

**PSYCHOLOGICAL IMPACT OF COVID-19 AND LOCKDOWN IN GENERAL  
POPULATION OF HIMACHAL PRADESH****Dr. Kamal Parkash\*, Dr. Subhash Sharma and Dr. Shivalika Sharma**

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**ABSTRACT**

This contextual analysis intended to determine and correlate the psychological effect and stress looked by the individuals at the hour of pinnacle of Coronavirus sickness (COVID-19) outbreak along with lockdown. In this investigation 300 patients were took from Dr. Radha Krishnan Medical college Hamirpur (H.P), India. A study achieved based on physical symptoms during most recent 14 days, segment measurements, areas of mental manifestations utilizing the Depression, Anxiety and Stress Scale (DASS-21). DASS-21 is based upon the three sided model of psychopathology that comprises of a standard distress work with various qualities. The DASS-21 anxiety, depression and stress were higher in mental patients than healthy controls ( $p < 0.001$ ). Genuine concerns about actual wellbeing, outrage and impulsivity and serious self-destructive ideation were essentially higher in mental patients than healthy controls ( $p < 0.05$ ). More than one-fourth of mental patients experienced moderately extreme to serious pressure. Respondents who revealed no change, poor or worse physical health status and had a mental illness were significantly more prone to have higher DASS depression, anxiety and stress. This investigation affirms the seriousness of negative mental effect on mental patients during the COVID-19 pandemic with strict lockdown measures. Understanding the mental effect on psychiatric patients during the COVID-19 pandemic can possibly give knowledge into how to build up another insusceptible psychiatry administration. Further examination is required to compare pro-inflammatory cytokines between psychiatric patients and healthy controls during the pandemic.

**KEYWORDS:** Coronavirus, depression, anxiety, Stress scale and inflammatory.**INTRODUCTION**

India, which as the second biggest populace on the planet is experiencing Covid-19 sickness. The 2019 coronavirus disease (COVID-19) is very infectious and potentially fatal (Colizzi et al., 2020). Right now, India is confronting unpleasant effect from Coronavirus and because of its consolidated dread and lockdown situation, a lion's share of Indians are facing unemployment which will trigger them towards hunger issues, destitution and psychological sickness. Thus, far unmistakably Coronavirus made a blended effect on society including the economy, way of life and climate. It is difficult to envision that the horrible experience of the Coronavirus - 19 pandemic will be failed to remember rapidly or altogether over the long run. The primary instance of the Coronavirus pandemic in india was accounted for on 30th January, 2020, beginning from china. Gradually, the pandemic spread to different states and association domains including the territory of Himachal Pradesh. The principal case was recorded in Himachal Pradesh on 20th March, 2020. By May 18th India examined 1 lakh (0.1 million) infected cases from Covid - 19 and 11th July the cases equalled 8 lakhs. Social separating and

lockdown rules were utilized in india, which anyway additionally affected the economy, human living and environment where a negative effect was noticed for the economy and human existence, the climate got a positive one.

On 22th march Prime Minister Narendra Modi urged individuals to follow 14 hour of Janta Curfew in india. On the 24th march first period of 21 days lockdown began in India.

Due to lockdown, mobility in basic food items and drug store, entertainment and retail, travel to station visits to parks and workplaces reduced by 64.2%, -70.5 1%, -65.6%, -46.17% and -60.03% respectively. To make the lockdown and social separating effective, india additionally leived the law under the Epidemic Disease Act, 1897. This 123 year old legislation permits a state/nation to affect people going by railroads, ship and air travelling was not an option at that time when this law was made and segregate suspects in hospitals, under temporary accommodations or otherwise to prevent the spread of pandemic infection.

Life in India includes urban and rural and the two of them got affected by Covid-19. The disease in transmission on already focal point in all the significant metro and capital urban areas of Indian states. Nonetheless, the both individuals from urban and rural areas face a real traumatized situation. Coronavirus has created a negative impact on human existence also. First to tame the Coronavirus transmission, locked down and social distancing measure was taken. From 24th march 2020 1.3 billion individuals were in lockdown circumstance in india. Social distancing advised in india, is difficult to follow for the poor who lives in slums, small and closed places.

