EFFECTS OF COVID-19 ON PSYCHOSOMATIC ISSUES, LEVEL OF PERCEIVED THREAT AND UNCERTAINTY AMONG UNIVERSITY STUDENTS IN PAKISTAN

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ABSTRACT

The Covid-19 pandemic was a very stressful and threatening situation that has brought the risk of death from infection and unbearable psychological pressure on students. The uncertainty about the prevailing situation triggered stress in students. Factors associated with increased stress are the online education system, financial crisis and parents' concerns about their children's future. The purpose of this study is to evaluate the level of a perceived threat of COVID 19, level of uncertainty in and the rise in psychosomatic complaints in university students during COVID-19. A cross sectional web-based survey was carried out to investigate the effects of COVID-19 on University Students of Pakistan. Population size was 300, and data was collected by spreading a semi structured questionnaire on Social Media. Data were analyzed by using an IBM SPSS 23.0. Duration of the study was 6 Months. The level of depression increased during COVID-19 from mild (Mean 4.02+3.24) to moderate (Mean 5.64+3.55). There was a moderate (Mean 12.52+4.428) level of uncertainty and the moderate (Mean 13.84+4.428) level of threat of virus affecting people**.** During Covid-19 people faced moderate level of threat and uncertainty. The level of depression increased from mild (Before COVID-19) to moderate (During COVID-19), among university students in Pakistan.

Key Words: COVID-19, level of perceived threat, level of Intolerance, psychological complaints.

INTRODUCTION

The 2019 Corona Virus (COVID-19), an infectious disease in China, incited panic and a prosperity risk. This virus was first discovered in late December 2019 in the city of Wuhan Hubei Province (Wang et al., 2020). On January 30, 2020, the World Health Organization (WHO) declared the simple acute respiratory syndrome Corona Virus (COVID-19) to be a known health problem of international significance(Casagrande et al., 2020). Regular lives have been disrupted due to the Corona Virus disease 2019 (COVID-19) pandemic and the social distancing steps taken by several nations(Lee, 2020). Many people may experience mental health issues due to social distancing, a common measure used to prevent the spread of a virus. To combat the spread of Covid-19, the US government placed mass quarantine and shelter-in-place orders across the country in March, isolating millions of people.

While these measures may help to reduce the number of new infections, a lack of social contact may hurt mental health due to feelings of depression and isolation (Kämpfen et al., 2020). Various advisories have a considerable negative influence on people's mental health, particularly those with obsessive-compulsive disorder (Singhal, 2020). Fear of becoming ill or dying, as well as a sense of helplessness, may contribute to an increase in suicide rates in 2020 (Montemurro & Perrini, 2022). Exacerbation of mental conditions decreased availability of social care which are highly prevalent in this population (Gupta et al., 2020). The epidemic has increased the chance of death through infection as well as terrible psychological pressure, which ultimately increases the probability of possibility (Sher, 2020). During the epidemic, it is recommended that students' mental health be

assessed (Noreen et al., 2020). There is no doubt that the spread of Corona Virus is perceived as a threat and a risk. Public confidence in these safeguarding measures is crucial and should help alleviate the perceived risk (Kanovsky & Halamová, 2020). The uncertainty about the prevailing situation triggered stress in students. To minimize the academic loss, countries across the world sought an alternative of teaching-the online based class (Ela et al., 2021).

Objectives:
1) This study evaluates the level of the perceived threat of COVID 19 and the level of uncertainty in university students.
2) To investigate the rise in psychosomatic complaints in university students during COVID-19.

Methods:
Participants:

Participants (N=300) were recruited from Undergraduate students of different universities of Pakistan. A Semi-Structured Questionnaire was prepared and used for Data Collection. Test Pre-Test method and expert opinion were used to validate the questionnaire. Data was collected through social media (WhatsApp groups, University groups, Gmail, Instagram & Facebook). A Cross Sectional Web Based Survey was conducted to examine the effects of COVID-19 on the physical and Psychological Health of University Students in Pakistan. Duration of Study was 6 months. Measures:

Data analysis:
The demographic variables were calculated using the descriptive approach. Paired T-Test was used to determine the statistical difference between Before and During COVID-19 and other demographic and related variables. The P-value was considered to be statistically significant if less than 0.05. The inferred data are presented as tables and graphs.

