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A study of psychological impact of COVID-19 pandemic and lockdown in India: An online survey

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Abstract: *Background:* The COVID-19 pandemic has created an unparalleled challenge resulting in millions of cases and lakhs of deaths. It has taken a large toll on people, health systems and economies. Also, the prolonged lockdown imposed following COVID-19, poses a challenge to the people's psychological health. *Objectives:* The objectives of this research were to study the awareness regarding COVID-19 pandemic, impact of nationwide lockdown among the people and influence of these factors in the development of stress, anxiety, and depression. *Methods:* An online cross-sectional study was conducted from 12th to 18th April 2020, using Google forms on social media. Participants were recruited using snowball sampling method. Appropriate ethical approval and consents were acquired. Analysis was done usingSPSS-22, applying percentages, chi-square test and regression analysis. *Results:* Of 517 participants, 229 (44.3%) and 443 (85.7%) had good knowledge regarding COVID-19 and desirable preventive practices, respectively. One hundred eighty-one (35%) participants were severely impacted due to lockdown, and it was a significant predictor of stress, anxiety, and depression. *Conclusion:* The situation created due to lockdown may have a negative impact on mental health of the people and needs further assessment.

Keywords: COVID-19 pandemic, Mental Suffering, Social Isolation, Knowledge, Attitudes, Practice, India.

Introduction

The World is currently facing an unprecedented challenge due to the ongoing rapid and extensive outbreak of the deadly COVID-19 infection. Coronavirus disease (abbreviated as COVID-19) is a respiratory disease transmitted from person to person through the "respiratory droplets" produced as a result of coughing, sneezing, or talking by a COVID-19 infected person [1-2]. It is caused by a novel coronavirus called "Severe Acute Respiratory Syndrome Coronavirus 2" (SARS- CoV-2) [3].

After an initial outbreak of disease in the Wuhan city, Hubei province of China in December 2019, the novel virus has spread rapidly to over 213 countries and territories around the world [2]. The COVID-19 outbreak was declared by the WHO as a "Public Health Emergency of International Concern" on Jan 30th, 2020 [4].On March 11, 2020, the WHO characterized COVID-19 as a global pandemic [5]. Globally, there have been 2,544,792 confirmed cases of COVID-19 including 175,694 deaths, reported to WHO as on April 23, 2020 [6].

Currently, there is no vaccine or antiviral treatment recommended explicitly for COVID-19 [2]. So the most critical intervention to prevent the illness & control its spread is the application of various preventive measures. Countries are putting in place a range of public health and social measures in different combinations to slow or stop the spread of COVID-19. India is at a crucial juncture in its fight against COVID-19, with 21700 confirmed cases including 686 deaths (as on April 23, 2020).

The Government has been aggressively adopting a variety of preparedness and response measures for COVID-19 including surveillance and contact tracing, laboratory diagnosis, implementing effective medical treatment, risk communication and

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community engagement, infection prevention and control, implementation of containment plan, limiting travel and controlling mobility of population within the city and between the cities, issuing facts and precautionary measures regarding COVID-19, hospital isolation of all confirmed cases and home quarantine of contacts along with the total country lockdown [5].

A lockdown is an emergency protocol limiting or completely abolishing the movement of the people inside or outside a specific area [7]. Nearly 3 billion people around the globe including 1.3 billion Indians, are under the COVID-19 lockdown [8].Although the Nationwide COVID-19 lockdown restrictions have proven to be effective to combat the outbreak in some countries, such drastic measures can also impose social, economic and psychological stressors on the whole population leading to long lasting undesirable effects like stress, anxiety, irritability, insomnia, depression, etc. on the people's health [7, 9].

To be effective these public health measures must be implemented with the full engagement of all the members of society including communities and professional groups. The acceptance and adherence of the public to these control measures mainly depends on their knowledge and practices towards COVID-19 infection. Success of control measures like quarantine and country lockdown is also influenced by their social, economic, and psychological impacts on the general population. The current research was planned to study the awareness regarding COVID-19 pandemic, impact of nationwide lockdown among the people and influence of these factors in the development of stress, anxiety, and depression.

