

**Analysis of Impact on Mental Health and Motivation Levels of Higher-Levels Students  
Due to Novel Virus COVID-19**

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**Abstract**

*The main purpose of this study was to analyze the impact on Mental Health and Motivation levels of university students because of nCOV-19. This study analyzed the perception of students' mental health and Motivation level due to nCOV-19. The population comprised 25000 students of the University of Education Multan, Baha Uddin Zakariya University Multan, and MNS University of Agriculture Multan. They selected a sample of 250 students through the cluster and stratified sampling technique. A survey was conducted for the quantitative components of the study amongst students using a self-made questionnaire based on the factors of mental health and motivation level. Three factors of mental health are stress, anxiety, and depression. The researcher distributed and administered the questionnaires himself. The study reviewed relevant literature regarding nCOV-19, character and higher educational institutions, and other factors influencing these variables. The received information was broken down using illustrative and inferential measurements. Descriptive statistics included mean, median, mode, and standard deviation. The results show that students receive a high level of data collected about the motivational level of students. Both anxiety and depression at a low level, and stress at moderate level amongst university students during the nCOV-19 Pandemic. Inferential statistics included t-test, Pearson correlation, and linear regression. The commonness of stress and depression in females is greater than males with a minimum margin, which shows females face a slightly higher level of stress and depression than males. But the commonness of anxiety in females is greater than males with a moderate margin, which shows females face a higher level of anxiety than males. Pearson coefficient correlation indicates a negative low degree of correlation between the impact of motivational levels and students' academic achievement.*

**Keywords:** nCOV-19, Anxiety, Stress, Depression, Motivations

**Introduction**

The COVID-19 pandemic has been one of the most dangerous medical services and financial emergencies of current occasions all over the World. In Pakistan alone, there have been more than 5,46,428 cases and over 13,370 deaths as of Feb 1, 2021 ("CDC Global Health - Pakistan", 2021). Pakistan is the world's fifth-most crowded country with an expected populace of 220 million as of 2020 ("Pakistan Coronavirus: 633,741 Cases and 13,935 Deaths - Worldometer", 2021). Psychological maladjustment during this situation represents a great financial load on society globally (Saxena, Thornicroft, Knapp and Whiteford, 2007). Psychological well-being issues are on the record during this COVID-19 lockdown, (Haider, Tiwana, and Tahir, 2020) as the approaching financial emergency issues show the negative impact on the mind of weak students and they require passionate directing during these awful occasions.

The issue of this study is to show the effect of the COVID-19 pandemic on the psychological well-being (pressure, uneasiness, and misery) of students in Pakistan. This investigation is additionally to analyze the effect of COVID-19 limitations (i.e., home restriction, school terminations, and distance learning) on students' scholastic inspiration and the participation of students in extracurricular exercises.

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### **Literature Review**

The COVID-19 initially began, numerous early occurrences of COVID-19 have been credited to individuals who have visited the Huanan Seafood Wholesale Market, situated in Wuhan, Hubei, China. (Liu et al., 2020) On eleven February 2020, the World Health Organization (WHO) named the disease "Coronavirus", which is speedy for COVID issue 2019. The infection that burst out all over the world and spread intense respiratory condition COVID two (SARS-CoV-2), a recently found infection deliberately related to bat COVIDs, pangolin COVIDs, and SARS-CoV(2020). The logical agreement is that COVID-19 is a zoonotic infection that emerged from bats in homegrown settings (Chen, 2020).

Psychological well-being issues are on the earth during this COVID-19 lockdown, (Haider, Tiwana, and Tahir, 2020) as the approaching monetary emergency issues' evil outcomes for the standpoint of weak students and they require enthusiastic guiding during this dangerous situation. Online scholastics may miss such issues (Erskine and MacPhail, 2015). In an online examination, emotionally supportive networks are made to help psychological wellness, anyway, just some oblige advanced education learners (Papadatou-Pastou, Goozee, Payne, Barrable and Tzotzoli, 2017) affecting the psychological wellness of students in this online scholarly time brought upon by COVID-19.

Stress can set off the body's reaction to an apparent possibility or risk, recognized as the battle or fight against this virus (COVID-19, 2021). During this response, positive chemicals like adrenaline and cortisol are delivered. This rates the coronary pulse eases back processing shunts blood buoy to most significant muscle gatherings, and changes various distinctive autonomic stressed capacities, giving the physical make-up an explosion of power and strength (Gostin and Wiley, 2020).

