

POST LOCKDOWN EFFECT ON PSYCHOLOGICAL HEALTH OF STUDENTS AFTER RESUMING CAMPUS ACTIVITIES: A CROSS-SECTIONAL STUDY

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ABSTRACT

Objectives: To evaluate post lockdown mental health parameters that are anxiety, depression, and stress among students of Baqai Dental College, Karachi, Pakistan.

Materials and Methods: A cross sectional study was conducted among all dental college students all academic years through convenience sampling with a valid questionnaire DASS 21 on psychological health parameters i.e., anxiety stress and depression. Questionnaire was distributed on official online groups of all academic levels that are first, second, third and fourth year of, Baqai Dental College, Karachi, Pakistan. Statistically significant value was considered as $p < 0.05$. One-way Anova was used as statistical test. Chi square test was used to test anxiety, depression, and stress association among all academic years and among both male and female genders of student.

Results: In this survey was conducted among 243 undergraduate male female students of all four academic years of dentistry. Among these students when compared final year students were found most stressed (34.5%) and depressed (43.6%) and anxiety was found greatest among them (72.7%). Depression anxiety and stress was lowest among first year students (21.2%, 13.1%, 32.1%).

Conclusion: The study concluded that anxiety, stress level is extremely high among final year students and depression is high in third and final year students while gender showed no major difference in mental health parameters when compared. Both gender showed almost same anxiety, depression, and stress level.

Key words: Post lockdown Anxiety, stress, depression, Dental students

INTRODUCTION

The Coronavirus disease (COVID-19) showed up in the city of China named Wuhan in the late 2019 and by the beginning of 2020, it had escalated globally.¹ The World Health Organization (WHO) officially announced it as a pandemic and added that this disease is more transmittable in contrast to previous outbreaks and precautionary measures have been carried out to stop further aggravation.²

Implementation of lockdown was announced all over the world as a preventive measure against this

COVID 19. It can be described as an emergency protocol executed by the concerned authorities in which people are temporarily prevented from entering or leaving a restricted area or given defined territory.³ The government bodies of including 150 countries as well as Pakistan has suspended all the public and health sectors activities including educational institutes to set bounds for socialization.⁴ Pakistan was under official lockdown since 23rd March which was extended till 14th April 2020.⁵ Declining evidence in the number of patients affected with virus have been observed and due to this fact educational institutions including Universities in Pakistan resumed their activities after a long lockdown period from 15th September 2020. After reopening of educational institutions on partial attendance it was observed that students are facing difficulties to cope up with their academic workload. Burdened of

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excessive work to fulfill the academic deficiencies triggered emotional disorders in them such as stress, depression and anxiety which is affecting on their educational performances.

Stress is a physical, mental, or emotional factor that causes bodily or mental tension. It is linked to mental-ill-health leading to influence the course of many medical conditions including psychological conditions such as depression and anxiety among students though depression usually comes with the manifestation of anxiety.⁶ Anxiety demarcate an ineradicable state designated by a feeling of apprehension and fear.⁷ It can be characterized by an exaggerated, undesirable and repulsive feeling of being anxious over future events.⁸

Depression is a depressive disorder that causes a persistent feeling of sadness and loss of interest. Depression, anxiety and stress are the key cause of negative state of mind in medical students and interfere with the ability to function in everyday life.⁹

In general many factors influence personal and academic activities under unusual circumstances and contribute to worsening mental health of a student. Factors can be categorized as an excessive academic burden, financial hardships, long working hours along with sleep deprivation, absence of social activities and isolation for longer period are the leading ones.¹⁰ It is unfortunate that psychological issues are not being considered properly and these are considered as personality problems.¹¹ Outcome of these mental issues are failure in achieving a academic and social goals and results in depression.¹² Failures in achieving goals may aggregate life time mental disorders including unusual sleep patterns and instability in personal relationships.¹³ The aim of this study is to determine the post lockdown anxiety, depression, and stress among private college dental students in Karachi, Pakistan and compare their difference of level among gender of students.