Material and Methods

This was a cross-sectional study conducted from 12th April to 18th April 2020, during the lockdown period for prevention of spread of COVID 19. When this study was conducted, we were at initial stages of nationwide lockdown imposed by the Central Government in 2020. It was impossible to physically meet the potential study participant to collect the data. Hence the data was collected online. We reached out to targeted study subjects using social media platforms (e.g.,WhatsApp, Facebook). We posted links of the questionnaire and introductory statement on such platforms, with the request to receivers to forward it in similar platforms. Hence the people participating in our study forwarded the links to their acquaintances, helping us to recruit more participants. Thus, the data was collected by the Snowball sampling method. Due to lockdown and other constraints no other sampling method was feasible.

The introductory statement had information regarding the research & researchers, eligibility of participation, voluntary nature of participation and assurance of complete anonymity. Participants had to declare of being of age 18 years and above, before the questionnaire was accessible. Only those currently experiencing lockdown in their region were requested to participate in the study. While exclusion criteria were person already suffering from any mental illness including depression and were on medication for the same. As the data was collected online and anonymity of a study participant is to be maintained; self-declaration by the study participants was considered final and no confirmation or review on the part of authors was possible.

The research was approved by the Institutional Ethical Committee. Participants had to fill the declaration regarding completion of 18 years of age and give their informed consent to participate in the study, before proceeding to the questionnaire. The online questionnaire had multiple sections with the first section being related to socio-demographic factors like age, gender etc. Four different scales and few relevant standalone questions were included in the questionnaire.

The short form of the Depression, Anxiety and Stress Scale (DASS-21) was one of scales used in the study. It is an Internationally validated screening tool with good reliability (Cronbach's alpha 0.76, and the internal consistency 0.83) [10-12]. The remaining three scales used in the current research were developed by the authors with the help of field experts and available literature. The second scale was to assess knowledge regarding COVID-19 among the participants. It was a 25-item scale with each statement to be answered from the options True, False or

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Don't know. The questions were based on "Myths busters" published on the WHO website [13] and "Detail Question and Answers on COVID-19 for Public" published on Ministry of Health and Family Welfare, Government of India website [14]. On taking into account the gravity of situation, continuous flow of information in all the types of media, simple and nontechnical nature of questions and discussion with the area experts, we decided to consider the participants scoring ≥21 (80%) to be having good knowledge and while those scoring below that to be having poor knowledge. The scale has good internal consistency, Cronbach's alpha 0.701.

The third scale used in the study was "Personal practices followed by individuals to prevent the transmission of COVID-19". These questions were based on guidelines published by WHO and Govt. of India [14-15]. The scale had two sub-questions with eight and five items, respectively. The questions had multiple choice answers. The practices were awarded points based on their selection of the choice. The range of possible scores was 0 to 34**.** Score of 28 (above 80%) and above was considered as desirable practice, and less than 28 was undesirable practice. With Cronbach's alpha of 0.704, scale had good internal consistency.

The fourth scale used in the study was "Lockdown impact scale". It was a 21-item scale to understand the impact / hardships (for e.g., availability of money, availability of groceries etc.) due to lockdown. Each item in the scale was to be ranked from 1 to 5, on ascending basis of its impact on the participant. The range of possible scoring was 21 to 105. Those scoring above 64 (> 50%) were considered to be severely impacted by lockdown and those scoring below 64 were considered to be mildly impacted by lockdown. The scale had good internal consistency with Cronbach's alpha of 0.904.

All questions from the four scales were compulsory (Participants had to answer those or drop out of the study), while the standalone questions and some of the socio-demographic questions (e.g., income) were optional. As this study was done at the very early stages of lockdown in India, we were unable to find similarly studies for reference in spite of extensive review of literature. It was decided to conduct a pilot study to examine the reliability and validity of various scales and to observe the reference prevalence for calculation of requisite sample size. The pilot study was conducted on 47 participants, which were not included in the final analysis. Using the results of pilot study, the calculated sample size was 470 (p = 46%, error =10% of p). Data collection was stopped on the day of fulfilment of sample size, hence the total sample included in the study was 517.

