



Original Research Article

Opinion of medical students on online classes during covid 19 pandemic

Nagasrilatha Bathala^{1,*}, Anjaneyulu Kammineni²

¹Dept. of Microbiology, Government Medical College, Kadapa, Andhra Pradesh, India

²Dept. of General Medicine, FIMS, Kadapa, Andhra Pradesh, India



ARTICLE INFO

Article history:

Received 21-05-2021

Accepted 02-08-2021

Available online 28-08-2021

Keywords:

Covid 19

Online classes

Medical students

ABSTRACT

Background: COVID-19 is referred as pandemic due to its severity and fierceness also as the greatest global health crisis since after centuries in human civilization. This made many schools and colleges to remain shut down for an indefinite time as the only option left to prevent transmission of virus in the institutions. At the same time, teaching concepts have changed with a similar speed than the evolution of the Internet, social media and digital technology. In these circumstances online teaching has become the only option left to fulfill the academic necessities of the students.

Objectives: This study will help to find out the students' opinion and attitude towards online classes during COVID – 19 Pandemic.

Methodology: An Anonymous Cross sectional study is conducted among undergraduate medical students of various colleges affiliated to DRNTRUHS, AP regarding their opinion and attitude towards online teaching classes conducted during Covid 19 pandemic period by sharing the link for Google document.

Results: 432 under graduate medical students were participated in the study. 313 participants (72.41%) opined that online teaching is helpful. Majority of participants opined that online teaching is helpful (72.41%); comfortable (61.63%); they are able to interact (73.7%). 68.74% of participants have troubles to attend online classes. Very less participants (13.79%) showed their preference for online classes after this period. All the participants strongly mentioned that their practical skills will be affected badly due to this type of teaching.

Conclusions: The deadly and infectious disease Covid-19 has deeply affected the educational system globally. In our present study majority of students strongly opined that online teaching is helpful; they are also comfortable and able to interact with their faculty also. When COVID 19 resolves, transformative changes are expected in medical education through the use of emergent technology.

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprint@ipinnovative.com

1. Introduction

COVID-19 is referred as pandemic due to its severity and fierceness also as the greatest global health crisis since after centuries in human civilization.¹ Any vagary accident that happens in the world will always leave its impact on education. And so the pandemic of COVID 19 has its footprints on education.² This tragedy has

shaken up the education sector, and this fear is likely to resonate across the education sector globally. In India, the government has announced lockdown and closure of educational institutions as a logical solution to enforce social distancing within communities.³ This made many schools and colleges to remain shut down for an indefinite time as the only option left to prevent transmission of virus in the institutions. As per the assessment of the researchers, it became uncertain to get back to normal teaching anytime soon. As social distancing is preminent at this stage,

* Corresponding author.

E-mail address: lathabathala77@gmail.com (N. Bathala).

educational institutions are struggling to find out options to deal with this challenging situation.⁴ This became an urgent need to protect and save our students, faculty, academic staff, communities, societies, and the nation as a whole. Fortunately, there is a range of modern tools available to face the challenge of distance learning imposed by the COVID-19 pandemic.⁵ At the same time, teaching concepts have changed with a similar speed than the evolution of the Internet, social media and digital technology.⁶ In these circumstances online teaching has become the only option left to fulfill the academic necessities of the students though student awareness of the cognitive challenges presented by the smartphone is unclear.⁷

1.1. Significance and objectives of the study

This study will help to find out the students' opinion and attitude towards online classes during COVID – 19 Pandemic. It can also lead to introduce a new pattern in medical institutions to enhance the students' knowledge and skills through digital technologies.

2. Methodology

An Anonymous Cross sectional study is conducted among undergraduate medical students of various colleges affiliated to DRNTRUHS, AP regarding their opinion and attitude towards online teaching classes conducted during Covid 19 pandemic period by sharing the link for google document having 15 questions (5 close ended and 10 open ended) and explained them the importance of this study in November 2020. After obtaining the filled forms the data was analyzed by preparing pai charts and Excel sheets.

3. Results

432 Under graduate medical students were participated in the study.

313 participants (72.41%) opined that online teaching is helpful especially at times like this. Majority of participants opined that online teaching is helpful (72.41%); comfortable (61.63%); they are able to interact (73.7%).

68.74% of participants have troubles to attend online classes due to network issues. Very less participants (13.79%) showed their preference for online classes after this period. All the participants strongly mentioned that their practical skills will be affected badly due to this type of teaching.

Although the percentage of satisfied participants is more, percent of unsatisfied participants is not in ignorable values.

79.8% of participants has mentioned that there is no other option other than online teaching and some of them mentioned other options as shown in Table 3.

