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## A Study on Depression, Anxiety and Stress Among Corona Activists

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### ABSTRACT

This descriptive research has attempted to gauge the level of stress, depression and anxiety among the Corona activists and reasons for such instances. Data from 102 Corona activists in Puducherry reveal that they are displaying signs of depression as they are getting upset by even small things and are marginally over-reacting to situations and developing dryness of mouth. However, they display only average level of anxiety and stress. Corona activists are depressed, anxious and stressed due to their inability to spend time with their family. Excessive workload also contributes to their stress. Corona activists who are highly depressed and anxious are stressed while those who are marginally depressed and marginally anxious are marginally stressed and those who are not anxious and depressed are stress-free. Anxiety influences stress the most while depression also casts a significant influence. This implies that Corona workers should be free from anxiety and depression if they have to be kept stress-free.

**KEYWORDS:** Anxiety, Corona activists, Depression, Stress, Upset.

### I. INTRODUCTION

The world witnessed the outbreak of Corona virus by around December last year in the Chinese city of Wuhan ([Holshue et al., 2020](#)) and the first death was reported by China on January 11, 2020 ([WHO, 2020a](#)). Since then, the virus started infecting all countries in the world rapidly ([WHO, 2020b](#)). Observing the seriousness of the issue, WHO announced "Public Health Emergency of International Concern" on January 30, 2020 (WHO, 2020b, 2020c). WHO declared the virus infection as "Pandemic" on March 11, 2020 with the virus engulfing 114 nations ([WHO, 2020c](#)).

### II. EFFECTS OF CORONA OUTBREAK

The Corona virus is easily communicable from human to human and it affects the respiratory organ of the human body, sometimes killing the affected person. Recognising the seriousness of the pandemic, many countries announced lock-down to minimise the spread of the virus. Unfortunately, this crippled the economy not only of some countries but the entire world ([Ebrahim et al., 2020](#)). Inter-country and intra-country transportation of passengers stopped while import and export business came to a standstill. Many firms lost business, as a consequence, many employees lost their job while others were forced to work for diminished salary. With the virus assuming a serious threat for the entire world, online coaching was organised for health workers ([WHO, 2020c](#)). Globally, finance was mobilised and "Strategic Preparedness and Response Plan" was chalked out and executed for serving the nations with inadequate medical facilities. The major emphasis by WHO was on speedy and extensive diagnosis to cover maximum people possible, discovering a vaccine for the virus and prevention of transmission of the virus ([WHO, 2020c](#)).

The epidemic being somewhat new to almost all the countries, people developed lot of anxiety due to fear of spread of the virus ([Deblina Roy et al., 2020](#)). Demand for protective equipments such as sanitisers and masks increased manifold ([Feng et al., 2020](#)). However, a huge gap between the availability and the requirement for protective devices is a major concern for health workers and medical personnel globally ([WHO, 2020c](#)). India being a densely populated nation with wide spread illiteracy and weak medical facilities, especially in the rural areas, may be badly affected. Despite appeals by the government through popular personalities to shun mass gathering ([McCloskey et al., 2020](#)), people did not follow social distancing due to indifferent attitudes.

With almost one-third of global population being affected by shut-down, the plight is worrying (Kaplan et al. [2020](#)). All have to preserve social distancing of two metres and use mask and sanitiser (Cheng et al., [2020](#)). India adopted shut-downs in different phases to control the spread of Corona (Sahu et al., [2020](#)). However, sufficient availability of medical amenities has been a major concern in India (Chetterje, [2020](#)). The news that hundreds of doctors, police officials, elected representatives, journalists, cine-artists and popular personalities being infected by Corona serves testimony to lack of sufficient availability of effective preventive Corona equipments such as masks, sanitisers and special dress even for these activists. This adds up to psychosomatic and mental stress on people and health officials.

