

ORIGINAL RESEARCH

Psychological Effects of COVID-19 Pandemic among the General Population of India

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Abstract: **Introduction:** Coronavirus disease 2019 (COVID-19) outbreak was declared as a pandemic in 2019 by the World Health Organization (WHO) with a global spread and undefined course. COVID-19 has created great fear and panic all over the world creating mental and physical distress. Looking at the adverse effects of the pandemic, we aimed to assess the psychological conditions of the general population residing in various states of India as a result of the nation-wide lockdown and quarantine due to COVID-19. **Materials & Methods:** This study is a descriptive, cross-sectional, anonymous online survey. A self-rated structured questionnaire was made through Google form. Snowball sampling technique was used. **Results:** 53.2% of the respondents were men while 46.8% were women. 92.5% resided in urban areas. A comparison between the male and female respondents was made in the various domains and we found that 28.3% of men and 30.2 % of women were affected to a greater extent by the pandemic whereas 24.6% of men were worried about the financial loss. 10.2% of the women reported to feel depressed in the last two weeks while only 7% of the men were irritated. 51.9% and 44.9% of men and women considered it important to take actions for preventing Corona Virus Disease. **Conclusion:** Stress, anxiety and depression among the general population was found to be moderately present although all the safety guidelines were followed along with the lockdown. The participants had a good level of awareness regarding preventive aspects as well.

Keywords: Anxiety, Stress, Depression, Mental Health, COVID-19

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1. Introduction

The outbreak and pandemic of coronavirus disease 2019 (COVID-19) has led to severe distress and hazards to mental health globally(1) . The general public's mental health requires significant attention and care as the psychological outcomes of the general population and its associated risk factors are found to be huge. With the emergence of coronavirus disease, a situation of socio-economic crisis and profound psychological distress rapidly occurred throughout the world(2).

Stress, anxiety, and depression caused by feelings of uncertainty and fear associated with the COVID-19 outbreak, along with mass lockdowns and economic recession are predicted to progressively increase mental health problems, psychological disorders, and suicide(3-5). There is an alarming call

for more attention to public mental health care and effective policies for assisting the general population of India to fight through this challenging time(3-5).

The rapidly evolving situation has drastically altered people's lives, as well as multiple aspects of the global, public, and private economy(3). Declines in tourism, aviation, agriculture, and the finance industry owing to the COVID-19 outbreak are reported as massive reductions in both supply and demand aspects of the economy by governments(4).

This study aims to assess the psychological effects of COVID-19 on the mental health of the general population residing in India. We aimed to assess the factors that have emerged as a result of quarantine and the nation-wide lockdown related to COVID-19 outbreak which has increased the psychological and emotional vulnerability of the general population in various states of India. This cross-sectional online survey studies the common mental health conditions of the general population and potential associated risk factors.

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2. Materials and Methods

2.1. Study Design

This study adopted a descriptive, cross-sectional, self-rated anonymous questionnaire-based online survey. Snowball sampling technique was used. Data were collected by creating a URL link of Google form sent through social media keeping in view the standards of social distancing protocols as per the instructions of the Indian Government to minimize face-to-face or physical interaction as citizens continue to isolate themselves at home because of COVID-19.

2.2. Study Area and Population

Anonymous online survey of the general population residing in various states of India. General population residing in Indian states with digital accessibility and knowledge of its use.

2.3. Duration of the study

5th September to 15th September 2020.

2.4. Sample size

Proportion of anxiety and COVID-19 stigma among the study population

Proportion of anxiety and stigma: 0.33

Absolute Precision (%): 5

Confidence interval (%): 95

Number needed (n): 340 but we receive 374 responses

2.5. Data Collection Methodology

Data collection was done by taking consent to be a part of the study by the respondents. The principles of snowball sampling technique were adapted using an online URL link which was circulated by the investigator through social media for capturing data from people with digital accessibility and knowledge of its use. Demographic details were recorded such as age, sex, socioeconomic status, occupational status, religious status, and marital status of the respondents. Data were collected using a pre-tested, self-rated online questionnaire through Google form. The reliability and validity of the questionnaire was tested through expert comments on the pilot study. The questionnaire had three sections including the personal details and demographic information, knowledge and information related to COVID-19, and factors affecting the mental health of the individuals because of the pandemic. Information collected using the above-mentioned tools was converted into a computer-based spreadsheet using PSPP software (Free Software Foundation, Boston, Massachusetts).

Inclusion criteria for the study were individuals above 18 years of age, including both the sexes, who had access to social media and digital knowledge of any socio-economic status.

