This is how India reacted to lockdown during COVID-19 pandemic: an online survey

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INTRODUCTION

The ongoing coronavirus disease 2019 (COVID-19) is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that originated in Wuhan, China in December 2019. All the countries are battling against this virus. The WHO has declared it a pandemic.

The first confirmed case of COVID-19 in India was reported on 30 January 2020, and by mid-March; there were approximately 500 confirmed cases in the country. As the fear of transmission grew, the Government of India ordered the nationwide lockdown for 21 days on March 24, as a preventive measure against the COVID-19 pandemic. It was extended until 3 May on 14 April (lockdown phase 2) and extended further by two weeks until 17 May on 1 May (lockdown phase 3).

The lockdown restricted people from stepping out of their homes and applied social distancing when outside the home. All the non-essential services such as educational...
institutions, industrial establishments, and hospitality services were suspended. Essential services such as hospitals, grocery shops, banks and ATMs, petrol pumps, etc. remained functional. Barrng transportation of essential goods, fire, police, and emergency services, all transport services- road, air, and rail were suspended.

No doubt, the lockdown has significantly slowed down the rate of growth of COVID-19 infections from a rate of doubling every three days by 6 April to every eight days on 18 April; but it has also immediately and drastically changed patterns of daily life across India. Restricted physical movement out of home, physical distancing when outside, restricted availability of most public services, uncertainty over disease status can lead to a state of unpleasant feelings and emotions among people which is called psychological distress.

Many research studies have evaluated the mental health of survivors of natural disasters or infectious diseases. However, very few studies have analyzed the psychological impact of quarantine on individuals quarantined due to the risk of infection.

The aim of the study was to investigate the effect of lockdown on the lives of the people of India. The objectives of this study were to understand effect of lockdown on the daily routine of the study population, to evaluate the effect of lockdown on the psychological well-being of the study subjects, and also to study the factors contributing to the psychological impact.

METHODS

An online survey was conducted from 15 April 2020 to 17 May 2020 during the nationwide COVID-19 lockdown phases 2 and 3.

Individuals from different parts of the country, aged 18 years or more, with access to the internet and understanding of English and willing for voluntary participation by providing written consent were included. However, those with a pre-diagnosed clinical psychiatric condition or history of the same were excluded from the study.

An online semi-structured questionnaire was designed using google forms, with a consent form and a note attached to it. The note contained a brief description of the study, the voluntary nature of participation, declarations of anonymity and confidentiality, and instructions for filling in the questionnaire.

The questionnaire comprised of multiple-choice and short answer type questions and was divided into two parts. The first part was related to the socio-demographic profiles (age, gender, state of residence, education, occupation, marital status, etc.) and clinical profiles (any chronic illness, addiction, history of contact with a suspected or laboratory-confirmed case of novel coronavirus infection).

The second part was related to the nationwide lockdown and its effect on the participants (routine daily life before and during the lockdown, self-adherence to infection prevention and control practices, behavior, and challenges faced during lockdown).

The link of the questionnaire was circulated via e-mails, WhatsApp, and other social media to the contacts of the investigators with a request to forward it to as many people as possible.

Statistical analysis

The above data was entered in MS excel and analyzed using SPSS version 22.0. Frequency and percentages were calculated for categorical variables. Means and the standard deviation were calculated to summarize continuous variables. Paired t-test was used to examine the relationship between changes in the mean duration of routine activities before and during the lockdown. A p value of <0.05 was considered significant for all analyses (considering 95% confidence interval).

RESULTS

A total of 452 responses were received. Out of them, 416 were recruited in the study as 36 responses were incomplete or in duplicate. All the respondents were Indians living in different states or union territories of the country with the maximum number (27.6%) from Uttar Pradesh followed by Delhi, Punjab, and Uttarakhand (Figure 1).

Out of 416 participants, 252 (60.6%) were male, and 164 (39.4%) were female. The mean age of the participants was 29.09±8.83 years. The majority of subjects, i.e. 94 (22.6%), were in the 26-35 years age group. 160 (38.7%) individuals described themselves as extroverts. The lowest educational level observed in this study was to be standard 12th. More than 60% of the study population was postgraduate. 98 (79%) had educational qualifications up to the graduate level.

