

Original Research

The psychological impact of covid-19 and restrictive measures in world- An original research

Dr. Monica Krishnappa

Assistant professor, RajaRajeswari Medical College and Hospital, Bangalore, Karnataka, India

ABSTRACT:

Introduction: The COVID-19 pandemic has led to a complete shut-down of the entire world and almost all the countries are presently in a “lockdown” mode. This study aimed to evaluate the psychological impact of lockdown due to COVID-19 pandemic on the general public with an objective to assess the prevalence of depression, anxiety, perceived stress, well-being, and other psychological issues. **Materials and Methods:** It was an online survey. The survey questionnaire included perceived stress scale, Patient Health Questionnaire-9, stress, anxiety, depression, and mental well-being, respectively. The survey link was circulated starting from April 6, 2020 and was closed on April 24, 2020. **Results:** During the survey, a total of 1871 responses were collected, of which 1685 (90.05%) responses were analyzed. About two-fifth (38.2%) had anxiety and 10.5% of the participants had depression. Overall, 40.5% of the participants had either anxiety or depression. Moderate level of stress was reported by about three-fourth (74.1%) of the participants and 71.7% reported poor well-being. **Conclusion:** We can conclude that two-fifth of the people are experiencing anxiety and depression, due to lockdown and the prevailing COVID-19 pandemic. This finding suggests that there is a need of expanding the mental health services to everyone in the society during this pandemic situation.

Key words: COVID-19, Adults, Lock Down, Stress

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Corresponding author: Dr. Monica Krishnappa, Assistant professor, RajaRajeswari Medical College and Hospital, Bangalore, Karnataka, India

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INTRODUCTION

“Lockdown” is an emergency protocol that prevents public from moving from one area to the other. As social distancing is an important public health solution to tackle the spread of COVID-19, many affected countries such as China, Italy, the United States, France, and Malaysia have also enforced lockdowns of public spaces effectively. [1- 6]

While lockdown can be a significant and effective strategy of social distancing to tackle the increasing spread of the highly infectious COVID-19 virus, at the same time, it can have some degree of psychological impact on the public. It is well known that quarantine/isolation for any cause and in the context of a pandemic (Severe Acute Respiratory distress Syndrome, 2003) has been associated with significant mental health problems ranging from anxiety, fear, depressive symptoms, sense of loneliness, sleep disturbances, anger, etc., in the immediate few days of isolation, and later with symptoms of posttraumatic stress disorder and depression after discharge from the

hospital.[7] However, the psychological impact of lockdown on the general public has not been studied yet. Lockdown can have different effects on different age groups. It may be difficult to engage the children at home throughout the day. This can be a source of stress to the parents. Similarly, due to the vulnerability of elderly for COVID-19 infections, others would avoid to meet the elderly, which can be a major source of distress, both for the elderly and their family members. [8-15] Moreover, recent reports suggest that the government’s sudden enforcement of lockdown has created many hurdles to the economically disadvantaged populations as evident from the mass exodus of migrant workers and concerns about starvation among people in slum areas.[4,11] However, no national-wide data on the psychological impact of lockdown in India are available. Therefore, the current study was planned with an aim to evaluate the psychological impact of lockdown on the general public with an objective to assess the fear, perceived stress, and psychological

problems related to lockdown due to COVID-19 infection in India.

MATERIALS AND METHODS

It was an online survey. The survey questionnaire consisted of the following instruments:

DEMOGRAPHICS AND PERSONAL CHARACTERISTICS

PATIENT HEALTH QUESTIONNAIRE-9

The Patient Health Questionnaire (PHQ) is a self-administered version of the PRIME-MD diagnostic instrument for common mental disorders.[15] The PHQ-9 is the depression module, which scores each of the 9 Diagnostic and Statistical Manual-IV criteria as "0" (not at all) to "3" (nearly every day). This questionnaire is found to have excellent reliability and validity, and sensitivity and specificity of 88% for major depression.

