

COVID-19 and Lockdown: A study on the Impact on Mental Health

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Abstract

Covid-19 pandemic has caused havoc worldwide. India is also going through a challenging situation as the number of infected/positive cases is increasing day by day. With strict preventive measures and restrictions by the Indian Government in the form of nationwide lockdown, the citizens are going through a range of psychological and emotion reactions, fear and uncertainty being one of them. This study was conducted with the aim of exploring the impact of Covid-19 and lockdown on the mental health of individuals. DASS-21 was used to assess Depression, Anxiety and Stress among 1000 respondents. Results suggest that there is a significant difference among Depression, Anxiety and Stress across age, gender and employment. Also, Depression was found to be high among the respondents of age range 15-35 years, Anxiety was found to be prevalent among those belonging to 21-25 years of age and Stress was found to be high in individuals of 21-25 years of age.

Keywords: *Covid-19, pandemic, mental health, psychological distress, wellbeing*

Introduction:

The word "pandemic" is derived from the Greek word "pandemos" wherein "pan" means "all" and "demos" means "people or population" i.e. "all the people". A pandemic is an epidemic which crosses international boundaries and affects all (nearly all) of the people. Other term used simultaneously is 'epidemic'. An epidemic ("epi" means "upon") as explained by the WHO, is the regional outbreak of an illness that spreads unexpectedly. It refers to an increase, often sudden, in the number of cases of a disease beyond what is

normally expected in the population of an area. Examples of epidemics in India in the past include the outbreaks of zika virus, chikungunya and dengue fever.

The World Health Organisation (2001) defined Pandemic as “an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people”. This definition does not include anything about population immunity, virology or disease severity. Pandemics can be said to occur annually in each of the temperate southern and northern hemispheres, given that seasonal epidemics cross international boundaries and affect a large number of people. However, seasonal epidemics are not considered pandemics. (WHO, 2001)

Coronaviruses are a large group of viruses that are known to infect both humans and animals, and in humans cause respiratory illness that range from common colds to much more serious infections. The previous well-known case of a coronavirus epidemic was Severe Acute Respiratory Syndrome (SARS), which was first detected in southern China in 2002, and then spread to 26 countries resulting in more than 8,000 cases and 774 deaths.

The Covid-19 disease was initially thought of as viral infection and first time on 31 December, 2019 World Health Organisation’s China office heard the reports of an unknown virus (hence the name novel coronavirus) behind large number of Pneumonia cases, in Wuhan city of Eastern China. Apparently, the disease originated from a sea food market of Wuhan where wild animals, birds, marmots, rabbits, bats, snakes etc are illegally traded. It is known that coronaviruses can jump from animals to humans, hence the first people to become infected with this disease are primarily from the sea food market who got infected from being in touch with animals. (WHO, 2020)

While it is still unclear and studies are going on to find the exact source of Covid-19. Zhou, Yang, Wang et al., 2020 from the Wuhan Institute for Virology released a detailed paper showing that the new coronaviruses' genetic makeup is 96 per cent identical to that of a coronavirus found in bats.

This disease which started as an epidemic mainly limited to China was declared as a pandemic on 11th March 2020 by the WHO. There have now been over 12,16,422 confirmed cases worldwide (WHO, 2020) and more 53,211 deaths, according to the John Hopkins University Covid-19 dashboard, which collates information from national and international health authorities. The disease has been detected in more than 200 countries and

territories, with Italy, the US and Spain experiencing the most widespread outbreaks outside of China.

The Chinese Government responded and closed the Wuhan city in an effort to contain the outbreak. However, the disease crossed international borders and reached different countries like USA, Italy, Spain, Iran etc. By the start of April, countries like USA and Italy have surpassed the number of cases reported in China. As reported on 3rd April, new epicentre of this disease is USA where around 3 lakh individuals have been reported to be affected by Covid-19.

(Coronavirus disease (COVID-19) is an infectious disease and shares many of its symptoms with the flu or common cold, although there are certain symptoms common to flu and colds that are not usually seen in Covid-19. People with confirmed cases of Covid-19 rarely suffer from a runny nose, for instance. The most common Covid-19 symptoms are fever and dry cough. Of the 55,924 early Chinese cases of the disease, nearly 90 per cent of patients experienced fever and just over two-thirds suffered with a dry cough. That's why the UK government is advising anyone with a high temperature or a new, continuous cough to stay at home for seven days or, if they live with other people, for the entire household to isolate for 14 days from the first onset of symptoms.