59.7% of Participants mentioned that online classes have no impact on their health and rest of the participants opined that these online classes affect their health physically and

Table 1: Opinion on online teaching

Questions	Yes	No
Online teaching helpful	72.41%(313)	27.59%(119)
Comfortable with on line teaching	61.63% (266)	38.37% (166)
Interaction with faculty	73.70% (318)	26.30% (114)
Troubles faced during online classes	68.74%(297)	31.46%(135)
Preference of online teaching even after pandemic	13.79% (60)	86.81% (372)
Effect on practical skills	100% (432)	0%

Table 2: Rating on satisfaction on online teaching

Rating	No of participants	Percent (%)
0	11	2.6
1	52	12.1
2	62	14.12
3	158	36.6
4	127	29.5
5	22	5.1
Total	432	100

Table 3: Options other than on line teaching

	No of participants	Percent (%)
No other option	345	79.8
By following Pandemic rules	38	8.8
Adjustment of academic year	15	3.5
Local resources	10	2.3
Assessments and seminars	16	3.7
Recorded videos	8	1.9
Total	432	100

Table 4: Impact on health

	No of participants	Percent (%)
No impact	258	59.7
Physical health	44	10.2
Mental health	112	25.9
Both	18	4.2
Total	432	100

mentally also.

4. Discussion

E Learning is used increasingly in health care to support the delivery of learning in outcome-based education. Broadly speaking, eLearning is considered to be the application and integration of educational technology to the learning process where as traditional learning is any learning activity undertaken in the traditional classroom environment; it is co-located, face-to-face instruction and practical work. In

contrast, a full or complete eLearning approach is defined as learning with no face-to-face component that relies entirely on the use of eLearning technology and techniques for its delivery. Full eLearning can be distributed geographically and/or temporally, and communication between student and teacher is handled electronically.⁸

The most important asset of modern e-learning is the fact that it allows the individual users to tailor the learning experience to their personal educational needs in a practical manner with significant flexibility to their time availability; time is the largest deficit of the busy clinicians of modern medicine. In that sense, a simple, comprehensive and consistent environment is required for the provision of high standards and, at the same time, a cost and time-effective educational experience.⁹ Already some of the academic leaders have implemented formal training programs, ranging from seminars and workshops to fellowships and advanced degree programs.¹⁰

It is also observed that teaching concepts have changed with a similar speed with the evolution of the Internet, social media and digital technology.⁶

Several areas are affected worldwide and there is a fear of losing this whole ongoing semester or even more in the coming future. The education sector was one of the first to react and respond to the pandemic by shutting down institutions to ensure the safety of the students. Various schools, colleges, and universities have discontinued in-person teaching. Several arguments are associated with e-learning. Accessibility, affordability, flexibility, learning pedagogy, life-long learning, and policy are some of the arguments related to online pedagogy. It is said that online mode of learning is easily accessible and can even reach to rural and remote areas. It is considered to be a relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning. Flexibility is another interesting aspect of online learning; a learner can schedule or plan their time for completion of courses available online. Combining face-to-face lectures with technology gives rise to blended learning and flipped classrooms; this type of learning environment can increase the learning potential of the students. Students can learn anytime and anywhere, thereby developing new skills in the process leading to life-long learning.

The government also recognizes the increasing importance of online learning in this dynamic world. The severe explosion of Corona Virus disease can make us add one more argument in terms of online learning, that is, online learning serves as a panacea in the time of crisis.¹¹ Online teaching is a relatively new concept in developing countries such as India.³

In our present study majority of students strongly opined that online teaching is helpful; they are also comfortable and able to interact with their faculty also. At the same time they

have mentioned that they have faced troubles in attending online classes (31.46%) as there are certain network issues and also issues with their electronic devices especially in rural areas. If these are improved online teaching can be strengthened somewhat. Majority of participants mentioned that they will not prefer online teaching (86.81%) even after this pandemic situation. This represents that they are interested in traditional teaching as this gives them friends, sharing, bonding with institution etc. all the participants strongly mentioned that on line teaching affects their practical skills badly (100%). Being medical students it is not enough to learn theoretical aspects of the subject. These students should know how to elicit signs and other practical skills to become good clinicians. The clinical component of medical education has to be focused on patient examination and include direct experience in the diagnostic and disease therapeutic treatment.¹² This happens with hands on training and by practicing only, which becomes a big task for medical students.

In our present study the participants satisfaction levels towards online teaching is an average (2-4). It is opined that this may be multifactorial like – internet issues, missing institution premises, friends, not able to develop their clinical skills etc.

Though majority of participants opined that there is no option other than online classes especially at times like this, but some of them mentioned that local resources can be utilized to teach them practical skills by permitting them to attend near by hospitals both in public as well as private sectors, which may result in not only in enhancing man power in health care system but also their practical skills can be improved at same time.

In this study more than half of the participants opined that there will be no impact of online classes on their health, some of the participants mentioned that it may affect physical, mental health or even both as they are supposed to be with electronic devices for long time and also it effects on their communication skills.