The majority of participants, 191 (45.9%), were from the salaried class. 76 (18.3%) were students. Two-third of participants (66.8%) were married. 32.7% of the married participants had a single child while 61.5% had more than one child. Most participants (85%) resided in urban areas. More than two-thirds (68.5%) of study subjects had a nuclear family. The maximum number of individuals, i.e. 102 (82.3%), belonged to the middle socioeconomic class as per the modified Kuppuswamy socioeconomic scale. None of the study subjects had any mental illness or addiction. None of them had a history of travel or contact with any suspected or confirmed case of COVID-19 (Table 1).
Figure 1: Distribution of subjects according to State/Union Territory of residence (N=416).

Table 1: Socio-demographic profiles of study participants.

| Characteristics         | Number | Percentage (%) |
|-------------------------|--------|----------------|
| Gender                  |        |                |
| Male                    | 252    | 60.6           |
| Female                  | 164    | 39.4           |
| Age (years)             |        |                |
| ≥18-25                  | 76     | 18.3           |
| 26-35                   | 94     | 22.6           |
| 36-45                   | 69     | 16.6           |
| 46-55                   | 73     | 17.5           |
| 56-65                   | 63     | 15.1           |
| >65                     | 41     | 9.9            |
| Type of personality     |        |                |
| Introvert               | 115    | 27.6           |

Continued.
Characteristics | Number | Percentage (%) |
--- | --- | ---
Extrovert | 160 | 38.5 |
Ambivert | 141 | 33.9 |
Education | | |
Secondary | 26 | 6.2 |
Graduation | 133 | 32 |
Post-graduation | 257 | 61.8 |
Occupation | | |
Student | 76 | 18.3 |
Salaried class | 191 | 45.9 |
Self employed | 59 | 14.2 |
Home maker | 25 | 6.0 |
Retired | 47 | 11.3 |
Work from home | 18 | 4.3 |
Marital status | | |
Unmarried | 138 | 33.2 |
Married | 278 | 66.8 |
Number of children (if married) | | |
0 | 16 | 5.8 |
1 | 91 | 32.7 |
>1 | 171 | 61.5 |
Residence | | |
Urban | 355 | 85.3 |
Rural | 61 | 14.7 |
Type of family | | |
Nuclear | 285 | 68.5 |
Joint | 131 | 31.5 |
Socio-economic status | | |
Lower | 43 | 10.3 |
Middle | 342 | 82.2 |
Upper | 31 | 7.5 |

About one-third (33.2%) of subjects reported changes in their sleep habits. 21.8% reported an increase in their duration of sleep while 11.4% reported a decrease in their duration of sleep. Out of this, 4.5% had difficulty in falling asleep and 6.9% had trouble in staying asleep. 30.5% of subjects had changes in their food habits. 20.4% started overeating and 10.1% reported poor appetite.

During the lockdown, 75.2% were working from home as opposed to 4.3% before lockdown. 36.8% reported a decrease in the number of working hours out of which 7.9% lost their job during the lockdown. 25% of participants increased the duration of physical exercise and/or meditation during the lockdown.

27.2% of subjects spent more time with their family members. Nearly one-third of participants spent more time on social media/OTT platforms (including about 12% of students who spent time attending online classes) and on watching television (Table 2).

Table 2: Changes in the daily routine during lockdown.

| Characteristics | No change | | Increased | | Decreased | |
|--- | --- | --- | --- | --- | --- | --- |
| Number | % | Number | % | Number | % |
| Duration of sleep | 278 | 66.8 | 91 | 21.8 | 47 | 11.4 |
| Eating habits | 289 | 69.5 | 85 | 20.4 | 42 | 10.1 |
| Time spent on official work (N=340) | 195 | 57.3 | 20 | 5.9 | 125 | 36.8 |
| Time spent on exercise/meditation | 280 | 67.3 | 104 | 25 | 32 | 7.7 |
| Time spent with family | 268 | 64.4 | 113 | 27.2 | 35 | 8.4 |
| Time spent on social media/OTT platform | 218 | 52.4 | 153 | 36.8 | 45 | 10.8 |
| Time spent watching TV | 240 | 57.7 | 145 | 34.9 | 31 | 7.4 |
Table 3: Changes in the mean duration of routine activities during lockdown.

