

PSYCHOLOGICAL IMPACT OF COVID-19 PANDEMIC ON MEDICAL STUDENTS

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ABSTRACT

Objective: To ascertain the prevalence of stress and anxiety disorder affecting the learning behaviors on Medical students during pandemic of COVID-19, so that strategies to cope would be streamlined.

Methods: This Cross-sectional study was carried out at AL-Aleem Medical College, Lahore attached with Gulab Devi Educational Complex, over a period of three months from September 2020 to November 2020 after approval from Institutional Review Board. Non probability convenience sampling technique was used, a total of 150 willing medical students 50 from each class (1st, 2nd and 3rd) were included in this study. The Data was collected by handing over “The 7-item Generalized Anxiety Disorder Scale (GAD-7)” Perfrma, it was entered and then analyzed with SPSS version 23.

Results: Total prevalence of stress and anxiety disorders in medical students was 81%, it was more prevalent in host élite 68.20% and in females 69%, the P-Value between female /male was 0.016 that is statistically significant. The mean age of students was 20.43 years

Conclusions: This study highlight the significant level of stress and anxiety disorders in Pakistani Medical Students during COVID-19 Pandemic. To reduce this stress and anxiety special preventive strategies and its implementation are the need of the hour in order to produce seven stars doctors.

Keywords: Medical students, Psychological stress, anxiety, depression

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INTRODUCTION

In January 2020, World Health Organization announced eruption of a current communicable Coronavirus disease named (COVID-19), and it has globally spread rapidly causing infectious pneumonia. In March 2020, according to WHO assessment COVID-19 would be a pandemic problem in future^{1, 2}. China is the First country who reported COVID-19 patient and according to China’s National Health Commission report 49824 COVID-19 patients are confirmed³. The Government of China, Health care provider team and Public are facing great pressure because of huge scale infectious disease⁴. In Pakistan COVID-19 virus was reported first time on 26

February 2020, when report of the student confirmed positive of COVID-19 in Karachi when he came back from Iran⁵. From 18 March 2020 onward COVID-19 positive patients had been registered in all provinces including Islamabad⁶. Because of the contagious nature of COVID-19 infection there is great psychological problems observed among medical fraternity including medical students, health care providers, physicians and surgeons⁷⁻⁸. The present quarantine status has close down schools, colleges and universities, resulting debarring face to face teaching, social gathering, and all sorts of learning activities. Mass quarantine due to COVID-19 globally and underdeveloped countries like Pakistan had affected a lot of medical and other college students physically, educationally and psychologically during the time of social isolations⁹⁻¹¹. The main objective of the study was to find out the prevalence of stress and anxiety disorder affecting the learning behaviors on Medical students of the Al- Aleem medical college during

pandemic of COVID-19, so that strategies to cope would be streamlined.

METHODS

A Cross sectional study was conducted at AL-Aleem Medical College, Lahore attached with Gulab Devi Educational Complex, over a period of three months from September 2020 to November 2020 after approval from Institutional Ethical Committee. Non probability convenience sampling technique was used, a total of 150 willing students 50 from each 1st, 2nd, 3rd year were included in this study, and Unwilling students from all three classes were excluded. The Data was collected by handing over “The 7- item Generalized Anxiety Disorder Scale (GAD-7)” Performa to willing students after informed consent. The purpose of study, importance of anxiety disorders and how to fill the Performa was explained in first 5 minutes. The filled Performa’s were then collected after 4-5 minutes from all participants of the study. “The 7-items Generalized Anxiety Disordered Scale (GAD-7)” is most popular instrument used in detection & screening of Anxiety Disorders, now a days it is used for screening, diagnosis, and the assessment of anxiety disorders, social phobias, post traumatic and post pandemic disorders¹². “The 7-item Generalized Anxiety Disorder (GAD-7; range 0-21 scores)” was utilized to appraise the severe-ness of symptoms of anxiety¹³. The score (0-4) was considered as normal, (5-9) showed mild anxiety, (10-14) moderate anxiety and (15-21) severe anxiety/depression. The data was entered, rechecked by an expert one for confirmation of correct entry and then analyzed using SPSS version 23. Descriptive Statistics was used to check the prevalence and percentage of all quantitative variables, the response rate was 100 percent.

RESULTS

A total of 150 medical students, 50 from each 1st, 2nd, and 3rd year MBBS classes were recruited in the study. Table I highlight the demography of the medical students. The Mean age of the medical students was 20.43 years. There were 92 females and 58 males, male female ratio was

58/92. All the medical students (100%) had some sort of knowledge regarding COVID-19. Social media, friends and family members are responsible for conveying information’s of this contagious disease, 81 students were day-scholar and 69 were hostel-lite. Table II depict the prevalence of stress and anxiety disorders in medical students, and Table III show the prevalence class-wise. The total prevalence of stress and anxiety in medical students was 81%, it was more prevalent in host élite 68.20% and in females 69%, the P-Value between female/ male was 0.016 that is statistically significant.