Data was collected through the questionnaire using Google Forms. Analysis was done using Google spreadsheet and SPSS-22. It included percentages, chi-square test and Binary logistic regression analysis.

Results

The online questionnaire was completed and submitted by 517 participants (Table 1). The mean age of the participants was 39.18 (± 12.105) yrs. Out of all the participants, 82 (15.9%) were involved either personally or had their immediate family members currently involved in healthcare. One person (0.19%) was quarantined due to COVID-19.

The participants reported 426 (82.4%) news portals (news channels / websites), 331 (64%) social media, 316 (61.1%) official bulletin or websites, 215 (41.6%) friends/ relatives/ acquaintances and 212 (41%) local authority announcements as their source of information related to COVID-19. 339(34.4%) participants reported that they had searched for COVID-19 information on online search engines (e.g., Google, Bing, Ecosia). Sixty-two (12%) participants were extremely worried while 276 (53.4%) were worried to some extent about catching COVID-19 infection. While 156 (30.2%) and 215 (41.6%) participants were extremely worried and worried respectively about the risk of their loved ones catching COVID-19 infection.

During the lockdown period, 473 (91.5%) participants were with their family. Thirty-four (6.6%) participants had travelled outside the station, while 156 (30.2%) had their workplace (office or business) partially or completely open. Majority of participants 473 (91.5%) believed that lockdown was

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absolutely necessary and 44 (8.5%) believed other options should've been considered. While enquiring about the perceived success of lockdown at this stage, 264 (51.1%) believed it was highly successful, 225 (43.5%) partially successful and 28 (5.4%) believed it to be unsuccessful. The optional standalone question about things that made them sad / agitated during lockdown was answered by 306 (59.2%) participants. Out of these 306; 85 (27.8%), 100 (32.7%) and 86 (28.1%) participants were sad / agitated due to being stuck indoors, lack of constructive work and unable to meet friends / relatives, respectively.

Table-1: Socio-demographic variables of the study participants

Variables		Frequency	Percent
Age group	≤40	290	56.1
	41-60	212	41.0
	>60	15	2.9
Gender	Male	301	58.2
	Female	216	41.8
Education	≤12th	36	7.0
	Graduate	158	30.6
	Post Graduate	206	39.8
	Professional	117	22.6
Occupation	Salaried	276	53.4
	Professional Practice	59	11.4
	Business	52	10.1
	Homemaker	45	8.7
	Other	85	16.4
Address	Metropolitan	150	29.0
	Urban area	299	57.8
	Rural area	68	13.2
Total		**517**	**100.0**

The median score for 25-items of knowledge regarding COVID-19 scale was 20 (Mean = 19.68 ± 3.16). When considering interpretation, 229 (44.3%) had good knowledge and 288 (55.7%) had poor knowledge regarding COVID-19. Four hundred ninety-four (95.6%) participants correctly knew of droplet transmission of COVID-19, 506 (98.6%) knew social distancing as an important measure to prevent transmission and 482 (93.2%) knew the correct meaning of social distancing. Majority of participants i.e., 493 (95.4%) knew that old aged and people with pre-existing conditions were more vulnerable to severe disease. Regarding myths / rumours; 245 (47.4%), 62 (11.9%) and 251 (48.5%) participants respectively believed that high temperature, drinking alcohol and eating garlic were protective against COVID-19.

Considering personal practices followed by individuals to prevent transmission of COVID-19 during the lockdown, desirable practices were exhibited by 443 (85.7%) participants. Only 54 (10.4%) participants reported of never venturing out of the house for any reason during lockdown period. The most common reason for the participants to venture out of the house was for buying groceries / medicines with 420 (81.2%) doing it for one or more times. 139 (26.9%) had left the house for exercise during lockdown.

