

Student's Satisfaction with Online Teaching during the COVID-19 Pandemic

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ABSTRACT

Objective: This study was conducted to determine the level of student's satisfaction with online teaching during the COVID-19 pandemic.

Methodology: The study was conducted in Sharif Medical and Dental College, Lahore from 10th June to 10th July 2020. It was a cross-sectional survey in which MBBS and BDS students were consecutively enrolled in the study. An online survey was carried out after the completion of 6 weeks of online classes through the Zoom application. A self-designed questionnaire based on a 5-point Likert scale was given to the students to grade the effectiveness of learning through e-classes and their satisfaction level on various parameters. On the Likert scale, 1 & 2 were taken as highly dissatisfied (strongly disagree, & disagree) and 4 & 5 being satisfied (strongly agree, & agree) and 3 was considered as uncertain. Percentages of the respondents in each domain of the questionnaire were calculated.

Results: Out of 470 participants, only 72(15.32%) students already had an experience of e-classes. Among the study participants, 327(69.57%) were of MBBS and 143(30.43%) were of BDS. The majority of the students 291(61.91%) were not satisfied with online classes, 99(21.06%) of students were uncertain and only 80(17.02%) of the students were satisfied.

Conclusion: The majority of the students 291(61.91%) were not satisfied with online classes in terms of learning environment, technological characteristics, and course management.

Keywords: Student's satisfaction. Online teaching. COVID-19.

INTRODUCTION

In the current era of global advancements in technological skills, a variety of innovative techniques have been created with a wide range of prospects for educational institutions.¹ Of these, the development of online courses have been a great addition to the already existing teaching and learning modalities in both graduate and undergraduate studies.² Online teaching not only provide opportunities to deliver academic content and learning materials but provide the advantage of access to resources, flexibility of scheduling the courses, and cost reduction.³ Online teaching also allows degree-awarding institutions to accommodate more students without the need to physically accommodate the courses.⁴

Characteristically online learning comprises pre-recorded lectures or live presentations delivered distantly. For student's assistance reading materials, study guides and assignments are accessible for download. It also includes small group discussions using various applications.⁴ Assessment methodologies frequently involve quizzes or descriptive written assessments which can be both formative and/summative. Such coursework is submitted online but credited independently by the instructor.⁵ Effective online teaching and learning has five elements: learning effectiveness, student satisfaction, student access, faculty satisfaction, and institutional cost-effectiveness.⁶ Student satisfaction is an important parameter to promote online teaching.⁷

From the start of online teaching, there are concerns regarding its impact on the quality of education.⁸ The teaching and learning experience in terms of achievement of learning objectives is challenging to both students and teachers.⁹ There are certain limitations to online learning including a considerable lack of motivation, higher student distraction, and dropout rates as compared to those taught by the conventional method. Lack of physical presence of a teacher also leads to moderately superficial communication between the learner and the instructor.¹⁰ Other problems include technical difficulties, lack of training of online instructors, and increased stress & confusion among students.¹¹ The COVID-19 pandemic has put educational activities to a halt globally. All the universities and accredited institutions have started online classes to avoid an educational loss to the

students staying at home due to the risk of the spread of COVID-19.¹²

The changeover to digital teaching and learning in contrast to traditional teaching is a great challenge not only for the institutions but for the faculty and students as well. In this back and forth between advocates and skeptics, the impact of COVID-19 on educational institutions and students offers a chance to carefully examine educational technology in acute, crisis-driven contexts. We, therefore, conducted this study to assess the students' satisfaction with the online courses conducted during the COVID-19 pandemic.

METHODOLOGY

It was a cross-sectional survey conducted in Sharif Medical and Dental College, Lahore. The study was approved from the ethical committee of Sharif Medical and Dental College, Lahore (Letter No. SMDC/SMRC/116-20). Informed consent was taken from all the students. A total of 470 students of MBBS and BDS participated in this study. The sample size of 353 was calculated using the satisfaction level of 35.9% among Pakistani students and a 5% margin of error.¹³ The questionnaire was sent to all the MBBS and BDS students out of which 470 students participated in the study. Students with more than 75% attendance were included and those who did not give consent were excluded from the study. An online survey using Google forms was carried out from 10th June to 10th July 2020 after the completion of 6 weeks of online classes via ZOOM. A convenient sampling technique was used. Students were approached via email. They were briefed about the objectives of the study. A self-designed questionnaire based on a 5-point Likert scale was given to the students to grade the effectiveness of learning through e-classes using ZOOM and their satisfaction level on various parameters. Responses were kept anonymous. All the students voluntarily participated in this study after giving informed written consent.