Moreover, abrupt lockdown authorization on 24th march 2020, forced a large number of migrant workers to undergo on uncertain future without family, food and work. Without transport facilities, laborers with newborn children, pragnent ladies and the old were forced to walk on foot. Hence, India experienced the second biggest reverse mass in its history after the partition of india in 1947. Prominent psychosocial issues are expected among migrants for pandemic covid-19 and lockdown. Also orders for workplaces like work from home were exhorted in india which is anyway appropriate just for the rural agricultural based population. Likewise, india actually need places with facility of computers and the internet web. Right now this work from is actually challenging in some parts india. Parallely, the education system is likewise presently at an end due to Coronavirus in india. During this lockdown period, the educational institutions were shut which hampered the general educating learning cycles and training framework due to the inaccessibility of the internet and computers among all the students in the rural india owing to the disparity of financial conditions.

Hospital faced critical time in india. Under the ordinary situation, accessible beds per 10,000 individuals were 3.2 for rural and 11.9 for urban which needed to increase to accommodate Coronavirus patients. Due to the bustling timetable for Coronavirus cases, some interruption and errors were noticed for the other treatments. Little troubles happened for running the children vaccination program for tuberculosis, meningitis, pneumonia, whooping, cough, lockjaw, hepatitis and diphtheria. For grown-ups, disruption of kidney dialysis, chemotherapy administrations were also noticed. Tuberculosis (TB) still possesses the highest level of burden in Indian which generally occurs due to malnutritions associated with poverty.

Lockdown cases had a great expanding impact on the TB cases while they are also vulnerable against Coronavirus cases. Schools, colleges, hotels, railway train coaches, were converted into quarantine facilities while stadiums were converted into isolation wards. Isolation, fear, uncertainty, economic turmoil is namely a few issues that can greatly cause psychological distress among humans due to covid-19. In india poverty, starvation, hunger is as

yet an issue that will be raised due to Coronavirus. Mass joblessness is probably going to make disappointment and drive individuals to ongoing pressure, frustration, discouragement, liquor reliance and self damage.

Reportedly on 12 Feb 2020, a 50 years of age man diagnosed with a viral sickness had a constant dread of getting infected by Coronavirus and this led him to commit suicide. From 19th March to 2nd May, 2020, 338 deaths were accounted because of lockdown which incorporates suicides emerging because of fear from corona, self- disconnection, starvation and financial distress.

Further, suicide cases were enrolled for the reason of restricting liquor during the lockdown period. Further staying at home during the lockdown caused poor physical activity and unhealthy food habits which thus creates weight gain, diabetes and builds the danger of creating cardiovascular illness.

This contextual investigation planned to determine and correlate the psychological impact and stress faced by individuals at the time of pinnacle of Covid illness (COVID- 19) outbreak along with lockdown in Himachal Pradesh. This study have capability to show the varieties in the psychological well being requires in individuals with and without mental sicknesses at the time of pandemic. For future epidemic of infectious disease, it also supports to build up advance immune psychiatry service. It is examined that during COVID-19 outbreak together with lockdown individuals with and without mental illness there were no variations among the degree of anxiety, depression, mental effect and stress.

## 2. METHODS

### 2.1 Respondents

From the information bases of Dr. Radha Krishnan Medical College Hamirpur (H.P), India personal survey face to face questionnaire was asked to patients. 300 patients information were gathered who were infected with corona virus. Among these 300 patients some had effectively mental sickness. All the patients were of 18 years or more. Thus, psychiatric patients were prior analysed by specialists for their psychological sickness like F32 Major Depressive Disorder—single episode, F41 other anxiety disorders, F33 Major depressive—recurrent episodes, that incorporates panic issue, nervousness problem, anxiety disorder, depressive disorder and F41-8 mixed anxiety.

