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Original Article

Online Education an Elixir or a hopeless Endeavour: A Cross-Sectional Survey among Undergraduate Students of LUMHS

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Abstract

Background: Institutional closures and other constraints on academic resources in midst of pandemic have had a substantial influence on education of all students globally. To overcome this challenge, educational institutions all over the world leaned towards non-traditional methods of learning vis-à-vis online education.

Objective: The fundamental purpose of this study is to gain insight into how this ongoing pandemic affects medical education, as well as associated factors and responses of medical student, along with exploring new exam strategies in the future.

Methodology: This cross-sectional study was conducted from 1st December 2020 to 1st March 2021 involving 313 medical undergraduates of Lumhs, including both male and female students following all inclusion criterions; Random sampling technique was used for sample selection to minimize the bias. 313 participants were students from 1st year to final year MBBS, BDS and DPT departments of Lumhs campus. Data was collected using self-reported qualitative online questioner, then SPSS version 26.0 was used to analyze the data and put out tables and figures. It was determined that a P-value of 0.05 or lower was significant

Results: Out of 313 medical students who participated in the survey 93.5% students thought that lockdown had affected their education, 85.1% students were having online classes and 74.5% students were not satisfied with the online learning. About the effectiveness of this methodology till the end of the pandemic, 65.9% students did not find this methodology effective till the end of the pandemic meanwhile, 46.5% students were in favor of the traditional method of annual examination given the condition does not improve over next few months, 35.4% wanted to take only online written examination. On the issue of online viva among 313 students, 34.5% students do not think online viva can replace physical examination for passing a professional examination. On the timings of the annual examination 85.7% students think that the annual examination should not take place on time, because they had lesser time to cover whole syllabus.

Conclusion: The results show that most students who took online classes were dissatisfied with their experience; therefore it's important to work on fixing problems like high tuition, bad connections, and boring lectures so that students may advance in their chosen fields.

Keywords

Virtual Learning, Online Education, Undergraduates, Hopelessness



Introduction

Since the beginning of 2020, a worldwide epidemic has dealt a severe blow to the world's health and education systems, as well as to the social and morals of all human race¹. Due to this catastrophe, the whole world into lockdown for a while in an effort to stop the spread of the mortalities and morbidities globally. Since March of 2020, the whole nation has been in a state of lockdown, during which time all forms of public transportation have been halted and all primary and higher education institutions have been closed. Academic activities, including exams, were put on hold, affecting students at medical schools throughout the globe, including Pakistan. As a result of this closure and suspension, the psychological and emotional wellbeing of all students specially medical students was compromised². Because of the severe disruption caused by the lockdown, the globe shifted to the notion of digital learning in order to maintain educational activities despite the crisis³. Moreover, the world has chosen for several student's educational strategies in order to promote student for graduation to minimize their educational losses. During the global health care crisis, some nations promoted students early while others turned to non-traditional forms of evaluation to ensure that all students could complete their degrees⁴. Due to pandemic causes a lockdown, recent college graduates may find it difficult to get work. Students are expected to graduate during the start of a massive global recession, at a period when they have already endured significant disruptions to their education in the form of learning and assessment in their final years. Health care settings are now the most challenging one to be working in, and many recent studies have shown that doctors are likely to suffer from their deficiency at key survival skills owing to discontinuity in courses due to lockdown.

Stress, PTSD, and sleep problems are quite common among physicians. It has the potential to become a widespread and important trend for the future of education in developing nations where the government is the primary provider of education. Students may learn to make judgments in a world full of unknowns, to solve issues in

constructive ways, and, most crucially, to adjust to new contexts in which they must use previously acquired knowledge and abilities. Most institutions have taken the initiative to enable communication skills,⁵ Skype calls, Zoom application⁶ and other virtual choices to lessen the distance in acquiring education in light of this situation and concern for the safety of students and their educational concerns. It's teaching both students and educators how to make the most of online learning environments and communication tools. In particular, medical students are at a pivotal point in their education and training, since physicians are the first line defense against these emergency circumstances. To get insight into how COVID-19 would affect medical online education, additional exams, and the future of yearly exams, a survey was administered to 211 students at Liaquat University of medicine and health sciences in Jamshoro, Sindh.