The participants filled a demographic form with information about gender, age, qualification, years in the course. Items or questions of the Student Satisfaction Survey Questionnaire were developed following AMEE guideline no 87.¹⁴ A pilot test was conducted for establishing the reliability and validity of instruments. The Cronbach's alpha for items on the scales ranged from 0.70 to

0.87 showing the internal consistency of the items. Items were characterized into three main domains of the learning environment, technological characteristics, and course management. The items in learning environment were distraction-free atmosphere, quality of learning material, instructional techniques, understanding of assignments, adequate timeline for assignments, interaction with the facilitator & other participants. The items in the technical characteristics were the audiovisual quality of the class and conduction of class on time despite technical errors. The items in the course management included online teaching as a great learning opportunity, stimulating and participation in future online classes. Percentages of the respondents in each domain of the questionnaire were calculated using a Likert scale. 1 & 2 being highly dissatisfied (strongly disagree, & disagree) and 4 & 5 were taken as satisfied (strongly agree, & agree) and 3 was considered as uncertain.

Data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 23. Numerical data such as age was expressed as mean and standard deviation (SD). Categorical data such as gender, academic program, and satisfaction of the students with the online classes were presented in frequency and percentage. Percentages of the respondents in each domain of the questionnaire were calculated. Data was stratified and compared on the basis of gender and courses. A chi-square test was applied to determine the association of satisfaction level of students with the age, socio-economic status, and academic program. A p-value of <0.05 was considered statistically significant.

RESULTS

Out of 470 participants, 220(47%) were males and 250(53%) were females. The mean age of the students was 20±1.2 years. Out of 470 students, 84.68% (398) students had not taken online classes previously. Seventy two (15.32%) students already had an experience of e-classes. Among the study participants, 327(69.57%) were of MBBS and 143(30.43%) were of BDS.

The majority of the students 291(61.91%) were not satisfied with online classes, 99(21.06%) of students were uncertain and only 80(17.02%) of the students were satisfied (Figure 1).

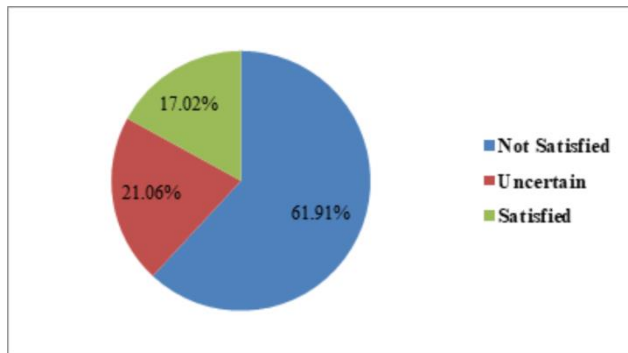


Figure 1: Student's Satisfaction with Online Classes

Table 1: Response of the Study Participants to the 3 Domains in the Questionnaire

Domain	Response of students			
	Response	Total	MBBS	BDS
Learning Environment	Satisfied	24.20%	70.84%	29.16%
	Uncertain	22.82%	70.30%	29.70%
	Dissatisfied	53.016%	68.89%	31.11%
Technological Characteristics	Satisfied	14.47%	65.65%	34.35%
	Uncertain	18.65%	73.12%	26.88%
	Dissatisfied	66.88%	69.56%	30.44%
Course Management	Satisfied	12.41%	68.40%	31.60%
	Uncertain	22.06%	71.51%	28.49%
	Dissatisfied	65.53%	69.17%	30.83%

Table 1 shows the response of MBBS and BDS students in terms of satisfaction, uncertain, and dissatisfaction to the three

domains in the questionnaire. Collectively, the majority of the students were satisfied with the learning environment (24.20%) as compared to technical characteristics (14.47%) and course management (12.541%). These findings are summarized in table 2.

Table 2: Association of Demographic Variables with the Satisfaction Level of the Study Participants

Variable	Satisfied 80	Uncertain in 99	Dissatisfied 291	p-value	
Gender	Male (220)	37	46	137	0.08
	Female (250)	43	53	154	
Socio-economic status	Middle class (126)	21	26	79	0.71
	High class (344)	59	73	212	
MBBS/BDS	MBBS (327)	64	71	192	0.03

There was no statistically significant difference in the level of satisfaction of students between gender (p-value = 0.08) and socioeconomic status (p-value= 0.71). However, the level of satisfaction was significantly greater in MBBS students as compared to BDS students (p-value= 0.03) (Table 2).

