



Psychological And Emotional Barrier And Academic Effect after Covid-19

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ABSTRACT

Purpose A contagious disease known as COVID-19 has spread globally. Students' reported stress levels during the Corona virus Illness Outbreak were assessed for this study since illness outbreaks may have mental health consequences. This study aims to determine how the COVID pandemic has affected the mental and emotional health of students. **Design / Methodology / Approach:** To examine the psychological effect, a validated version of the Depression, Anxiety, and Stress Scale-21 Item questionnaire was used. Using this form, information was collected from 697 samples. The data were statistically analysed using SPSS. The research made use of the Mann-Whitney U test and the Kruskal-Wallis test wherever feasible. This research used the chi-square test to compare socio demographic data with logistic regression analysis to discover student response-related components.

Findings: There was a rise in the number of pupils who were sad, nervous, or agitated because of the COVID-19 epidemic. Women were also more likely than men to demonstrate indicators of mental illness, according to the research. **Implications:** Findings of this study will be helpful for management and policy makers of higher educational institutions to focus on overcoming the psychological and emotional barriers among students. **Novelty:** This is first study as per the researcher best knowledge, focusing on psychological and emotional barriers among student after Covid-19.

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Introduction

The epidemic of the new coronavirus illness 2019 (COVID-19) has been catastrophic and devastating, offering difficulties to researchers and healthcare systems throughout the course of human history. In December 2019, Wuhan, China, was the first city in the world to proclaim a COVID-19 pandemic. In the last twenty years, it has evolved into a phenomenon that is seen all over the globe. Three days later, on January 30, 2020, the World Health Organization (WHO) declared the COVID-19 outbreak to be a pandemic. This virus is transmitted almost exclusively from person to person, either by coming into physical touch with an infected person or by breathing in their respiratory droplets (Hui et al., 2020; Meng, Hua, & Bian, 2020; Zhu et al., 2020).

The authorities have implemented stringent limitations in an effort to maintain control of the coronavirus. These restrictions include the closing of borders and curfews, as well as a general prohibition on public gatherings and the closure of public places, such as park plays capes and schools. Because of these limitations, millions of individuals have been compelled to live by themselves (Kumar & Nayar, 2021; Wang et al., 2020), which may have contributed to an increase in the prevalence of mental health problems linked with feelings of isolation (Banerjee & Rai, 2020; Killgore et al., 2020; Luchetti et al., 2020; Serafini et al., 2020; Stickley, Matsubayashi, & Ueda, 2021; Tull et al., 2020). People experience feelings of loneliness as a result of the gap that exists between their actual and expected levels of social involvement (Cacioppo, Fowler, & Christakis, 2009; Cacioppo & Hawkley, 2009; Harrison & Kelly, 1996; Perlman & Peplau, 1981). In the midst of the COVID-19 epidemic, medical professionals are up against more challenges than ever before, and they are more sensitive to criticism than ever before (Bergmann, Muth, & Loerbroks, 2019; XIN, JIANG, & XIN, 2019). It's possible that this will result in a greater sense of isolation. There is evidence that lonesomeness may be detrimental to a person's professional life [for example, (Seginer & Lilach, 2004; Slaten & Baskin, 2014)]. The purpose of this research was to evaluate how the COVID-19 outbreak affects future career selections made by medical students, as well as the role that loneliness plays in the interaction between the two variables.

The goal of this research was to assess the levels of anxiety and sadness that were experienced by students throughout the preceding academic year. We anticipated a spike in both anxiousness and depressed feelings beginning one month before the lockdown and continuing through the last two weeks of the lockdown itself. It was predicted that the degree of difficulty that students encountered because of the lockdown in their preparation for national examinations would have an impact on the degrees of anxiety and despair that they experienced during the lockdown.

Literature Review

Giannopoulou et al. (2021) in her study "Adding stress to the stressed: Senior high school students' mental health amidst the COVID-19 nationwide lockdown in Greece" found that young person's two-year preparation for the National university entrance exams in Greece is one most physically and emotionally taxing periods of their life. This study's findings are based on the replies of 442 seniors from the graduating class of 2019 who participated in an online survey (16-30 April 2020) about the impact of the lockdown on their mental health. Anxiety-related screenings (GAD-7 score ≥ 11) rose from 23.8% to 49.5%, but depression screenings (PHQ-9 score > 11) climbed from 48.5% to 63.8%, with a rise in the proportion of individuals in the

severe depression range (PHQ-20) from 10% to 27%. The percentage of those screened for anxiety (GAD-7 score > 11) rose from 3.8% to 20.5%. The severity of lockdown distress predicted depression and anxiety symptoms during home confinement, even after controlling for baseline levels of depression and anxiety (one month before to the lockdown). This basically predicted a 30% increase in symptoms of despair and anxiety during home confinement. Given the unexpectedly high rates of anxiety and depression among senior high school students during a pandemic, we suggest that prompt action should be done to decrease and treat these kids' mental health issues (Giannopoulou et al., 2021).