| Changes                                      | Before lockdown | During lockdown | P value   |
|----------------------------------------------|-----------------|-----------------|-----------|
| Sleep duration (in hrs)                      | 7.3±0.97        | 7.5±1.4         | 0.0001    |
| Duration of exercise/meditation (in mins)    | 46.1±34.7       | 56.7±47.0       | <0.0001   |
| Working hours per day                        | 6.5±3.2         | 5.2±3.9         | <0.0001   |
| Time spent with family (duration in hours)   | 6.3±5.9         | 7.8±6.1         | <0.0001   |
| Time spent on social media/OTT platform (duration in hours) | 2.2±1.9 | 2.7±1.7 | 0.0000 |
| Time spent watching TV (duration in hrs)     | 1.6±1.4         | 2.2±1.6         | <0.0001   |

There was a significant increase in the mean duration of sleep, exercise/meditation, and time spent with family, time spent on social media/OTT platform and television during the lockdown as compared to that before lockdown. However, there was a significant decrease in the mean number of daily working hours during the lockdown (Table 3).

Table 4: Adherence to infection prevention and control practices.

| Adherence to infection prevention and control practices                        | Number | Percentage (%) |
|--------------------------------------------------------------------------------|--------|----------------|
| Going outside only when absolutely necessary                                   | 378    | 90.9           |
| Maintaining distance of at least two metres from other persons when outside    | 352    | 84.6           |
| Wearing a face mask when outside                                               | 392    | 94.2           |
| Frequent hand wash with soap and water / hand clean with alcohol-based rub at least for 20 seconds | 93     | 75.0           |
| Following WHO recommended steps of hand washing                                | 81     | 65.3           |
| Covering nose and mouth while sneezing or coughing                             | 84     | 67.7           |
| Avoiding touching eyes, nose, and mouth with unwashed hands                    | 84     | 67.7           |

The most common symptom of psychological distress was anxiety (about 70%). More than half of the participants were worried about their health or the health of their family members (53.4%). Approximately 37% had anxiety about their job or the job of their family members. Nearly 22% had worries about finance-related issues. Out of 76 students, (52 68.4%) were anxious about issues related to their education. About 27% of parents were worried about the education of their children. About 35% had fear of getting infected or spreading the infection to their loved ones. About one-third of subjects reported changes in their sleep pattern/food habits. Other symptoms of psychological distress were loss of interest, difficulty to concentrate, loss of temper, irritability, forgetfulness, unexplained headaches or body pains and increased use of tobacco, alcohol, or any other drugs. 30.8% of respondents noticed a major change in eating/ sleep pattern of their family member and/or person staying with them. 26.7% noticed behavioural changes among family members (Table 5).

Table 5: Behaviour during lockdown.

| Characteristics                              | Yes | No |
|----------------------------------------------|-----|----|
|                                              | Number | %  | Number | %  |
| Any anxiety                                  | 292  | 70.2 | 124    | 29.8 |
| Any fear                                     | 147  | 35.3 | 269    | 64.7 |
| Major changes in sleep pattern               | 138  | 33.2 | 278    | 66.8 |
| Major changes in eating pattern              | 127  | 30.5 | 289    | 69.5 |
| Loss of interest in things once pleasurable | 87   | 20.9 | 329    | 79.1 |
| Difficulty concentrating                     | 72   | 17.3 | 344    | 82.7 |
| Loss of temper                               | 66   | 15.9 | 350    | 84.1 |
| Irritability                                 | 63   | 15.1 | 353    | 84.9 |
| Forgetfulness                                | 54   | 13   | 362    | 87   |
| Unexplained headaches or body pains          | 47   | 11.3 | 369    | 88.7 |