MATERIALS AND METHODS

This study is conducted after taking approval from Ethical Review board of Baqai Medical University with the registration number BDC/ERB/2020/004. Pre structured, valid survey questionnaire simulate from DASS 21 was utilized to post lockdown anxiety, depression and stress level among students of Baqai Dental college including all

students of first, second, third and final year. Census sampling (students from all the academic years included) was done. 243 participants of both genders and all academic years were included (response rate of 88%).

DASS-21 is the self- assessment tool composed of 21 items that evaluate three psychological constructs Depression, Anxiety and Stress 7 scale each. Respondents wade through these constructs and marked their response using a 4- point Liker- type psychometric scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). Scores of anxiety, depression and stress are divided into normal, moderate, severe, and extremely severe according to cutoff values mentioned in Table 1.

Responses was collected online through a closed ended questionnaire, from the students distributed online via link through social media. Data was gathered over a period of 1 weeks. Participants consent form was pasted with questionnaire. Only on acceptance of consent by participants' form was opened to fill for the items asked.

Data was entered in SPSS version 21. Statistical analysis was done by applying t test to determine mean values of each variable. Mean values was compared between different academic years and among gender of students by applying one-way Analysis of Variance (ANOVA).

RESULT

In this survey 243 undergraduate male female students have participated. Among these 88(36%) were male students and 155 (63%) were female. Each academic year students responded for survey were calculated as for first year 72(96%), second year 70(94%), third year 68(98%), fourth year 66(94%). Among these students when compared final year students were found most stressed (34.5%) and depressed(43.6%) and anxiety was found greatest among them(72.7%).

Table 1 is showing the cutoff values for Normal, mild, moderate, severe, extremely severe conditions for stress, anxiety and depression used in this survey.

Table 2, all three variables were checked in different academic years. Among all four academic years' depression level of final year students was

found highest 24 (43.6%). Anxiety was found elevated among final year students 40 (72.7%). Increased level of stress was also found in final year student 19 (34.5%).

Table 3 manifested the association of depression anxiety and stress in all academic year with the significant P-value (0.001), (0.000), (0,001) respectively. It interprets that in all academic years, anxiety, depression, and stress were found different.

Table 1: Recommended cutoff score for depression, anxiety and stress

Scales	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely severe	28+	20+	34+

Table 2: Academic year wise distribution of Depression, Anxiety, and stress among dental students

Academic year	Dass-21	Depression n (%)	Anxiety n (%)	Stress n (%)
First Year	Normal	36 (42.9%)	34 (40.5%)	44 (52.4%)
	Mild	07 (8.3%)	02 (2.4%)	09 (10.7%)
	Moderate	14 (16.7%)	08 (9.5%)	08 (9.5%)
	Severe	07 (8.3%)	13 (15.5%)	12 (14.3%)
	Extremely Severe	20 (23.8%)	27 (32.1%)	11 (13.1%)
Second Year	Normal	11 (21.2%)	10 (19.2%)	20 (38.5%)
	Mild	09 (17.3%)	01 (1.9%)	01 (1.9%)
	Moderate	05 (9.6%)	09 (17.3%)	09 (17.3%)
	Severe	06 (11.5%)	04 (7.7%)	08 (15.4%)
	Extremely Severe	21 (40.4%)	28 (53.8%)	14 (26.9%)
Third Year	Normal	17 (31.5%)	12 (22.2%)	22 (40.7%)
	Mild	04 (7.4%)	05 (9.3%)	06 (11.1%)
	Moderate	09 (16.7%)	05 (9.3%)	09 (16.7%)
	Severe	08 (14.8%)	07 (13.0%)	07 (13.0%)
	Extremely Severe	16 (29.6%)	25 (46.3%)	10 (18.5%)
Final Year	Normal	06 (10.9%)	04 (7.3%)	11 (20.7%)
	Mild	05 (9.1%)	01 (1.8%)	03 (5.5%)
	Moderate	05 (9.1%)	05 (9.1%)	15 (27.3%)
	Severe	15 (27.3%)	04 (7.3%)	07 (12.7%)
	Extremely Severe	24 (43.6%)	40 (72.7%)	19 (34.5%)

Table 4: Gender wise responses of Depression, Anxiety, and stress among undergraduate dental students.

