likely. Major responders were graduate/postgraduate; probably they had easier access to digital tools to fill the questionnaire in comparison to others.

Our study reveals that majority of the participants thought that lockdown was an important measure to control the spread of the virus, although half of the participants of view that lockdown should be implemented based on incidence of cases in the community or individual state. The likely reason for the same could be that India is such a large country with disparities that need actions implementable at local levels with specific needs. It should not be generalized to the entire population as it will have major repercussions on economic and social fronts.

This study however gives an important insight into the awareness of the participants on the measures other than lockdown such as, 12% and 10% of the participants believed in social measures and vaccination respectively that can help in the containment of the virus transmission. A considerable higher proportion of people included in the study knew about herd immunity. About one-third of study participants had the effect of lockdown on their earnings. The perception on whether lockdown served its purpose revealed that a higher proportion of individuals were of the opinion that the cases would have increased by 100 times if lockdown was not put in place.

Further, the younger adults favoured the lockdown more as compared to the older adults which can be attributed to the relaxation and ease that younger people feel due to callous attitude but the older ones have the maturity to understand the repercussions on economic fronts due to job recession. Others had the environment of switching to "Work from home" practice thus their income wasn't affected by the implementation of the lockdown and were favouring the lockdown as compared to those whose income was affected and the difference was found to be statistically significant.

Based on these findings, the study significantly highlights the constraints of not having accountable data with relation to this study that restricts us from improving the sustained circumstances around COVID-19 based on the outcome of this study. It becomes although more important now to ruminate the pre and post lockdown juncture, as the comparison thus drawn will provide much assistance in the anticipated next waves.

CONCLUSION

The ubiquitous nature of fury caused due to COVID-19 has not spared even the developed world. India, still as a developing nation has giant leaps to take to clear through this pandemic crisis. This study concludes that the general population was clear about the essentiality of the lockdown however a segment of the population had the implications in a way that was affecting their livelihood hence acutely changing their perception otherwise. This, in turn, goes in favour of the continuation of IEC activities related to COVID measures and policy decisions to be amended following the livelihood of all segments of the population.

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

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