Anxiety is a feeling of unease, such as fear or fear, that can be moderate or severe. Despondency is a continuous and genuine logical infection that adversely impacts how you feel, how you think, and how you act. Luckily, it is furthermore treatable. Despondency reasons feelings of misery and additionally a deficiency of leisure activity in activities you when enjoyed (Haider, Tiwana, and Tahir, 2020). It can prompt a scope of enthusiastic and real issues and can limit your capability to include at work and home.

Built-up the Academic Motivation Scale (AMS), through the ideas of the Self-Determination Theory. This instrument has been generally utilized in the Education field. It was converted into Portuguese interestingly, to break down the inspiration of college students in Medicine (Ryan, 2010) concerning their course. From that point forward, a few examinations have been directed at the public level, attempting to inspect and approve the psychometric highlights of this instrument (Hashmi and Saleem, 2020). So, the objectives of this study were

- To analyze the impact of novel virus COVID-19 on the motivational level of university students.
- To investigate the presence of depression, anxiety, and stress amongst university students during the nCOV-19 pandemic.
- To find out the comparison of depression, anxiety, and stress between male and female genders.

The significance of the study is that: In Pakistan, the mental health and motivational level are much required for the students due to the nCOV-19. But no proper guidance is provided to the students. The results of this study will be beneficial for the students, teachers, parents, policymakers, community members, and the Government of Pakistan. This study may be useful for planners and administrations to improve the strategies that help the students to improve their mental health and motivation. The parents of the students may also be beneficial to this study as they will be able to understand the mental crisis of a child and try to help to resolve them. This study may decrease the negative feelings and may replace them with feelings of hope, courage and willing cooperation, and so on.

### **Methodology**

Quantitative research has been conducted. The study was descriptive. This research was conducted to be able to analyze the impact on Mental Health and Motivation levels of Higher-Level Students due to the Novel Virus COVID-19. For this purpose, a survey design was used, using quantitative methodology. The survey was conducted on three public universities students of Multan city. The population consisted of 25000 students of higher-level classes of several government universities

which were situated in Multan City. Keeping in view the specific nature of the present research the population was selected. A total of 250 students were selected as a sample for the study using cluster and stratified sampling techniques. A total of 110 students were selected from the University of Education, a total of 70 students were selected from Bahauddin Zakariya University Multan and a total of 70 students were selected from MNS University of Agriculture Multan. Only higher-level classes (BS, B. Ed, MA). The validation of the instrument was secured by taking experts' opinions. Furthermore, its reliability was made sure after its pilot testing. There were 40 students, who took part in the pilot testing. The Cronbach's Alpha was 0.86 that is acceptable for reliability.

The survey questionnaire was used as a tool for the data collection through google form (online). Online technology is used as WhatsApp, Emails, and Facebook. After reviewing the literature, the questionnaire was designed. Total 41 statements in which, 25 positive statements were included along with a set of responses consisting of Five-Point Likert Scale, for collection of answers from respondents. The responses including strongly disagree, disagree, undecided, agree, strongly agree ranging from 1 to 5 respectively. And other 16 statements were included along with a set of responses consisting of the Four-Point Likert Scale, for the collection of answers from respondents. The responses including not at all, several days, more than half of the day, nearly every day ranging from 1 to 4 respectively.

**Data Analysis**

Data were analyzed using descriptive and inferential statistics. Descriptive statistics included mean, median, mode, standard deviation, and cross-tabulation. Inferential statistics included a t-test. SPSS software and Microsoft Excel were used for the analysis of data. Statement-wise analysis of self-reporting questionnaire was done. Arithmetic means, mode, median, and standard deviation were computed. T-test was computed to determine the gender-based difference of ethical values in the perception of students. Cross Tabulation was done to analyze device preference on a gender basis. The data were analyzed based on percentage, mean, mode, median, and standard deviation. Data analysis is categorized into two different groups; the first group is "the impact of novel virus COVID-19 on Motivational levels of university students", and "the prevalence amongst university students during the COVID-19 pandemic". And the second group is further distributed into three sub-values based on the three factors; depression, anxiety, and stress. Further, a gender-based comparison is conducted.