### 2.2 Measures

**The survey comprised of inquiries have various zones like**

Demographic statistics, Depression, Anxiety and Stress Scale (DASS - 21), Physical symptoms that seems like COV ID-19 disease and self-evaluating physical health in last 14 days and some other mental indications. Psychological wellness status was assessed by utilizing the Depression, Anxiety and Stress Scale (DASS-21)

based upon the tripartite model of psychopathology that consist of general distress build with different characteristics. DASS was earlier used in the research related to SARS and COVID-19. The complete ISI score was splitted into:

0-7 = No clinically significant insomnia

8- 12 = Subthreshold insomnia

15-21 = Clinical insomnia (moderate severity)

22-28 = Clinical insomnia (severe)

### 2.3 Statistical Study

Detailed statistics were used to compile the variables and mean. For continuous variables, standard deviation were

used and for categorical variables, frequency and percentage were used. Inferential statistics, in addition to independent sample t-test and Pearson's Chi-square test were used to check out if there was any difference in the resultant variables between the healthy people group and psychiatric patients group. To explore the relationship among the resultant variables and the two groups of people with psychiatric illness and without psychiatric illness along with the demographic variables. Multiple linear regression with a backward selection method was used. Each and every analysis were directed using IBM SPSS Statistics 22, and the level of significance was set at 5%.

**Table 1: Demographic characteristics, physical symptoms and physical health of the study respondents with and without psychiatric illness.**

Patients with Psychiatric Healthy controls (m= illness (n= 120)	180)	P
<b>Gender</b>		
Male 78 (65%)	86 (47.7%)	0.33
Female 42 (35%)	94 (52.2%)	
Mean age (SD) 33.03 ( 14.83% )		
<b>Education level</b>		
Primary school 5 (4.16%)	8 (4.9%)	0.810
Middle school 26 (21.6%)	38 (21.1%)	
Senior secondary school 52 ( 43.3% )	67 (37.2%)	
Diploma college 18 (15%)	34 (18.8%)	
Undergraduate university degree 19 (15.8%)	33 (18.8%)	
<b>Household size</b>		
1 Family member 12 (10%)	20 (11.1%)	0.99
2 Family members 39 (32.05%)	58 (32.2%)	
3-5 Family members 51 (42.05%)		
6 or above family members 18 (15%)	75 (41.6%) 27(15%)	
<b>Recent physical symptom in the last 14 days</b>	10.3 (57.2%)	0.320
No physical symptom 83 (69.16%) Atleast one of the physical symptoms 37 (30.83%)	78 (43.3%)	
<b>Self-reported physical health status</b>		
Poor or worse 14(11.66%)	25 (13.8%)	0.26
No change 86 (71.66%)	113 (62.7%)	
Healthier or better 20 (16.66%)	42 (23.3%)	
<b>Psychiatric Diagnosis</b>		
F32/F33 Major Depressive Disorder 19 (15.83%)		
F41 other anxiety disorders 31 (25.83%)	N/A N/A N/A	N/A N/A N/A
F41.8 Mixed anxiety and depressive disorder 70 (58.33%)		

New physical symptoms in the past 14 days comprise chills, fever, difficulty in breathing, myalgia, cough, dizziness, headache, coryza, sore throat, diarrhoea, Nausea and vomiting.

## 3. RESULTS

### 3.1. Demographic characteristics of responders with and without psychiatric illnesses

Table 1 shows the demographic characteristics of the responders with and without psychiatric illnesses. To accomplished the survey 512 psychiatric patients were

approached. Out of these patients only 120 patients completed the survey. Only 23.4 % gave their feedback. In healthy controls 286 were approached but 180 finished the survey. Total 62.93% responded to the survey.

The survey participants comprised 120 psychiatric patients and 180 healthy controls whose age and gender were matched. The participants were both men and women, living in a household with 3-5 family members with the mean age of 33.3 years. According to education level who held senior secondary level education (43.3%) had higher percentage of psychiatric patients in

comparison to the healthy controls (37.2 %) (p 0.810). Many healthy controls (43.3%) were reported physical symptoms as compared to psychiatric patients (30.83%). Also, in poor or worse physical health, healthy controls (13.8%) reported more physical symptoms than

psychiatric patients (11.66%) (P 0.26) For psychiatric patients, maximum of the responders had F41.8 mixed anxiety and depressive disorder (58.33%), followed by F41 other anxiety disorders (25.83%) and F32, and F33 Major depressive disorder (15.83%).