Table 1 Demographic Data (n=150)

	No of Students	Percentage
Age (Years)		
18 - 20	25	16.66
21 - 22	102	68.00
23 – 24	23	15.33
Gender		
Male	58	38.70
Female	92	61.30
Knowledge of COVID-19		
Yes	150	100
No	0	0
Place of living		
Day-scholar	81	54.00
Hostel-lite	69	46.00

Table 2 Prevalence of Stress & Anxiety in Medical Students (n = 150)

GAD Score (0-21)	No of Students	Percentage
Score 0–4 (Normal)	28	18.70
Score 5–9 (Mild Anxiety)	47	31.30
Score 10-14 (Moderate Anxiety)	50	33.30
Score 15-21 (Severe Anxiety)	25	16.70

Table 3 prevalence of Stress & Anxiety in Medical Students Class-wise (n=150)

GAD Score (0-21)	First Year Students	Second Year Students	Third Year Students	Number of Students	Percentage
Score 0–4 (Normal)	13	5	10	28	18.67
Score 5–9 (Mild Anxiety)	16	22	9	47	31.34
Score 10-14 (Moderate Anxiety)	14	19	17	50	33.33
Score 15-21 (Severe Anxiety)	7	4	14	25	16.66
Total	50	50	50	150	100

DISCUSSION

World Health Organization “define Health as a state of Physical, Mental, and social wellbeing and not merely

the absence of disease or infirmity”¹⁴. Stress and anxiety disorders including depression are considered to be a normal emotional response to any pandemic condition¹⁵.

Human health is totally dependent on the surrounding atmosphere any sort of outbreak or pandemic conditions is responsible to change the attitude and behavior of general public and college students^{16, 17, 18}. COVID-19 pandemic had ruined the health and learning behavior of students from different groups and also responsible for stress and anxiety disorders in public persons from all walks of life^{19, 20}. In our study the mean age of the medical students was 20.43 years, almost 100% students had information of COVID-19 infectious and communicable disease, these finding are tallying with other study^{20, 21}. Social media, friends and family play an important role in spreading incomplete, irrelevant and vague news about COVID-19 disease. Living with family members is a healthy sign and it would prevent negative thoughts in mind even in the presence of any outbreak or pandemic situation. In our study stress and anxiety disorders were more prevalent in hostel lite 68.20%% and this finding is consistent with other studies^{22, 23}. The prevalence of stress and anxiety disorders in medical students in our study was 81.33% and it had affected the learning behavior of students, cognitive and psychomotor skills are affected at large. This is an alarmingly high suggesting emergency measures should be taken to reduce it in order to produce good quality doctors. In this study the prevalence of mild anxiety was 31.30%, moderate anxiety was 33.30% and only in 19.70 % severe degree of anxiety was observed, but these findings were quite high from other studies^{21, 24-25}. Mild and Moderate degree of anxiety was observed in all three years of medical students 32%, 28% in First year, 44%, 38% in Second year, 18%, 34% in third year respectively, there is hardly any data regarding year wise but overall high prevalence were observed as compared to other studies^{21, 24, 25}. In literature it has been reported consistently that females are more prone towards stress and anxiety as compare to males, in our study 69% of females were suffering from mild to moderate anxiety, "Mann Whitney U" Test was applied to get the P-value and it was 0.016, considered as statistically significant. Any P-Value < than 0.05 is said to be statistically significant, this is consistent with literature^{26, 27}.

Preventive measures like lock down, social distancing, social gathering, personal protective measures and quarantines are essential for spreading the infectious disease but on the other side they are contributory factors in changing the attitude and behaviors of public and medical students²⁸⁻²⁹. Literature review quoted that stress and anxiety disorders often occur during isolation, lock down and could worsen the interpersonal communications and learning behaviors^{30, 31}. Medical students could feel and behave differently once the COVID-19 pandemic is over, explicit both longitudinal

and cross-sectional research is required to dig out differences. Online learning on doubt has a precise impact on medical education and student's growth. Social support plays an important role in reducing all sort stress and anxiety disorders affecting the learning behaviors of students³².

LIMITATION OF THE STUDY

As the study is conducted only in one teaching hospital so results of this study could not be generalized but this data would help and act as a platform for generation of further researcher's data.

CONCLUSIONS

This study highlights the significant level of stress and anxiety disorders in Pakistani Medical Students during COVID-19 Pandemic. To reduce this stress and anxiety special preventive strategies and its implementation are the need of the hour in order to produce seven stars doctors. Effective Leadership, Training and coaching sessions and provisions of Personal Protective Equipment's are top priorities of the society and local government.

ETHICAL APPROVAL

The study was approved from Institutional Review Board of Al-Aleem Medical College/Gulab Devi Chest Hospital, Lahore, Pakistan, vide reference No. Admin/AAMC/20/0-394, dated September 09, 2020.

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AUTHOR'S CONTRIBUTIONS

NI, IAA: Conceptualized the idea and made research proposal

FN: Collected the data

KM, NN: Helped in entering data and made tables

AR: Helped in analyzing data and Editing.

ZUL, NK, NA: Supervised the study.