We excluded individuals who did not give their consent to participate, those who did not have digital knowledge and its accessibility, those who suffered mental health problems or were less than 18 years.

2.6. Ethical Consideration

This protocol was placed to the Research Committee and then to the Institutional Human Ethics Committee, Indira Gandhi Institute of Medical Sciences, Patna for approval and the study was initiated after getting approval from the Dean of Research and Institutional Human Ethics Committee (Letter No- 1755/IEC/IGIMS/2020 Dated 28-09-2020). The consent was obtained in understandable Hindi and English languages.

3. Results

Stress, anxiety and depression were common during the pandemic but it was moreover manageable by the individuals themselves (tables 1 & 2). According to Table 1, most respondents were from Bihar, Uttar Pradesh, Delhi and Haryana. 53.2% of the respondents were men while 46.8% were women. 92.5% resided in urban areas. 70.9 % were married, 88.5% were Hindus, 54.3% were highly educated, and 46.0% were employed.

Table 2 shows the various domains of stress, anxiety, and depression of the general population during the pandemic. A comparison between the male and female respondents was made in various domains and we found that 58.6% of the respondents (28.3 % of men and 30.2 % of women) were affected to a greater extent by the pandemic, whereas 24.6% of men were worried about the financial loss imposed during the lockdown and 17.9% of women were more depressed and worried after following news about COVID-19 on social media.

About 23.3 % of men found it difficult to adjust with the new routine during the lockdown and only 19.0 % of women found it difficult to adjust. 10.2% of women reported to feel depressed in last two weeks while only 7% of men were irritated. 51.9% and 44.9% of men and women considered it important to take action for preventing COVID-19 infection. 26.7% of men find COVID-19 very dangerous and fatal while 25.7 % of women agreed (Table 2).

4. Discussion

We found that 28.3 % of men and 30.2 % of women (58.6% of the total respondents) were affected by the pandemic. Similar studies on the psychological impact of COVID-19 pandemic on the general population in West Bengal showed that the level of fear, anxiety, worry, and depression among the general population was high because of lack of knowledge and existing treatment for COVID-19. About 57.8% of the re-

spondents were worried and anxious, 52.1 % were preoccupied with the fear of contamination. Mental status of 64.9% subjects were affected negatively with news of COVID-19, whereas, 34.7 % people were found depressed and 69.6% of the respondents were worried about the financial loss during the lockdown(5) . 24.6% of men were worried about the financial loss incurred during the lockdown and 17.9% of the women were depressed and worried after following news about COVID-19 on social media.

Anxiety depression, worry, and fear were commonly found in several studies as psychological consequences of COVID-19 pandemic. We found that 10.2% of women reported to feel depressed in last two weeks while only 7% of men were irritated. Similarly, in a study in Turkey, 84% of the participants thought COVID-19 contamination was very dangerous and 33.3% were anxious as a result of the pandemic(6). In another study, 33.3% of the respondents were worried more than usual due to the pandemic, 24% were depressed and 36% were anxious(7). In another study, 16.5% of the subjects were depressed and 28.8% were worried and anxious(8).

One of the limitations of this study was that the results cannot be generalized as it is limited to only the educated class who had online accessibility to participate in this study. The time period of the study was October 2020, which indicates a major shift in the information and perception of the respondents about COVID-19 as compared to early detection of the disease.

5. Conclusion

Results of this study indicate that stress, anxiety, and depression among the general population was found to be moderately present. The level of awareness related to COVID-19 disease, its spread and preventive aspects was good among the general public therefore, no profound significant psychological problem was found. The chief factors of distress among general population were the fear of contamination, lack of effective treatment strategy, and risks associated to COVID-19 disease leading to death.

6. Appendix

6.1. Acknowledgment

None.

6.2. Conflict of interest

The authors declare that they have no competing interests.

6.3. Funding support

None.

6.4. Author's contributions

All authors have equally contributed in the study, data analysis and writing the manuscript.

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Table 1: Socio-Demographic profile of Respondents (n=374).

S. No	Demographic Features	Category	Total (%) n=374(100%)
1	Sex	Male	199 (53.2)
		Female	175 (46.8)
2	Religion	Hindu	331 (88.5)
		Muslim	18 (4.8)
		Others	25 (6.7)
3	Marital Status	Married	265 (70.9)
		Single	97 (25.9)
		Others	12 (3.1)
4	Educational Status	School	05 (1.3)
		College	81 (21.7)
		Higher	203 (54.3)
		Professional	85 (22.7)
5	Occupation	Employed	172 (46.0)
		Unemployed	33 (8.8)
		Retired	33 (8.8)
		Business	40 (13.1)
		Full time homemaker	36 (9.6)
		Others	51 (13.6)
6	Place of Residence	Urban	346 (92.5)
		Rural	28 (7.5)
7	State	Bihar	145 (38.8)
		Uttar Pradesh	43 (11.5)
		Delhi	54 (14.4)
		Haryana	30 (8.0)
		Others	102 (27.3)

Table 2: Psychological effects of COVID-19 pandemic on the respondents (n=374).