**Table 2: Depression, Anxiety, Stress and Stress Scale-21 (DASS -21 scores of the study respondents with and without psychiatric illnesses.**

	Psychiatric illness n=120	Healthy controls m=180	P
<b>DASS-21 (Anxiety)</b>			
			P<0.001
No	94	173	
(0-7)	(78.3%)	(96.1%)	
Mild	11	4	
(8-9)	(9.1%)	(2.2%)	
Moderate	7	2	
(10-14)	(5.8%)	(1.11%)	
Severe	3	1	
(15-19)	(2.5%)	(0.55%)	
Extremely	5	0	
Severe	(4.1%)	(0%)	
(20+)			
<b>DASS-21 (Depression)</b>			
No	88	178	P<0.01
(0-9)	(73.3%)	(98.8)	
Mild	10	1	
(10-13)	(8.3%)	(0.55%)	
Moderate	8	0	
(14-20)	(6.6%)	(0%)	
Severe	5	1	
(21-27)	(4.1%)	(0.55%)	
Extremely	9	0	
Severe	(7.5%)	(0%)	
(28+)			
<b>DASS 21 (Stress)</b>			
No	79	170	P<0.01
(0-14)	(65.83%)	(94.4%)	
Mild	27	7	
(15-18)	(22.5%)	(3.88%)	
Moderate	2	1	
(19-25)	(1.66%)	(0.55%)	
Severe	7	1	
(26-33)	(5.83%)	(0.55%)	
Extremely	5	1	
Severe	(4.16%)	(0.55%)	
(34+)			

Table 2 shows the DASS-21 scores of the study respondents. The mean DASS-21 anxiety score of psychiatric patients was significantly higher than healthy controls (p < 0.001).

There were significantly more psychiatric patients reporting anxiety symptoms as compared healthy controls (p < 0.001). The mean DASS-21 depression score of psychiatric patients was also significantly higher than healthy controls (p < 0.01). There were significantly

more psychiatric patients reporting depressive symptoms as compared to healthy controls (p<0.01). The mean DASS-21 stress score of psychiatric patients was significantly higher as compared to healthy controls (p < 0.01).

**Table 3: Other psychiatric symptoms reported by respondents during the covid-19 pandemic.**

Worries about physical health	Psychiatric patients (120)	Healthy Controls (180)	P
No worry	63 (52.5)	123 (68.3%)	< 0.0014
Mild worry	35 (29.1%)	47 (26.11%)	
Moderate	11 (9.1%)	7 (3.8%)	
Serious	8 (6.66%)	2 (1.1%)	
Very serious	3 (2.5%)	1 (0.55%)	
<b>Anger and impulsivity</b>			
No anger and impulsivity	78 (65%)	113 (62.7%)	P=0.293
Mild anger and impulsivity	24 (20%)	48 (26.6%)	
Moderate anger and impulsivity	10 (8.3%)	15 (8.3%)	
Serious anger and impulsivity	6 (5%)	3 (0.01%)	
Very serious Anger and impulsivity	2 (1.6%)	1 (0.55%)	
<b>Alcohol use</b>			
No alcohol use	95 (79.1%)	173 (96.1%)	P< 0.01
Mild alcohol use	15 (12.5%)	3 (1.66%)	
Moderate alcohol use	5 (4.16%)	2 (1.11%)	
Serious alcohol use	4 (3.33%)	1 (0.55%)	
Very serious alcohol use	1 (0.83%)	1 (0.55%)	
<b>Paranoid idea</b>			
No paranoid idea	106 (88.33%)	180 (100%)	P< 0.01
Mild paranoid idea	10 (8.33%)	0 (0%)	
Moderate paranoid idea	2 (1.66%)	0 (0%)	
Serious paranoid idea	1 (0.83%)	0 (0%)	
Very serious paranoid idea	1 (0.55%)	0 (0%)	
<b>Suicidal ideation</b>			
No suicidal ideation	106 (88.33%)	179 (99.44%)	P<0.01
Mild suicidal ideation	8 (6.66%)	0 (0%)	
Moderate suicidal ideation	3 (2.5%)	1 (0.55%)	
Serious suicidal ideation	2 (1.66%)	0 (0%)	
Very serious suicidal ideation	1 (0.833%)	0 (0%)	