Methodology

The survey was given approval by the LUMHS Hospital Ethical review committee (ERC). The data was collected from 1st December 2020 to 1st March 2021. The informed consent was obtained from students at the start of survey. This is a qualitative survey-based cross-sectional study in which 313 students participated from Liaquat University of medical and health science Jamshoro, Sindh. 313 students of all five years of M.B.B.S were selected after strictly following all inclusion criteria. We divided our survey into three categories. The 1st part of the survey, asked about the effectiveness and impact of COVID-19 on online Education. The 2nd part covered the mode of supplementary examination. 3rd part of the survey inquired about the future of the annual examination. The importance, aims, and rationale of the study were disseminated via pre-research interviews with students. Data was gathered using proformas. Participants filled out a questionnaire detailing all their demographic information such gender, age, education level, eating habits, BMI, etc the questionnaire was presented to respondents in their native tongue (Sindhi or Urdu). When analysing the data, we utilised SPSS 26. P-value <0.05 was considered statically significant and

cross tabulations for mean mode frequencies and percentages were calculated and formed.

Results

Out of 313 Medical students who participated in the survey, including undergraduates students from 1st year to final year MBBS. (Their demographic data is mentioned in table 1) Our results shows that 93% students that lockdown had affected their education. 67% agree that lockdown had affected their mental health. 81% students agree that lockdown had affected their physical health. 61% students agree that they are taking online classes to minimize the educational loss 74% students agree that they were not satisfied with online learning 35% students agree that they were able to connect to online classes on time. 17% students agree they had complete concentration throughout the length of lecture. 66% students agree that they did not find this methodology effective till the end of the pandemic. 46% students agree that they were in favor of the traditional method of annual examination given the condition

does not improve over next few months, 35% agree that they wanted to take only online written examination, 75% students agree that online viva can replace physical examination for passing a professional examination, 85% students agree that the annual examination should not take place on time. 71% students agree that online learning have a bright future, 76% students agree that online method is temporary solution of this ongoing pandemic. 66% students agree that physical classes or virtual classes. (As shown in table 2 and figure 1) Furthermore these study subjects were divided into two groups depending upon their response of whether or not they are taking online classes, as Group A were taking online classes and Group B were those, who doesn't take online classes, and their responses were measured. Furthermore, we also found out that those students, who are taking online classes are less depressed and anxious regarding their studies and more motivated to study as compared to those, who don't take online classes. (mentioned in table 3 and figure 2 and 3).

Table 1: Demographic data showing frequency, age, BMI & domicile of sample size (n=313)

Gender	Frequency	Age (mean)	BMI (mean)	Urban	Rural	Std deviation
Male	121(38.6%)	27.32	31.9	24.64%	22.74%	3.45
Female	192(61.3%)	26.19	29.13	27.01%	25.59%	4.31

Table 2: Self reported questioner's responded by undergraduate students (n=313).

Responses by students:	Strongly agree	Agree	Disagree	Strongly Disagree
Lockdown had affected your education.	37%	56%	06%	01%
Lockdown had affected your mental health.	23%	44%	30%	03%
Lockdown had affected your physical health.	20%	61%	08%	11%
Are you taking online classes to minimize the educational loss	11%	50%	20%	19%
Are you satisfied with online learning	7%	19%	51%	23%
Are you able to connect to online classes on time	5%	30%	64%	1%
Are you able to fully concentrate throughout the length of lecture	2%	15%	48%	35%
Do you find this methodology effective till the end of the pandemic	13%	21%	43%	23%
Do you find traditional method of annual examination better than online method	23%	23%	41%	13%

Do you wanted to take only online written examination	13%	22%	45%	20%
Online viva can replace physical examination for passing a professional examination	25%	50%	13%	12%
Extended time should be granted before annual examinations	28%	57%	09%	06%
Online learning has a bright future	22%	49%	16%	13%
Online method is temporary solution to this ongoing pandemic	27%	49%	16%	08%
Physical classes better than virtual classes	21%	45%	23%	11%

