



Impact Of Covid 19 Pandemic On 1st MBBS Students In Learning Anatomy; A Students Perspective

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Abstract

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Introduction

In anatomy education, dissection of cadavers is most important traditional teaching method^[1] due to its advantages like direct handling of the tissues , three dimensional relations ,interactions with other students & discussion on dissection table. During COVID 19 Students were not in touch with cadavers, learning dissection virtually was big challenge for them & teaching them virtually was task for faculties. First MBBS students are very new to medical environment & they start adapting to this by observing their seniors, faculties on daily basis around them. After entering in medical college other than learning i.e. knowledge domain; they have to learn to communicate, to be responsible & how to take correct decisions i.e. skill domain & attitude domain. All these can be achieved only by continuous physical guidance of trained faculties. New curriculum was introduced by MCI from this 2019-2020 batch.^[2] With changed curriculum understanding of anatomy with clinical perspective is most important as assessment is based mainly on learning objectives. Many new teaching learning method like early clinical exposure, AETCOM modules were introduced for the same batch.^[3] Cadaveric dissection is ideal method for training hands & fingers for future surgical procedure on living human beings.^[4]

The government of India imposed mandatory lockdown on March 24,2020 which was extended till 31st may^[5]. For 1st MBBS students the academic year which has to be finished after one year; extended its period. Students from remote areas were just started to adapt to these new methods &..... then online teaching has to be followed, they have to face many difficulties of which network connectivity was major.

This virtual anatomy learning is likely to affect student's further professional phases as it is one of the basic subjects for MBBS. But there are some advantages of learning anatomy virtually such as easy to learn at any time & place, can be revised again & again.

As 2019-20 batch experienced learning by traditional & new online methods, So this study is done to access students views regarding stress faced by them during pandemic period, experience of learning anatomy by both method with comparison of their state of mind, material used, use of new technology, assessment methods & their experience after joining college offline in new normal conditions with many changed guidelines in dissection hall, in institute and in hostels.

Material And Methods

This is cross sectional study. New curriculum students with due consent of 2019-20 batch of Smt. Kashibai Navale Medical College & General Hospital were included in the study in the month of January 2021 after their university theory examination. Out of 150 Students 80 students responded to the questionnaire voluntarily. Students ranging from age 17-20 years were included in the study. A questionnaire was shared as Google form. We maintain anonymity of the students. Questionnaire was validated & study was approved by ethical committee of our institute.

For batch 2019-2020 after foundation course for one month i.e. in the month of August 2019, students learnt Upper Extremity, Lower Extremity, Thorax, Head & Neck from the month of September till March 2021 physically through lectures, osteology demonstrations, histology practicals & dissections. From April 2020 to July 2020 part of Neuroanatomy & Abdomen along with 2nd terminal & Preliminary examination were held online. For theory- lectures

Results

were recorded and shared on portal and for practical's videos were prepared.

In the goggle form out of 25 multiple choice questions 21 were of closed ended type & 4 questions were open ended type. The responses received were tabulated & analyzed.

Aims And Objectives-

1. To observe effects of Covid 19 pandemic situation on 1st MBBS students in learning anatomy
2. To check usefulness of new teaching methods used during lockdown
3. To see impact of pandemic on learning histology and embryology and on new curriculum
4. To see effect of pandemic on mental status of 1st MBBS students
5. To see response of 1st MBBS students to new normal after lockdown.

Table 1

N=80	Yes(in percentage)	No(in percentage)	Partly(in percentage)	Can't say(in percentage)
Is improvement needed in online method?	35.4	34.2	26.6	3.8
Was material shared on portal enough?	36.7	6	51.9	5.4
Was it stressful during pandemic?	73.4	3	21.5	2.1
Is new curriculum affected?	90	2	6	2
Are we ready for teaching with new technology?	44.7	40.8	-	14.5
Is Histology learning affected?	75.3	19.5	-	5.2
Is Embryology learning affected?	74	23.4	-	2.6

Table-2

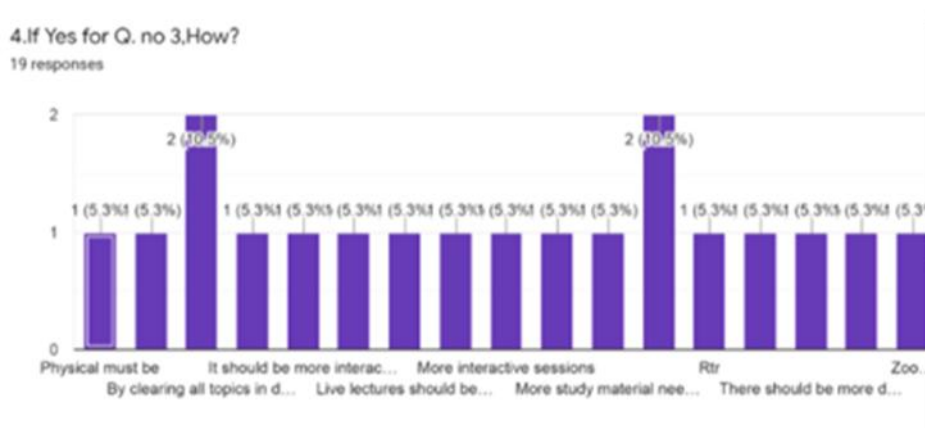
Method used for studying in lockdown	Self study 31.3	Internet 1.4	College portal 18.8	Combination 42.5
How did you cope up with the stress?	Listening to music 57	Drawing 13.9	Any other art 19	Yoga/meditation 10.1
Which part of curriculum affected most	Lecture 7	Dissection 91.1	ECE(early clinical exposure) 0.9	SDL(self directed learning) 1
Advantages of physical learning in dissection hall	Feel of tissue 17.7	Orientation 22.8	3D image 25.3	Interactive 34.2
How online education helped?	To continue learning 31.6	Maintain contact with subject 39.5	For new concepts 23.7	For assessment 5.2
Disadvantages of E-learning	Technology dependency 16.9	Less interactive 37.7	No feel of Tissue 39	No personal contact 6.4
Suggested method for learning in future	E-learning 3.2	Physical 58.4	Combination 36.4	Can't say 2
How exam should be conducted?	Physical 48.7	Online 28.9	Objective based 22.4	-
Feelings after joining college	Happy 31.2	Panic 6.4	Stressful 45.5	Difficult to say 16.9
How do you feel to study with new protocols?	Satisfactory 46.8	Partially 40.3	Not at all 13	-
After appearing for university exam which learning method you will prefer?	Physical 67.5	Online -	Combination 32.5	-

