



Effect Of COVID-19 On Medical Students' Education And Well Being

¹Dr. Nusrat Chouhan, ²Dr. Sanjeev Verma, ³Dr. Megha Kapoor, ⁴Dr. Shazia , ⁵Dr. Vanita Sharma

¹Demonstrator, ^{2,4}Assistant Professor, ³Lecturer, ⁵Associate Professor,

PG Department of Physiology

Government Medical College, Jammu

***Corresponding Author:**

Dr. Shazia

Assistant Professor, PG Department of Physiology, Government Medical College, Jammu

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Abstract

Background:

COVID-19 has had a huge impact over physical and mental health. Healthcare workers have also been on higher risk zone. Medical students have been affected because of the changes in study pattern and limitation of patient exposure.

Aims and Objective: study was conducted to assess the effect of the covid-19 pandemic on medical student's well being and medical education.

Materials and methods: A cross-sectional survey measured the effect of the COVID-19 pandemic on medical students in Jammu. An online survey was distributed to medical students. Descriptive analyses and ANOVAs were used to assess changes in mental health, health habits and quality of education during the pandemic.

Results: 140 medical students participated in this study. 72.1% reported a reduction in the quality of their education since COVID-19. 78.6% of students found online to be inferior to in-person teaching. 53% of students had more time for wellness and leisure activities; about half of the cohort felt more depressed (58.8%). 41% felt that they were as lonely as before COVID-19. During the pandemic, students with a prior history of depression or anxiety expressed increased depressive symptoms. Sleep quality improved while quality of life became poorer for these students.

Conclusion: The present study observed that there has been a considerable increase in anxiety and depressive symptoms among students. Therefore it can be stated that well being and education of medical students has been adversely affected by the pandemic.

Keywords: COVID- 19, medical students, mental health, education

Introduction

COVID-19 has spread rapidly around the world infecting 305 million people and leading to 5 million death. It constrained the people to prevent the spread. Eventually the students were confronted indoor. COVID-19 has had a huge impact over physical and mental health of the medical students around the world. In this study we will review 11 studies found from pubmed using covid-19 mental health'. Healthcare workers have also been on higher risk zone. This study will evaluate how covid 19 has

impacted medical students mental health. Medical students have been affected because of the changes in study pattern and limitation of patient exposure.

People all over the world were affected by corona virus disease 2019 (COVID-19), which is the fifth pandemic after the 1918 flu pandemic. The earliest date of symptom onset was 1 December 2019 in Wuhan City, China. World Health Organization(WHO) temporarily termed the new virus 2019 novel corona virus (2019-nCoV) on 12 January 2020 and then officially named this

infectious disease corona virus disease 2019 (COVID-19) on 12 February 2020(1) It was declared a public health emergency of international concern on Jan 30, 2020 by WHO.(2)(3)

Clinical features of Covid-19 range from asymptomatic state to severe acute respiratory distress syndrome and multi organ dysfunction.(2) Lower respiratory tract infection related symptoms including fever, dry cough and dyspnea were reported in the initial case series from Wuhan, China. In addition, headache, dizziness, generalized weakness, vomiting and diarrhea were observed.(4) Efforts were made on large scales to reduce the speed of viral transmission. Extremely strict pandemic prevention measures were undertaken such as the mandatory closure of schools and the suspension of all nonessential productions and commercial activities. This not only affected physical health but also mental well being of individuals (2)(5). This affected usual activities, routines, and livelihoods of people which lead to an increase in loneliness, anxiety, depression, insomnia, harmful alcohol, and drug use, and self-harm or suicidal behavior. The mental and psychological wellbeing of medical students is another concern(6)

In this pandemic medical fraternity including physicians, nurses, paramedical staff and medical students are at high risk as they are performing their duties in hospitals, causing increased stress in unprepared situations. The current quarantine conditions have shut down schools and universities and have suspended face-to-face teaching and learning sessions. This has affected the physiological phases of live(7) With the highly compacted nature of medical curriculums, a dire need to find alternate teaching methods to compensate for the loss of in-person large group lectures and in-hospital teaching resulted in a quick shift to online teaching platforms.(5)(8)

Owing to the unknown nature of the COVID-19 pandemic, there is concern regarding students missing out on meaningful educational experiences and months of clinical training. Coexisting unknown effects on their current well-being or professional trajectory are also alarming features.(9)

Thus the present study was conducted to assess the effect of the COVID-19 pandemic on medical students' wellbeing and medical education. This data

may help inform policies regarding the roles of medical students in clinical training during the current pandemic and prepare for the possibility of future pandemics.

Material and Methods

This cross-sectional survey measured the effect of the COVID-19 pandemic on medical students' education in Jammu and their overall mental and physical wellness (components of wellbeing). All participants voluntarily signed an electronic consent form on the front page of the questionnaire.

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Secure and encrypted cloud-based software was used to develop an online survey with a total of 40 questions (Appendix A). The questionnaire was adapted from previous similar studies on the effect of COVID-19 on the general public's mental health and wellbeing. The present study was conducted in GMC Jammu first prof MBBS students for three months. The questionnaire was sent to 140 medical students. All survey responses were kept and analyzed in the study. To maintain full anonymity of participants, no personal identifiable information was obtained.

Data collected pertaining to health habits prior to COVID-19 were based on participant recall. It was collected using google form with organization and statistical analysis performed using statistical package of social sciences (SPSS) version 25.