Table 3 shows other mental manifestations announced by respondents during the COVID-19 pandemic. Mental patients and healthy controls reported no worry, mild, moderate and extreme stresses about their physical health. There were essentially more mental patients revealing moderate to serious stresses over their physical health as compared to healthy controls ( $p < 0.0014$ ). Mental patients and healthy control announced moderate to extreme anger and impulsivity. There were fundamentally more mental patients announcing moderate to severe outrage and impulsivity as thought about to healthy controls ( $p < 0.293$ ). Psychiatric patients and also healthy control announced no, mild, moderate, serious and very serious self-destructive ideation. Mental patients were altogether more than healthy controls. Psychiatric patients and healthy control as well reported no, mild, moderate, serious and intense suspicious thought and liquor use however there were no huge contrasts in the pace of different components between healthy controls and psychiatric patients.

#### 4. DISCUSSION

The essential consequences of the examination show that along the pinnacle of the COVID-19 pandemic with unbending lockdown measures, psychiatric patients scored notably higher on the absolute DASS - 21

uneasiness, anxiety, stress and depression. The COVID-19 is highly contagious and has caused large-scale lockdown worldwide (F. Hao et al., 2020). Psychiatric patients were altogether bound to report worries about their actual wellbeing, anger, impulsivity and self-destructive ideation. Responders who acknowledged no change, poor or worse physical health status and had mental diseases were significantly bound to support higher, DASS depression, anxiety, and stress subscale. This information dropped the first invalid theory that there were no contrasts between the levels of depression, nervousness and stress and mental effect come acrossed by individuals with and without mental ailments during the height of COVID-19 pandemic with unbending isolate measures. This is the investigation deciding the mental impact on mental patients and healthy controls during the peak of the COVID-19 pandemic when the unbending lockdown measures were set up for the entire city. This information examined likely focuses on assessment and care for psychiatric patients as a component of the new insusceptible psychiatry administration during a pandemic. These outcomes can likewise be utilized as a kind of perspective for psychological wellness experts and experts for a future disturbance of irresistible sickness.

The COVID-19 pandemic is exceptionally irresistible and has caused significant lockdown all around the world. This pandemic has showed up in nearly higher mental trouble in mental patients. From perspective of immunopsychiatry service, psychiatric patients were more prone to report moderate to extreme stresses over their actual wellbeing because of the premium that they may have unknowingly gotten the infection and maybe less successful adapting systems (Chua *et al.*, 2004; Colizzi *et al.*, 2020). Thus, immunopsychiatry service should offer point-of-care test for the revelation of COVID-19 and negative detections can offer stimulation to psychiatric patients. Adding perspectives to disturbing psychological well-being were conceivable concedes in conveyance of psychotropic medications, insufficiency of way to deal with essential consideration or outpatient centers, expanded monetary difficulty, individual worry of declining COVID-19, significant stretch of remaining at home alongside more disstressed everyday environments because of absence of provisions in the weeks following the pestilence.

These adjustments in elements may prompt sensations of sadness and expanded self-destructive ideation among psychiatric patients.

Individuals with mental sicknesses were significantly bound to underwrite more elevated levels depression, nervousness and stress. Psychiatric patients may experience a decrease in emotional wellness administrations during the COVID-19 pandemic. Numerous components caused a decrease in assistance. First, quick emotional wellness care needs of psychiatric patients were a lower need when the quantity of COVID-19 cases rose sharply in the city. Second, psychiatric patients were urged not to visit the emergency clinic as wellbeing administrations were committed to overseeing in critical condition patients and associated or affirmed cases with COVID-19. Third, the lockdown estimates made it hard for patients to see specialists and other psychological wellness care suppliers because of lacking medical services assets alongside fear of contacting COVID-19 in medical clinics which oversaw patients infected by COVID-19. Our discoveries stress the requirement for another immunopsychiatry service during COVID-19 pandemic to disperse the board plans with psychiatric patients by means of telepsychiatry because of lockdown measures, including individuals who have not up to this point contracted COVID-19. Thereafter the COVID-19 pandemic, psychological well-being readiness and expectation of future episodes will prompt an expanded familiarity with the necessities of psychiatric patients and alternate courses of action to be set up. Telepsychiatry crisis administrations or helpline should be made accessible to patients with extreme self-destructive ideation. Improved admittance to telepsychiatry administrations, home conveyance of psychotropic prescriptions on the web mental medical aid assets and irresistible illness episode readiness assume a basic part in decreasing the acerbity of mental