Regarding social distancing, 107 (20.7%) sometimes failed to maintain it while interacting with people. Twenty-seven (5.2%) participants confessed of leaving the house out of curiosity. The most practised preventive

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measures were hand washing among 489 (94.6%) after returning home from outside followed by use of masks every time while going out, among 459 (88.6%) participants.

The median score for "Lockdown impact scale", was 34 (Mean ± SD= 36.21 ±12.109). One hundred eighty-one (35%) participants were severely impacted due to the lockdown. The most commonly impacting lockdown factors were risk of contact with COVID-19 positive person 346 (66.9%), pandemic news 340 (65.8%), non-availability of transport in case of emergency 339 (65.6%), discussion about COVID-19 on social media 301 (58.2%) and worry about future financial liabilities 301 (58.2%). Lockdown impact was significantly associated with whether participants were living with family or away from the family during the lockdown (χ^2=4.75, P=0.029). Among those away from the family, 42 (50%) were severely impacted as compared to 159 (30.8%) living with family. Similarly, impact was significantly higher (χ^2=8.156, P=0.017) among those who believed that other options to lockdown should have been considered (54.5%) as compared to those considering it absolutely necessary (30.4%). Association of these scales with various factors is described in Table 2.

Table-2: Association of the scales with various variables

Variable	Knowledge regarding COVID-19 pandemic		Practices following to prevent transmission of COVID-19		Impacted by lockdown		Total
	Poor	Good	Undesirable	Desirable	Mildly impacted	Severely impacted	
Gender							
Male	148	153	57	244	204	97	301
	49.2%	50.8%	18.9%	81.1%	67.8%	32.2%	100%
Female	140	76	17	199	132	84	216
	64.8%	35.2%	7.9%	92.1%	61.1%	38.9%	100%
	χ^2= 12.475, p = 0.000		χ^2= 12.557, p = 0.000		χ^2= 2.454, p = 0.117		
Education							
≤12th	20	16	3	33	29	7	36
	55.6%	44.4%	8.3%	91.7%	80.6%	19.4%	100%
Graduate	98	60	20	138	110	48	158
	62.0%	38.0%	12.7%	87.3%	69.6%	30.4%	100%
Post Graduate	114	92	27	179	123	83	206
	55.3%	44.7%	13.1%	86.9%	59.7%	40.3%	100%
Professional	56	61	24	93	74	43	117
	47.9%	52.1%	20.5%	79.5%	63.2%	36.8%	100%
	χ^2= 5.485, p = 0.140		χ^2= 5.314, p = 0.150		χ^2= 8.004, p = 0.046		
Occupation							
Salaried	138	138	36	240	181	95	276
	50%	50%	13%	87%	65.6%	34.4%	100%
Professional Practice or Business	55	56	19	92	64	47	111
	49.5%	50.5%	17.1%	82.9%	57.7%	42.3%	100%
Other	95	35	19	111	91	39	130
	73.1%	26.9%	14.6%	85.4%	70.0%	30.0%	100%
	χ^2= 21.245, p = 0.000		χ^2= 1.084, p = 0.582		χ^2= 4.099, p = 0.129		