Other Covid-19 symptoms are less common. Just under 40 per cent of people with the disease experience fatigue, while a third of people cough up sputum – a thick mucus from within the lungs. Other rarer symptoms include shortness of breath, muscle pain, sore throats, headaches or chills, loss of smell or taste. According to the WHO, symptoms tend to appear between five and six days after infection.

The disease causes respiratory illness (like the flu) with symptoms such as a cough, fever, and in more severe cases, difficulty breathing. It spreads primarily through contact with an infected person when they cough or sneeze. It also spreads when a person touches a surface or object that has the virus on it, then touches their eyes, nose, or mouth.

With more than 4000 reported cases in India (06, April 2020), Covid-19 is creating havoc among the masses. First case was reported on 30 January in Kerala followed by 3 more cases by 03 February. Numbers escalated in March after a Sikh preacher who returned from travel to Italy and Germany, carrying the virus, and later turned into "super spreader" by attending a Sikh festival in Anandpur Sahib. Amid the worsening situation, Indian Prime Minister Narendra Modi asked for a Curfew to be observed on 22 March from 7am to 9 pm. This

measure aimed at creating awareness among masses and acknowledging the work of healthcare professionals involved in combatting the Covid-19 pandemic. On 24 March 2020, Prime Minister announced a nationwide lockdown in order to control the pandemic and contain the infection from spreading further.

All these measures in place, but still India is facing a crisis situation as the number of positive cases keep on rising. According to report of Business Today (06 April 2020) due to shortage of PPE equipment and facilities the healthcare professionals are at huge risk across the country, which has been turning into nightmare with the number of medical professionals including doctors and nurses are getting infected while treating the patients.

Due to its tremendous infectious ability the disease has instilled a considerable degree of fear, worry and concern in the population at large and among certain groups in particular, such as older adults, care providers and people with underlying health conditions.

In public mental health terms, the main psychological impact to date is elevated rates of stress or anxiety. But as new measures and impacts are introduced – especially quarantine and its effects on many people's usual activities, routines or livelihoods – levels of loneliness, depression, harmful alcohol and drug use, and self-harm or suicidal behaviour are also expected to rise.

In this crisis situation of lockdown amid Covid-19 pandemic, health and mental health professionals face challenge due to very less information regarding the psychological impact and underlying mental health conditions of general public. There is a looming uncertainty due to outbreak of such unparalleled magnitude affecting individuals across the globe. Researchers are busy exploring the genomic characterisation of the virus, identifying the epidemiology and clinical characteristics of infected patients and the challenges faced by healthcare authorities and functionaries. However less focus is being paid towards the impact of Covid-19 on mental health of individuals in India. (MOHFW, 2020)

Therefore, this study aims at assessing the mental health of individuals during lockdown amid Covid-19 pandemic in India. This study aims at finding the prevalence of psychiatric symptoms viz. Depression, Anxiety and Stress across gender, age etc. This study will further assist the government agencies and healthcare professionals by providing them beneficial information which can be used to safeguard the psychological wellbeing at community level in India.

Methodology:

In order to assess Depression, Anxiety and Stress among the residents of Uttar Pradesh, Depression Anxiety and Stress Scale (DASS- 21) was administered. DASS is a reliable tool to assess the psychological distress in clinical and non-clinical population (Lovibond PF,1995). A section of demographic profile (Age, Gender and Employment) was added. A google forms was created and it was randomly circulated among 1500 resident of Uttar Pradesh state of India in the month of April 2020.

Result and Analysis:

Out of 1500 people to whom online questionnaire was distributed, only 66.66% (1000) filled the questionnaire. Out of these 1000 samples 38% (380) were male and 62% (620) were female. Out of the total respondents 18%(180) where in the age group of 15-20 years, 42%(420) were in age group of 21years to 25 years, 18%(180) were in the age group of 26 to 39 years, 15.5%(155) were in the age group of 31-35 years, 2%(20) belonged to the age group of 36 to 40, 2.5%(25) were in the age group of 41 to 45 years and 2%(20) were in the age group of 46 to 50 years old. Finally, with respect to employability 50% (500) were employed and 50% (500) were unemployed.