AlAteeq, Aljhani, and AlEesa (2020) in her study "Perceived stress among students in virtual classrooms during the COVID-19 outbreak in KSA" found that the sociodemographic characteristics, the Perceived Stress Scale (PSS), and emotional and behavioral reactions to the pandemic were explored in a cross-sectional research of 367 Saudi Arabian students. 74.8 percent of the participants were female, and 79.8 percent were high school students. 55% of participants indicated moderate levels of stress, whereas 30% reported severe levels. Women and university students had a strong connection (p -value = 0.003 and 0.049, respectively) with their stress levels. At the onset of the COVID-19 epidemic, stress levels among Saudi Arabian students ranged from moderate to high. This study showed a considerable correlation between female college students and high levels of stress. The use of online counselling and stress management courses would help students enrolled in distance education (AlAteeq et al., 2020).

Using two-stage cluster sampling, Hakami et al. (2021) revealed that Saudi Arabian dental students were recruited for a cross-sectional study on the psychological impact of the COVID-19 epidemic. The Depression, Anxiety, and Stress Scale-21-Item Questionnaire was used to assess the psychological consequences. Using SPSS, the data were examined. Several statistical tests, including the Kruskal-Wallis and Mann-Whitney U, were used. Comparing sociodemographic data with logistic regression analysis using the chi-square test. The scale's internal consistency is superb (0.954). The study comprised 697 students; the majority of them were women between the ages of 21.7 and 7.8 years old. 96.1 percent of respondents were single, compared to 69.4 percent who lived in families with five or more people. Gender, university, and the time of the survey all had a major influence on the outcomes, according to the study. 60.64 percent, 37.02 percent, and 34.92 percent of students saw an increase in depression, anxiety, and stress, respectively. During the COVID-19 epidemic, females, lone students, and juniors were more likely to have mental health concerns. Dental students have an immediate need for school-provided counselling services to assist them in coping with the demands of their profession (Hakami et al., 2021).

Jane Cooley Fruehwirth's study "The Covid-19 pandemic and mental health of first-year college students: Examining the effect of Covid-19 stressors using longitudinal data" found that when the Covid-19 pandemic began, moderate-to-severe anxiety increased from 18.1% to 25.3% in four months, while depression increased from 21.5% to 31.7%. A greater proportion of pupils with increased anxiety symptoms were white, female, or members of a racial or ethnic minority (SGM). Significant increases in depressive symptoms were seen among SGM and NH Black students, as well as among females and NH Blacks. Education at a distance and social isolation may contribute to the increase of depression and anxiety symptoms. Reductions in work hours or hospitalization of a loved one with Covid-19 did not exacerbate feelings of sadness or anxiety (Fruehwirth, Biswas, & Perreira, 2021).

Zheng et al. (2021) in her study "Impact of the Perceived Mental Stress During the COVID-19 Pandemic on Medical Students' Loneliness Feelings and Future Career Choice: A Preliminary Survey Study" observed that the COVID-19 epidemic grows globally, its impact on mental health is becoming apparent. A global public health emergency such as Ebola is too much for medical students in their infancy to manage. Consequently, medical students may be more prone to select a less satisfying medical career. During the COVID-19 pandemic outbreak in China, we conducted three online questionnaires to assess how the pandemic influenced the mental health and career prospects of medical students. Results indicated that the COVID-19 epidemic's perceived stress may influence future career decisions of medical students, and that the sense of loneliness may serve as a mediator. According to current study, the mental health of medical students during public health emergencies like as the COVID-19 outbreak should get more attention (Zheng et al., 2021).

Methodology

To investigate the effects that the COVID-19 outbreak had on students' mental health, cross-sectional research was carried out on the students at the schools and colleges.

Sampling procedures

Using a technique of cluster sampling that has two stages. In order to determine the appropriate size of the sample, we used a power of 80 percent and a confidence interval of 95 percent. The target prevalence was fifty percent. (CI). For this experiment, there needed to be a total of 700 participants, both male and female.