Continued.
Characteristics | Yes | No |
|------------------|-----|-----|
| Increased the use of tobacco, alcohol or any other drugs | 8 | 1.9 | 408 | 98.1 |
| Change in behaviour of family member and/or person staying with | 111 | 26.7 | 305 | 73.3 |
| Major change in eating/sleep pattern of family members and/or person staying with | 128 | 30.8 | 288 | 69.2 |
| Increase in the use of tobacco, alcohol or any other drugs by your family members and/or person staying with | 5 | 1.2 | 411 | 98.8 |

About one-third of study subjects (33.2%) had already bought food supplies and other items of daily need on a large scale and 155(37.3%) were planning to do that in near future. 85.1% had already bought personal protective equipment. Only 10% had bought drugs supposed to be good for treating COVID-19 infection and another 30.8% were planning to do that (Figure 2).

Figure 2: Behaviour during lockdown.

The feeling of uncertainty was the most common challenge faced by the participants during the lockdown (88%). About 74% were upset with the disrupted plans due to travel restrictions and physical distancing. Other challenges faced by participants during lockdown were inadequate information given to them regarding infection control measures and status of COVID-19 pandemic (42.5%), difficulty in procuring items of daily needs (26.4%), financial losses incurred to them due to Corona pandemic and lockdown (21.6%), difficulty in managing household chores without domestic help (20.4%) due to the closure of educational institutions and restricted movement and coping with loneliness (13.5%) (Figure 3).

Figure 3: Challenges faced during lockdown.
DISCUSSION

During the coronavirus (COVID-19) pandemic, quarantine is being used as a public health measure throughout the world to reduce transmission of the disease. It ranged from self-isolation at home (home quarantine), isolation at government-run health facilities (institutional quarantine) to lockdown (mass quarantine). In India, the entire nation was put under a lockdown in March. Lockdown has had a huge impact on the reduction of the spread of infection by breaking chains of transmission. But it has brought significant changes in the daily routine of the people as well.

During the lockdown, 75.2% of respondents were working from home in contrast to only 4.3% before lockdown. 36.8% of participants reported a decrease in the number of working hours out of which 7.9% lost their jobs during the lockdown. Lee et al also reported an unprecedented decline in employment, average days worked, and earnings among participants in Delhi during the lockdown. These results are consistent with those found by Afridi et al and Bertrand et al.

The rate of unemployment was low (7.9%) in our study in comparison to that (25.5%) reported by Bertrand et al as the majority i.e.191 (45.9%) of participants in our study were from salaried class, with the ability to work from home and continue to earn a living during the lockdown.

In the present study, there was a significant increase in the mean duration of sleep, exercise/meditation, and time spent with family during the lockdown as compared to that before the lockdown. We found that office work from home, online classes, watching movies, playing online games, the social distancing norms have resulted in a significant increase in the time spent on various screens among the participants.

The impact of the lockdown on several health-related behaviors was evident by the finding that around 91% of respondents remained confined inside their homes and stepped out only when necessary. 94.2% used a mask and nearly 85% maintained social distancing whenever they went outside. 75% frequently wash their hands and made it a daily habit.

In an online survey in India by Deblina et al, the study participants reported frequent use of sanitizers and gloves (75%), hand wash(85%), and masks(37%) indicating the increasing concern of participants towards personal hygienic measures to avoid COVID-19 infection. Most of the participants (more than 4/5th) agreed with social distancing, avoiding travel, self-quarantine, and adequate hygienic measures.

In another survey, Lee et al found that general intra-city movement in Delhi dropped to less than 20 percent of normal following the lockdown announcement and the lockdown resulted in widespread compliance with public health directives; mask usage rose by 73%; time spent indoor increased by 51%, and hand washing rose by 10%.

Recent rapid review of the evidence suggests that individuals who were kept in isolation and quarantine experienced significant psychological distress in the form of anxiety, anger, confusion, and post-traumatic stress symptoms. Our study has found the psychological burden of lockdown in the lives of people in the form of anxiety (70%), fear of infection (about 35%), changes in the sleep pattern (33.2%) and food habits (30.5%), loss of interest (21%), difficulty in concentrating(17.3%), losing temper (15.9%), irritability(15%), forgetfulness (13%), unexplained headaches and body pains (11.3%) and increased use of tobacco, alcohol or any other drugs (1.9%).