The analysis was carried out with the help of SPSS software version 23. Crosstabulation and

Table 1

Age	Anxiety					P Value
	Normal	Mild Anxiety	Moderate Anxiety	Severe Anxiety	Extremely Severe Anxiety	
15-20	116	0	24	16	24	.000
21-25	190	59	24	71	76	
26-30	124	32	8	16	0	
31-35	76	23	36	20	0	
36-40	20	0	0	0	0	
41-45	24	1	0	0	0	
46-50	20	0	0	0	0	
Total	570	115	92	123	100	

Chi Square Test was used to draw meaningful conclusion.

According to National Mental Health Survey of India 2016, anxiety was highest in the age bracket of 40 to 49 years of age but in the current study the age group between 21 years to 25 years had more anxiety (Table 1) when compared to other age group, whereas the people in age group of 41 years and above had no or mild anxiety. This might be due to uncertainty in the future regarding job and career. There is a significant difference (.000) between the age and anxiety.

Table 2

Age	Stress					P Value
	Normal	Mild Stress	Moderate Stress	Severe Stress	Extremely Severe Stress	
15-20	104	16	4	20	36	.000
21-25	247	44	41	72	16	
26-30	136	8	32	4	0	
31-35	95	16	40	4	0	
36-40	20	0	0	0	0	
41-45	21	4	0	0	0	
46-50	20	0	0	0	0	
Total	643	88	117	100	52	

The age group of 21 years to 25 years showed the most sign of stress (50% severe stress) (Table 2) whereas the stress was least in the age group of 46 years and above. However, the National Mental Health Survey of India 2016, suggests that stress was highest in the persons belonging to age range 40-49 years. Possible reason for this might be the millennials going through lots of turmoil due to lockdown which is affecting their personal and professional relationships and dynamics. There is a significant difference between age and stress.

Table 3

Age	Depression					P Value
	Normal	Mild Depression	Moderate Depression	Severe Depression	Extremely Severe Depression	
15-20	104	0	40	0	36	.000
21-25	235	88	21	28	48	
26-30	136	1	39	0	4	
31-35	79	32	24	20	0	
36-40	20	0	0	0	0	
41-45	21	4	0	0	0	
46-50	16	4	0	0	0	
Total	611	129	124	48	88	

The sign of depression was most visible in the age group of 15 years to 35 years (Table 3), it ranges from mild to extreme severe Depression, whereas the age group in the range of 36 years and above were more or less normal or showed mild symptom of Depression. This is in contrast to the National Mental Health Survey of India 2016 findings which found that Depression was highest in the individuals belonging to age range 40-49 years. This shift in age range can be attributed to the current lockdown and crisis situation amid the Covid-19 pandemic. There is a significant difference between depression and age.

Table 4

Gender	Anxiety					P Value
	Normal	Mild Anxiety	Moderate Anxiety	Severe Anxiety	Extremely Severe Anxiety	
Male	206	31	48	39	56	.000
Female	364	84	44	84	44	
Total	570	115	92	123	100	

The above table 4, suggests that level of Anxiety was high in women as compared to their male counterpart. This is in sync with the findings of National Mental Health Survey of India 2016, which suggest that women show higher level of Anxiety as compared to males. This

could be linked to difference in processing of Serotonin in female brain as compared to male brain which results in dissimilar manifestations of symptoms. There is a significant difference (.000) in anxiety in relation to gender.

Table 5

Gender	Stress					P Value
	Normal	Mild Stress	Moderate Stress	Severe Stress	Extremely Severe Stress	
Male	171	56	93	32	28	.000
Female	472	32	24	68	24	
Total	643	88	117	100	52	

From table 5, one can conclude that the Stress level was higher in males as compared to females. However, study by APA, 2010 suggests that women are more likely to be stressed as compared to their male counterparts as women tend to attribute their stress to money and economy whereas males do not attribute their stress to work. There is a significant difference (.000) among gender with regard to Stress.