Hall et al. ([2008](#)) have quoted that during crisis-like situations marked by the spread of epidemic, public are severely horrified of being affected and this feeling of insecurity results in them getting anxious, depressed and stressed. According to Selye ([1956](#)), "Stress can be explained as a feeling of emotional and physical tension which arises from any event that threatens our homeostasis". Anxiety arises due to "fear of unknown" (Holland, [2018](#)). Depression is a state of being disinterested in routine tasks. It is quite understandable that people exposed to pandemic without effective prevention will be fearing about the result of such pandemic which will be unknown, exposing them to anxiety, stress and depression. Xiang et al. ([2020](#)) have emphasised upon the need to focus on providing effective mental health to people as they are exposed to excessive emotional distress due to fear of the epidemic infecting them. As a complementary, WHO (2020) has also come out with guiding principles to redress psychosomatic and emotional problems accruing due to the pandemic. Addressing emotional and mental problems is the need of the hour as many suicides have been reported due to fear of the pandemic (Goyal et al., [2020](#); Mamun & Griffiths, [2020](#)). Wang et al. ([2020](#)) & Qiu et al. ([2020](#)) found that Chinese were extremely stressed, anxious and depressed due to the epidemic.

Many studies have revealed that people are mentally affected due to pandemic. For instance, Leung et al. ([2003](#)) found that people were highly anxious during SARS. Similarly, McAlonan et al. ([2007](#)) unearthed that during SARS, people were generally anxious, stressed and depressed and health activists experienced these to a greater extent due to them being exposed to higher risk. Hawryluck et al. ([2004](#)) also reported that people isolated due to SARS developed stress while Usher et al. ([2020](#)) remarked that socialising inclination of human beings renders them socially interactive with fellow human beings and hence, restrictions in mobility augments emotional and psychosomatic stress. Van Bortel et al. ([2016](#)); Kumar and Nayar ([2020](#)) observed that during Pandemic times, people encounter feeling of tribulation, vulnerability, stress, fright, nervousness and concern and these aspects of mental and emotional health needs to be redressed properly.

Nicola et al. ([2020](#)) quotes the panic scenario of people resorting to excessive buying and stocking grocery items in their home, thus super markets getting empty as an indicator of anxiety among the people. The pandemic has left the students highly anxious and stressed as online teaching cannot be accessed by most of them due to financial and network problems (Agha, [2020](#); Cao et al. [2020](#)). Roy et al. ([2020](#)) exposed the prevalence of immense anxiety among people in India due to the Corona crisis. Brooks et al. ([2020](#)) pointed out that Corona affected patients are kept in isolation in the name of quarantine and they are subject to huge stress. Usama Rehman et al. ([2020](#)) establish that economically weaker sections of the society, unable to keep stock of essential items at home during the shut-down were subject to immense stress. Financial comfort of family is adversely related to stress while students were subject to higher level of stress. The level of stress among the health activists were in the normal range, suggesting their proficiency to be calm during times of adversity. A comprehensive review of literature available shows that empirical studies have covered either stress or anxiety of people due to Corona. No study has taken the holistic distress aspect comprising of anxiety, depression and stress. Most importantly, the holistic distress aspect of Corona activists who are subject to immense risk of working along with Corona patients have not been attempted. This study aspires to fill this gap by trying to gauge the level of stress, anxiety and depression prevalent among the Corona activists and the probable reasons for such stress, anxiety and depression. Finally, the impact exerted by depression and anxiety on stress is also proposed to be studied.

### **III. OBJECTIVES OF THE STUDY**

1. To gauge the extent to which Corona activists are depressed, anxious and stressed;
2. To identify the reasons for depression, anxiety and stress among the Corona activists;
3. To assess the impact exerted by anxiety and depression on stress of the activists.

### **IV. METHODOLOGY**

This research is descriptive in nature, based purely on primary data, collected by administering a structured questionnaire to 102 Corona activists in Puducherry, selected using convenience sampling method. Data pertaining to anxiety, stress and depression arising out of working as Corona activists has been obtained through

7 statements in Likert's five-point scale for all the three factors and analysed using SPSS, employing the statistical tools of Frequency, percentage, Mean, ANOVA, Cluster Analysis, Chi-square Analysis and Regression, after cleaning the data and establishing their reliability and normality.