The participant’s demographic information has been categorized according to gender.

*Table-1 Participant’s Demographic Information*

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>		
Male	134	53.6
Female	116	46.4

This table results showed that male frequency is more than female that is 134 and 116 respectively in total 250 students. The percentage of the male is 53.6% and females is 46.4%.

*Table-2 Analysis of data regarding Motivational levels of university students*

<b>Sr. No.</b>	<b>Statement</b>	<b>Mean</b>	<b>Mode</b>	<b>Median</b>	<b>Std. dev.</b>
1.	Feel positive about life	4.1	4.0	4.0	0.9
2.	Figuring out the best solution to the problem	3.8	4.0	4.0	0.9
3.	Imagine new ways to do things	4.2	4.0	4.0	0.7
4.	Come up with new ideas	4.2	4.0	4.0	0.7
5.	Hopeful about future	4.4	5.0	5.0	0.8
6.	Easy communication with thoughts and ideas	3.8	4.0	4.0	1.0
7.	Smartness makes changes	3.8	4.0	4.0	0.8
8.	Exert more effort when difficult assignments	4.2	4.0	4.0	0.9
9.	Figuring many solutions to problems	4.3	4.0	4.0	0.7
10.	Enjoy homework and activities	4.0	4.0	4.00	1.0
11.	To learn as much as	4.3	5.0	4.00	0.8
	<b>Overall</b>	<b>4.1</b>	<b>4.2</b>	<b>4.1</b>	<b>0.8</b>

This part is centered on the investigation of information in regards to the Motivational degrees of college students. Eleven statements were given on this topic based on which students appraised themselves to be careful. The poll portrayed general qualities identified with the character. Students were approached to rate themselves cautiously. The rating scale comprised of the five

reactions; Strongly Disagree, Disagree, Undecided, Agree, Strongly Agree. Overall mean worth of 4.1 shows understudies have emphatically concurred with levels of inspiration. Generally, middle and mode esteems are discovered to be 4.1 and 4.2 separately which support the after-effects of the mean. By and large Standard deviation is 0.8 which addresses firmly concurs with the level of agreement among respondents.

**Table-3 Depression amongst university students during the COVID-19 Pandemic**

<b>Sr. No.</b>	<b>Statement</b>	<b>Mean</b>	<b>Mode</b>	<b>Median</b>	<b>Std. dev.</b>
1.	Little interest or pleasure	2.2	2.0	2	1.0
2.	Feeling depressed, down, or hopeless	1.9	1.0	2.0	1.0
3.	Staying asleep or trouble falling	2.0	1.0	2.0	1.1
4.	Feeling low energy and tired	2.3	2.0	2.0	1.1
5.	Overeating or poor appetite	1.7	1.0	1.0	1.0
6.	Feeling bad or failure	1.7	1.0	1.0	1.0
7.	Trouble concentrating on things	1.9	1.0	2.0	1.1
8.	Moving or speaking so slowly	1.7	1.0	1.0	1.0
9.	Off dead, or hurting	1.8	1.0	1.0	1.0
	<b>Overall</b>	<b>1.9</b>	<b>1.2</b>	<b>1.6</b>	<b>1.0</b>

This segment is centered on the examination of information concerning research on the commonness of sorrow among university students during the COVID-19 pandemic. 9 articulations were given in this subject based on which students evaluated themselves. The questionnaire was described the general qualities identified with the character. Students were approached to rate themselves carefully. The rating scale comprised of the four responses; not by any stretch of the imagination, several days, more than half of the day, nearly consistently. In general, a mean worth of 1.9 demonstrates understudies have a respondent low degree of sorrow among them. By and large middle and mode esteems are discovered to be 1.6 and 1.2 individually which support the consequences of the mean. By and large Standard deviation is 1.0 which addresses a low degree of depression among respondents.

