

ORIGINAL ARTICLE

Opinion of first-year medical students about online teaching during COVID pandemic

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INTRODUCTION

The use of technology in education has increased in recent years and online learning has become a common teaching mode. In the age of modern technology, incorporating online teaching in traditional curriculum needs to be considered in undergraduate medical education. The use of online learning has vastly increased since 2012 in higher education.^[1-3] The coronavirus disease (COVID)-19 pandemic and the nationwide lockdown has brought a sudden change in medical education also, across the globe. The COVID-19 pandemic has exacerbated these issues, as most medical schools have abruptly switched from

Objective: The objective of the study is to know about what the fresh (1st year) medical students thought about the newer techniques of medical education during the course of pandemic. **Materials and Methods:** Twelve questions pertaining to online teaching of Anatomy were formed in Google Sheets. A response link was created and sent to 149 1st year medical students. **Results:** More than half of the students (54.7%) studied anatomy <2 h, but were satisfied with the online support given (55.9%). Almost 3/5th (59.4%) considered online assessment beneficial. Although most of them (85.2%) appreciated the teacher's availability for their help, many (78.5%) of them had difficulty in understanding the topic online. **Conclusion:** Students had a view that Anatomy is the most difficult subject in first year. Hence, online support should be given from the start and regular assessment should be done in mixed pattern of questions.

KEY WORDS: Medical students, online teaching, opinion, pandemic

face-to-face to distance learning, necessitating the development of novel techniques to conduct remote anatomy education.^[4]

To ensure social distancing medical colleges in India were compelled to send the students home and medical education had to be continued online since March 2020 and again in April 2021 due to second wave. Many medical colleges and health universities have taken the initiative to start teaching and learning using various online platforms on their own as there were no definitive directives from either the Medical Council of India (MCI) or any other statutory bodies. The COVID-19 epidemic has thrown a wrench in the traditional delivery of anatomical instruction, requiring institutions to quickly adjust curricular delivery. Several academic institutions have recorded the disturbance and described how their courses have responded thus far.^[5-10] Synchronous and asynchronous online learning methods often used include video conferencing,^[8] digitized cadaveric and 3D virtual anatomy platforms,^[7] and digitized cadaveric and 3D virtual anatomy platforms.^[8]

Till date effectivity of online learning for undergraduate medical education remains, a field that requires thorough exploration. Peia *et al.*, in 2019, explored five databases and four key journals of medical education were searched using ten terms and their Boolean combinations during 2000–2017. Sixteen articles were

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identified. No evidence was there to demonstrate that offline learning works better and can, therefore, be considered as a potential method in undergraduate medical teaching.^[11]

Established features of effective online pedagogy should be used to optimize virtual learning.^[12,13] Feedback is emphasized, social ties are established, and a variety of technologies are used.^[9] Traditional modalities of knowledge distribution have been supplemented by online tools such as virtual dissection simulators and online anatomy software.^[14-17] These online tools, on the other hand, may not address all of the advantages of face-to-face laboratories,^[14] and the existing situation may limit access to high-quality virtual simulators and software.

Objective

The objective of this study was to know about what the fresh medical students thought about the newer techniques of medical education during the course of pandemic. That is when everyone was restricted to their homes and the teaching had resumed in online mode.

MATERIALS AND METHOD

Twelve questions pertaining to online teaching of Anatomy were formed in Google Sheets. A response link was created and sent to 149 1st year medical students. These students had completed 2 months of classroom teaching and were sent to their homes due to 2nd wave of Covid pandemic. Their teaching was continued in online mode and after 2 months of online teaching, this questionnaire was prepared.

Study Design

Close-ended Multiple choice questions type.

Place of study

Online survey in Department of Anatomy, Varun Arjun Medical College, Shahjahanpur, Uttar Pradesh, India.

Duration of study

Fifteen days duration. Students were given 15 days' time to record their responses online (from 15th June 2021 to 30th June 2021).

Study samples

One hundred and forty-nine students of First year MBBS were sent link in common WhatsApp group. A total of 140 students responded.

Study technique

Online response survey.

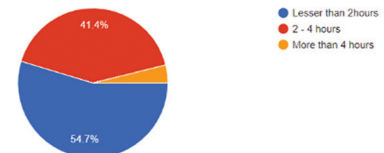
Analysis of Data

Data obtained were collected and analyzed statistically using Statistical Package for the Social Sciences software and Microsoft Excel 2007.