### V. DATA ANALYSIS

#### Level of Depression among Corona Activists and Grouping them Accordingly

Depression existing among Corona activists and grouping them according to the level of depression they are subject to is displayed in table 1.

**Table 1: Depression among Corona Activists and Grouping them Accordingly**

Statement	Mean			
	Total	C1	C2	C3
I found myself getting upset by even small things	3.4020	4.37	2.38	3.69
I was aware of dryness of my mouth	3.2353	4.00	2.88	3.18
I tended to over-react to situation	3.2941	4.21	2.06	3.73
I had a feeling of shakiness (e.g., legs going to give way)	2.6078	4.32	1.72	2.73
I found it difficult to relax	3.0686	4.58	2.19	3.06
I felt that I was using a lot of nervous energy	2.9020	4.42	2.19	2.78
I felt sad and depressed	3.1765	4.32	2.22	3.35
No. of Cases	19	32	51	

Table 1 highlights that the activists are developing depression as they are getting upset by even small things and are marginally over-reacting to situations and developing dryness of mouth. The table further showcases the formation of 3 distinct clusters based on level of depression among the Corona activists, which have been labelled as "Highly Depressed Group", "Undepressed Group" and "Modestly Depressed Group", each encompassing 19, 32 and 51 activists respectively.

**Anxiety among Corona Activists and Grouping them Accordingly :** Level of anxiety among the Corona activists and grouping them according to the level of anxiety they are subject to is displayed in table 2.

**Table 2: Anxiety among Corona Activists and Grouping them Accordingly**

Statement	Mean			
	Total	C1	C2	C3
I had a feeling of faintness	2.5294	2.47	1.63	3.91
I felt that I had lost interest in just about everything	2.9902	3.21	1.97	3.96
I felt scared without any good reason	2.9216	2.96	2.00	4.04
I had difficulty in swallowing	2.1275	2.23	1.22	3.71
I couldn't seem to get any enjoyment out of the things I did	2.8333	3.09	1.53	4.13
I found that I was very irritable	2.9118	3.04	1.84	4.13
I felt I was close to panic	2.6765	2.60	1.69	4.22
No. of Cases		47	32	23

Table 2 suggests that the Corona activists are not anxious with their work. The table further displays the formation of 3 distinct clusters based on level of anxiety the activists are subject to and these clusters are designated as "Marginally anxious group", "Undisturbed Group" and "Anxious Group", each encompassing 47, 32 and 23 activists respectively.

**Stress among Corona Activists and Grouping them Accordingly :** The level of stress Corona activists are subject to and grouping them according to the level of stress they are subject to is displayed in table 3.

**Table 3: Stress among Corona Activists and Grouping them Accordingly**

Statement	Mean			
	Total	C1	C2	C3
I found it hard to calm down after something upset me	3.2549	2.12	3.31	4.38
I was unable to become enthusiastic about anything	2.8333	1.93	2.75	4.21
I found it difficult to tolerate interruptions to what I was doing	3.1078	1.92	3.21	4.17
I was intolerant of anything that interrupted me from getting on with what I was doing	3.1176	1.98	3.15	4.38
I felt terrified	2.8333	1.94	2.88	4.13
I found myself getting agitated	2.8725	1.65	2.83	4.29
I found it difficult to work up initiatives to do things	3.1569	1.81	3.40	4.08
No. of Cases		26	52	24

Table 3 highlights that the Corona activists are subject to average level of stress at their work. The table further highlights the formation of three distinct clusters which have been labelled as "Neustressed Group", Marginally Stress Group and "Stressed Group", each encompassing 26, 52 and 24 activists respectively.