The severity of COVID-19 threat:

We asked the respondents 5 questions each question containing 5 options. Each option contains a specific value that is Strongly Disagree=1, Disagree=2, Neither agree nor disagree=3, Agree=4, and Strongly Agree=5. We calculated the scores of each respondent individually. We classified these results into 3 categories that are Mild, Moderate, and Severe as Mild=5-11, Moderate=12-18, and Severe=19-25. The minimum value is 5 and the maximum value is 25. The Level of Uncertainty Among Students: We asked the respondents 5 questions each question containing 5 options. Each option contains a specific value that is Not at all characteristic of me=1, A little characteristic of me=2, Somewhat characteristic of me=3, Very characteristic of me=4, and entirely characteristic of me=5. We calculated the scores of each respondent individually. We classified these results into 3 categories that are Mild, Moderate, and Severe as Mild=5-11, Moderate=12-18, and Severe=19-25. The minimum value is 5 and the maximum value is 25.

The Severity of Depression:

We asked the respondents 5 questions each question containing 4 options. Each option contains a specific value that is calculated according to the specified rule of the PHQ-9 Scale, that is Not at all=0, Several days=1, More than half the days=2, and nearly every day=3. We calculated the scores of each respondent individually. We classified these results into 3 categories that are Mild, Moderate, and Severe as Mild=<4, Moderate=>5-9, and Severe=>10-15. The minimum value is 0 and the maximum value is 15.

Results:
Demographics:
There were 300 participants there were 23.7% males and 76.3% were female.

Respondents	Frequency	Percent
16-20	39	13.0
21-25	240	80.0
26-30	19	6.3
31-35	2	.7

Table 1 Age of respondents

| Institution Names	Frequency	Percent
University of Sargodha	64	21.3
University of Central Punjab	26	8.7
King Edward Medical University	31	10.3
Government College University Faisalabad	34	11.3
University of the Punjab	25	8.3
University of Lahore	32	10.7
Riphah International University	20	6.7
University of Agriculture	34	11.3
Government College University Lahore	21	7.0
Agha Khan University	13	4.3
Total	**300**	**100.0**

Table 1 Educational Institutes (Data presented in this table indicated the frequency distribution of the respondents according to their Institution)

Programs	Frequency	Percent
BS-Chemistry	10	3.3
BS-Physics	6	2
BS-Mathematics	5	1.7
BSIT	3	1
BSCS	13	4.3
DPT	149	49.7
MBBS	40	13.3
Others	74	24.7

Table 3 Participants' educational programs (Data presented in this table and figure indicated the frequency distribution of the respondents according to the education program).

COVID-19 threat scale:

