Impact of covid-19 pandemic: Perception of clinical year medical students on transition of traditional to online lectures in a medical university of Karachi, Pakistan.

Shazia Durrani Fakhir¹, Ammara Hameed²

ABSTRACT… Objective: To determine the perception of clinical undergraduate MBBS students of online lectures in a medical university of Karachi, Pakistan. Study Design: Descriptive Study. Setting: Bahria University Medical and Dental College. Period: May 2020 till July 2020. Material & Methods: Four weeks after introduction of online lectures. Data was collected from clinical year students over two weeks using Google forms and analysed using SPSS version 22. Result: Of 450 clinical year students, n=234 responded. Overall, 48.7% (n = 114) students were satisfied with the online lectures, 34.2 %( n= 80) were completely satisfied and 17.7 %( n=39) were unsatisfied. 53.4 %( n=125) felt lectures were serving the purpose whereas 37.2% (n=87) do not feel the same. The lack of interaction component in online lectures was felt by 45.7% (n=107) students. Regarding clinical teaching, 72.2% (n=170) do not think it is possible online, 15.8 (n=35) feel it possible and 12.4% (n=29) were hopeful. Majority 61.1% (n=143) think it is impossible to complete medical studies online. Student ideas for improvement included availability of lecture recording for later viewing, integrated quizzes, increasing interactive component, training of faculty, small group sessions and case based teaching. Majorly students faced internet connectivity issues and timings of long lectures without break. Conclusion: Online lectures can be improved by reducing the issues faced by students, providing them easy internet access, faculty training programs to make interactive and case based presentation and quizzes.

Key words: Online Lectures, e Learning, Medical Students, Student Perception.

INTRODUCTION

Covid pandemic has had a significant impact on medical education. Especially difficult is for the medical students who have to learn through online lectures alone and make the most of the situation. Previously students were having early morning traditional classroom large group lectures followed by clinical sessions in hospital wards and clinical hands on examination and history taking skills were taught, practiced and real patient scenarios observed and discussed in smaller groups. Unfortunately only online lecture have been made possible as yet since the closure of all teaching hospitals for students. This particular way in which online lectures are being conducted in place of traditional classes is relatively new and needs to be further researched to improve and facilitate learning.¹

The concept of online classes is perceived differently by the students.² We need to assess the way online classes are perceived so that improvement methods are introduced to achieve maximum learning.³ Student perception was studied since quite a while and gave positive results.⁴ A study showed that more students showed improvement learning through online sessions than face to face teaching.⁵ Another study showed that undergraduate medical students showed better reception of online lectures and resulted in overall improved outcomes.⁶ Similar results in seen in dental students⁷ E learning in Korean medical colleges was studied and showed satisfactory results.⁸,⁹ Significant evidence in the learning skills reveals the emphases of participation in online learning environments.¹⁰ Medical students have
generally expressed strong satisfaction with early
applications of online classes to undergraduate
medical education. More study has been done
internationally and nationally to study the student
perspective and to assess online learning and
use of internet facilities. Few more studied
showed results on online learning where
student perception was recorded specially the
advantages, disadvantages and also the barriers
to learning online.

MATERIAL & METHODS
Place and duration of study was Bahria University
Medical and Dental College started from May
2020 till July 2020. Study type was Descriptive
study type with a purposive sampling technique.
Inclusion criteria was All MBBS students clinical
years including third, fourth and final year
student taking online classes and Exclusion
criteria included students who do not have
access to online classes and preclinical MBBS
years Study Instrument used was Google online
questionnaire.

Procedure in Details that The questionnaire was
made online google forms and consists of 3
sections including declared and informed written
consent, personal information and third consists
of the data collection regarding student perception
questions. Names to remain anonymous. Only
clinical years MBBS classes were included in the
data collection survey. 7 questions are quantitative
and one is open ended question where students
give their opinion regarding their perception and
ideas for improvement. Out of total 450 students in
theses clinical years in Bahria university medical
college, according to open Epi, the sample size
comes to be 208. 234 responses were however
recorded. Analysis done on spss version 22.

RESULT
MBBS classes of third, fourth and final year taking
online lectures during lockdown were asked their
perception on this type of online classes taking
place in their institute Out of 450, 234 responded.
Seven items were assessed on a 3-point response
scale. Table-I shows the distribution frequency of
responses to the seven assessed components.

An open ended question was used to take
input of student ideas for improvement in the
online lecture format. Figure-1 shows six themes
identified by students and their frequency by
clinical year.

