

Effect Of Covid 19 Pandemic On Anatomy Teaching Learning Methods: Students' Perspective

Dr. Fulari S.P.*, Dr. Masaram N.B.** , Dr. Doijad V.P.***

*Associate Professor, **Assistant Professor, Department Of Anatomy, *** Assistant Professor, Department Of Physiology, Dr. V. M. G. M. C, Solapur, Maharashtra

Abstract: Background: In comparison to other basic subjects in medical sciences, learning Anatomy online was felt difficult. With the emergence of Covid 19 pandemic, the teaching and learning method entirely shifted to online classes. So, the present study aimed to compare the effectiveness of teaching learning in the subject of Anatomy by online teaching learning methods with that of traditional classroom teaching learning methods by students' perspective. Material And Methods: The study was done using predesigned multiple-choice questionnaire among the first MBBS students. The opinion about effectiveness of traditional classroom teaching learning methods and online teaching learning methods were anonymously retrieved through Google forms. Result: 80.2% students opined that traditional classroom teaching learning method is better. Conclusion: Classroom teaching is far better than online teaching. [SP Fulari Natl J Integr Res Med, 2022; 13(1): 81-84, Published on 26/01/2022]

Key Words: Classroom Teaching, Online Teaching, Medical Students, Pandemic, Perceptions

Author for correspondence: Dr. Masaram N.B, Assistant Professor, Department Of Anatomy, Dr. V. M.G.M.C, Solapur, Maharashtra E-Mail: masaramnitin9@gmail.com Mobile: 9422265676

Introduction: Anatomy is the foundation of medical education, in comparison to other basic subjects in medical sciences, learning Anatomy online was felt difficult as the students were unable to understand the three-dimensional, spatial orientation of structures in human body¹.

With the emergence of Covid 19 pandemic, first time in the history of medical education, the teaching and learning method entirely shifted to online classes from traditional method of classroom teaching in the subject of Anatomy, in the form of lectures, lecture cum demonstrations, cadaveric dissections, observation of histology slides focused on light microscopes etc. Due to lockdown situations in the Covid 19 pandemic, institute has to send the students to their hometowns as a precautionary measure and faculty had no option to continue teaching online by all possible means².

Rising concern among students urged to evaluate strength and weakness of ongoing various online teaching and learning methods. Although not ideal but live online class through video conferencing using Microsoft teams, sharing PowerPoint presentations with audio-recording by teachers, to students seems to be an apt solution for continuing the teaching learning of Anatomy to first MBBS students³.

So, the present study aimed to compare the

effectiveness of teaching learning in the subject of Anatomy by online teaching learning methods with that of traditional classroom teaching learning methods by students' perspective.

Material & Methods: The study was done using predesigned multiple-choice questionnaire among the two batches of first MBBS curriculum, 200 students each of Dr. V.M. Govt. Medical College, Solapur, Maharashtra, India, who have attended regular classes in college during pre and post pandemic lockdown period as well as online classes during pandemic lockdown period.

The opinion about effectiveness of traditional classroom teaching learning methods and online teaching learning methods were anonymously retrieved through Google forms.

The data transferred to Excel sheet and analyzed for various parameters to derive the descriptive statistics between traditional classroom teaching and learning method and online teaching and learning method for conclusion. Chi-square test is applied to derive the significance of analyzed data. This study was conducted after approval from Institutional Ethics Committee of Dr. V.M. Govt. Medical College, Solapur, Letter No. Pharma Dept/IEC/Approval letter/129/21 dated 08/09/2021.

Inclusion Criteria: Out of 400 total students,

This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), allowing third parties to copy and redistribute the material in any medium or format and to remix, transform, and build upon the material for any purpose, even commercially, provided the original work is properly cited and states its license.

those who have attended minimum 75% online and regular classes in the subject of Anatomy, were included belonging to First MBBS batch 2019-20 and 2020-21.

Exclusion Criteria: Out of 400 total students, whose attendance is less than 75% in online and regular classes in the subject of Anatomy, were excluded.