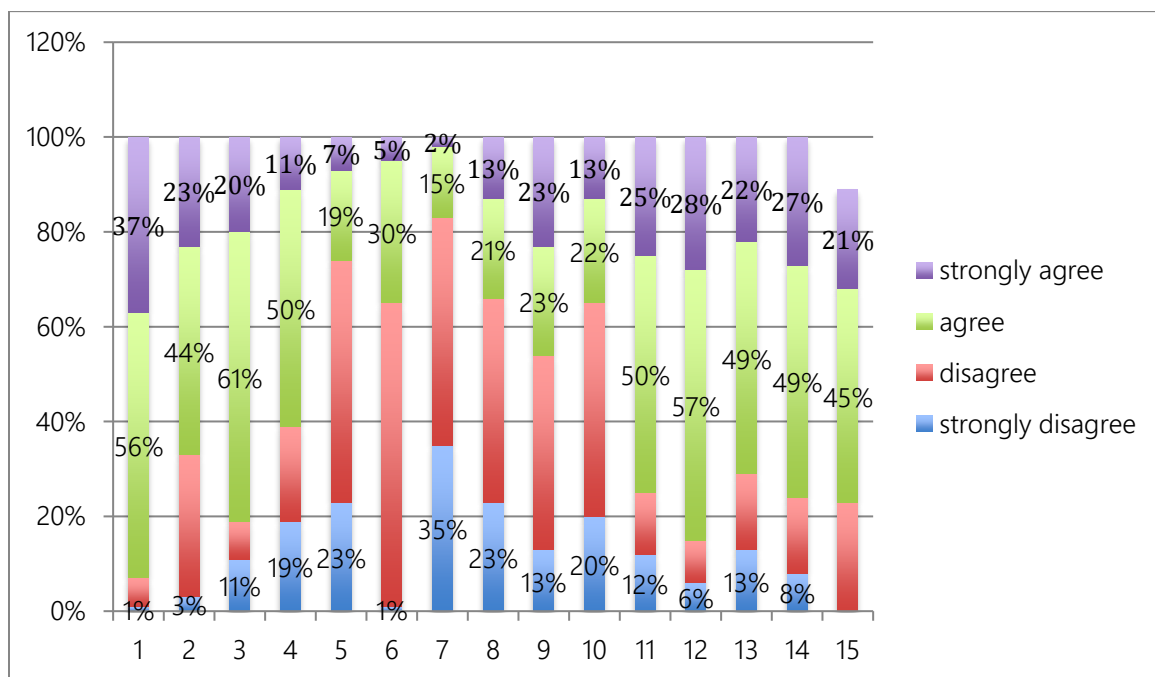


Figure 1: Self-questionnaire responded by undergraduate students (n=313).

Table 3: Satisfaction of undergraduates towards online learning (n=313)

Variables	Group A (Taking Online Classes)		Group B (Not Taking Online Classes)	
	Agree	Disagree	Agree	Disagree
Is social interaction important for personal development?	93%	07%	96%	04%
learning within group better than individually?	96%	04%	89%	11%
Physical presentation better than zoom meetings?	71%	29%	93%	07%
Extracurricular activities are necessary along with studies?	91%	09%	89%	11%
Do you feel anxious about upcoming exams?	78%	22%	91%	09%

Do you feel depressed?	31%	69%	49%	51%
Does lockdown affect your Personality?	71%	29%	89%	11%
Do you feel motivated to study?	59%	41%	39%	61%