Nearly one-third of respondents noticed major changes in eating habits/sleep patterns and behavioral changes among their family members. Isolation, loss of normal routine, social distancing, and financial losses during lockdown may be the root cause of psychological distress among study subjects and their family members. The disease with no vaccines or approved drug regimens in place further added to the distress.

In an online survey, Deblina et al reported a wide range of symptoms of psychological distress in the form of preoccupation with the thoughts of the COVID-19 pandemic (>80%), anxiety (72%), fear of contracting the novel coronavirus infection (40%), difficulty in sleeping (12%), and reduced social contact (82%).

In an online survey, Varshney et al found 33.2% of participants across India had a significant psychological impact during the early phase of the COVID-19 pandemic. In the most recent nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic by Qiu et al, almost 35% of the respondents experienced psychological distress. In a study from northern Spain by Ozamiz et al, 27.5% of participants reported symptoms of depression, 26.9% anxiety, and 26.5% stress.

People quarantined during the SARS epidemic reported various negative responses: fear (20%), nervousness (18%), sadness (18%), and guilt (10%). In the past, during the Ebola outbreak, people had a wide spectrum of psychosocial impacts including fear of falling sick, helplessness, hopelessness, stigma, and even death. A rapid review of the literature showed mixed evidence for the association of participant characteristics and demographics with the psychological impact of quarantine.

In the present study, analysis of psychological distress and depression within the sample indicated that female respondents had a higher frequency of psychological distress as compared to males. In an online survey, Varshney et al found that the COVID-19 outbreak had a
statistically significant higher psychological impact on females as compared to their male counterparts. These findings were similar in the Chinese community where females suffered a greater psychological impact of coronavirus outbreak. 

Previously available extensive epidemiological literature also shows that women are at a higher risk of developing psychological distress. A study by Taylor et al also indicated a higher risk for psychological distress for women as compared to men however this difference was not significant. 

In the present study, psychological distress was found more among married participants than their unmarried counterparts. We have found an association of psychological distress with having children. Subjects with 1 or more children had a higher incidence of psychological distress as compared to those with no child.

Taylor et al in a study of horse owners quarantined because of equine influenza found that participants with one child had a 1.2 times higher risk of psychological distress than those with no children, and having three or more children appeared somewhat protective against high psychological distress. In this study, the frequency of psychological distress was higher among respondents who had financial issues. Financial issues were more common among the participants who lost their job during the lockdown and/or belong to a lower-income group.

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In this study, participants with a fear of infection suffered more from psychological distress. In our study, we found that participants who were away from their families for education or work and living alone showed more symptoms of psychological distress. Similarly, elderly people living alone also showed more mental distress.

An earlier meta-analysis had concluded that loneliness is a risk factor for psychological distress. WHO recently changed the term ‘social distancing’ to ‘physical distancing’ to make people feel less lonely and isolated. In our study, 37.3% of the participants had experienced the problem of inadequate basic supplies or medical care.

Difficulty in procuring items of basic needs and getting regular medical care during quarantine was found to be associated with frustration. In the present study, psychological distress was reported more among participants who responded in phase 3 of lockdown than those in phase 2. Longer durations of quarantine were found to be associated with post-traumatic stress symptoms. Those quarantined for more than 10 days showed significantly higher post-traumatic stress symptoms than those quarantined for less than 10 days.

In our study, 42.5% of the participants reported that they had inadequate information about infection control practices, the purpose of quarantine, and the status of the corona pandemic. These participants showed more symptoms of psychological distress. Insufficient clear guidelines about infection control practices and confusion about the purpose or rationale of quarantine were found to be a stressor in some studies. We found no significant difference in the frequency of symptoms of psychological distress among study subjects belonging to different age groups or with different levels of education.

A study by Hawryluck et al also suggested that demographic factors such as age and level of education were not associated with psychological outcomes. In a study, Qiu et al reported the highest levels of anxiety and depression among young adults in the 18-30 years of age. This higher symptomatology among young adults could be caused by the large amount of information that they receive from social media, which can easily trigger stress. Similarly, people with higher education tended to have more distress, probably because of high self-awareness of their health. However, a study of quarantined following an outbreak of equine influenza identified lower age (16-24 years) and lower formal educational qualification as factors associated with negative psychological impact.