Study Tool: Based on the opinion of Anatomy faculty and concerns regarding students involved in online teaching learning process various issues like understanding ability, accessibility, concentration, quality content, practical knowledge, stress factors were considered.

The multiple-choice questions in Google forms were framed to obtain the following information from students:

- Students' opinion about quality and effectiveness of teaching online Anatomy theory and practical classes.
- Various difficulties faced by students during learning subject of Anatomy by online methods.

- Comparison between effectiveness of online teaching learning methods and traditional classroom teaching learning methods.
- Learning problems due to mood changes, stress during lockdown of Covid 19 pandemic.
- The validation of questionnaire was done by discussion with all faculties in department of Anatomy of Dr. V.M. Govt. Medical College, Solapur.

The Google form was posted to 400 students. They were conveyed that participation in study was voluntary and no any personal information like their name, roll numbers collected, so as to get unbiased responses from the students. The informed consent was taken from the students via same Google form to involve in the study and seven days time was allotted to the students to submit their responses.

Results: Out of 400 students, total of 212 students participated in the study. We have tabulated the responses of the students and analyzed with the help of Excel sheets and following results found shown in following table.

Table 1: Opinion On Anatomy Theory And Practical Teaching And Learning (N=212 Students)

Sr. No.	Type Of Classes	Traditional Classroom Teaching Is Better Than Online Classes (% Of Students)	Online Teaching Is Better Than Traditional Classroom Classes (% Of Students)	Both Are Equally Good (% Of Students)	P Value (Chi-Square Test)
1.	Gross Anatomy Theory Classes	76.4	13.2	10.4	Significant P<0.001
2	Histology Theory Classes	76.9	14.1	9	Significant P<0.001
3	Embryology Theory Classes	68.4	17.9	13.7	Significant P<0.001
4	Genetics Theory Classes	60.8	21.2	17.9	Significant P<0.001
5	Osteology Lecture Cum Demonstrations	84.4	11.3	4.3	Significant P<0.001
6	Cadaveric Dissections	90.1	6.1	3.8	Significant P<0.001
7	Histology Practicals	84.4	9.4	6.2	Significant P<0.001
8	Overall Teaching And Learning Methods In Anatomy	80.2	11.3	8.5	Significant P<0.001

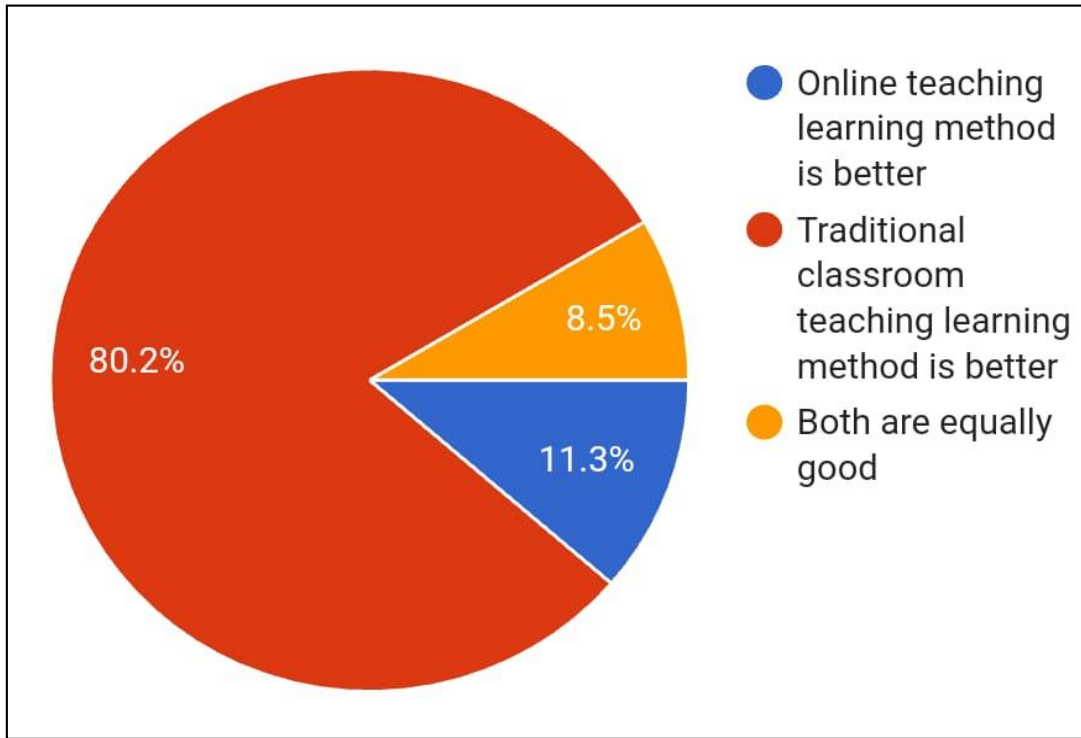
Opinion On Anatomy Theory And Practical Teaching And Learning: Total of 80.2% students opined that traditional classroom teaching