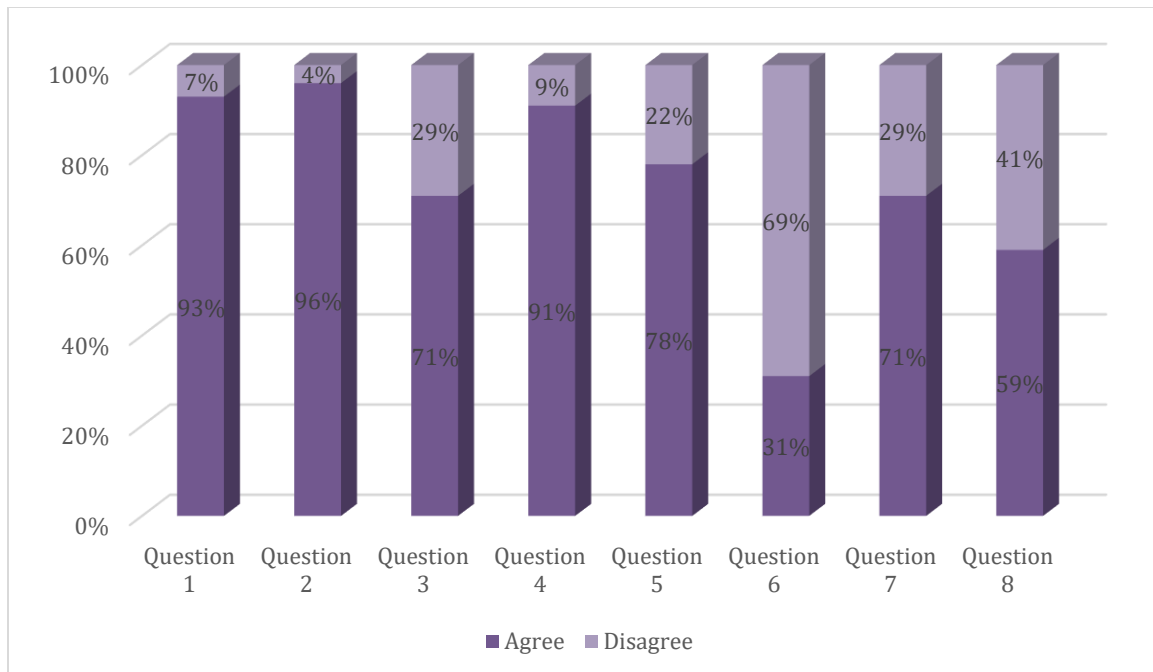


Figure 2: Self-questioner responded by undergraduate students of group A.

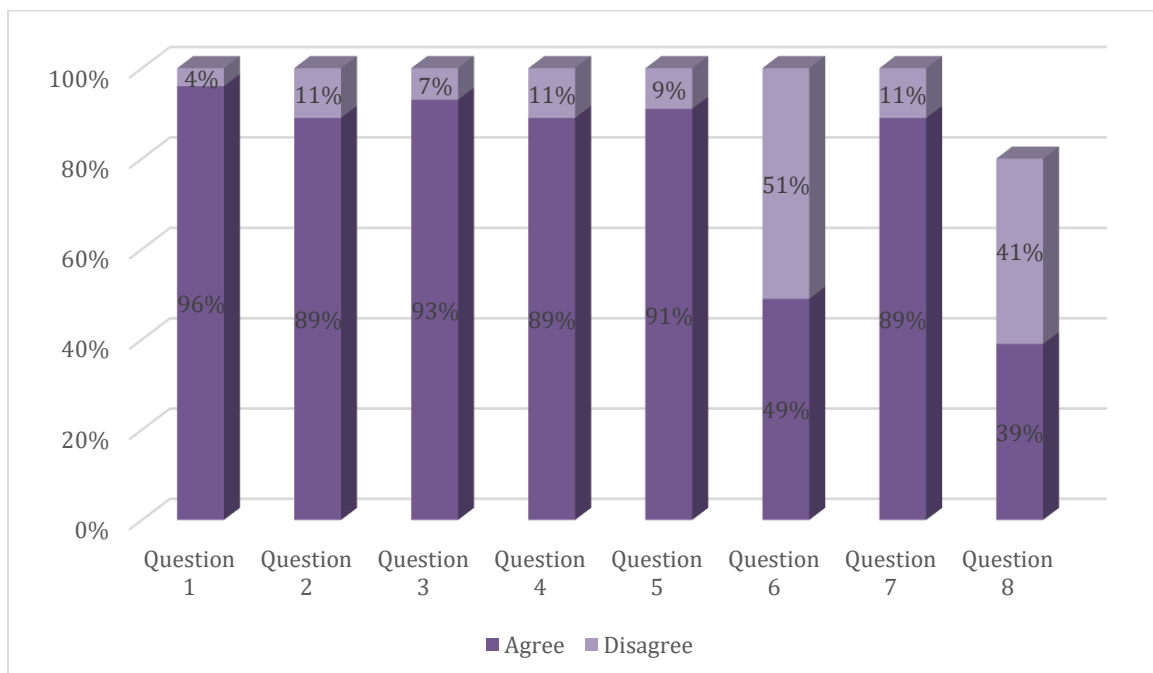


Figure 3: Self-questioner responded by undergraduate students of group B.

Discussion

Considering the global load of pandemic since last 2 years, this article is of utmost importance as we are currently in a state of uncertainty considering the future of our professionals, including doctors, engineers and all other professionals, as their studies have got a serious hit by the ongoing pandemic, lockdown and closure of institutes. Therefore, it is crucial to assess the impact of the pandemic on the loss of education, and there is an urgent need to develop new methods, such as an online learning and assessment system, to limit the impact on graduates' ability to continue their studies. This survey-based, cross-sectional study aimed to gauge medical students' attitudes about the implications of a recent ban on extra curricular activities, online coursework, and yearly exams.