Data collection

A Microsoft Forms questionnaire was sent to the students via email on November 14th, and two reminders were sent on December 19th and December 23rd to remind them to complete the survey. On November 26, the end of the two-week opportunity for replies to the questionnaire was announced. Participants in the questionnaire survey were made aware that their participation was completely optional and anonymous prior to completing any of the questions. Following that, we were able to get their freely given permission. There were two portions to the validated questionnaire: the first included demographic information, and the second had the previously validated 21-item Depression, Anxiety, and Stress Scale (DASS-21) (Ali et al., 2017). All three dimensions of an individual's emotional state, namely depression, anxiety, and stress are measured by the DASS-21 at the same time. Many people utilize the DASS-21 because of its dependability and validity (Lovibond & Lovibond, 1996).

Each of the three scales of the DASS-21 had seven subscales. A four-point scale was used to assess the viewpoints of dentistry students. Below is a breakdown of your performance on each component. A score of 0 indicates that it had no impact on me, but a score of 1, 2, or 3 indicates that it did. To determine if a person was suffering from depression, anxiety, or stress, the relevant variables were added together and assigned to one of four severity levels depending on the total of their scores. Every psychological scale ranged from 0 to 28 points, for a total score range of 0-84. Overall, the range of grades was between zero and eighty-four. When the sum of each scale was multiplied by two, four distinct cutoff points were feasible. Normal (D = 0-9, A = 10-13, S = 19-25), severe (D = 22-27, A = 15-19, and S = 28-34+) anxiety and stress levels were classified into five groups using the three outcome variables listed above (Lovibond & Lovibond, 1996).

Data management and analysis

The statistical analyses were performed using version 26 of SPSS (IBM Corporation, Armonk, NY, USA). The survey results were included in the category data. Using the chi-square test, the distributions of different socio demographic parameters were examined (age, gender, marital status, and household size). Depression, anxiety, and stress were the dependent variables used to classify the questionnaire's psychological health outcome data. The demographics, universities, class year, and survey duration were compared using the Pearson chi-square test. Using a Bonferroni-adjusted pair wise comparisons test, multiple group comparisons were performed. Analyses of relationships between psychological variables and socio demographic characteristics, survey time, university location, and academic year were conducted using ordinal logistic regression. In addition, median comparisons were made between the psychological measures and socio demographic variables, such as survey time, institution location, and academic year. Statistical significance was determined if the P-value was less than 5 percent. Cronbach's alpha was used to assess the survey's reliability.

Result

Distribution of participants by demographic variables

Table 1

Descriptive statistics for participant demographics

	Variable	%	N = 697
Gender	Girls	54.70	381
	Boys	45.30	316
Marital status	Divorced	0.30	2
	Married	3.60	25
	Unmarried	96.10	670
Class year	5th year	19.4	135
	4th year	19.2	134
	3rd year	18.40	128
	2nd year	20.70	144
	1 st year	22.40	158
Survey time	1st week	60.8	424
	2nd week	39.20	273
Household	More than 5 persons	69.40	484
	Two to 5 persons	27.10	189
	Two persons	2.20	15
	Alone	1.30	9

Students and their mental health

It was determined that the DASS-21 questions had a good level of internal consistency (= 0.954). There are two tables, Tables 2 and 3, that represent the replies to the questions that were given by students attending a variety of regional institutions. According to the findings of the study, a significant number of dental students (60.64 percent), dental students (37.02 percent), and dental students (34.92 percent) had higher levels of depression, anxiety, and stress, respectively. A total of 28.6 percent of the student body was identified as suffering from clinical depression, 17.43 percent from anxiety, and 14.66 percent from severe or very severe stress.

Table 2*Students' DASS-21 response rates from several institutions*

	Never	Sometimes	Often	Almost always
Depression questions				
No happy emotions were registering in my body at all	32.70	37.20	19.20	10.90
It was challenging for me to take the initiative to accomplish tasks	31.00	34.60	17.60	16.80
I lacked anticipation	46.40	26.60	12.4	14.70
I was sad and depressed	21.20	39.20	21.7	17.90
I was incapable of developing enthusiasm for anything	31.60	31.40	15.2	21.40
I thought I had little value as a person.	54.80	22.70	10.5	12.10
I felt that existence had no significance	53.50	21.40	9.6	15.50
Stress questions				
Getting to sleep was difficult for me	20.40	38.30	23.40	17.90
I often overreacted to circumstances	41.50	34.00	14.20	10.30
I had a great deal of anxious energy	34.00	29.80	17.90	18.20
I noticed myself becoming annoyed	27.10	33.90	20.90	18.10
I had a hard time unwinding	29.30	36.90	16.90	16.90
I had a zero-tolerance policy towards anything that got in the way of my productivity	37.60	33.80	15.40	13.20
I had the distinct impression that I was being too sensitive	46.00	30.10	11.10	12.80
Anxiety questions				
It occurred to me that I had a dry mouth	62.30	24.55	9.31	3.92
I had difficulties inhaling and exhaling (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	75.20	17.61	4.72	2.47
I was shaken to the core (e.g., in the hands)	73.30	16.82	6.01	3.98
I was afraid of situations where I would freak out and seem like a fool, so I avoided them whenever possible	50.90	25.42	14.45	9.35
I was on the verge of a panic attack	61.70	19.21	9.66	9.61
In the absence of physical activity, I could feel my heart beating (e.g., sense of heart rate increase, heart missing a beat)	59.81	22.10	10.34	7.70
I felt fear for no apparent cause.	55.00	24.50	8.82	11.82