Statistical analysis

The collected data was entered on Microsoft excel spreadsheet. For the descriptive analyses, data was presented in terms of proportions and percentages for qualitative data, and mean and standard deviation for quantitative data. Sub analysis of data stratified based was performed using Pearson's chi-square test and Analysis of variance, whatever appropriate. Analysis of variance assessed the change in health habits, from before the pandemic to during the pandemic with subsequent post-hoc tests. The health habits included time spent seated, time spent in front of screen, amount of alcohol consumed etc All statistical analyses were performed using SPSS 25.0 software. P-value <0.05 was considered significant.

Results:

140 medical students among age group 18-22 from GMC Jammu participated in the study. 48.9% of the total participants were females. 24% of students had Prior clinical diagnosis with anxiety or depression. 82.5% of students had never attended any wellness program since pandemic. Significantly 92.1% agreed to the fact that COVID-19 has affected their studies. While 78.6% students found online teaching less

efficient on the other hand 5.7% felt that it is as efficient as face to face teaching. However 41.7% students confirmed that they had more time for personal studying. 44.3% of students who had no prior diagnosis of depression increase in depressive and anxiety symptoms. Significantly 52.9% of students with prior diagnosis of depression and anxiety reported better quality of sleep since covid-19

Table: 1 Sociodemographic characteristics of the participants.

Variable	n (%) N=248	Prior diagnosis of depression/anxiety N=34	No diagnosis Of depression/anxiety N =106	p-value
Age				
15 – 20	108	25	83	0.28
21 – 25	32	9	23	
Sex				
Male	71	16	55	0.31
Female	69	18	51	
Year of study				
Ist	140	34		

Table: 2 Experience of covid-19 on psychological well being of the students and self perceived quality of life.

variable	Experience since covid-19	Prior clinical diagnosis of depression /anxiety		p-value
		Yes (n=34)	No (n=106)	
Depression	More	22	47	0.1072
	Unchanged	9	48	
	Less	3	11	
Sleep quality	Worse	7	21	0.95
	Unchanged	9	31	
	Better	18	54	
Loneliness	More	18	39	0.236
	Unchanged	10	45	
	Less	6	22	

Quality of life	Worse	17	61	0.529
	Unchanged	12	36	
	Better	5	9	

Discussion:

The results of present study showed that the sleep quality improved (50%) as a result of quarantine and isolation in COVID-19 pandemic while the quality of life became worse in 57% of students who were never diagnosed with depression and anxiety.

The corona virus disease 2019 (COVID-19) pandemic has caused an extraordinary stressor to patients and health care systems across the globe. Facing this large scale infectious public health event, medical students were under both physical and psychological pressure.(10) A study by Patsali (11) confirmed that students are at high risk to develop depression and suicidality in relation to the COVID-19 outbreak.

In the context of the COVID-19 pandemic, it appears likely that there will be substantial increases in anxiety and depression, substance use, loneliness, and domestic violence.(12) Individuals with a history of mental disorders or current diagnoses of psychiatric illnesses are also generally more sensitive to external stressors, such as social isolation associated with the pandemic.(13) In present study 64% students with previous diagnosis of depression experienced increase in depression and anxiety symptoms. Similar results were observed by ELHawary(5) in which overall wellbeing and health related habits significantly worsened during the pandemic.

On the other hand pandemic has affected the education pattern for medical students severely and students may find the rapid transition to online instruction distracting and frustrating. (14) Our results showed that the majority of the students believe their medical education worsened during the pandemic. Approx 78% of students found online teaching less efficient and 63.6% of students did not even find it suitable as a complementary method of teaching.

The main barriers to online teaching appear to be family distractions, internet connection and the timing of tutorials. (15) Another challenge was the

dependency of online learning on technological equipment and the provision of the equipment for institutions, faculty and learners.(16) Developing healthy social skills is not only an important competency for future physicians; it also has a protective effect on mental health. This has been lacking while being in social isolation which has been an integral part in the fight against COVID-19.(5)

However according to the assessment of present study it was observed that since the pandemic students have been getting more time to take care of their wellness (53%). 48.1% stated that they have been spending more time for exercise and enjoy the leisure activities. Whereas a study by Valenciano suggested that Walking, moderate, vigorous, and total physical activity levels have been reduced during the COVID-19 pandemic confinements in university students.(17)

Limitations:

There have been various limitations of the study. The data collection was made from a limited number of students which lead to statistically insignificant results of the study. The study has not taken into account needs of students with disabilities during the transition to online courses. Also the students’ grade point average (GPA) was not taken into consideration for evaluation of actual impact on education. Our slight disappropriate sample indicates that our findings may be not fully representative of all the students of GMC. Also response may have arisen.

Conclusion:

The study has provided insight into impact of covid 19 pandemic on mental wellbeing and it also brought into consideration the major coping strategies followed by students to deal with the situation.

It can be concluded from the study that there has been a considerable increase in anxiety and depressive symptoms among people who do not have preexisting mental health conditions, with some experiencing post-traumatic stress disorder in due

course. Students with a prior history of depression and anxiety were more affected.

Students preferred face to face teaching over online teaching owing to the reduced interpersonal skills. It is recommended that measures should be taken to alleviate students stress which may be dangerous in various ways.

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