Table 6

Gender	Depression					P Value
	Normal	Mild Depression	Moderate Depression	Severe Depression	Extremely Severe Depression	
Male	212	45	67	20	36	.002
Female	399	84	57	28	52	
Total	611	129	124	48	88	

The current study shows that men are more depressed as compared to women due to the current Covid-19 crisis (Table 6). This is in sync with the findings of National Mental Health Survey of India 2016, which suggests that Depression was more prevalent in males than females. This can be attributed to the ongoing lockdown and change in daily routines, work life balance and looming uncertainty in career and job prospects. There is a significant difference (.002) among gender in regard to Depression.

Table 7

Employment	Anxiety					P Value
	Normal	Mild Anxiety	Moderate Anxiety	Severe Anxiety	Extremely Severe Anxiety	
Employed	310	55	44	55	36	.007
Unemployed	260	60	48	68	64	
Total	570	115	92	123	100	

Overall, the unemployed show less features of Anxiety as compared to their employed counterparts, but when we look at the cases of severe to extreme severe anxiety, we find that unemployed group rate much higher than those employed. The study by Iman and Ansari 2018 found that Depression and Anxiety was high among unemployed individual. This again can be attributed to the lack of daily routine and scheduling which affects the psycho-social functioning of individuals. There is a no significant difference (.007) between the employability and stress.

Table 8

Employment	Stress					P Value
	Normal	Mild Stress	Moderate Stress	Severe Stress	Extremely Severe Stress	
Employed	319	44	93	36	8	.000
Unemployed	324	44	24	64	44	
Total	643	88	117	100	52	

From table 8, it is clear that there was no difference in the Stress level of both employed and unemployed. However, the unemployed group showed more symptom of severe to extremely severe Stress when compared with employed. Stress was linked to employment status, the findings of Iman and Ansari 2018 suggest that employed individuals show high level of stress, which can be attributed to working conditions, work culture, salary, attitude of

colleagues etc. This all leads to stress or work-related stress. There is a significant difference (.000) between the employability and stress.

Table 9

Employment	Depression					P value
	Normal	Mild Depression	Moderate Depression	Severe Depression	Extremely Severe Depression	
Employed	332	77	47	24	20	.000
Unemployed	279	52	77	24	68	
Total	611	129	124	48	88	

The features of depression were more visible in unemployed as compared to employed persons (Table 9). This finding is in sync with the findings of Iman and Ansari 2018, which suggest that employed persons show high Depression and Anxiety. There is a significant difference (.000) between the employability and depression.

Conclusion:

The study revealed that Covid-19 is creating psychological distress among the individuals, as there are restrictions due to lockdown people are forced to stay home. Individuals are going through a crisis situation and feeling lack of control on their lives due to lockdown and restrictions imposed upon them. Young adolescents and adult age group is facing uncertainty with respect to career and professional life, jobs are at stake. Fear of infection is creating a panic situation among them.

There is increase in levels of Anxiety, Stress and Depression specially among young group i.e. 15-35 years however, the previous studies have shown that the Anxiety, Stress and Depression are more prevalent in older age group i.e. 40-49 years age range. The study is in tune with the findings of National Mental Health Survey of India 2016 which suggested that Anxiety is higher in females whereas males are depressed and stressed as compared to females. There is a significant difference between those who are employed and those unemployed in respect to stress and depression whereas in case of anxiety there is no significant difference between the both.

Recommendations:

Findings of this study provide direct information about the mental health conditions, their prevalence and contributing factors, hence can be used to develop psychological interventions that can positively deal with the underlying psychological conditions amid Covid-19 outbreak. It can also act as a baseline for evaluation, preventing and controlling and help in psychosocial rehabilitation of the affected individuals.

Limitations:

This study used self-report tool (DASS-21) for assessing the psychological impact, Depression, Anxiety and Stress which may not be as effective as being assessed by trained mental health professionals, adding to limitation of this study. Moreover, one group of samples (eg. students) from the population, has been oversampled, hence it can be considered as selection bias adding to another limitation of this study.