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Variable	Knowledge regarding COVID-19 pandemic		Practices following to prevent transmission of COVID-19		Impacted by lockdown		Total
	Poor	Good	Undesirable	Desirable	Mildly impacted	Severely impacted	
Current Address							
Metropolitan	71	79	18	132	92	58	150
	47.3%	52.7%	12.0%	88.0%	61.3%	38.7%	100%
Urban area	165	134	49	250	201	98	299
	55.2%	44.8%	16.4%	83.6%	67.2%	32.8%	100%
Rural area	52	16	7	61	43	25	68
	76.5%	23.5%	10.3%	89.7%	63.2%	36.8%	100%
	χ^2= 16.177, p = 0.000		χ^2= 2.599, p = 0.273		χ^2= 1.629, p = 0.443		
Stressed of catching COVID 19 infection							
No	113	66	24	155	146	33	179
	63.1%	36.9%	13.4%	86.6%	81.6%	18.4%	100%
Somewhat	142	134	43	233	163	113	276
	51.4%	48.6%	15.6%	84.4%	59.1%	40.9%	100%
Very much	33	29	7	55	27	35	62
	53.2%	46.8%	11.3%	88.7%	43.5%	56.5%	100%
	χ^2= 6.178, p = 0.046		χ^2= 0.943, p = 0.624		χ^2= 38.408, p = 0.000		
Stressed of Loved ones catching COVID 19 infection							
No	95	51	23	123	116	30	146
	65.1%	34.9%	15.8%	84.2%	79.5%	20.5%	100%
Somewhat	112	103	29	186	136	79	215
	52.1%	47.9%	13.5%	86.5%	63.3%	36.7%	100%
Very much	81	75	22	134	84	72	156
	51.9%	48.1%	14.1%	85.9%	53.8%	46.2%	100%
	χ^2= 7.229, p = 0.027		χ^2= 0.372, p = 0.830		χ^2= 22.219, p = 0.000		
Total	288	229	74	443	336	181	517
	55.7%	44.3%	14.3%	85.7%	65.0%	35.0%	100%

According to the DASS scale, stress, anxiety, and depression was observed in 48 (9.3%), 75 (14.5%) and 62 (12%) participants respectively. The association of various factors with stress, anxiety and depression as presented in Table 3. Binary logistic regression with Wald's backward method was applied to find the significant predictors for Stress, Anxiety and Depression. Accordingly, three regression models were obtained with overall percentages: 90.7, 85.5, 87, respectively (Table 4).

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Table-3: Association of the Stress, Anxiety and Depression with various variables							
Variable	**Stress**		**Anxiety**		**Depression**		**Total**
	Absent	**Present**	**Absent**	**Present**	**Absent**	**Present**	
Gender							
Male	282	19	263	38	267	34	301
	93.7%	6.3%	87.4%	12.6%	88.7%	11.3%	100%
Female	187	29	179	37	188	28	216
	86.6%	13.4%	82.9%	17.1%	87.0%	13.0%	100%
	χ^2= 7.556, p = 0.006		χ^2= 2.058, p = 0.151		χ^2= 0.331, p = 0.565		
Stressed of catching COVID-19 infection							
No	172	7	166	13	168	11	179
	96.1%	3.9%	92.7%	7.3%	93.9%	6.1%	100%
Somewhat	244	32	234	42	238	38	276
	88.4%	11.6%	84.8%	15.2%	86.2%	13.8%	100%
Very much	53	9	42	20	49	13	62
	85.5%	14.5%	67.7%	32.3%	79.0%	21.0%	100%
	χ^2= 9.901, p = 0.007		χ^2= 23.439, p = 0.000		χ^2= 11.355, p = 0.003		
Stressed of Loved ones catching COVID 19 infection							
No	137	9	129	17	133	13	146
	93.8%	6.2%	88.4%	11.6%	91.1%	8.9%	100%
Somewhat	194	21	191	24	187	28	215
	90.2%	9.8%	88.8%	11.2%	87.0%	13.0%	100%
Very much	138	18	122	34	135	21	156
	88.5%	11.5%	78.2%	21.8%	86.5%	13.5%	100%
	χ^2= 2.688, p = 0.261		χ^2=9.585, p = 0.008		χ^2= 1.855, p = 0.396		
Opinion about lockdown							
Necessary	434	39	410	63	424	49	473
	91.8%	8.2%	86.7%	13.3%	89.6%	10.4%	100%
Other options should have been considered	35	9	32	12	31	13	44
	79.5%	20.5%	72.7%	27.3%	70.5%	29.5%	100%
	χ^2= 7.125, p = 0.008		χ^2=6.32, p = 0.012		χ^2= 14.04, p = 0.000		
Knowledge regarding COVID-19 pandemic							
Poor	264	24	242	46	255	33	288
	91.7%	8.3%	84.0%	16.0%	88.5%	11.5%	100%
Good	205	24	200	29	200	29	229
	89.5%	10.5%	87.3%	12.7%	87.3%	12.7%	100%
	χ^2= 0.698, p = 0.403		χ^2=1.126, p = 0.289		χ^2= 0.176, p = 0.675		
Practices following to prevent transmission of COVID-19							
Undesirable	64	10	52	22	57	17	74
	86.5%	13.5%	70.3%	29.7%	77.0%	23.0%	100%
Desirable	405	38	390	53	398	45	443
	91.4%	8.6%	88.0%	12.0%	89.8%	10.2%	100%
	χ^2 = 1.834, p = 0.176		χ^2=16.137, p = 0.000		χ^2= 9.866, p = 0.002		