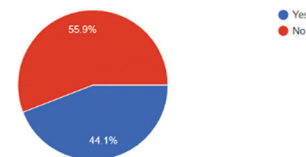
RESULTS

In response to 1st question regarding daily hours of anatomy studied at home besides lectures, most of them (54.7%) said less than 2 hours. Very few (3.9%) studied for more than 4 h. 55.9% were satisfied with online support given while 44.1% were not satisfied.

1 - How many hours did you study anatomy at home?
128 responses

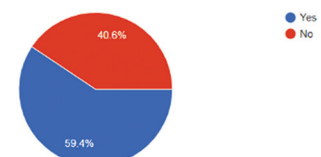


2 - Are you satisfied with online support which have been provided
127 responses

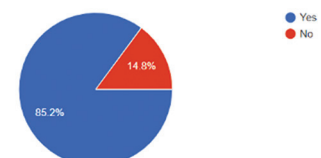


Regarding regular online assessment, most of them (59.4%) considered it to be beneficial, while rest of them (40.6%) denied about any benefits. Maximum of them (85.2%) confirmed that the anatomy teachers were available for their doubt clarification while 14.8% had difficulty in reaching respective teachers.

3 - Do you think regular online assessment was beneficial to you?
128 responses



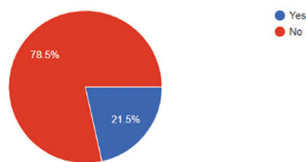
4 - Was your teacher available online whenever you needed?
128 responses



About 78.5% responded that it was not easy to understand a topic online, while 21.5% were able to understand. An interesting response regarding the first-year subjects (Anatomy, Physiology, Biochemistry, PSM); nearly half of them (46.4%) had a opinion that Anatomy posed as most difficult subject. 39.2% considered Biochemistry as most difficult, 10.4% voted for Physiology as most difficult. While rest (4%) considered PSM as most difficult.

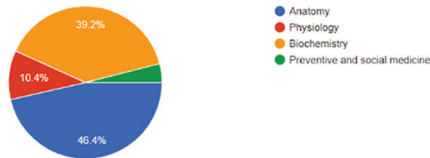
5- Was it easy to understand a topic online?

130 responses



6 - Which subject (among 1st year) posed difficulty in understanding?

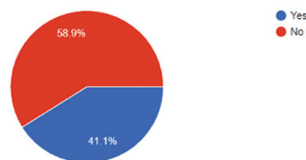
125 responses



About 2/5th of them (41.1%) had an opinion that online support should be continued even when offline classes begin but majority (58.9%) did not want to continue. Contrary to this More than half of them (53.5%) held a view that online support should be from the beginning of academic classes. However, 46.5% did not want it.

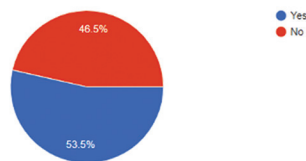
7- Do you want to continued with online support, once physical classes resume?

129 responses



8- Do you think online support should start from beginning of classes?

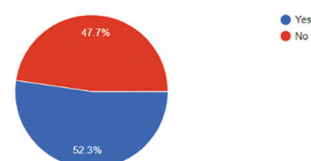
127 responses



Just more than half of them (52.3%) wanted answers of the assessment questions should be made available to them while rest of them (47.7%) wanted themselves to find the answers. Very interesting responses for the type of questions to be

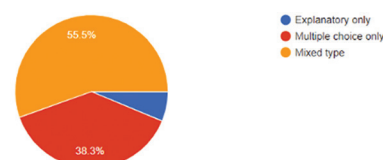
9- Do you want readymade answers to be made available to you for your assessments?

130 responses



10- Which type of questions should be used for online assesment?

128 responses

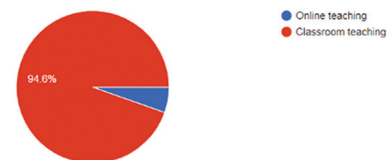


used for online assessment were observed. 6.2% wanted only Explanatory type questions, 38.3% wanted only MCQs for the assessment, and 55.5% wanted mixed questionnaire.

It was almost unanimous response (94.6%) that Classroom teaching is best, although 5.4% denied it. The students were really stressed about their anatomy studies during this pandemic (86.2%), still 13.8% were not so much stressed.

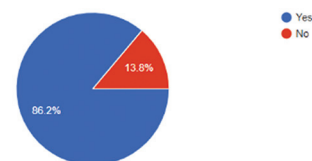
11- Which type of teaching, do you think is best?