Above table no 1 and table no 2 depicts the values in percentage .

Students responses to open ended questions-

How Improvement needed in online material shares on portal-by clearing all the topics in details physically(10.5%), keeping more interactive sessions, offline teaching ,more study material needed were some responses from students

Graph -1



How did you cope up with the stress-Listening to music was the most common stress relieving hobby for 57% of students. Other than this farming, dancing, playing sports & spending time with the family were stress relieving activities.

When students were asked about advantages of physical learning in Dissection hall- 34.2 % students like the interactive way of learning in D-hall, 25.3% got 3D imagination,22.8% students easily understood orientation of various parts to each other in physical learning & 17.7% students felt that Feel of tissue lacks in online teaching. “It is utmost important as live structures are seen, any doubts on the spot could be cleared and the whole importance and essence of cadaver is lost because of pandemic and lifelong memory is also lost.” “In dissection hall, in case if we are not getting any structure or rather when we mistake one structure by other, there are teachers who can correct us and tell us whatever concept than we know is actually correct; but if one goes to study it online, though one may understand it but there’s none to check his/her understanding whether what is assuming is right or wrong!”

Good/bad experiences of pandemic-“bonding with family members increased”. “Solitude ,helped to understand what happening inside me instead of around me”. They got time to pursue their hobbies . No academic stress so improved mental health. Got

to know ability to grasp things by self study. Understood the importance of physical lecture.

Lockdown made them lazy & feeling of ‘need of getting studies completed on urgent basis’ was gone. Studies were not done seriously. Good - Got to spend time with family Bad - Daily routine and studies were affected. Pandemic- “it emphasized the value of physical, interactive education which is important for our clinical knowledge.” ‘Lonliness sometimes can be helpful but for long time it may turn to depression’.

After joining back- It was stressful at the beginning because of exam pressure simultaneously journal , logbook completion pressure just with the fact that it felt like we were starting afresh specially during dissection felt a bit disoriented. Difficulty in coping up with the previous topics before pandemic.

It took time to adjust with it for some time as it was difficult to live with mask and sanitizer.

Students were unable to sit for long hours without break. Some students were afraid of getting infected by COVID. Maintaining social distance was challenging at hostels & mess.

Discussion

Whole world has suffered due to COVID 19 pandemic. Medical fraternity students are affected in many ways but the impact of this pandemic is

devastating on 1st MBBS students as they are just budding. Anatomy is one of the fundamental subject to form backbone for further phases.^[6]

Before pandemic many new applications like Augmented reality & virtual reality were used as a supportive to traditional teaching methods.^[7] Most of institutes purchased all new technologies required for this new normal online teaching. New LMS applications like MOODLE, BOARD.....came into light. Faculties had to undergo training to use these new modalities. Other aspects like embryology models, histology slides, charts, osteology teaching was done online using various modern applications.

In our study 42.5% students preferred combination of internet & material shared on college portal for studying anatomy during lockdown. A study by Hyeijung et al. concluded that blended learning approach is an effective method for anatomy learning along with self-directed study.^[8] And in contrast to our study their study revealed that students prefer online lectures method more than physical classroom lectures as they can learn according to their convenience and can review videos & get time for self study. In a study by Anjali et al. more than half of students were moderately satisfied with the virtual anatomy classes & 9% were dissatisfied.^[9] Evan et al. stated that current situation is a stop-gap solution & students will return to lab soon.^[10] Pandemic taught that

learning anatomy can be delivered in a variety of ways that have advanced the use of digital technologies, challenged more traditional approaches.^[11] Parther et al. said that situation should be looked as an opportunity to expand anatomy education beyond face to face teaching.^[12]

In a study by Syal et al. stated that during pandemic 69.38% felt that they became less productive in studies & 74% respondents felt less motivated to study at home. In our study 73.4 % students were stressful during pandemic and 45.5% were stressful after joining college back. Students will prefer physical classes & exams in our study. Similar to study by Syal et al. were still acclimatizing to changed norms.^[13]

Students like physical classroom method for learning anatomy and they realised the importance of it.

Limitations-The study was related to our institute only so to the particular geographic area, on broad basis opinions may vary.

Conclusion:

For anatomy learning online teaching can't replace traditional cadaveric dissection method. Interactive classroom teaching is the best method. During lockdown online teaching helped them to maintain contact with the subject.

Many innovative methods emerge during pandemic & newer technologies were acquired, adapted & implemented.

Need-Methodology is important & taking feedbacks to review, modify and implement such studies will help.

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