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Variable	Stress		Anxiety		Depression		Total
	Absent	Present	Absent	Present	Absent	Present	
Impacted by lockdown							
Mildly impacted	320	16	311	25	317	19	336
	95.2%	4.8%	92.6%	7.4%	94.3%	5.7%	100%
Severely impacted	149	32	131	50	138	43	181
	82.3%	17.7%	72.4%	27.6%	76.2%	23.8%	100%
	χ^2= 23.306, p = 0.000		χ^2=38.640, p = 0.000		χ^2= 36.523, p = 0.000		
Total	469	48	442	75	455	62	517
	90.7%	9.3%	85.5%	14.5%	88.0%	12.0%	100%

Table-4: Binary Logistic Regression models for Stress, Anxiety and Depression

	B	S.E.	Wald	df	P- value	Odds Ratio	95% Confidence Interval for odds ratio
Dependent variable Stress, Model percentage = 91.1							
Impacted by lockdown	1.199	0.342	12.276	1	0.000	3.317	(1.696, 6.487)
Age	-0.064	0.017	14.236	1	0.000	0.938	(0.908, 0.97)
Gender	0.774	0.338	5.254	1	0.022	2.169	(1.119, 4.206)
Stressed of catching COVID 19 infection	0.552	0.263	4.418	1	0.036	1.737	(1.038, 2.906)
Travelled outstation during lockdown	1.162	0.52	4.985	1	0.026	3.195	(1.152, 8.857)
Opinion about lockdown	0.673	0.243	7.671	1	0.006	1.96	(1.217, 3.156)
Constant	-6.106	1.206	25.638	1	0.000	0.002	
Dependent variable Anxiety, Model percentage = 87							
Practices following to prevent transmission of COVID-19	-0.142	0.042	11.279	1	0.001	0.868	(0.799, 0.943)
Impacted by lockdown	1.327	0.283	21.992	1	0.000	3.77	(2.165, 6.564)
Age	-0.045	0.013	11.376	1	0.001	0.956	(0.932, 0.982)
Stressed of catching COVID 19 infection	0.727	0.221	10.785	1	0.001	2.068	(1.34, 3.191)
Opinion about lockdown	0.369	0.221	2.795	1	0.095	1.447	(0.938, 2.231)
Constant	0.295	1.431	0.042	1	0.837	1.343	
Dependent variable Depression, Model percentage = 88.2							
Practices following to prevent transmission of COVID-19	-0.112	0.045	6.254	1	0.012	0.894	(0.819, 0.976)
Impacted by lockdown	1.426	0.309	21.368	1	0.000	4.164	(2.274, 7.623)
Age	-0.043	0.014	9.153	1	0.002	0.958	(0.932, 0.985)
Stressed of catching COVID 19 infection	0.454	0.234	3.78	1	0.052	1.575	(0.996, 2.489)
Opinion about lockdown	0.58	0.218	7.073	1	0.008	1.785	(1.165, 2.737)
Constant	-0.8	1.543	0.269	1	0.604	0.449	

B = Regression Coefficient, S.E. = Standard Error, Wald = Wald's Coefficient, df= Degree of Freedom.