Even though the online classes are helping the students to cover their syllabus in this pandemic situation, if the same continues for longer period its effective ness may be questionable as the effectiveness of online learning is influenced by many factors which create barriers for online learning, such as administrative issues, social interaction, academic skills, technical skills, learner motivation, time and support for studies, technical problems, cost and access to the internet.¹³

Even the online classes have proven to be useful, but these may not be completely replacing the traditional teaching methodology especially in medical education as practical skills are to be demonstrated and are to be practiced on hands. Therefore, this is the time to gravely rethink, re- vamp and redesign our education system in much demanding need of unprecedented current situation.

These circumstances make us realize that scenario planning is an urgent need for medical institutions. Newly introduced, outcome-based, competency-based medical curriculum in India advocates e-learning as a tool for self-directed learning in students. This crisis has given us opportunity to divulge into unexplored areas of technology based medical education. When COVID 19 resolves, transformative changes are expected in medical education through the use of emergent technology.¹⁴ As there is uncertainty about duration of this pandemic and social distancing measures are needed for long, hence, education of future doctors requires intense and prompt attention.¹⁵

To strengthen online teaching at all levels it requires the efforts from government, education institutions, parents and also from students.

As this pandemic spreads, there has been an increasing move towards teaching online because of shutting down of schools, colleges and universities.

5. Conclusions

The deadly and infectious disease Corona Virus also known as Covid-19 has deeply affected the educational system globally. In our present study majority of students strongly opined that online teaching is helpful; they are also comfortable and able to interact with their faculty also. When COVID 19 resolves, transformative changes are expected in medical education through the use of emergent technology.

6. Source of Funding

None.

7. Conflicts of Interest

Nil.

8. Acknowledgement

Thanks to all participating students of NTRUHS, Andhra Pradesh.

References

1. Mishra L, Gupta T, Shree A. Abha Shree Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *Int J Educ Res Open*. 2020;2(8). doi:10.1016/j.ijedro.2020.100012.
2. Radha R, Mahalakshmi K, Kumar VS, Saravanakumar AR. E-Learning during Lockdown of Covid-19 Pandemic: A Global

3. Perspective. *Int J Control Automation*. 2020;13(4):1088–99.
3. Joshi A, Vinay M, Bhaskar P. Impact of coronavirus pandemic on the Indian education sector: perspectives of teachers on online teaching and assessments. *Interact Technol Smart Educ*. 2020;doi:10.1108/ITSE-06-2020-0087.
4. Rieley JB. Corona Virus and its impact on higher education. Available from: https://www.researchgate.net/post/Corona_Virus_and_its_impact_on_higher_education.
5. Gonzalez T, Rubia MA, Hincz KP, Comas-Lopez M, Subirats L, Fort S, et al. Influence of COVID-19 confinement on students' performance in higher education. *PLoS One*. 2020;15(10):e0239490. doi:10.1371/journal.pone.0239490.
6. Schneider M, Binder T. E-learning in medicine: current status and future developments. *Hamdan Med J*. 2019;12:147–51.
7. Hartley K, Bendixen LD, Gianoutsos D, Shreve E. The smartphone in self-regulated learning and student success: clarifying relationships and testing an intervention. *Int J Educ Technol High Educ*. 2020;17(52). doi:10.1186/s41239-020-00230-1.
8. Al-Shorbaji N, Atun R, Car J, Majeed A, Wheeler E. World Health Organization. eLearning for undergraduate health professional education: a systematic review informing a radical transformation of health workforce development; 2015. Available from: <https://apps.who.int/iris/handle/10665/330089>.
9. Merzouk A, Kurosinski P, Kostikas K. Learning for the medical team: the present and future of ERS Learning Resources. *Breathe*. 2014;10(4):296–304. doi:10.1183/20734735.008814.
10. Dyrbye L, Cumyn A, Day H, Hefflin M. A qualitative study of physicians' experiences with online learning in a masters degree program: benefits, challenges, and proposed solutions. *Med Teach*. 2009;31(2):40–6.
11. Dhawan S. Online Learning: A Panacea in the Time of COVID-19 Crisis. *J Educ Technol Sys*. 2020;49(1):5–22.
12. Masic I. E-learning as new method of medical education. *Acta Inform Med*. 2008;16(2):102–7. doi:10.5455/aim.2008.16.102-117.
13. Pei L, Wu H. Does online learning work better than offline learning in undergraduate medical education? A systematic review and meta-analysis. *Med Educ Online*. 2019;24(1):1666538. doi:10.1080/10872981.2019.1666538.
14. Saiyad S, Virk A, Mahajan R, Singh T. Online teaching in medical training: establishing good online teaching practices from cumulative experience. *Int J App Basic Med Res*. 2020;10:149–55.
15. Verma A, Verma S, Garg P, Godara R. Online Teaching During COVID-19: Perception of Medical Undergraduate Students. *Indian J Surg*. 2020;27:1–2. doi:10.1007/s12262-020-02487-2.

Author biography

Nagasrilatha Bathala, Associate Professor

Anjaneyulu Kammineni, Associate Professor

Cite this article: Bathala N, Kammineni A. Opinion of medical students on online classes during covid 19 pandemic. *J Educ Technol Health Sci* 2021;8(2):64-67.