Students were also asked about the major issues
faced by them in adapting to the online teaching.
Internet connectivity issues was identified by
13.1% (n=32) students and timings of long
lectures without break was a problem for 4.5 %
(n=11).

DISCUSSION AND ANALYSIS
Online classes and courses have been taking
place in virtual institutes since some time. This
is the first time during this pandemic that medical
college has to take online lectures even for clinical
MBBS regular students Student perception is
important to know what they expect out of these
lectures and any problem they face. Student
perception is significantly related to their overall
satisfaction of the online classes.

<table>
<thead>
<tr>
<th>STUDENT PERCEPTION FOR ONLINE LECTURES</th>
<th>Yes n (%)</th>
<th>Somewhat n (%)</th>
<th>No n (%)</th>
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<tbody>
<tr>
<td>Are you satisfied with online lectures?</td>
<td>80(34.2)</td>
<td>114(48.7)</td>
<td>39 (17.7)</td>
</tr>
<tr>
<td>Do online lectures serve the purpose?</td>
<td>125(53.3)</td>
<td>62(26.5)</td>
<td>47(20.1)</td>
</tr>
<tr>
<td>Are online lectures good substitute for traditional lectures?</td>
<td>78(33.3)</td>
<td>67(28.3)</td>
<td>87(37.2)</td>
</tr>
<tr>
<td>Did online lectures improve learning?</td>
<td>82(34.9)</td>
<td>60(25.6)</td>
<td>92(39.2)</td>
</tr>
<tr>
<td>Are interactive lectures possible online?</td>
<td>44(18.8)</td>
<td>83(35.4)</td>
<td>107(45.7)</td>
</tr>
<tr>
<td>Are clinical sessions possible online?</td>
<td>35(15.8)</td>
<td>29(12.4)</td>
<td>170(72.2)</td>
</tr>
<tr>
<td>Are Medical studies possible online?</td>
<td>52(18.4)</td>
<td>48(20.4)</td>
<td>143(61.1)</td>
</tr>
</tbody>
</table>

Table-I. Frequency of responses as n (%); total responder n= 234
Almost half of the student were generally satisfied with the ongoing online lectures as they believed these lectures kept them in touch with their studies and faculty as well as their peers. Few said studies would be better if colleges opened.

Online learning may not be applicable for every medical student. Every student has different learning styles and needs to be analyzed. Some learn visually others by repeating and reviewing the lectures. By asking student their needs, measures can be taken to improve student performance as well as satisfaction. Some student do feel online lectures have kept them updated and also help improve their learning as lifelong adult learning is self-directed and not faculty centered.

When inquired whether online interactive sessions are possible, only a few said yes, because most of the faculty was simply uploading recorded lectures which made interaction impossible. Those taking live lectures were not making any or minimum interactions. A large group also makes interaction less likely and all students are unable to interact. Smaller groups would make interaction possible. Students do not think it would be possible to have clinical sessions online. Few did believe it was possible as virtual learning through virtual simulators has been in use for medical for some time. Majority of the students still feel medical studies are not possible online and nothing could replace actual patient contact and examination.

The use of Computer for medical teaching and learning is anticipatable to increase. Medical educators are already beginning to introduce...
computer based classes. They have the benefit of being convenient and flexible. Each student can study at his or her speed. Weaker students would be at particular benefit as they can stop the lecture, repeat and restart at their own pace.\textsuperscript{22}

A study done in India recently showed student satisfaction for online classes and they felt it was a good diversion from stressing about the present COVID situation and they could organize their learning according to their own pace and also improve their mental health.\textsuperscript{23} Another study states that after this pandemic is over everyone will be having their own story to tell, medical students in particular feel it has impacted their education on a different level altogether.\textsuperscript{24}

**LIMITATIONS**

Single institute students have been included.

**CONCLUSION**

Online learning can be improved by removing the issues faced by students, providing them easy internet access and developing faculty training programs for better use of technology as well as how to make interactive and case based presentation that give maximum learning environment to clinical students like online videos and practical implications and critical thinking quizzes.

**ACKNOWLEDGEMENT**

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**AUTHORSHIP AND CONTRIBUTION DECLARATION**

<table>
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<tr>
<th>Sr. #</th>
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<tbody>
<tr>
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<td>Conceiving the idea, synopsis writing, data collection, analysis of result and interpretation, manuscript writing, review and final approval.</td>
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