Since the lockdown, medical facilities have been closed, and thus, classes have been put on hold. However, a recent survey conducted by Mehmood S, et al., 2021⁷ has shown that "in accordance with the rest of the globe, medical schools in Pakistan have begun offering students access to medical education through online courses". To ascertain the efficacy of these classes, our research reveals that the vast majority of students who were enrolled in them were dissatisfied with this mode of education and did not believe that it was effective until the end of the pandemic. This is as most of the students in our region come from rural settings, where access to the internet is one of the biggest issues; additionally, load-shedding is very common in this region, so there is a lagging effect of students accessing their courses at different forums⁸. Furthermore, most students' socioeconomic situation is low, making it difficult for them to obtain the pricey electronics like Smartphones and computers necessary for online learning. However, those who are in a position to do so have found this kind of education to be beneficial in the long run⁹.

Although the vast majority of students surveyed in one research conducted by Gupta S, et al. 2021¹⁰ favored classroom instruction, a sizable percentage (35.4% to be exact) opted for distance education instead. The theoretical rather than the practical

were the issue of choice as online learning. Similar results were found by Singh et al., 2020¹¹ who found that just 46 (22.1%) of students preferred Online classes over regular classrooms (n=106). The advantages of e-learning include its adaptability to the learner's schedule, the ease with which knowledge can be shared, the fact that it can be repeated, the ease with which medical information is accessed, and the quality of the learning experiences themselves. The digitization of medical education with cutting-edge technology may potentially change the future of the medical curriculum. However, problems with logistics, supply, cost, training, and information veracity have been identified by Guarino S, et al., 2014¹².

Abbasi S, et al. 2021¹³ conducted a survey study in Pakistan with 382 MBBS and BDS students, of whom 77.4% had a negative attitude towards electronic learning and 86.0% stated that it had no influence on their overall learning outcome. Azlan NA, et al. 2021¹⁴ conducted a research on student reactions to remote learning and found that students are more likely to be unreliable and inattentive to online learning than to physical learning. Because our results for online courses were consistent with those of Azlan AN and Abbasi S¹³⁻¹⁴. We conclude that online education has the potential to be successful, although there are many questions about its worth in our region of the globe. According to our research, the majority of graduates want to be promoted to the next class or graduating based on their past academic achievement and marks, or they want an examination substitution. However, if the HEC (Higher Education Commission) does not want students to be exempted from their final exams, another method of evaluating students must be found to provide them with emotional relief in this time of crisis. Another Nepalese research by Atreya A, et al., 2020¹⁵ proposed that group discussions, practice exams, brainstorming ideas, and presentations be used to boost students' participation and attention during online sessions. Slow internet connections, a lack of technical understanding, and issues about audio output and visual features were noted as limits. Another study by Rafay A. et al., 2022¹⁶ focused on the future of

exams and the usefulness of online teaching approaches, and their results are congruent with ours, demonstrating that student discontent with online teaching methods is prevalent.

According to the findings described above, online education seems to be a two-edged sword in our region of the globe, with both useful and lacking aspects. It could be very beneficial in the future, but there are many flaws in it right now, most notably the socioeconomic burden on students. As a result, it is critical for institutional leaders and policymakers to devise strategies to alleviate these burdens on students and improve the education system as a whole in this post-pandemic situation.

Conclusion

Our findings are consistent with those of the aforementioned studies, demonstrating that many obstacles exist, particularly in our region that must be overcome in order to reap the full benefits of online learning; however, during the COVID crisis and national lockdown, online education remains the only practical option for keeping the educational process moving forward. Policymakers must design strategies to limit the amount of time students spend in institutions and offer a mechanism for measuring this learning in order to guarantee that students get the maximum professional benefit from their education. There should be strategies in place to overcome all of the aforementioned difficulties, including the financial strain on students and concerns with electricity and internet access, which are two of the most common issues that students confront. As we strive to integrate this into our present curriculum, we will face several challenges. The pandemic, on the other hand, has prompted academic institutions to create unique e-learning solutions that will considerably enhance the area of medical education.

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