It is a 7-item anxiety scale with good reliability as well as criterion, construct, factorial, and procedural validity. Cutoff points of 5, 10, and 15 are interpreted as representing mild, moderate, and severe levels of anxiety on the Generalized Anxiety Disorder (GAD)-7.[16] Increasing scores on the scale are strongly associated with multiple domains of functional impairment. Although GAD and depression

symptoms frequently co-occurred, factor analysis confirmed them as distinct dimensions. Moreover, GAD and depression symptoms have differing but independent effects on functional impairment and disability. There is good agreement between self-report and interviewer administered versions of the scale. This study employed self-reported version.

It is a 10-item scale widely used to assess the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress.[17] The questions are of a general nature and hence are relatively free of content specific to any subpopulation group. The questions in the perceived stress scale (PSS) ask about feelings and thoughts during the last month. It has adequate psychometric properties.[18] For this survey, we had reduced the time limit to 15 days.

The study was approved by the Ethics Committee. Descriptive statistics were applied and the data collected was analyzed using SPSS 20.0 version. Pearson's co-relation co-efficient and Spearman's co-relation co-efficient were used to find the association between different variables.

RESULTS

During the survey, a total of 1871 responses were collected of which 1685 (90.05%) responses were analyzed. The mean age of the participants (1653 responses) was 41.26 (SD: 13.67) years. About three-fifths of the participants (63.7%) were male, about three-fourth were married (72.6%), three-fifth had completed postgraduation (61.8%), majority were employed (self-employed/employed in government sector or private sector) (78.9%). With regard to profession, slightly less than half of the responders (47.1%) were health-care workers (HCWs). In terms of current level of working during lockdown, about one-fifth of responders (21.1%) were not going to work and rest were either working from home for few hours (17.7%) or for usual hours (8.5%) and some were going for work for few hours (16.6%).

Regarding somatic symptoms, sleep, appetite and fatigue, there was slight worsening (increase) in these features in about one-fifths of responders [Table 1]. About one-third to about three-fifth of the participants reported slight or marked increase in activities such as exercise, faith in God, watching movies, internet gaming, playing indoor games, sexual activity, reading books, painting, cooking, and cleaning [Table 1]. There was marked reduction in shopping and spending in a significant proportion of the participants. More than one-third of the participants (38.5%) had fear of getting infected with COVID-19 infection, always wore masks and protective equipment even in open spaces (37.9%), invested majority of their time reading or watching COVID-related facts (38.5%), and had anxiety when dealing with febrile patients/family members (38.8%). One-fourth of the responders reported feelings of pessimism or hopelessness (23.3%), feeling detached from others (24.0%), feeling exhausted (24.3%) and had trouble falling asleep/frequent awakenings (27.7%). Further, about one-fifth of the responders reported having avoided COVID-19-related information (20.8%), had anxiety/palpitations (19.3%) and had deterioration in the work performance (19.3%). About 30% of the participants reported of feeling irritated and angry on self or others, and with the uncertainty about frequent modifications of infection control procedures (32.0%). About one-fourth of the participants also reported fear of going out of home, because of fear of infecting family members. **Table 2**

Table 1: Effect of lockdown on one's emotions, feelings, and various aspects of life