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Discussion

We observed that less than 45% participants had good knowledge regarding COVID-19 with the mean score of 19.68 out of 25. News portals (82.4%) and social media (64%) were the most used sources of information about COVID-19. Higher percentage of Males, people from the metropolitan area and those people who were stressed about catching COVID-19 infection (self or loved ones) were having better knowledge. In a study conducted by Abdelhafiz AS et al., in Egypt, the authors observed a mean knowledge score of 16.39 (out of 23) with social media being a source of knowledge among 66.9% participants [16].

They also concluded lower knowledge in rural populations. Hence the findings were like our study. Zhong BL et al., conducted an online survey in China, in which they observed that the mean score on the 12-question based scale was 10.8, which was like our observation [17]. However they observed significantly better knowledge among females as compared to males. Methods of sampling and socio-cultural differences in study population may account for the differences in observations. In an Indian study, Roy D et. al., observed that most of the participants had variable knowledge, majority participants were able to answer some questions like frequent hand washing being mode of prevention correctly, however many also failed to identify fever as a symptom of COVID-19 [18].

We observed desirable practices among 85.7% participants. Hand washing and regular use of masks were reported by 94.6% and 88.6% participants, respectively. In a study conducted in Anhui province of China, Chen Yet.al., observed good practices regarding COVID-19. They reported use of masks in 93.6% participants [19]. In an Iranian study, Taghrir MH et al., observed 94.2% participants practicing high level of preventive behaviours [20]. However the study population consisted of medical students, hence better practices are expected among them.

In our study, most participants believed that lockdown was absolutely necessary (91.5%). About third of the people were severely impacted due to lockdown, especially those living away from the family. In a sentiment analysis done by Barkur et al. in India using twitter, the authors observed that majority of Indians support the decision of lockdown [21].

We calculated the psychological impact with the help of DASS-21 scale. Stress, depression, and anxiety were observed in 9.3%, 14.5% and 12% respondents, respectively. These were more common among respondents who were stressed about catching COVID-19, did not believe that lockdown was absolutely essential and those who were severely impacted by lockdown. In a similar study from China Wang C et al., reported 8.1% respondents having moderate to severe stress levels; 28.8% reported moderate to severe anxiety symptoms and 16.5% reported moderate to severe depressive symptoms [22].

Zhang SX et al., observed increased distress in Chinese residents during confinement, especially among those who stopped working due to confinement [23]. In a study conducted among the Italian general population Moccia L et al., reported psychological distress among 38% participants [24]. It is common to observe varying degree of distress following COVID-19 and lockdown. However, the symptoms reported participants may have varied due to the geographical distribution and also due to prevalence of COVID-19 infection in the country.

Conclusion

Overall, the level of knowledge regarding COVID-19 and its prevention was found to be unsatisfactory. News portals and social media were the most important sources of knowledge. The myths like the preventive effect of high atmospheric temperatures and garlic were common. Males and urban residents generally had better knowledge. People who had better knowledge seemed to be more worried about catching the disease. Desirable practices were commonly reported among the people, but significant minorities failed to adhere to safety precautions like maintaining social distancing. The decision of lockdown was supported by the majority of participants. However, a substantial section of people was severely impacted by the lockdown.

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People were prone to develop stress, depression, and anxiety during these situations. Those who were stressed about oneself or their loved ones getting COVID-19 infection, and those severely impacted by lockdown were found to be more prone to develop psychological problems. Better dissemination of knowledge with more thrust on busting myths regarding the disease is essential. People should be assured about getting concrete support in case of difficulties during and aftermath of the lockdown. Better assessment of psychological effects of the pandemic and lockdown is required.

Limitations of the study

Due to the nature of the study and presence of lockdown at the time of data collection, it was very difficult for the authors to exert any control in recruitment of participants or the environment during data collection. Any verification of answers provided by participants was not possible. Many confounders like previous mental conditions, other stressors etc., were not considered. Results cannot be directly extrapolated to society as the sample was not representative of the population.

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