Table 3*Students' sadness, anxiety, and stress levels*

Depression Levels	Depression N (%) [695]	Anxiety N (%) [695]	Stress N (%) [695]
Extremely severe	125 (17.98)	66 (9.52)	24 (3.54)
Severe	74 (10.64)	55 (7.93)	78 (11.25)
Moderate	122 (17.55)	99 (14.24)	75 (10.87)
Mild	101 (14.52)	37 (5.31)	66 (9.87)
Normal	274 (39.37)	437 (62.95)	453 (65.07)
Overall, no of students	422 (60.62)	257 (37.03)	243 (34.91)

The findings of the students' mental health differed according to gender, institution, and survey period (Tables 4 and 5). It has been shown that female students are much more prone to mental health issues such as anxiety, depression, and stress than their male counterparts. There was no evidence to suggest that the various class years had significantly varied levels of performance. Despite the fact that the two educational establishments had the same graduating class, they were quite different in many other respects. Students from certain schools showed significantly higher levels of despair, anxiety, and tension as compared to pupils from other schools. Other schools' students showed lower levels of all three (P 0.05). (P 0.0001). (Information not shown) During the first week of the survey, there was a significant increase in the number of students who reported feeling worried and depressed (P 0.05), as well as students who reported higher levels of stress (P 0.0001).

Table 4

Comparisons of depression levels among women, men, and students of various genders, educational institutions, and years of study

		Depression		Anxiety		Stress	
		Median	Range	Median	Range	Median	Range
Survey time	Week 1	12.00*	42.0	4.00*	34.0	12.00*	36.0
	Week 2	10.00	42.0	4.00	36.0	8.00	36.0
Gender	Females	14.00* ⁰ *	42.0	6.0**	36.0	12.00**	36.0
	Males	10.00	42.0	2.00	36.0	8.00	36.0
University		12.01	42.0	6.00†	36.0	14.0††	36.0
Class year	5th year	10.00	36.0	10.0	36.0	4.00	36.0
	4th year	12.00	42.0	10.0	36.0	6.00	34.0
	3rd year	12.00	42.0	10.0	36.0	4.00	32.0
	2nd year	12.00	42.0	12.0	36.0	4.00	36.0
	1st year	12.00	42.0	10.0	36.0	4.00	34.0

Using the Mann-Whitney test, * is significant at 0.05 and ** at 0.0001.

According to the Kruskal-Wallis test, is significant at 0.05, while is significant at 0.0001.

Table 5

Statistical comparisons of sociodemographic, university, class year, and survey period depression, stress, and anxiety levels

	Depression*			Anxiety*			Stress*		
	N = 695			N = 695			N = 695		
	χ^2	df	P	χ^2	df	P	χ^2	Df	P
Class year	13.26	16	0.625	25.97	16	0.053	14.16	16	0.585
Household	16.985	12	0.153	6.30	12	0.901	15.18	12	0.232
Marital status	3.745	8	0.872	3.466	8	0.901	9.271	8	0.321
Gender	25.10	4	<0.0001	30.07	4	<0.0001	26.37	4	<0.0001
University	32.36	20	0.040	38.40	20	0.007	53.03	20	<0.0001
Survey time	11.25	4	0.023	12.68	4	0.012	10.34	4	0.031

❖ *Chi-squared test.*

The results of the logistic regression are shown in Table 6. Those who identified as female had a significantly increased risk of experiencing symptoms of sadness, anxiety, and stress compared to students who identified as male ($\exp[\beta] = 2.00, 2.28, \text{ and } 1.90$; $P < 0.0001$). Students who were in their first three years of college had a prevalence of anxiety that was two times higher than students who were in their final two years of college. Those who lived by themselves had a four to eight times increased risk of suffering from depression, anxiety, and stress compared to students who lived with two or more roommates.