	No change	Slightly increased	Markedly increased	Slightly decreased	Markedly decreased	Cannot say
Sadness	613 (36.4)	518 (30.7)	181 (10.7)	175 (10.4)	96 (5.7)	102 (6.1)
Anxiety	509 (30.2)	606 (36.0)	218 (12.9)	203 (12.0)	98 (5.8)	51 (3.0)
Irritability	595 (35.3)	545 (32.3)	213 (12.6)	184 (10.9)	97 (5.8)	51 (3.0)
Frustration	59 (35.2)	545 (32.3)	231 (13.7)	146 (8.7)	101 (6.0)	69 (4.1)
Loneliness	709 (42.1)	359 (21.3)	248 (14.7)	160 (9.5)	127 (7.5)	82 (4.9)
Social connectedness	579 (34.4)	315 (18.7)	167 (9.9)	295 (17.7)	268 (15.9)	61 (3.6)
Social isolation	527 (31.3)	378 (22.4)	385 (22.8)	176 (10.4)	139 (8.2)	80 (4.7)
Fear and apprehension	575 (34.1)	569 (33.8)	222 (13.2)	165 (9.8)	91 (5.4)	63 (3.7)
Fear of death	893 (53.0)	351 (20.8)	176 (10.4)	73 (4.3)	60 (3.6)	132 (7.8)
Sleep	652 (38.7)	367 (21.8)	225 (13.4)	285 (16.9)	104 (6.2)	52 (3.1)
Appetite	880 (47.5)	378 (22.4)	182 (10.8)	261 (15.5)	39 (2.3)	25 (1.5)
Pain	1103 (65.5)	190 (11.3)	158 (9.4)	97 (5.8)	37 (2.2)	100 (5.9)
Fatigue	836 (49.6)	372 (22.1)	162 (9.6)	157 (9.3)	98 (5.8)	60 (3.6)
Exercise	569 (33.8)	376 (22.3)	193 (11.5)	247 (14.7)	248 (14.7)	52 (3.1)
Substance use, including alcohol	1009 (59.9)	173 (10.3)	125 (7.4)	78 (4.6)	157 (9.3)	143 (8.5)
Use of social media	323 (19.2)	489 (29.0)	591 (35.1)	140 (8.3)	108 (6.4)	34 (2.0)
Faith in god	844 (50.1)	308 (18.3)	358 (21.2)	74 (4.4)	67 (4.0)	34 (2.0)
Watching movies	515 (30.6)	534 (31.7)	436 (25.9)	107 (6.4)	58 (3.4)	35 (2.1)
Internet gaming	913 (54.2)	311 (18.5)	269 (16.0)	57 (3.4)	50 (3.0)	85 (5.0)
Playing indoor games (without using the gadgets)	813 (48.2)	417 (24.7)	227 (13.5)	69 (4.1)	54 (3.2)	105 (6.2)
Sexual activity	945 (56.1)	241 (14.3)	165 (9.8)	109 (6.5)	112 (6.6)	113 (6.7)
Shopping	477 (28.3)	196 (11.6)	61 (3.6)	188 (11.2)	707 (42.0)	56 (3.3)
Spending	377 (22.4)	160 (9.5)	60 (3.6)	370 (22.0)	681 (40.4)	37 (2.2)
Reading books	599 (35.5)	529 (31.4)	264 (15.7)	133 (7.9)	114 (6.8)	46 (2.7)
Drawing/painting	1018 (60.4)	252 (15.0)	211 (12.5)	23 (1.4)	33 (2.0)	148 (8.8)
Cooking	596 (35.4)	461 (27.4)	449 (26.6)	72 (4.3)	42 (2.5)	65 (3.9)
Cleaning	380 (22.6)	603 (35.8)	505 (30.0)	118 (7.0)	52 (3.1)	27 (1.6)