Gender	DASS-21	Depression	P-value	Anxiety	P-value	Stress	P-value
Male (n =88)	Normal	22.7%	0.315	21.6%	0.410	35.2%	0.509
	Mild	12.5%		1.1%		11.4%	
	Moderate	12.5%		12.5%		15.6%	
	Severe	19.3%		12.5%		15.9%	
	Extremely Severe	33.0%		62.3%		21.6%	
Female (n=155)	Normal	32.3%	0.315	27.1%	0.410	41.9%	0.509
	Mild	08.4%		05.2%		05.8%	
	Moderate	14.2%		09.7%		17.4%	
	Severe	12.3%		11.0%		12.9%	
	Extremely Severe	32.9%		47.1%		21.9%	
Total (243)		100%		100%		100%	

Table 3: Association of Depression, Anxiety, and stress in all academic year

Parameters	Academic year	Percentage (%)	P-value
Depression	First Year	34.3%	0.001
	Second Year	21.2%	
	Third Year	22%	
	Final Year	22.4%	
Anxiety	First Year	34.3%	0.000
	Second Year	21.2%	
	Third Year	22%	
	Final Year	22.4%	
Stress	First Year	34.3%	0.001
	Second Year	21.2%	
	Third Year	22%	
	Final Year	22.4%	

Table 4 is showing gender wise distribution of all variables and disclosed that all three parameters of psychological health showing same level of distribution among all academic years. Males and females are equally affected by the quarantine situation of lockdown.

DISCUSSION

Quarantine from a Covid 19 virus is considered as preventive measure from infection to spread but it has created certain psychological disturbances among people all over the world. This Survey explored the effect of covid 19 lockdown on mental health of young adult students in a private dental college of Karachi. This survey revealed that final year students were found more effected mentally due to this lockdown time which has been over but left some deleterious effects on achieving their goals. This survey analyzed that final year dental students have much anxiety than their junior mates i.e., 43.6% depression, 72.7% Anxiety and 34.5% stress. Number of practical classes also reduced due to long term lockdown during their academic session which causes difficulty in acquiring theoretical knowledge. Similar study was done in Saudi Arabia and concluded that High levels of psychosocial distress was found in their students during the initial three academic years which is a contradicting result from our study¹⁴. The reason they have explained that newly admitted students have fear of study burden and as they progress they find out the ways to cope up with it. Another past study results support our study result

of finding elevated psychological parameter among final year students¹⁵.

In Present study gender was also a parameter to evaluate psychological health difference. Results revealed that there was no difference based on gender among dental students to attain anxiety depression and stress levels. This was the most interesting fact the study concluded as most of the studies supported the fact that females are more prone to get physiological burden and their effects on their mental health¹⁶⁻¹⁸. Present study showed no difference may be the fact that the undergraduate females who exhibit family responsibilities shows high time management may be particularly vulnerable to challenges more than their male counterparts¹⁹⁻²¹. Timely strategic move from the college management to Hybrid learning also added in low stress anxiety level among initial years of Dental education.

There is need of psychiatrist, in this circumstances to keep the mental balance of the senior students. Educational institutes should show understanding and deal the situation sensibly by faculty and management side to help students to cope with the hardships they are facing in their campus activities.

The limitations of the study include the sample drawn from only one Dental college of Karachi, the statistical analysis that based on gender differences, and the academic years only. Female subjects were more than male in the study group as there were more strength of female students in the whole college. However, study group should be equal in gender distribution and study sample should be taken from more than college in the city. Longitudinal study before and after complete opening of academic college would be better to draw any conclusion. Educational institutes should show resilience and empathy to adopt such technology for improvement in times of such crisis.

CONCLUSION

Present study suggested that all the parameters of altered psychological health that are depression, anxiety, and stress are elevated among young adult students after the arrival of this pandemic era. The cessation of campus activities has affected on their physiological health. Family and Social support is necessary to reduce these disorders. Socializing support event and teaching staff support may help

them to improve their academic performances and to become mentally healthy social well-being. Strategic planning for the next academic year is much needed to support mental health of dental students as healthy mind will produce positivity to achieve academic goals in future.

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