learning method is far better. A small group of students 11.3% opined that online teaching and

learning method is better, similarly 8.5% of students opined that both the traditional as well

as online teaching learning method is equally good.

Figure 1: Opinion Regarding Overall Teaching And Learning Methods In Anatomy (N=212 Students)



Discussion: Our study is aimed to know the effectiveness of teaching and learning in the subject of anatomy by online platform during the Covid 19 pandemic and was compared with traditional classroom teaching which the students underwent during pre-pandemic and post-pandemic period. The students anonymously and spontaneously opined that traditional classroom teaching is better than online teaching in the subject of anatomy for both theory as well as practical classes.

The practical aspects of anatomy are very difficult to comprehend and perceive from online classes as it lacks spatial and tactile orientation of different body parts and organs which can only be learnt by actual cadaveric dissections and by observing and handling real anatomical specimens⁴.

Development of knowledge and skills among medical students can only be done within the college classroom teaching with live face to face interactions between the students and teachers which is major drawback in online teaching⁵.

It has been suggested that the dissection plays an important role in the medical training. This is attributed to the development of cognitive, psychomotor and affective domains of learning.

Significant percentage of students also had other problems related to the insufficient or lack of study materials, network and connectivity issues, and lack of study environment at home affecting their capacity of the subject⁶.

Overall, the present study findings indicate that online teaching is not the preferred mode of teaching the subject of anatomy and students prefer traditional classroom teaching over and above online teaching methods.

Conclusion: The present study revealed the student's opinion regarding teaching and learning in the subject of anatomy that traditional classroom teaching is far better than online teaching with the advantages of face to face interactions among teachers and students.

References:

1. Eluru R, Ramulu MV, Koshi R, Deshpande S: Effect of Corona Pandemic on Learning Anatomy Subject among First Year MBBS Students, IJARS, 2021 Jan, Vol 10(1): 13-15
2. Arora Ak, Srinivasan R, Impact of Pandemic Covid 19 on the teaching, learning process: A study of higher education teachers. Indian J Management 2020; 13.
3. Bhargava Shruti: Online Classes for Medical Students During COVID-19 Pandemic: Through

the Eyes of the Teaching Faculty, Journal Of Research in Medical and Dental Sciences, July 2020; Vol. 8, Issue 4, 189-192.

4. Kelsey AHCM, McCulloch V, Gillingwater TH, Findlater GS, Paxton JZ, Anatomical Sciences at the University of Edinburgh: Initial experiences of teaching anatomy online, *Transl Res Ana*, 2020; 19; doi:10.1016/j.tri.2020.100065,
5. Chatterjee S. The COVID -19 pandemic through the lens of a medical student in India. *Int J Med Students* 2020; 8:82-83.
6. Doherty OD, Dromey M, Loughheed J, Hannigan A, Last J, Mc Grath D, Barrier and solution to online teaching in medical education- An integrative review, *BMC Medical Education*, 2018; 18: 130.

Conflict of interest: None
Funding: None
Cite this Article as: SP Fulari, NB Masaram, VP Doijad. Effect Of Covid 19 Pandemic On Anatomy Teaching Learning Methods: Students' Perspective. <i>Natl J Integr Res Med</i> 2022; Vol.13(1): 81-84