Table 2: Stress due to coronavirus disease-19 infection

Variable	Frequency (%)	
Yes	No	Not applicable
Feared getting infected more severely with corona virus 648 (38.5)	900 (53.4)	137 (8.1)
Feeling pessimism or hopelessness 393 (23.3)	1172 (69.6)	120 (7.1)
Absence of emotional response - feeling numb/no happiness or sadness 324 (19.2)	1162 (69.0)	199 (11.8)
Feeling exhausted 409 (24.3)	1119 (66.4)	157 (9.3)
Reduced awareness or being in a daze/feeling confused/unable to think clearly 311 (18.5)	1249 (74.1)	125 (7.4)
Feeling detached from others 404 (24.0)	1155 (68.5)	126 (7.5)
Always wore mask and protective equipment even in open spaces 639 (37.9)	940 (55.8)	106 (6.3)
Invest majority of free time reading or watching corona virus-related information 649 (38.5)	968 (57.4)	68 (4.0)
Anxiety when dealing with febrile patients/family members 653 (38.8)	781 (46.4)	251 (14.9)
Avoided corona virus related information 350 (20.8)	1186 (70.4)	149 (8.8)
Had anxiety/palpitations 325 (19.3)	1284 (76.2)	76 (4.5)
Felt irritated/angry on self or others 526 (31.2)	1087 (64.5)	72 (4.3)
Had trouble falling asleep/frequent awakening (27.7) 467	1156 (68.6)	62 (3.7)
Uncertainty about frequent modification of infection control procedures 540 (32.0)	1001 (59.4)	144 (8.5)
Poor concentration and felt indecisive 409 (24.3)	1156 (68.6)	120 (7.1)
Afraid to go to home because of fear of infecting family 402 (23.9)	1013 (60.1)	270 (16.0)
Deteriorating work performance 325 (19.3)	1103 (65.5)	257 (15.3)
Reluctant to work or consider resignation after discharge 163 (9.7)	1109 (65.8)	413 (24.5)
Depressed mood - feeling low most part of the day 276 (16.4)	1238 (73.5)	171 (10.1)
Stigmatization and rejection in neighborhood because of hospital work/being kept in quarantined facility 173 (10.3)	1069 (63.4)	443 (26.3)

DISCUSSION

India was quite early in its response to impose lockdown, as early as, within 2 weeks of declaration of COVID-19 as a pandemic. In this regard, the current study was planned to evaluate the psychological impact of lockdown on the general public with an objective to assess the fear, perceived stress, and psychological problems related to lockdown due to COVID-19 pandemic in India. [19-22]

In the present study, in general, majority of the participants reported positive impact of the lockdown on the relationship dimension in terms of relationship with parents, children, spouse, colleagues, and neighbors. The improved relationship could be attributed to the availability of more free time, less work pressure and possible fulfillment of long desired free time. However, the improved relationship dimensions could also be attributed to the fact that, when everyone is fighting a common enemy, the

The prevalence rates of depressive symptoms and anxiety symptoms based on cut off scores of PHQ-9 and GAD-7 were 10.5% and 38.2%, respectively. The prevalence of anxiety found in the present study is comparable to the previous study from China, but the prevalence rate of depression is lower. The lower rate of depression in the present survey, compared to the study from China, could be due to the difference in the timing of the study, in terms of the number of COVID-19 cases in the country. [23-25]

interpersonal relationship issues are forgotten, which is possibly reflected as improved relationships. Another explanation for the improved relationship could be a fear of death, which often makes people perceive themselves as weak, and hence, have less initiative to fight with others. [7,25,21]

However, despite improvement in the interpersonal dimension, there was increase in the prevalence of negative emotions such as sadness, loneliness, anxiety, frustration, and fear and apprehension in

about one-third to nearly half of the participants. All these findings reflect the fear of infection of contracting COVID-19. While fear of contracting COVID-19 can be considered as justified, considering the worldwide mortality and infection rates, but these could also be attributed to the issues such as media hype and prevailing myths related to COVID-19 infection.[21,22]

This survey has certain limitations. Despite attempts to circulate widely in all possible social media platforms, wider participation was expected. Accordingly, it can be said that the response rate for the survey was low. About half of the participants were doctors, which suggest that the survey did not have the desired snowballing effect, as much as it was expected. A majority of the participants were postgraduates, which was possibly again influenced by the higher proportion of participants being doctors. The survey was limited to those, who had access to a smart phone device and it can be said that the study participants may not be representative of people from various strata of the country. However, considering the situation, this was the possible best methodology to reach to the people to understand the psychological impact. These limitations suggest that the findings may not be generalizable to every strata of the society.

CONCLUSIONS

To conclude, the present survey suggests that more than two-fifth of the people are experiencing anxiety and depression, due to lockdown and the prevailing COVID-19 pandemic. This finding suggests that there is a need of expanding the mental health services to everyone in the society during this pandemic situation.

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