Data presented in this histogram and tables indicated the results of the respondents' input on the COVID-19 threat scale.
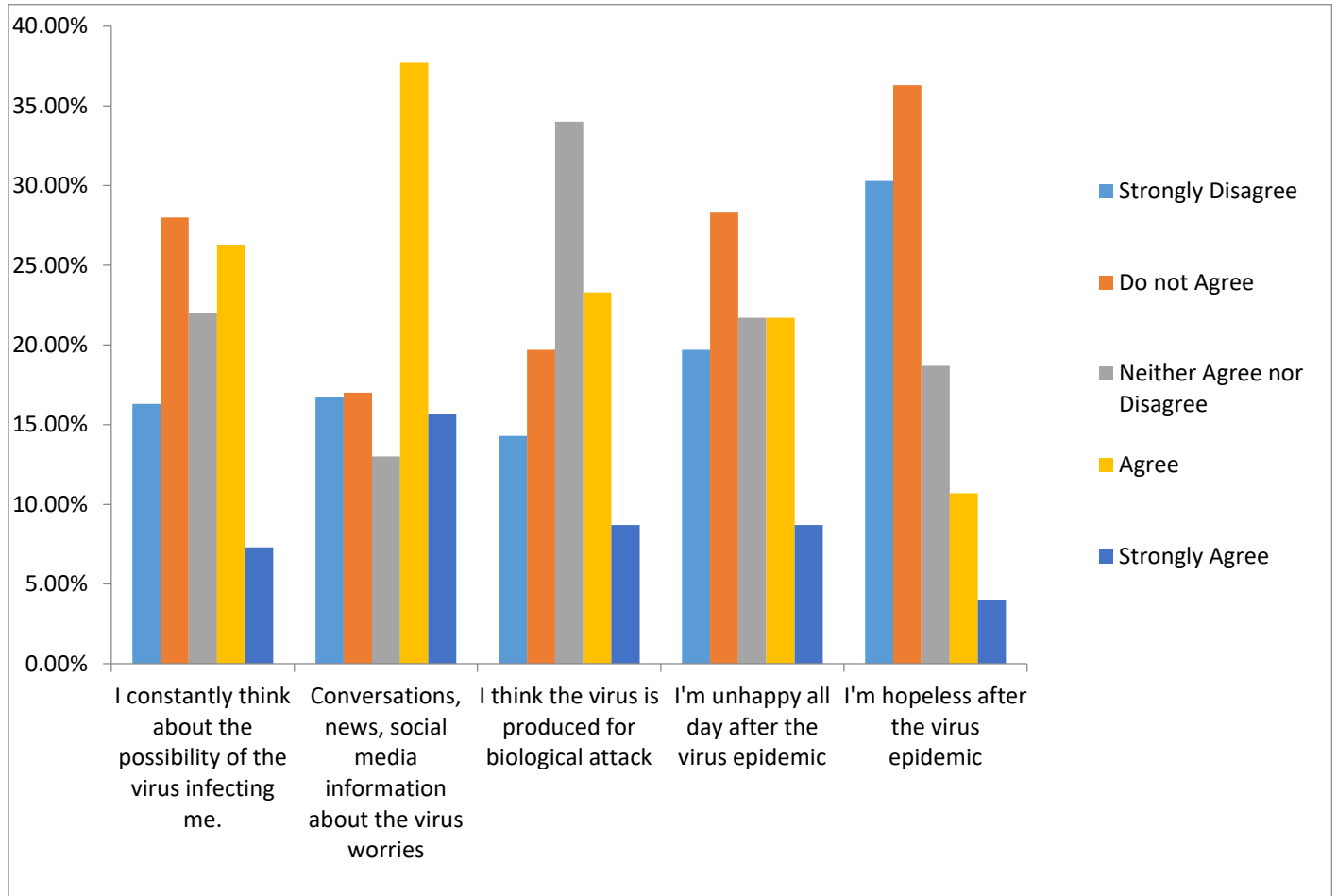

Figure 1: COVID-19 Threat Scale

	N	Minimum	Maximum	Mean	Std. Deviation
COVID-19 Threat Scale Score	300	5	25	13.84	4.428

Severity of threat	Frequency	Percent
Mild	101	33.7
Moderate	152	50.7
Severe	47	15.7
Total	**300**	**100.0**

Table 4: Severity of Threat

Intolerance of Uncertainty Scale (modified):
Data presented in this table indicated the results of the respondent's input on the Intolerance of Uncertainty Scale (modified).
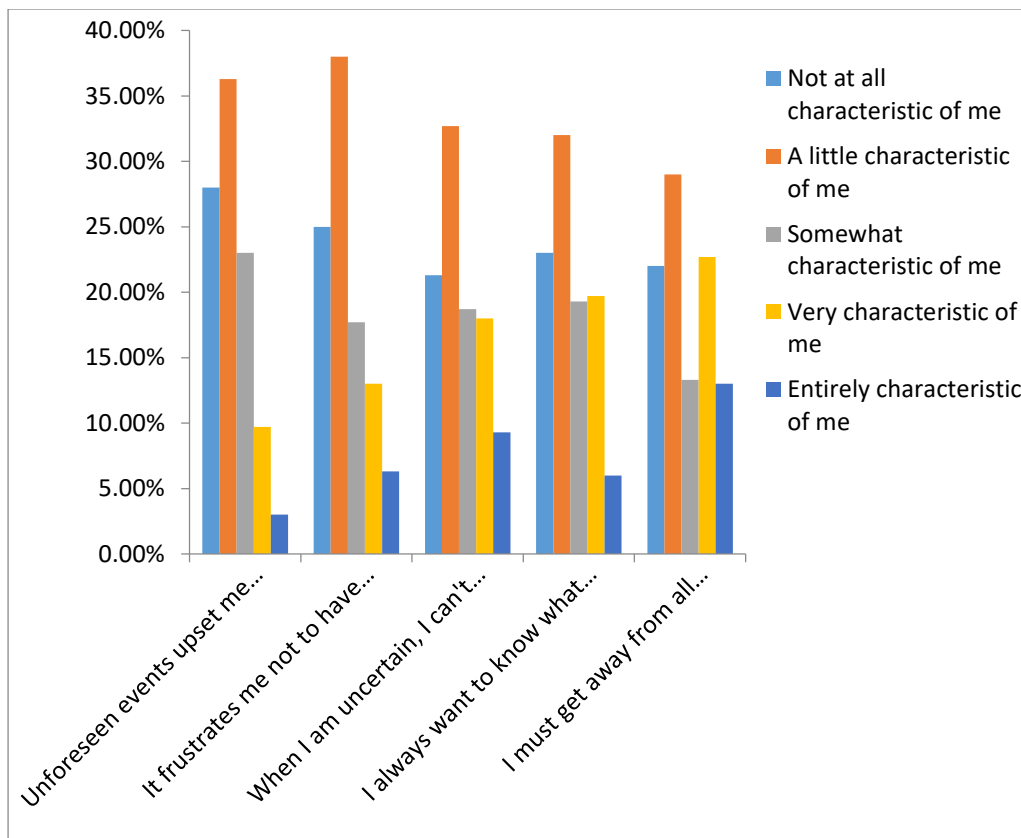
Figure 2: Intolerance of Uncertainty Scale (modified)