**Table-4 Anxiety amongst university students during the COVID-19 Pandemic**

<b>Sr. No.</b>	<b>Statement</b>	<b>Mean</b>	<b>Mode</b>	<b>Median</b>	<b>Std. dev.</b>
1.	Feeling anxious and nervous	1.8	1.0	2.0	0.9
2.	Not being able to control or stop worrying	1.9	1.0	2.0	1.1
3.	Too much worried about different things	2.2	1.0	2.0	1.2
4.	Relaxing in trouble	1.9	1.0	2.0	1.0
5.	Being so restless that makes it hard to sit	2.0	1.0	2.0	1.1
6.	Easily annoyed or irritable	2.0	1.0	2.0	1.0
7.	Feeling afraid	2.1	1.0	2.0	1.1
	<b>Overall</b>	<b>2.0</b>	<b>1.0</b>	<b>2.0</b>	<b>1.1</b>

This section is an emphasis the analysis of data to investigate the prevalence of anxiety amongst university students during the COVID-19 pandemic. Seven statements were given in this theme based on which students graded themselves. The questionnaire was described general characteristics belongs to the character. Students were asked to grade themselves carefully. The rating scale consisted of the four responses; not at all, More than half of the day, several days, nearly every day. The overall mean value of 2.0 indicates students have respondents' low level of anxiety amongst them. Overall mode and median values are found to be 2.0 and 1.0 respectively which support the results of the mean. The overall Standard deviation is 1.1 which represents a low level of anxiety amongst respondents.

**Table-5 Stress amongst university students during the COVID-19 Pandemic**

<b>Sr. No.</b>	<b>Statement</b>	<b>Mean</b>	<b>Mode</b>	<b>Median</b>	<b>Std. dev.</b>
1.	Exercised (whether indoors or outdoors)	3.4	4.0	4.0	1.1
2.	Nutrition balance	3.7	4.0	4.0	1.0
3.	Regular awakening time and bedtime	3.4	4.0	4.0	1.2
4.	Engaged activities	3.8	4.0	4.0	1.0
5.	Interaction face-to-face	4.0	4.0	4.0	0.9
6.	Going out or took preventive	4.0	4.0	4.0	1.0
7.	Think about the future positively	4.3	5.0	4.0	0.8

8.	Budget tight	3.8	4.0	4.0	1.0
9.	A personal relationship with a close person	3.3	4.0	3.0	1.2
10.	Easily disturbed due to life-change	3.6	4.0	4.0	1.0
11.	Feel nervous or anxious	3.3	4.0	4.0	1.1
12.	Properly not sleep	3.0	4.0	3.0	1.3
13.	Daily life interrupted	3.4	4.0	4.0	1.2
14.	Schoolwork interrupted due to life-change	3.4	4.0	4.0	1.0
	<b>Overall</b>	<b>3.6</b>	<b>4.1</b>	<b>3.9</b>	<b>1.1</b>

This section is an emphasis the analysis of data to investigate the commonness of stress amongst university students during the COVID-19 pandemic. Fourteen statements were given in this section based on which students graded themselves. The questionnaire described common characteristics belongs to the character. Students were asked to grade themselves carefully. The rating scale consisted of the five responses; strongly Disagree, Disagree, Undecided, Agree, Strongly Agree. The overall mean value of 3.6 indicates students have respondents agree with the levels of stress. Overall mode and median values are found to be 3.9 and 4.1 respectively which favors the results of the mean. The overall Standard deviation is 1.1 which represents an agreed level of stress amongst respondents.

**Impact of Motivational levels on Student's academic achievement**

This section determines the relationship between the impact of motivational levels and students' academic achievement to determine if motivational levels have any effect on and students' academic achievement. Inferential statistics are used for this research. Pearson correlation test is applied to determine the relationship between the Impact of motivational levels and students' academic achievement.

*Table-6 Impact of Motivational levels on Student's academic achievement*

		Motivation	Academic Achievement
Motivational Levels	Pearson Correlation	1	-.023
	Sig. (2-tailed)		.717
	N	250	250
Academic Achievement	Pearson Correlation	-.023	1
	Sig. (2-tailed)	.717	
	N	250	250

Table-6 shows the value of Pearson coefficient correlation between the impact of motivational levels and students' academic achievement is -0.23. This indicates a negative low degree of correlation between the impact of motivational levels and students' academic achievement. However, the p-value is .0717 which is greater than 0.05 which indicates there is no statistically significant relationship between the impact of motivational levels and students' academic achievement.

**Difference between perception to the outbreak on the mental health of university students on gender basis**

*Table-7 Analysis of the prevalence of Depression on a gender basis*

Prevalence of Depression	Participant	N	Mean	DF	Sig.
	Male	134	1.8433	248	.041
	Female	116	1.9770	228.99	

Table-7 shows the mean value of prevalence of depression in females 1.97 is greater than males 1.84 with a minimum margin which shows females face a slightly higher level of depression than males. However, the p-value of .041 is less than 0.05 which shows there is a statistical difference between females and males. It is determined there exists a statistical difference between males and females regarding the prevalence of depression.