130 responses



12- Do you feel stressed about your anatomy sudies during this pandemic?

130 responses



DISCUSSION

Coaching classes nowadays have become the organized sector of education in India. They greatly attract students aspiring for professional and non-professional courses. However, the limited number of Higher Institutions in our country makes this rat race even more tuff. By the time the students enter Medical College, they are tired and bored a lot after having undergone the extreme stress of coaching and competition. Recommendations in the new curriculum pose a challenge for implementation because of limited resources and large number of mostly indifferent students.^[18] The present online teaching sessions were somewhat similar to coaching classes. This may be a reason why our students participated so well in our online sessions. Students could very easily contact their teachers in online mode. They could also study different topics according to their own timings and pace. They felt more comfortable to express their opinions, thoughts, and queries online.

Our present society (especially younger generations) has become more dependent on the virtual world and medical students are also a part of it. Hence, they are more comfortable with online education system. They often fail to attend normal theory classes because of many reasons, and many of them who attend classes do not pay sufficient attention. In such a large class of students, it becomes very difficult for teachers to monitor all students simultaneously. During online sessions, it is easier to monitor students and find out their problems and help them to find a solution.

The competency-based medical education (CBME) curriculum has been designed to identify the desired outcomes; define the level of performance for each competency, and develop

a framework for assessing competencies. MCI, now known as the National Medical Commission had recommended its implementation in 2019.^[19] The document contains a total of 412 topics for learning and 2949 outcomes to be mastered.^[18] CBME is learner-centric and focuses on competencies as endpoints. The internal assessment (IA) is embedded in the curriculum, and providing continuous evaluation of student's performance and is given greater emphasis. The new curriculum emphasizes a cut-off pass level of IA as 50%.^[20]

The objectives of study conducted by Kazi *et al.*^[21] during the COVID-19 pandemic were to assess feedback of the 2nd year undergraduate dental students regarding sessions of Google Classroom as a modern e-learning tool. The study concluded that the undergraduate 2nd-year dental students considered Google Classroom as a productive, efficient, and helpful modern e-learning tool for substantial studying and tackling exams during the COVID-19 scenario. Findings of our study does not support it. In our study, 149 medical students of Varun Arjun Medical College, participated online during the COVID-19 pandemic, and 94.6% of students expressed their views that Classroom teaching is best. Still, 53.4% wanted online support system from the beginning of academics. Almost half (46.4%) considered Anatomy as difficult subject to be taught online.

Online assessment is also very deceptive in online mode. Almost 2/3rd (59.4%) considered online regular assessment to be beneficial. The students are staying at home and books are available with them. Hence, they may adopt unfair means. Parents involvement becomes necessary in these situations. Keeping these in mind, questions need to be structured in such a way that until and unless they study well and get their concepts clear, they will not be able to answer even if they have their books at hand. Hence, setting of MCQ papers becomes very tedious for the faculties and it requires lots of time and energy. However, once the Google sheet is ready, it becomes very easy to assess.

CONCLUSION

More than half of the students (54.7%) studied anatomy lesser than 2 hours but were satisfied with the online support given (55.9%). Almost 3/5th (59.4%) considered online assessment beneficial. Although most of them (85.2%) appreciated the teacher's availability for their help, many (78.5%) of them had difficulty in understanding the topic online. Nearly half of them (46.4%) considered Anatomy as most difficult subject among first year medical subjects (Anatomy, Physiology, Biochemistry, PSM). Less than half (41.1%) wanted to continue with online support with offline classes but more than half (53.5%) wanted the online support from the beginning of academic year. Similar part of students (52.3%) wanted readymade answers to be made available to them. 55/5% wanted mixed type of questions for assessment. Because they had stress about their anatomy classes (86.2%), almost all (94.6%) agreed that classroom teaching was best.

CLINICAL RELEVANCE

This study gave us idea about student's perspective of Anatomy teachings conducted during Pandemic. Now this will certainly help teachers in preparing their strategy to help students during such pandemic/epidemic period and also during long vacation period. Benefits of online teaching include tailored content, the use of an engaging and interactive platform, the development of 3D spatial awareness and exposure to human variations, and the opportunity for independent student feedback through metacognitive processes. Drawbacks include the limited provision of meaningful feedback and interactivity. Because personal variations in responses may occur due to different IQ levels of students, these data need to be compared with similar studies conducted in Premiere institute students.

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CONTRIBUTION OF AUTHORS

All authors contributed equally.

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