DISCUSSION

Online learning provides several opportunities to medical students worldwide consisting of online lectures, tutorials, videos, webcasts, virtual models, and video-conferencing. It ranges from discussion forums and websites to online chat & communication apps.¹⁵ In this study, we observed that online learning is not an effective teaching method for students.

In our study, the mean age of the students was 20±1.2 years and the majority of the students (53%) were female in our study whereas 47% were male. Similarly, in another study, the mean age of the medical students was 20.02±1.45 years, 66.6% of the study participants were female and 32.6% were male.¹³ In our study, only 15.32% of students had prior experience of e-classes and students had completed 6 weeks of online classes before participation in this study. Similarly, in a study by Kaur et al., 12.5% of students had an experience of online classes and the study was conducted after completing 3 weeks of online classes.¹⁶

The majority of the students (61.91%) were not satisfied with online classes, 21.06% of students were uncertain and only 17.02% of the students were satisfied. Our study reported that online learning is not as effective as traditional classroom teaching. A study was conducted in June 2020 to evaluate online learning & its association with student satisfaction in Bruneian and Pakistanis students. According to them, 35.9% of students were satisfied with online teaching in Pakistan and 50% of students are satisfied with Bruneian.¹³ Another study conducted to evaluate the perception & satisfaction of the undergraduate student's regarding online teaching showed that 78% of students were dissatisfied with online teaching through Zoom application.¹⁷

Similarly, another study reported online learning as a less effective teaching method and it cannot be a substitute for classroom teaching. The results of the study showed that the medical students found the online classes effective in terms of learning opportunities & grooming of professional career, communication, and submission of assignments. However, taking online classes was non-convenient with less interaction between teachers and students. The online classes also did not meet the learning needs at the individual level and balance between theoretical & practical knowledge.¹⁶ A study enrolled undergraduate students of a university to assess the effect of face-to-face and online teaching on students' progress & achievements. The study reported that online teaching results in poor interaction between

the students & the teacher and are associated with lower grades of students.¹⁸

In our study, the domain with the greatest degree of student dissatisfaction was course management followed by technical characteristics. In another study by Lee et al., most of the students were satisfied with the learning environment. The main factors of dissatisfaction were technical problems in the internet connection and poor sound quality.¹⁹

A study was conducted in India to determine the response of medical students to online classes during the COVID-19 pandemic. In contrast to our results, the study reported positive outcomes with online learning. The results showed that 127 out of 130 students found that online classes were relevant and in accordance with the learning objectives. The atmosphere of the online classes was comfortable and enjoyable according to 57% of the students. Many students suggested including online classes in their curriculum after the COVID-19 pandemic.²⁰ A systemic review and meta-analysis analyzed the outcomes of online versus traditional teaching. In 7 articles, there was no significant difference in outcomes between the two methods and 9 articles reported improved outcomes in the online classes group. The post-test score and retention test scores were better in the online group. The study concluded that online learning should be used in undergraduate medical education, but to maximize its benefits both online and offline teaching methodology must be used.²¹

Ni et al. stated that the major difference between online and traditional teaching methods lies in the mode of interaction between the teacher and the students. The traditional teaching method is superior to online classes concerning effective communication. The performance of the students varies greatly irrespective of the mode of teaching but online learning is a major challenge for students.²² Another study reported that the major barriers in implementing online classes are the lack of technical skills, infrastructure & institutional strategies, time limitation, and negative attitudes.²³

The majority of the studies reported a higher rate of student dissatisfaction with online teaching. These results are in concordance with our study. There should be mixed sessions of traditional face-to-face and online learning to increase the understanding and satisfaction level of students with online teaching. The institutions should arrange faculty development sessions to help their faculty understand the online teaching apps and tips to make online sessions interactive and helpful for the students.

CONCLUSION

The majority of the medical students 291(61.91%) were not satisfied with online classes in terms of learning environment, technological characteristics & course management. Traditional teaching should be supplemented by online learning to avoid the potential limitation of online teaching in undergraduate medical and dental students except during situations that make online learning mandatory. Training sessions of the faculty members should be arranged for better online teaching and learning.

Limitations of the Study:

- It was a single-centered study. Further research is needed involving more medical and dental institutions.
- The study was conducted after 6 weeks of online classes. Further studies after a longer duration of online classes and a mixed method study should be done to better evaluate the experience of the students about online learning.

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