	N	Minimum	Maximum	Mean	Std. Deviation
Intolerance of Uncertainty Scale (modified) Score	300	5	25	12.52	4.428

Level Of Uncertainty	Frequency	Percent
Mild	149	49.7
Moderate	106	35.3
Severe	45	15.0
Total	**300**	**100.0**

Table 5: Level of Uncertainty Among Students

Pre-Corona patient health questionnaire (PHQ-9):

In the PHQ-9 Scale during COVID, we've checked the different psychological distress and difficulties among university students during COVID situations that are highly associated with social functioning and experiences. The results designated that student experienced substantial psychological problems during the pandemic.

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
a. Little interest or pleasure in doing things	32.3%	34.7%	22.7%	10.3%
b. Feeling down, depressed, or hopeless	46.3%	35.0%	16.0%	2.7%
c. Feeling bad about yourself or that you are a failure or have let yourself or your family down	54.3%	26.0%	13.3%	6.3%

d. **Trouble concentrating on things, such as reading the newspaper or watching television.**	48.3%	30.7%	16.0%	5.0%
e. **Thoughts that you would be better off dead or of hurting yourself in some way.**	59.7%	21.0%	12.7%	6.7%

Table 6 Pre Corona Patient Health Questionnaire (PHQ-9)

	N	Minimum	Maximum	Mean	Std. Deviation
Patient health questionnaire (PHQ-9)	300	0	15	4.02	3.24

During the corona patient health questionnaire (PHQ-9):

Data presented in this table indicated the results of the respondents' input during Corona Patient Health Questionnaire (PHQ-9).

|	N	Minimum	Maximum	Mean	Std. Deviation
Patient health questionnaire (PHQ-9)	300	0	15	5.64	3.55

Table 7: During Corona Patient Health Questionnaire (PHQ-9)

Comparison between Before and During Corona Patient Health Questionnaire (PHQ-9):
Data presented in this table indicated the results of comparison between before and during Corona Patient Health Questionnaire (PHQ-9).

	Mean	Std. Deviation	95% Confidence Interval of the Difference		T	Df	Sig. (2-tailed)
			Lower	Upper			
Total Score Before Covid-19 Total Score After Covid-19	-1.623	3.542	-2.026	-1.221	-7.939	299	.000

PHQ-9 depression Scale applied on university students during COVID-19 confinement, 95% confidence interval of the differences between two variable total score of before COVID-19 and total score of after COVID-19, with the margin of error of 5% lower value of paired sample t-test is -2.026 and higher value of paired sample t-test is -1.221and the value of t is -7.939.

