

Correlation Between Depression, Stress and Fear of Covid-19 Among Indian Students

Dr. Sandeep* & Suman Rani**

Abstract:

Aim of the current study was to investigate the correlation between depression, stress and fear of COVID-19 among Indian students. The sample includes 120 participants ranged from 20 to 30 years. Following tools were used for data collection, fear of COVID-19 scale, Patient Health Questionnaire (PHQ-9) & Perceived stress scale. Obtained data analysed with the help of spss version 16.0 and statistics such as correlation and regression analysis were performed. Finding indicated Depression and stress are the strongly correlated with fear of COVID-19 among Indian students. Further, the stepwise multiple regression analysis showed that fear of COVID-19 is a significant predictor of stress among Indian students.

Keyword: - Fear of COVID-19.

About authors:

*Dr. Sandeep Panchal, Assistant Professor, Dept. of Psychology, Rajiv Gandhi University (A Central University), Doimukh, Itanagar, Arunachal Pradesh, India,

**Students, Indira Gandhi University, Rewari, Haryana, India.

INTRODUCTION

The disease related to covid-19 has caused by a new damage of corona virus. 'CO' means Corona, VI refers to Virus and D means Disease. previously, this disease refers as '2019 novel coronavirus'. Many people who are confronted with the infection related to COVID-19 experienced mild to moderate illness related to respiration and may have the recovery without any treatment. Some people, who are having some kind of medical issues like diabetes, cardiovascular disease, chronic respiratory disease, and cancer may have the tendency to develop more serious illness. Because the covid-19 is more serious diseases many people's listen the news and that precipitate fear about the covid-19 and person over think on the outcomes and that over thinking leads to overburden on the person then they may feel stress and that cause negative mood swings also. Person feels stress when he or she has excessive pressure from the environment other which also affect individuals as stressors. Stress may be understood in terms of any change that causes physical, emotional, psychological strain. Stress is kind of bodily reaction to any situation or object that needs reaction or attention. The stress happens because of the extra demands which are greater than the available sources of the individuals. There are many types of stressor which are depends on their intensity. Previously, Hall et al. (2008) reported that the current

pandemic situations affected the peoples and they are feeling the stressful and high levels of anxiety and depression. Another results by the Shete and Garkal (2015) reported higher stress among the PG students who perusing medical course. The result indicated there are many factors that affect the level of stress in connection with age and gender. Result also surprised to know that people are facing lot of difficulties without vaccinations. Therefore vaccination is very much important to reduce the level of cases of Covvid-19 due to this people are more anxious, stressed and depressed (Xiang et al. 2020).

Depression can be characterized as persistent feeling of sadness and loss of interest. It can also denoted as major depression, it affects how person feel, think and behave and that lead to a variety of emotional and physical problems. Person may have trouble doing normal day-to-day activities, and sometimes he/she may feel as if life isn't worth living. There are various causes of depression, including complex interaction between social, psychological and bio-logical factors. Life event such as childhood adversity, loss and unemployment contribute to end may catalyze the development of depression. There are various studies related to stress and depression in relation to fear of covid-19. Recently, Shahid and his colleagues (2020) revealed that females have high level of depression, anxiety and stress then the male counterparts. Pfefferbaum, et al. (2020)

reported Public health emergencies may affect the health, safety, and well-being of the individuals and their communities. The effects of these converted in to many emotional and behavioural reactions. In a significant research, Rumeysa and colleagues (2020) found that stress and depression has been reported by the women and youth when their working hour increased due to covid 19 situation. In significant study, Rehman, Shahnawaz and Uniyal (2020) revealed significant differences between males and females on stress, anxiety and depression among COVID-19 patients. The average score on depression and anxiety were found to be higher than males. Although there were no significant difference revealed among both males and females who has the low levels of stress, anxiety, and depression. On Similar line, anxiety and depression reported by the people who were suffering from Pandemic and Lockdown (Grover, et al., 2020).

In context to the Cross cultural research, one of the study showed that many psychological problems (anxiety, stress, and depression) during Covid-19 among different national peoples. Common mental health problems related to anxiety and stress and depression happened (Wang et al. 2020), not only this the depression stress, and anxiety was found to be very usual among the people (Leung et al. 2003). Health care professionals are also at very high risk of stress, anxiety and depression (McAlonan et al. 2007). One of important study which also reveal the PTSD and depression are related factors (Hawryluck et al. 2004). Roy et al. (2020) found anxiety levels was observed high among people during pandemic situation. Eight percent participants who have the preoccupied thoughts related to COVID-19 and seventy two percent raised their needs for uses of sanitize and gloves. All the participants also acclaimed about the mental healthcare. Therefore it is needed to spread the awareness and enhance the mental health awareness to this covid situation. Gender difference has been study by Qiu et al. (2020), showed Female participants have high levels of psychological problems than the male group. In an important study, Bakioglu, Korkmaz and Ercan (2020) revealed positive correlation between fear of COVID-19 and intolerance of uncertainty, depression, anxiety, and stress. Further, negative

relationship was determined between the fear of COVID-19 and positivity. The study indicated that there was a mediating factors related to intolerance and uncertainty about the future. There are many situation factors also relevant to the fear related to COVID-19 that leads to depression, stress and high levels of anxiety among the peoples.