**Association Between Depression, Anxiety and Stress**



Fig 1: Anxiety & Stress

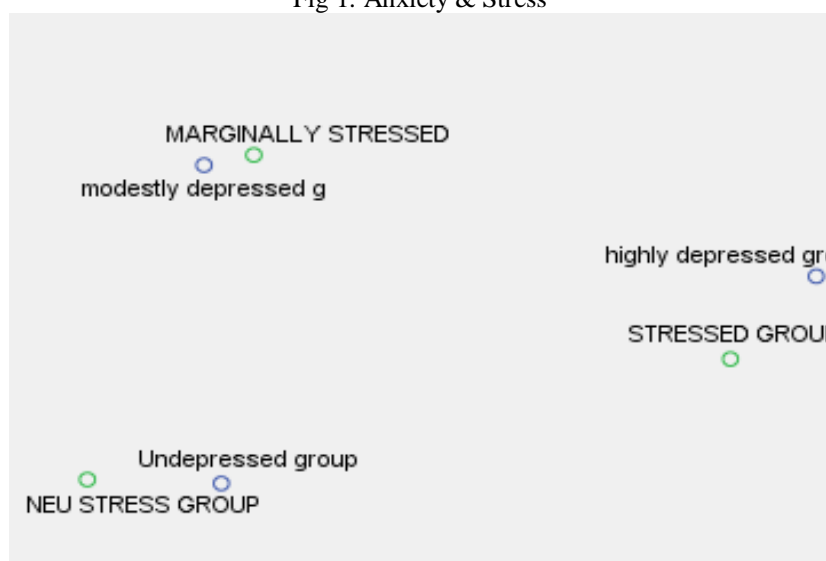


Fig 2: Depression & Stress

Figures 1 and 2 suggests that Corona activists who are highly depressed and anxious are stressed while those who are marginally depressed and marginally anxious are marginally stressed and those who are not anxious and depressed are free from stress.

**Impact of Depression and Anxiety on Stress :** The impact exerted by depression and anxiety of Corona activists on their stress has been explored using Regression Analysis and the outcome is displayed in table 4.

**Table 4: Impact of Depression and Anxiety on Stress**

R <sup>2</sup>	Factor	Coefficients				Model Fit	
		B	Std. Error	T	Sig.	F	Sig.
0.664	Constant	3.297	1.560	2.114	0.037	97.751	0.000
	Depression	1.047	0.629	1.663	0.099		
	ANXIETY	0.771	0.081	9.503	0.000		

Table 4 highlights that the two independent variables of depression and anxiety explain 66.4% variance of the dependent variable of stress. Further, the Regression model is fit. Anxiety exerts significant impact on stress at 1% while depression impacts stress at 10%. Based on the Regression results, the following Regression Model is formed:

$$\text{Stress} = 3.297 + 1.047 * \text{Depression} + 0.771 * \text{Anxiety}$$

This implies that increase in depression results in more stress for the activists.

**Determinants of DEPRESSION :** Factors contributing to depression among Corona activists has been explored using Regression Analysis and the outcome is displayed in table 5.

**Table 5: FACTORS CONTRIBUTING TO DEPRESSION**

R <sup>2</sup>	Factor	Coefficients				Model Fit	
		B	Std. Error	T	Sig.	F	Sig.
0.172	constant	2.271	0.246	9.224	0.000	2.792	0.011
	Excessive workload	0.121	0.076	1.584	0.117		
	Working in night shift	-0.106	0.069	-1.543	0.126		
	Difficult work timings	-0.031	0.087	-0.356	0.723		
	Dealing with public in the backdrop of Covid-19	0.023	0.079	0.292	0.771		
	Indifferent attitude of Superiors	0.016	0.098	0.163	0.871		
	Different directions from different authorities	0.094	0.107	0.877	0.383		
	Not able to spend time with family	0.135	0.070	1.932	0.036		

Table 5 highlights that the independent variables explain 17.2% variance of the dependent variable. Further, the Regression model is fit. Further, the Corona activists disabled to spend time with their family is the only factor contributing to their depression. If inability of the activists to spend time with family increases by 1 unit, their depression increases by 0.135 units.

**Determinants of ANXIETY :** Factors contributing to anxiety among Corona activists has been unearthed using Regression Analysis and the outcome is displayed in table 6.