Table 6

Normal logarithmic regression for the components of the depression and anxiety measures, gender, age, and class year of respondents, and survey season.

	Depression		Anxiety		Stress	
	EXP(β)	95% CI	EXP(β)	95% CI	EXP(β)	95% CI
	1.08	.948-1.23	1.11	.947-1.25	1.03	.908-1.22
Females	2.01	1.51-2.65**	2.27	1.64-3.15**	1.91	1.32-2.66**
Males	Reference					
1st year	1.61	.851-3.01	2.26	1.08-4.71*	1.82	.891-3.91
2nd year	1.53	.862-2.73	2.07	1.08-4.12*	1.48	.758-2.91
3rd year	1.51	.905-1.45	2.12	1.16-3.83*	1.81	.991-3.28
4th year	1.42	.894-2.21	1.64	.981-2.81	1.77	.872-2.52
5th year	Reference					
Week 1	1.21	0.896-1.74	1.45	.973-2.08	1.32	.882-1.97
Week 2	Reference					
Alone	8.66	2.28-32.45*	4.32	1.11-16.94*	5.21	1.45-18.3*
Two persons	1.42	.284-2.07	1.22	.443-3.62	.677	.210-2.13
Two to 5 persons	1.06	.763-1.43	1.02	.703-1.42	.863	.602-1.23
More than 5 persons	Reference					

* 0.05 and ** 0.0001 are considered significant thresholds for the ordinal regression test. Confidence interval, abbreviated as CI.

Discussion

This is significant since no previous research has investigated the psychological consequences that a pandemic has on children. According to studies, during the COVID-19 virus pandemic, dentistry students were more prone to report feelings of unhappiness, nervousness, and agitation than usual. According to the findings of the study, those who lived alone, women, and first-year college students were at a greater risk for having mental health problems.

Due to the present circumstance, which involves dentistry being shut down and people being aware that they may be exposed to the COVID 19 virus, dental students are under a significant lot of stress. As a result, anxiety and sadness are growing among students. 60.64 percent, 37.02 percent, and 34.92 percent of participants exhibited increased levels of depression, anxiety, and stress, respectively. According to prior study, students from thirty countries reported fear and concern during the outbreak of COVID-19 (Ahmed et al., 2020).

Moreover, our results were consistent with those of a prior study conducted among Israeli dental professionals (Shacham et al., 2020). The authors of the research found that during the COVID-19 outbreak, the people exhibited elevated levels of anxiety and sadness.

The need to recall a huge amount of material, academic rivalry among students, grade point averages, and a fear of failing are just some of the reasons why going to school may be a stressful experience (Dyrbye, Thomas, & Shanafelt, 2006). The pupils' mental health was evaluated using the DASS-21 measure, which had previously been validated. In addition to this, it enables straightforward comparisons to be made with studies that describe aspects of mental health. This was particularly the case in the majority of research involving dentistry students, and the reason for this is that they used the DASS-21 scale. Notably, the findings of our inquiry were consistent with those discovered in earlier research carried out on Saudi Arabian university students. 54.9 percent of individuals who participated in the survey claimed having experienced depression, while 66.8 percent said they had experienced anxiety, and 54.7 percent stated that they had experienced stress (Basudan, Binanzan, & Alhassan, 2017). According to the findings of yet another research, the province of Makkah in Saudi Arabia has one of the highest rates of depression, anxiety, and stress among its student population (Aboalshamat, Hou, & Strodl, 2015). Despite this, the findings could not be generalized since other areas of Saudi Arabia were not well represented in the research. This meant that the findings could not be used to draw any conclusions. It is possible that the high rates of depression and anxiety among dentistry students could be attributed to the academic pressure they face as they strive to complete course requirements, achieve outstanding grades, and continually perform at their best.

Conclusion

Students who took part in this research reported experiencing heightened feelings of sadness, worry, and stress during the COVID-19 epidemic. Furthermore, in comparison to their male counterparts, female students were much more likely to report experiencing greater degrees of psychological issues. As a result of this research, educational institutions may be better equipped to evaluate and manage existing levels of stress, depression, and anxiety, in addition to assisting in the establishment of mental health programs and policies.

Since this research was carried out over the internet, there was a chance of reporting bias. In addition, the research did not take into consideration the fact that the mental health of students may change throughout the course of the academic year since we did not have data on their mental health at the beginning of the study to use as a baseline. The symptom pattern would have been better investigated, and more information would have been offered, if the research had been conducted in a longitudinal fashion and included personal interviews as well as the use of multiple different inventories.

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