indications experienced by psychiatric patients. As sadness and stress are related with an expansion of supportive of fiery cytokines including Interleukin-1 beta (IL-1  $\beta$ ) (Lu *et al.*, 2017), Interleukin-6 (IL-6) (Liu *et al.*, 2012), Tumor Necrosis Factor- $\alpha$  (TNF- $\alpha$ ) (Osimo *et al.*, 2020) and C-responsive protein (CRP) (Ng *et al.*, 2018), future immunopsychiatry administration and exploration should screen the connection between levels of supportive of pro-inflammatory cytokines and depression in psychiatric patients during the pandemic. If favorable to pro-inflammatory cytokines were discovered to be expanded in mental patients during lockdown, further examination is needed to assess pharmacological intercession (Lee *et al.*, 2018a,b) and non-pharmacological mediation (for example active work) to lessen favorable to incendiary cytokines (Simpson and Katsanis 2020).

Self-revealed poorer or more terrible actual wellbeing status was significantly what's more, contrarily connected with more elevated levels of anxiety, nervousness and stress. During the COVID-19 pandemic the typical public was found to invest more time at home (Wang *et al.*, 2020a,b).

Telepsychiatry and cell phone based treatment should centre of attention on unwinding activities to neutralize tension, anxiety, and depression. The rest quality can be improved by rest cleanliness and circadian musicality as a component of the psychoneuroimmunity preventive systems (Kim and Su, 2020). Physical activities (e.g., locally situated exercise) can improve the actual wellbeing of individuals living in home (Zhang *et al.*, 2015). Further research is required to evaluate the effectiveness of these psychoneuroimmunity preventive strategies to enhance resilience (Ho *et al.*, 2020). In light of our examination, psychiatric patients communicated essentially more significant levels of stresses over their actual wellbeing. Telepsychiatry and smartphone based psychological treatment can challenge intellectual predispositions where mental patients will in general overestimate the danger of contracting from COVID-19 or think little of their actual wellbeing status (Zhang and Ho, 2017). In this study, there are so many antagonistic discoveries between individuals and without mental sicknesses that require further understanding.

In this examination respondents with mental ailment didn't encounter extra segregation during the COVID-19 pandemic. Respondents with mental ailments did not show an expansion in liquor consumption when contrasted with wellbeing control gatherings. This perception is not quite the same as the past examination, which announced the expansion in liquor inebriation and maltreatment after catastrophic events. As the public authority actualized trip limitation during the COVID-19 pandemic for all residents, individuals with and without mental sicknesses didn't have successive admittance to buy liquor from nearby stores. Likewise, entertainment venues, bars, and eateries were requested to stop activity

and these measures further decrease liquor admission of psychiatric patients and healthy controls. Levels of anxiety, uneasiness and stress, were not identified with instructive level, age what's more, sex, demonstrating that all areas of the network were negatively influenced. There are a few weaknesses in the current examination. To start with, there are constraints in summing up the example of psychiatric patients as they experienced non-psychotic mental issues, which was because of a confined testing during COV ID-19 pestilence with exacting lockdown measures. Their ability to finish the poll confirmed the reality that the psychiatric patients were less seriously sick. This investigation was acted in only one hospital of Hamirpur. Regardless of these constraints, this is the main examination that analysed the mental effect on individuals with and without mental ailments in a city seriously influenced by the COVID-19 pandemic with strict lockdown measures.

## 5. CONCLUSION

This is the primary investigation that analysed the dissemination of psychiatric symptoms between people with and without psychiatric illnesses during the COVID-19 epidemic. Our discoveries will genuine as a source of perspective for mental experts and institutions in different nations as the COVID-19 pandemic is proceeding. The after effects of this investigation suggest that psychiatric patients were at a higher danger of indicating more significant levels of symptoms of anxiety, nervousness, stress, concerns about physical health, anger, irritability and self-destructive ideation when contrasted with healthy controls. From immunopsychiatry administration perspective, there should be more readiness viewing psychiatric patients as focuses for care with nonstop mental mediation during the pandemic of hazardous irresistible illnesses.

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