**Table 6: Determinants of ANXIETY**

R <sup>2</sup>	Factor	Coefficients				Model Fit	
		B	Std. Error	T	Sig.	F	Sig.
0.228	Constant	11.704	1.845	6.342	0.000	3.959	0.001
	Excessive workload	0.441	0.571	0.773	0.441		
	Working in night shift	-0.490	0.515	-0.952	0.344		
	Difficult work timings	-0.527	0.651	-0.810	0.420		
	Dealing with public in the backdrop of Covid-19	-0.006	0.595	-0.010	0.992		

	Indifferent attitude of Superiors	0.868	0.731	1.187	0.238		
	Different directions from different authorities	0.839	0.803	1.044	0.299		
	Not able to spend time with family	1.171	0.525	2.230	0.028		

Table 6 displays that the independent variables explain 22.8% variance of the dependent variable. Furthermore, the Regression model is fit. Most importantly, inability of the Corona activists to spend time with their family is contributing to their anxiety. If the activists are disable to spend time on their family by 1 unit, their anxiety increases by 1.171 units.

**Determinants of Stress** :Factors contributing to stress among Corona activists has been explored using Regression Analysis and the outcome is displayed in table 7.

**Table 7: Determinants of Stress**

R <sup>2</sup>	Factor	Coefficients				Model Fit	
		B	Std. Error	T	Sig.	F	Sig.
0.252	Constant	12.957	1.927	6.725	0.000	4.517	0.000
	Excessive workload	1.153	0.596	1.936	0.056		
	Working in night shift	-0.639	0.537	-1.189	0.238		
	Difficult work timings	-0.887	0.680	-1.305	0.195		
	Dealing with public in the backdrop of Covid-19	-0.220	0.622	-0.354	0.724		
	Indifferent attitude of Superiors	0.613	0.764	0.802	0.424		
	Different directions from different authorities	1.314	0.839	1.567	0.120		
	Not able to spend time with family	1.202	0.549	2.191	0.031		

Table 7 suggests that the independent variables explain 25.2% variance of the dependent variable and the Regression model is fit. The table further reveals that excessive workload and inability to spend time with family contributes to stress among the Corona activists. One unit increase in inability to spend time with family increases stress by 1.202 units while one unit increase in workload increases stress by 1.153 units.

### VI. INFERENCES FROM THE STUDY

Corona activists are displaying signs of depression as they are getting upset by even small things and are marginally over-reacting to situations and developing dryness of mouth. However, they display only average level of anxiety and stress. Corona activists are depressed, anxious and stressed due to their inability to spend time with their family. Excessive workload also contributes to stress. This emphasises the importance of authorities to ensure that the Corona activists are given adequate time to be with their respective families. Their workload should also be rationalised. Working hours should not be more than 9 hours a day and they should be picked up and dropped back to home by government jeep so that unnecessary wastage of time in transportation and travelling by two-wheelers which involves more risk of catching Corona, is avoided. 19 activists are highly depressed while 23 are anxious and 24 are stressed. 32 are not depressed while 32 are not anxious and 26 are not stressed. 51 are modestly depressed while 47 are marginally anxious and 52 are marginally stressed. This shows that there is not much difference in the number of activists with different levels of stress, depression and anxiety. Corona activists who are highly depressed and anxious are stressed while those who are marginally depressed and marginally anxious are marginally stressed and those who are not anxious and depressed are stress-free. Anxiety influences stress the most while depression also casts a significant influence. This implies that Corona workers should be free from anxiety and depression if they have to be kept stress-free. Efforts should be made to ensure that their working hours is not too stretched. They should be given at least one day off during a week. If they are spending 10 hours a day on work, then it is imperative to give then two days off during a week. Most importantly, all the Corona activists should be given good quality medical dress, mask, gloves and sanitiser so that they can be protected from getting infected by the virus while dealing with patients with infection.

## VII. CONCLUSION

The Corona pandemic has kept many people panicking. Activists are directly dealing with infected patients. This increases their chances of getting infected and statistics also talks about many Police officials and doctors getting infected by the virus. High rate of infection among Corona activists is happening despite their awareness about preventing such infection. This is the most worrying scenario as it is difficult for the activists to protect themselves from being infected. This increases their depression, anxiety and ultimately, stress, which is totally hazardous for their health. Hence, government should ensure that all the Corona activists are provided with the best amenities to ensure that chances of them being infected is minimised if not totally eliminated.

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