ORIGINAL ARTICLE

ACADEMIC STRESS AMONG MEDICAL STUDENTS DURING THE PANDEMIC OF COVID-19 IN PAKISTAN

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ABSTRACT:

Background and objective: In Pakistan the first case of COVID-19 was reported on 26th February it led towards the closure of educational institutions on 14th March and at that time medical education also got transitioned regarding content of basic health sciences, behavioral sciences and clinical health sciences along with other educational institutions as this online transition got started with less infrastructure. medical education also got transitioned to online education with a lesser infrastructure

As medical students are more convenient in physical interactive sessions of study. This study aimed to find the perception of academic stress among medical students in COVID-19 pandemic.

Methods: It was a cross-sectional study and conducted in June 2020 by online survey using non-probability convenient type of sampling. In this study, 385 medical and dental students of the age (16-31years) from both Private and public sector medical colleges, after providing informed consent participants completed this online survey. Perception of academic stress was accessed by using pre-tested questionnaire of the Perception of Academic Stress Scale. Five-point Likert scale was used for the responses on items. Data analysis was performed by using SPSS. Data was presented in frequency and percentages. Chi-square test was used for comparison. P-value less than 0.05 was taken as significant

Results: The results showed that 120(31.2%) students were found confident regarding their future and almost same number of students were also stressed out regarding their studies in pandemic of COVID-19 as 118(30.6%) students strongly agreed with this statement. There were significantly higher number of female students106 (32.2%) who felt this pandemic stressed them out regarding studies as compare to male students12 (21.4%)(0.009).

Conclusion: We found that students were not satisfied with this setup and got frustrated in COVID-19 pandemic because of the disruption of their studies.

KEYWORDS: Academic stress, COVID-19 pandemic, Medical students, Online classes.

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INTRODUCTION:

Medicine is a very stressful field of education because of the extensive, highly demanding curriculum, frequent examination and the fear of failure are the constant stressors[1]. COVID-19 was reported in Wuhan city of China in late December 2019 but late in March 2020 it was declared as a Pandemic[2]. In Pakistan, the first case of COVID-19 was reported on 26th February and all educational institutions got closed on 14th March and soon government of Pakistan ordered the educational institutions to develop the setup of online classes.

Online system is not a new mode of education for any university many faculty members are getting training to use online platform to carry out education but there is always a chance that some faculty members are proficient in the use of modern technology, especially computers but along with it many universities also don't have enough infrastructure to carry out online classes and many students don't have laptops and access to internet at homes[3]. System of education along with medical education had quickly transitioned to online format that include the content of the basic health sciences, clinical health sciences and even in behavioral sciences. Medical students are more convenient to study in physical settings of interactive sessions under the supervision of facilitators. Examination also got transitioned to the online format[4]. Online assessment system raised the question of reliability, authenticity and fairness[5]. Faculty members need to change their whole assessment styles to lower the chance of academic dishonesty such as transition to Quizzes as compared to other assignments.[6] E-assessment has its own drawbacks in developing countries like poor infrastructure and lack of the proper connectivity of internet.[7] The whole transition in this situation stressed out the students[2] and this influenced the well-being of students as it brought up frustration among students.[8]

Keeping in view all these factors, this study was aimed to find the perception of academic stress among medical students in COVID-19 pandemic.

METHODS:
This cross-sectional study was conducted in June 2020 by online survey using non-probability convenient type of sampling. Ethical approval for this study was taken by the Ethical Review Board of CMH Lahore Medical College and institute of Dentistry. The data was collected by questionnaire having informed consent, demographic information (having age, gender, program, year of study, sector of college and BMI) and pre-tested questionnaire of the Perception of Academic Stress Scale[9], it has six items related to students' academic self-perceptions. A five-point Likert scale was used for the responses on items. (1=extremely irrelevant, 2=irrelevant, 3=slightly relevant, 4=relevant, and 5=strongly relevant). Data was collected from different medical colleges of public and private sectors via Google forms. Three hundred and eighty-five respondents took part in the study after the informed consent. The inclusion criteria to participate was being currently a medical student and taking online classes and age ranging from 16-31 years.

Data analysis was performed by using the Microsoft Excel 2016 and IBM Statistic version 20.

Microsoft excel was used for editing and coding and then the excel file was imported to SPSS software. Descriptive statistics (frequency, percentage) and Chi-square test was executed by using the SPSS software. The variables were considered significant with P-value less than or equal to 0.05.

RESULT:
Table (1) showed that the studied population were 329(85.5%) female and 56(14.5%) male of age between (16-31years). The higher percentage of age group 283(73.5%) were of 21 years and younger. According to the program of study predominantly 353(91.7%) students were of MBBS. Regarding the sector of college, 249(64.7%) students were from private sector participated in it dominantly. More number of participants belonged to 2nd year MBBS 171(44.5%). Regarding the BMI higher percentage of students 253(65.7%) were in normal range of BMI between 18.5-24.9.