S. No	Questions	Response's	Response Male n=199(%)	Response Fe- male n=175(%)	Response Total n=374(%)
1	Have you taken the help of psychiatry helpline to reduce your anxiety or depression during the past 2 weeks?	Yes No	08 (2.1) 191 (51.1)	03 (0.8) 172 (46.0)	11 (2.9) 363 (97.1)
2	Are you on any anti-depressant(s)/anti-anxiety/sleep medication, which has been started in the past two weeks?	Yes No	05 (1.3) 194 (51.9)	07 (1.9) 168 (44.9)	12 (3.2) 362 (96.8)
3	How do you think COVID-19 pandemic has affected your mental status negatively? Has affected me to some extent Has affected me to a great extent Has not affected me at all		106 (28.3) 13 (3.5) 80 (21.4)	113 (30.2) 13 (3.5) 49 (13.1)	219 (58.6) 26 (7.0) 129 (34.5)
4	Did you find it difficult to adjust to the new routine during the lockdown period?	Yes No	87 (23.3) 112 (29.9)	71 (19.0) 104 (27.8)	158 (42.2) 216 (57.8)
5	Do you think the corona virus disease is generating stigma against specific people?	Yes No Don't know	90 (24.1) 80 (21.4) 29 (7.8)	75 (20.1) 60 (16.0) 40 (10.7)	165 (44.1) 140 (37.4) 69 (18.4)
6	How dangerous do you think the COVID-19 risk is? Very Dangerous More or Less Dangerous Is not Dangerous		100 (26.7) 86 (23.0) 13 (3.5)	96 (25.7) 75 (20.1) 04 (1.1)	196 (52.4) 161 (43.0) 17 (4.5)
7	Do You think you are likely to get COVID-19 infection?	Yes No Don't Know	87 (23.3) 52 (13.9) 60 (16.0)	76 (20.3) 37 (9.9) 62 (16.6)	163 (43.6) 89 (23.8) 122 (32.6)
8	Do you consider it important to take actions to prevent the spread of corona virus in your community?	Yes No Don't Know	194 (51.9) 04 (1.1) 01 (0.3)	168 (44.9) 01 (0.3) 06 (1.6)	362 (96.8) 05 (1.3) 07 (1.9)
9	Are you feeling worried more than usual in the last 2 weeks?	Yes No Don't Know	46 (12.3) 145 (38.8) 08 (2.1)	51 (13.6) 116 (31.0) 08 (2.1)	97 (25.9) 261 (69.8) 16 (4.3)
10	Are you preoccupied with the ideas of contracting COVID-19 during past 2 weeks?	Yes No Don't Know	46 (12.3) 147 (39.3) 06 (1.6)	37 (9.9) 123 (32.9) 15 (4.0)	83 (22.2) 270 (72.2) 21 (5.6)
11	Has your sleep cycle become disturbed in the past 2 weeks?	Yes No Don't Know	31 (8.3) 164 (43.9) 04 (1.1)	37 (9.9) 133 (35.6) 05 (1.3)	68 (18.2) 297 (79.4) 09 (2.4)
12	Are you feeling depressed for most of the time in the past 2 weeks?	Yes No	21 (5.6) 178 (47.6)	38 (10.2) 137 (36.6)	59 (15.8) 315 (84.2)
13	Have you become more irritable than usual in the past 2 weeks?	Yes No	26 (7.0) 173 (46.3)	35 (9.4) 140 (37.4)	61 (16.3) 313 (83.7)
14	Have you visited doctor(s) on multiple occasions to rule out the symptoms of COVID-19 in the past 2 weeks?	Yes No	08 (2.1) 191 (51.1)	05 (1.3) 170 (45.5)	13 (3.5) 361 (96.5)
15	Do you get more worried or depressed after reading news and messages on WhatsApp or Facebook related to COVID-19 in past 2 weeks?	Yes No May be	50 (13.4) 115 (30.7) 34 (9.1)	67 (17.9) 67 (17.9) 41 (11.0)	117 (31.3) 182 (48.7) 75 20.1)
16	Are you worried about the financial loss that you are incurring during the lockdown?	Yes No	92 (24.6) 107 (28.6)	69 (18.4) 106 (28.3)	161 (43.0) 213 (57.0)