*Table-8 Analysis of the prevalence of Anxiety on a gender basis*

Prevalence of Anxiety	Participant	N	Mean	DF	Sig.
	Male	134	1.8550	248	.949
	Female	116	2.1367	242.99	

Table-8 shows the mean value of prevalence of anxiety in females 2.1 is greater than males 1.8 with a moderate margin which shows females face a higher level of anxiety than males. However, the p-value of .949 is greater than 0.05 which shows there is no statistical difference between females and males. It is determined that there is no statistical difference between females and males regarding the prevalence of anxiety.

Table-9 Analysis of the prevalence of Stress on a gender basis

Prevalence of stress	Participant	N	Mean	DF	Sig.
	Male	134	3.7132	248	.129
	Female	116	3.6435	247.8	

Table-9 shows the mean value of prevalence of stress in females 116 is greater than males 134 with a very minimum margin which shows females face a slightly higher level of stress than males. However, the p-value of .129 is greater than 0.05 which represents there is no statistical difference between males and females. It is therefore determined there is no statistical difference between males and females regarding the prevalence of stress.

**Conclusion and Discussion**

This study is an essential addition to motivate and built inspire amongst higher-level students in Pakistan. This examination proposes that mental prosperity and emotional wellness should be checked during the pandemic, and instructive organizations ought to offer mental help for adjusting to these conditions. Also, it is important to explore why higher-level students are suffering a greater psychological impact in future studies. Earlier studies in Pakistan observed the presence of depression, anxiety, and stress among students in higher academia.

The analysis of mental health and motivation level showed us that higher-level students are mentally disturbed about their daily life and education. With the passage of time students positively motivated. Students who have a high rate of stress, anxiety, and depression, according to research findings. Female students are observed to be more negatively affected, and university students have higher stress and anxiety levels.

From the academic perspective, motivation is a concept that encompasses several positive constructs significantly related to learning and educational development and that has generated multiple perspectives of study. Pintrich identified three general categories of constructs pertinent to motivation in the educational context (Pintrich, 1991): (a) beliefs of individuals in their abilities to perform an activity; (b) their reasons or purposes for engaging in the activity, and (c) their 20 affective reactions to the activity. In a recent review, Murphy and Alexander examined 20 fundamental terms linked to the different lines or perspectives of research in this field (Murphy & Alexander, 2000).

Sex contrasts have recently been found in pressure identified with COVID-19 out of an examination by Liu et al. in China (Liu et al., 2020). They tracked down that the pervasiveness of post-horrendous pressure conditions a month after the COVID-19 flare-up was 7% in the hardest-hit zones and that women were more significantly impacted. Since the beginning of the COVID-19 pandemic, there have been not many investigations that have effectively inspected the effect of COVID-19 on emotional wellness in various understudy populaces. Cao et al. directed a 7-thing Generalized Anxiety Disorder Scale (GAD-7) on 7,143 undergrads in China. They discovered 24.9% of the respondents had nervousness of which just 2.7% was viewed as moderate and 0.9% was severe (Cao et al., 2020).

The COVID-19 epidemic has been dubbed the world's largest most destructive and complicated public health problem. Aside from the increasing mortality rate, countries around the world have seen a rise in excruciating psychological outcomes, such as anxiety and depression, among people of all ages. Students at universities are no exception, as all educational establishments are unregulated. In this research, 4.10 indicates students have strongly agreed with the motivational level and the standard deviation is 0.85 which characterizes a strongly agreed level of consensus amongst respondents. The relationship between the impact of motivational levels and students' academic achievement to determine if motivational levels have any effect on and Student's academic achievement. Inferential statistics are applied for this research. Pearson correlation test is used to determine the relationship between the Impact of motivational levels and students' academic achievement.

**Recommendation**

Based on findings of the current study, were recommend that there should be given proper training to teachers to increase the motivation level in the university students. On the other hand, to minimize the exceeding psychological issues in the university students, the government along with the universities management should arrange to deliver the proper counseling sessions for students to overcome the psychological issues of the university students.

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