In previous pandemics, it was found that the most frequent stressors in adults were the duration of lockdown, fear of being infected, frustration, boredom, and inadequate information.

**Limitations**

The actual number of respondents is low compared to the total number of persons who were placed into lockdown and therefore may not be representative of the entire population. Furthermore, a self-selection bias may have occurred with those persons who were experiencing the greatest or least levels of distress responding to the survey. In addition, respondents required access to a smartphone or a computer to respond, which suggests that they may be more educated and have higher socioeconomic status than the overall group who were quarantined. They also had to be English-speaking to participate in the survey.

**CONCLUSION**

The results of this survey allow for the generation of hypotheses that require further exploration. Our data showed that the Lockdown brought significant changes in the daily routine and behaviour of people with a wide spectrum of negative psychological impact in the forms of...
anxiety, fear of infection, changes in their sleep pattern/food habits, and other depressive symptoms.

Public health officials, infectious diseases physicians, psychiatrists, and psychologists need to be made aware of this issue. They must work to define the factors that influence the success of quarantine and infection control practices for both disease containment and community recovery and must also consider mental health issues while planning interventions to fight the pandemic and be prepared to offer additional support to persons who are at increased risk for the adverse psychological and social consequences of quarantine.

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REFERENCES

1. Lee K, Sahai H, Baylis P, Greenstone M. Job Loss and Behavioral Change: The Unprecedented Effects of the India Lockdown in Delhi. University of Chicago, Becker Friedman Institute for Economics. 2020;2020-65.
2. Afridi F, Dhillon A, Roy S. How has Covid-19 crisis affected urban poor? Findings from a phone survey. Ideas for India. 2020.
3. Bertrand M, Kaushik K, Heather S. How are Indian households coping under the COVID-19 lockdown? 8 Key findings. Chicago booth. 2020.
4. Roy D, Tripathy S, Kar SK, Sharma N, Verma SK, Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. Asian J Psychiatr. 2020;51:102083.
5. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet. 2020;395(10227):912-20.
6. Varshney M, Parel JT, Raizada N, Sarin SK. Initial psychological impact of COVID-19 and its correlates in Indian Community: An online (FEEL-COVID) survey. PLoS One. 2020;15(5):233874.
7. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. Gen Psychiatr. 2020;33(2):100213.
8. Ozamiz EN, Idoiaga MN, Dosil SM, Picaza GM. Corrigendum: Psychological Symptoms During the Two Stages of Lockdown in Response to the COVID-19 Outbreak: An Investigation in a Sample of Citizens in Northern Spain. Front Psychol. 2020;11:2116.
9. Reynolds DL, Garay JR, Deamond SL, Moran MK, Gold W, Styra R. Understanding, compliance and psychological impact of the SARS quarantine experience. Epidemiol Infect. 2008;136:997-1007.
10. Hall RC, Hall RC, Chapman MJ. The 1995 Kikwit Ebola outbreak: lessons hospitals and physicians can apply to future viral epidemics. Gen Hosp Psychiatry. 2008;30(5):446-52.
11. Lim GY, Tam WW, Lu Y, Ho CS, Zhang MW, Ho RC. Prevalence of Depression in the Community from 30 Countries between 1994 and 2014. Sci Rep. 2018;8(1):2861.
12. Taylor MR, Agho KE, Stevens GJ, Raphael B. Factors influencing psychological distress during a disease epidemic: data from Australia's first outbreak of equine influenza. BMC Public Health. 2008;8:347.
13. Hawryluck L, Gold WL, Robinson S, Pogorski S, Galea S, Styra R. SARS control and psychological effects of quarantine, Toronto, Canada. Emerg Infect Dis. 2004;10(7):1206-12.
14. Blendon RJ, Benson JM, Roches CM, Raleigh E, Taylor CK. The public's response to severe acute respiratory syndrome in Toronto and the United States. Clin Infect Dis. 2004;38(7):925-31.

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