Std.= 3.542, Mean=-1.623, Correlation=.459 with .000 Significance level
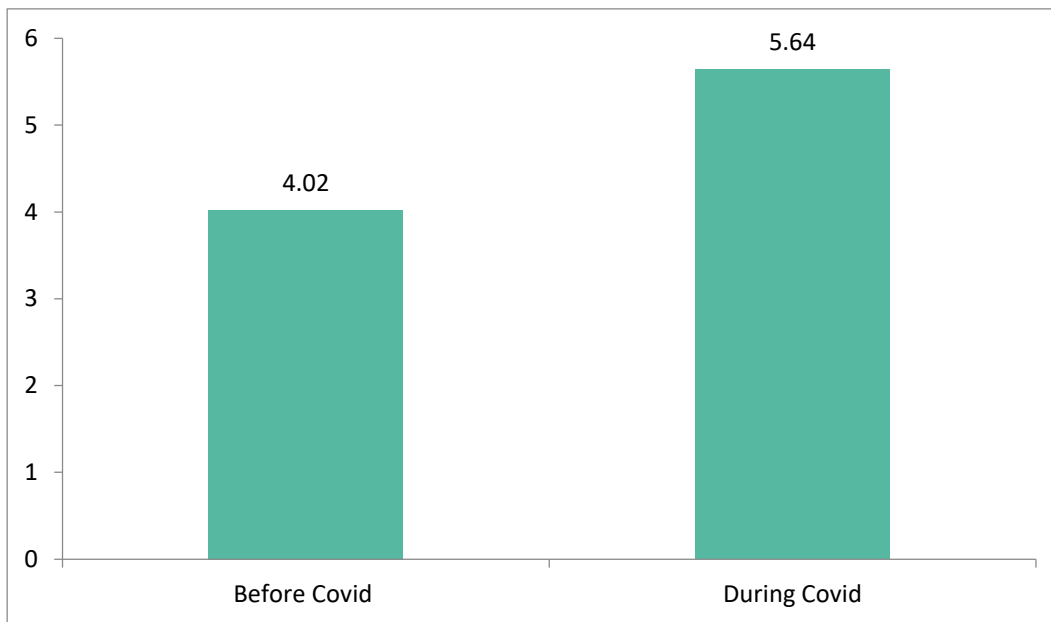
Figure 3: Comparison Between Before and After COVID

DISCUSSION:
COVID 19 Threat Scale:
We validated a 5-item scale assessing the level of perceived psychological threat in response to t;he COVID-19 pandemic. Using an observational web-based survey in the form of a quantitative type survey design, we found the psychometric properties of the scale were sound.
The significance of our modified perceived COVID 19 threat scale is that it is a measurement tool to check the psychological impact of COVID 19 on our lives. From the study, we got to know that the majority of the population does not agree about the possibility of the virus-infected them. The majority of the population agrees the way of getting information about the virus worries is through conversations, news, and social media. Further according to our statement, the virus is produced for biological attack the large population was neither agreed nor disagreed with the statement. The most response of the population for the virus epidemic makes them unhappy and hopeless all day was not agreed. So it concludes that the virus epidemic doesn't make people hopeless and unhappy. The study scale suggests the correlation of anxiety, depression, threat, sedentary lifestyle, routine disturbance. The results in percentage are shown to

us depicting the following findings among individuals.

Intolerance of Uncertainty Scale (modified):

In the Intolerance of Uncertainty Scale (modified) Scale, the results are as showing the probable anxiety associated with COVID 19 and its outcome on an individual life where we have checked the correlations and predisposing factors among different university students.

PHQ-9 Scale Before COVID:

In PHQ-9 Scale Before COVID, we've investigated student's mental health and social networks before the time of the COVID-19 pandemic. Further, we've analyzed multiple changes in social interactions and mental health indicators before COVID among different university students in Pakistan.

PHQ-9 Scale During COVID:

In the PHQ-9 Scale during COVID, we've checked the different psychological distress and difficulties among university students during COVID situations that are highly associated with social functioning and experiences. The results designated that students experienced substantial psychological problems during the pandemic.

Conclusion:

The Majority of respondents had a moderate level of threat and uncertainty during COVID-19. The Majority of respondents had a mild level of depression before COVID-19 that increased to moderate level of depression during COVID-19.

Limitations:

This study was not conducted on general population. Gender specific study was not included. Data was not collected from all over the Pakistan because of limited time and resources. Recall bias and non compliance of the respondents can be present.

Recommendations:

More research work is required on equal male and female ratio with large sample size and population. Face to face interviews with the respondents are preferred. Other co-morbid conditions must also be taken into account.

Competing Interests:

The authors have no competing interests to declare.

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