Table 1: Demographic variables of study

Character	Frequency	Percent
Age		
21 years and younger	283	73.5
22-25 years	100	26.0
26 years	1	0.3
31 years	1	0.3
Gender		
Male	56	14.5
Female	329	85.5
Program		
MBBS	353	91.7
BDS	32	8.3
Year of study		
1st year	89	23.1
2nd year	171	44.5
3rd year	56	14.5
4th year	51	13.2
5th year	18	4.7
Sector		
Public	136	35.3
Private	249	64.7
BMI		
Underweight	70	18.2
(below18.5)	253	65.7
Normal (18.5-24.9)	57	14.8
Overweight (25-29.9)	5	1.3
Obese (30 and above)		

Table (2) showed the perception of academic stress by the Likert scale. 153(46.5%) females and 17(30.4%)

males agreed that they were confident regarding their future (significant p-value 0.007). 180(54.7%) females and 29(51.8%) males agreed that they were able to catch up if getting behind work (p-value 0.023). Almost one third students disagreed that they had enough time to relax in usual days of college (p-value 0.02). 114(43.8%) female students strongly agreed that they feel difficulty in maintaining concentration in online classes (p-value 0.342). Many students disagreed 91(27.7%) with the statement that they are making this time productive (p-value 0.114). Major chunk of students agreed 149(45.3%) and 106(32.2%) strongly agreed that this time stressed them out regarding their studies.

Table (2): Perception of academic stress

	Gender	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		p-value
		count	%	count	%	count	%	count	%	Count	%	
Am I confident that I am successful in future	Male	1	1.8%	0	.0%	9	16.1%	17	30.4%	29	51.8%	
	Female	4	1.2%	7	2.1%	74	22.5%	153	46.5%	91	27.7%	0.007
Am I able to catch up if getting behind work	Male	-	-	2	3.6%	11	19.6%	29	51.8%	14	25.0%	
	Female	-	-	33	10.0%	79	24.0%	180	54.7%	37	11.2%	0.023
I had enough time to relax in usual days of college	Male	7	12.5%	13	23.2%	11	19.6%	19	33.9%	6	10.7%	
	Female	22	6.7%	119	36.2%	85	25.8%	92	28.0%	11	3.3%	0.02
Do you feel difficulty in maintaining concentration during online lecture	Male	4	7.1%	3	5.4%	9	16.1%	17	30.4%	23	41.1%	
	Female	7	2.1%	21	6.4%	49	14.9%	108	32.8%	144	43.8%	0.342
Do you feel you make this time productive	Male	7	12.5%	12	21.4%	15	26.8%	13	23.2%	9	16.1%	0.114
	Female	49	14.9%	91	27.7%	105	31.9%	63	19.1%	21	6.4%	
Do you feel this time stressed you out regarding your studies	Male	4	7.1%	10	17.9%	9	16.1%	21	37.5%	12	21.4%	
	Female	7	2.1%	23	7.0%	44	13.4%	149	45.3%	106	32.2%	0.009

DISCUSSION:

Stress has always been the issue of undergraduate medical students[1,10] and many past researches showed that stress influenced the academic achievements of the students[11]. In this study, we found that students were under stress in this pandemic as their studies were disturbed with it and they were not comfortable with online classes as they felt difficulty in maintaining their concentration because of less concentration time in virtual study sessions as compared to face to face interaction.[12] Educational institutions started online classes with less preparation that influenced the quality of online education a lot. These online study sessions in Pakistan are at nascent stage as they are started as "Emergency remote learning" and it has flaws in it like internet connectivity issues. Government should take immediate measures and telecommunication companies should also invest in expanding 4G services, especially in the remote areas of Pakistan.[13] In this changing situation of COVID-19 universities should keep students updated to mitigate the cognitive load from students. Faculty members should embrace technology and pay careful attention to student experience to make the learning rich and effective.

CONCLUSION:

This study points out that those students who were found confident regarding their studies, were able to catch up work and had enough time to relax in usual days of college were even stressed out in this pandemic of COVID-19 regarding their studies as they felt difficulty in maintaining concentration during online classes and did not find that they make this time productive.

LIMITATIONS:

The participants of study belong to the medical and dental colleges as it didn't focus on the students of other fields who are also suffering from the academic stress during COVID-19. This e-based questionnaire may also lead to selection biased. Future researches should be administrated to the large heterogeneous group of students from different fields of study. This study also not focuses on Psychological stress like Corona patients affected in family and financial issues.

ETHICAL APPROVAL:

The study was approved by the Ethical Review Committee of CMH Lahore Medical & Institute of Dentistry, Lahore, Pakistan, vide IRB Reference No. 52 /ERC/CMHLMC Dated: May 18, 2020.

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AUTHORS' CONTRIBUTION:

AN: Literature search, study design and concept, questionnaire design, data collection
RM: Literature search, study design and concept, questionnaire design, data collection, data analysis
AA: Literature search, study design and concept, questionnaire design, data interpretation, drafting
FI: Drafting, Revision and final approval
FH: Drafting the work or revising it critically
RKA: Drafting ,Revision and final approval