RATIONALE OF THE STUDY

Recent times the covid-19 situation creates a Burdon on the students and there are many factors involves due to these factors the fear related to COVID 19 may developed among Indian students. Since, the students are facing a lot of problems and uncertainty about their carrier and also about their higher studies because of their multiple issues the pandemic situation that creates Burdon on them. Therefore, the study planned to identify the Correlated factors related to fear of Covid-19 among Indian Students.

OBJECTIVES

The following objective has been taken:

- To investigate the correlation between depression and Fear related to COVID-19.
- To investigate the correlation between Stress and Fear related to COVID-19.
- To investigate the predictive factor related to stress among Indian students.

HYPOTHESIS

- There would be positive correlation between depression and fear related to COVID-19.
- There would be positive correlation between stress and fear related to COVID-19 among Indian students.
- Fear related to COVID-19 would be a significant predictor of stress among Indian students.

METHOD

Sample:

Current research conducted by using the Google form and it was circulated to the participants on their Whatsappnumber after taking the informed consent online. The sample includes 120 (70males and 50 females). The collected sample has the age range between 20-30 years. Sample includes only university and college students.

MEASURE

The below mentioned psychological test were used for the data collection.

Patient Health Questionnaire (PHQ-9) (Spitzer, Williams, Kroenke, et al., 1999): The PHQ-9 consists of 9 items indicating the criterion symptoms for DSM 5 major depressive disorder. Participants are asked how much each symptom has bothered them over the past 2 weeks, with the response patterns of 0 to 3 rating scales. The PHQ-9 can be used for continuous as well as categorical in scoring patterns. For continuous scale range from 0 to 27 (high scores indicated severe depression) for categorically algorithm for major depressive or other depressive disorder. The PHQ-9 has strong internal and test-retest reliability as well as construct and factor-structure validity.

Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, (1983)): The PSS is a 10 item major designed to measure the individuals score on stress dimension who are facing the life as stressful. The participants rated the items on likert scale ranging from 0 to 4 points. Higher scores indicate grater perception of lives stress; lower scores reflect lower stress levels. The scale has adequate coefficient alpha values (.84 & .85 on college students: Cohen et. al., 1983); The PSS has been positively correlated with life-event scores, depressive and physical symptomatology, social anxiety and maladaptive health-related behaviours (e.g. increased smoking; Cohen, Sherrod and Clark, 1986). These are the reliable sources of evidence which reveals the construct and concurrent validity.

Fear of COVID-19 scale (Ahorsu, et. al., 2020):

The scale is a 7 item measure designed to assess the degree to which individual fear of COVID-19. Participants rate him or her on five point Likert type scale. The response patterns of likert scale are “Strongly disagree”, “disagree”, “neutral”, “agree” and “Strongly agree”. The minimum score can be 1 and maximum will be 5. Composite total score can be obtained by add up all individual items score which is range from 7 to 35.

PROCEDURE

After taking informed consent through online, the selected tools were circulated on the person whatsapp number and the collected data were automatically saved in the excel sheet. The answered were collected and score as per online mode. The scores were statistically analysed using SPSS 16.0 version. Analyses were conducted for descriptive, correlation analyses and regression prediction.

RESULTS

The study investigated the relationship between the Depression, Stress and fear related to COVID-19 among Indian Students. The collected raw data were analysed with the help of SPSS 16.0 version, and descriptive statistics, Pearson's Product Moment method of correlation and Regression analysis were applied. Results showed participants scored low levels on Depression (Mean=7.42, SD=6.12) from a maximum of 27, low levels of stress (Mean=14.98, SD=7.40) from a maximum of 40, and average score on fear related to COVID-19 (Mean=17.65, SD=6.41) from a maximum of 35.

Table– 1 Inter-correlation Matrix

	Depression	Stress	Fear related to Covid-19
Depression	-----	.49**	.47**
Stress		-----	.25*
Fear related to Covid-19			-----
Mean	7.42	14.98	17.65
S.D	6.12	7.40	6.41

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

Table 1 reveals the variable depression has significant correlation with stress (.49) which

is significant at .01 levels. The correlation coefficient between depression and fear related to

COVID-19 among Indian students. Depression and fear related to COVID-19 was found positive with a correlation coefficient of .47 which is significant at .01 level. Further, Stress reveals the

positive relationship with the fear related to COVID-19, the correlation coefficient value is .25, which has significant relation at .05 levels.

Table– 2 Summary of Stepwise Multiple Regression (Dependent Variable: Stress)

Step	Variable	R	R ²	R ² Change	Beta	Std. Error	F	P
1	Fear related to Covid-19	.25	.06	.06	.24	7.21	6.39	.01

Table 2 indicated the results of step wise multiple regression analysis. The analysis found only one predictor related to stress among Indian students. The predictor factors of fear related to COVID-19 account only 06 % variance in stress ($R=.25$, $R^2=.06$), the F value is equal to 6.39, it is significant at .01 levels of significant. It can be understood that the students who are having the uncertainty and high level of stress about their carrier may have the high level of fear related to COVID-19.