References:

- Last JM, editor. *A dictionary of epidemiology*, 4th edition. New York: Oxford University Press; 2001.
- Yan, Sophia; Wallen, Joe (21 January 2020). "China confirms human-to-human spread of deadly new virus as WHO mulls declaring global health emergency". *The Daily Telegraph*. Retrieved 07 April 2020.
- "40,000 Indians quarantined after 'super spreader' ignores government advice". *The Telegraph*. 28 March 2020.
- Grace, S.L. et al. (2005). The occupational and psychosocial impact of SARS on academic physicians in three affected hospitals. *Psychosomatics*, 46, 385-391.
- Centers for Disease Control (2007, February). Interim pre-pandemic planning guidance: Community strategy for pandemic influenza mitigation in the United States.
- Lazarus, P.J., Jimerson, S.R., & Broch, S.E. (2003). Helping children after a natural disaster: Information for parents and teachers. In S. E. Brock, P.J. Lazarus, & S. R. Jimer
- Lin, C.Y. et al. (2007). Psychological effect of severe acute respiratory syndrome on emergency department staff. *Emergency Medicine Journal*, 24, 12-17
- World Health Organization (2009) Pandemic (H1N1) 2009 - Update 63. http://www.who.int/csr/don/2009_08_28/en/index.html.
- World Health Organization (2009) Influenza a(H1N1).

- http://www.who.int/mediacentre/news/statements/2009/h1n1_20090429/en/index.html
- Fraser C, Donnelly CA, Cauchemez S, Hanage WP, Van Kerkhove MD, et al. (2009) Pandemic Potential of a Strain of Influenza a (H1N1): Early Findings. *Science* 1176062.
- World Health Organisation (2020) Mental health and psychological resilience during the COVID-19 pandemic <http://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/news/news/2020/3/mental-health-and-psychological-resilience-during-the-covid-19-pandemic>
- Stallman HM. Prevalence of psychological distress in university students – Implications for service delivery. *Aust Fam Physician*. 2008;37:673–7
- Khan MS, Mahmood S, Badshah A, Ali SU, Jamal Y. Prevalence of depression, anxiety and their associated factors among medical students in Karachi, Pakistan. *J Pak Med Assoc*. 2006;56:583–6.
- American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Arlington, VA: American Psychiatric Association; 2013
- Lepine JP., Pariente P., Boulenger JP., et al Anxiety disorders in a French general psychiatric outpatient sample. Comparison between DSM-III and DSM-III-R criteria. *Soc Psychiatry Psychiatr Epidemiol*. 1989;24(6):301–308.
- Kessler RC., Petukhova M., Sampson NA., Zaslavsky AM., Wittchen HU. Twelve-month and lifetime prevalence and lifetime morbid risk of anxiety and mood disorders in the United States. *Int J Methods Psychiatr Res*. 2012;21(3):169–184.
- Kessler RC., McGonagle KA., Zhao S., et al Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. *Arch Gen Psychiatry*. 1994;51(1):8–19.
- Gururaj G, Varghese M, Benegal V, Rao GN, Pathak K, Singh LK, Mehta RY, Ram D, Shibukumar TM, Kokane A, Lenin Singh RK, Chavan BS, Sharma P, Ramasubramanian C, Dalal PK, Saha PK, Deuri SP, Giri AK, Kavishvar AB, Sinha VK, Thavody J, Chatterji R, Akoijam BS, Das S, Kashyap A, Ragavan VS, Singh SK, Misra R and NMHS collaborators group. National Mental Health Survey of India, 2015-16: Prevalence, patterns and outcomes. Bengaluru, National Institute of Mental Health and Neuro Sciences, NIMHANS Publication No. 129, 2016.
- Linn MW, Sandifer R, Stein S. Effects of unemployment on mental and physical health. *American Journal of Public Health*. 1985; 75(5):502-506.

- Poornima Mahindru, Manoj Kumar Sharma, Santosh Kumar Chaturvedi Job related stress and employment of people with mental illness:A catch 22, Journal of Psychosocial Rehabilitation and Mental Health. 2016; 3(1):31-33.
- Sheldon Rao, Naveen Ramesh. Depression, anxiety and stress levels in industrial workers: A pilot study in Bangalore, India. Industrial Psychiatry Journal. 2015; 24(1):23-28.
- Saligman MEP, Walker ESR, Rosenhan DL. Abnormal Psychology, 4th edition, New York: W. W. Norton and Company, Inc, 2006.