DISCUSSION

One of main aim of the research was to investigate the correlation between the depression, stress and the fear related to COVID-19 among Indian students. As far as the correlation coefficient are concern, the depression and fear related to Covid-19 was positively related with each other. That can be interpreted as the students who are having high depression also have high level of fear related to covid 19. Therresults also showed that how students are facing uncertainty about the carrier as well as the higher study examination which is the chronic feeling that lead to the stress and depression among the students Therefore, hypothesis 1 and 2 regarding the correlation between depression, stress and fear related to covid-19 is proved and hence it is accepted here. The earlier study which focused on depression and stress are the positively related with each other, so the result of the current study is consistent with the earlier study as they indicated the positive relationbetween depression and stress (Bakioglu, Korkmaz, & Ercan, 2020).

Further, Result also showed that fear of COVID 19 which accounts 6 % of variance in stress among Indian students. Therefore, the study claimed that the fear related to COVID 19 is significantpredictors of stress among Indian

students. Since, the students are facing a lot of problems and uncertainty about their carrier and also about their higher studies because of their multiple issues the pandemic situation that creates Burdon on them. Thus, the hypothesis 3 which claimed that the predictorof stress among Indian students is proved here hence it is accepted. Presents results are similar with the results that showed people are confronted many problems in this current pandemic without vaccination it would be better to vaccinated all the peoples so that their immunity can be boosted and also the levels of anxiety and stress can be reduced (Xiang et al. 2020). Another recent study, which reveals that the fear related to covid-19 is significant predictor of emotional adjustment among students (Panchal & Yadav 2021).

REFERENCES

- Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The Fear of COVID-19 Scale: Development and Initial Validation. *International Journal of Mental Health and Addiction*, 1–9.
- Bakioglu, F., Korkmaz, O., & Ercan, H. (2020). Fever of COVID-19 and positivity: mediating role of intolerance of uncertainty, depression, anxiety and stress. *International Journal Mental Health, Addiction*, 1-14.
- Bartolomucci, A., & Leopardi, R., (2009). Stress and Depression: preclinical research and clinical and implications. *Plos One*, 4(1), 4265e.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385-396.

- Grover, et al., (2020). Psychological impact of COVID-19 lockdown: an online survey from India. *Indian journal psychiatry*, 62(4), 354-362.
- Hall, R., & Chapman, M. (2008). The 1995 Kikwit Ebola outbreak: Lessons hospitals and physicians can apply to future viral epidemics. *General Hospital Psychiatry*, 30(5), 446-452.
- Hawryluck, L., Gold, W. L., Robinson, S., Pogorski, S., Galea, S., & Styra, R. (2004). Control and psychological effects of quarantine, Toronto, Canada. *Emerging Infectious Diseases*, 10(7), 1206-1212.
- Leung et al. (2003). The impact of community psychological responses on outbreak control for severe acute respiratory syndrome in Hong Kong. *Journal of Epidemiology & Community Health*, 57(11), 857-863.
- McAlonan, et al. (2007). Immediate and sustained psychological impact of an emerging infectious disease outbreak on health care workers. *The Canadian Journal of Psychiatry*, 52(4), 241-247.
- Panchal, S., & Yadav, M. (2021). Day Time Sleepiness and Quality of Life Predicts Perceived Stress among Youth. *Journal of Psychological Research*, 3(2), 29-34. (Peer Reviewed & International Journal) ISSN- 2630-5143(Bilingual Publishing Co, Singapore)
- Pfefferbaum, et al., (2020). Mental health and COVID-19 Pandemic. *The new England Journal of medicine*, 383(6), 510-512.
- Qiu et al. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: Implications and policy recommendations. *General Psychiatry*, 33(2), e100213.
- Rehman, U., Shahnawaz, M. G., & Uniyal, R. (2020). depression, anxiety and stress among Indian in times of COVID-19 lockdown. *Community Mental Health Journal*, 1-7.
- Roy et al. (2020). Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian Journal of Psychiatry*, 51, 102083.
- Rumeysa, et al., (2020). Depression, anxiety, stress level of physician and associated factors in COVID-19 pandemic. *Psychiatry research*, 290, 113130.
- Shahid et al., (2020). Assessment of depression anxiety and stress among COVID-19 patients by using DASS 21 scales. *Journal of medical case report and review*, 3(6), 2589-8647.
- Shete. A. N., & Garkal. KD., (2015). A study of stress, anxiety and depression among post graduate medical student. *Journal of health and research* 2(2), 119-123.
- Spitzer, R. L., Williams, J. B. W., Kroenke, K., et al., (1999). Patient Health Questionnaire Study Group. Validity and utility of a self report version of PRIME- MD: The PHQ Primary Care Study. *JAMA*, 282, 1734-1744.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C.S., Ho, & R.C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 Coronavirus Disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, 17(5), 1729.
- Xiang et al. (2020). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The Lancet Psychiatry*, 7(3), 228-229.