

Comparison of Face to Face Versus On-Line Teaching Satisfaction of Medical Students

Face to Face VS
On-Line
Teaching
Satisfaction of
Medical Students

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ABSTRACT

Objective: To evaluate and compare satisfaction of medical students with their teacher's teaching, during on line versus face to face academic sessions.

Study Design: Cross sectional, comparative study

Place and Duration of Study: This study was conducted at the University College of Medicine (UCM), The University of Lahore from March 2020 to December 2021.

Materials and Methods: In this study, we included all enrolled medical students and teachers from first to final academic year. Data was collected at two points, first at the end of 2020, when all the studies were mostly on line due to COVID-19 lock down. Second data collection point was at the end of 2021, when almost all studies were face to face due to controlled COVID-19 situation in Pakistan. After taking consent, students were asked about their satisfaction with teachings first during on line and second about same teachers during face to face academic sessions. Used questionnaires was developed based on Higher Education Commission Pakistan guide lines. Both questionnaires have ten closed and one open ended questions. After collection, data was analyzed using mean, median and t-test considering $P < 0.05$ level of significance.

Results: Our study found, medical students were more satisfied with teaching of their teachers during face to face, academic session of 2021 as compared to on line session of 2020. When compared, we found significant difference in satisfaction of medical students with same teacher's teaching during on line, in 2020 (4.11 ± 0.21) versus face to face in 2021 session (4.26 ± 0.23). This result is highly significant with p value $P < 0.00$. Year wise medical year comparison revealed highly significant results in first, third and final year medical studies, while insignificant in fourth and first year of medical studies. The mean of satisfaction of students with their teacher's teaching during on line session of 2020 in first, second, third, fourth and final year of medical studies were found (4.28 ± 0.17), (4.07 ± 0.23), (4.06 ± 0.15), (4.18 ± 0.23) and (4.00 ± 0.18) respectively. The mean of satisfaction of students with their teacher's teaching during face to face session in 2021 in first, second, third, fourth and final year of medical studies were found (4.31 ± 0.32), (4.26 ± 0.17), (4.23 ± 0.16), (4.29 ± 0.30) and (4.23 ± 0.19) respectively.

Conclusion: It is concluded that medical students are found more satisfied with face to face as compare to on line teaching of same teachers.

Key Words: COVID-19, Face to Face teaching, Online teaching, Medical education

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INTRODUCTION

At the end of 2019, a disease caused by a severe acute respiratory syndrome coronavirus (SARS-CoV-2)

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commonly known as COVID-19 was first reported in China. This disease causes range of symptoms from simple cold, fever to pneumonia and even functional failure.⁽¹⁾

Sooner this COVID-19 spread throughout the world and declared as pandemic by World Health Organization.⁽²⁾ This disease like all over the world also has effected Pakistan despite strict and prompt measures of government till mid of February 2022 Pakistan has 1.49 million diagnosed cases of COVID-19 and 29,822 deaths due to this disease.⁽³⁾

Social mixing is one of the important and easy reason of high spread of this disease.⁽¹⁾ Due to this reason, most countries including Pakistan imposed quarantine. All social gatherings were limited.⁽⁴⁾ The Higher Education Commission of Pakistan announced the shifting of all university education to online so learning and teaching

could continue in a safe environment. This was unplanned and equally challenging for all institutes including University College of Medicine, (UCM).

Medical education in Pakistan consists of a 5-year program with the particular program in UCM being integrated curriculum. This means that the curriculum ensures a high level of hospital exposure from the beginning of medical teaching in comparison to other curriculums running in the country. Although at The University of Lahore our medical students were familiar with on line teaching and learning, like availability of online textbooks, modules study guides, time tables and lectures material on the existing online portal (SAP) at UCM, but despite this prior sensitization it was all a big challenge.

During COVID-19 pandemic on line teaching and learning was the only solution in all educational institutes including medical schools to continue the process of learning. As in any other teaching modality it is essential to satisfy the teachers and students involved in particular. Student satisfaction is defined as attitude resulting from an evaluation of educational experience, facilities and services.^(5, 6)

One of the aspects of acquisition of knowledge in the medical student is learning through social interaction. Medical students interacting with others especially patients and receiving feedback contributes significantly to their satisfaction with their learning. To enhance learning and student satisfaction with it, extracurricular activities also play an important role. Literature shows that learning satisfaction is correlated with student engagement and academic performance.^(7, 8)

Previously, online learning has been used as an adjunct method in medical schools to augment the classical approach of teaching and learning. In COVID-19 the sudden and complete transition from face-to-face teaching to 100% online learning was challenging not only for students, administration but also for faculty. With the strong support of medical education department at UCM, all clinical and basic faculty was trained and successfully managed to deliver the curriculum online during strict quarantining period of 2020.

In 2021 due to controlled situation of COVID-19, teaching reverted to face to face. In this context, this study was aimed to measure satisfaction of students with same teacher's performance during online and face to face academic session in the year 2020 and 2021 respectively.

MATERIALS AND METHODS

It was a cross-sectional study, was conducted at University College of Medicine, The University of Lahore, from March 2020 to December 2021.

Selection criteria: All Medical students and teachers from first to final year of medical studies were included.

Exclusion criteria: The data of teachers who left the job in between 2020-21 and didn't complete the two sessions were excluded.

Data collection procedure: On line consent form (Annexure-A) followed by a detailed questionnaire, was sent to all medical students for data collection. This questionnaire was administered twice first at the end of academic year 2020 and second at end of academic year 2021, at UCM, the University of Lahore.

Two questionnaires (Annexure B&C) were designed for this study. One for on line teacher's performance evaluation and second for face to face teacher's performance evaluation. Both questionnaires were organized into two parts – socio-demographic information and questions related to student's satisfaction with online or face to face teaching of respective teachers that had been involved throughout the academic year. Questionnaire was based on HEC teacher's evaluation questionnaire and responses were given in five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Both the questionnaires have 10 close ended and one open ended questions. Both questionnaires were inquiring about student satisfaction with teacher's subject knowledge, his or her expertise in making teaching interactive (whether on-line or face to face), maintaining session discipline, expertise in use of technology etc. These questionnaires also ask about student's satisfaction with teacher's personal traits like following ethical, social norms, and punctuality during on line and face to face teaching sessions.

Data Analysis: The data was analyzed in SPSS V25. Gender was presented as frequency and percentage. Categorical variable was presented as mean and standard deviation. The mean and t-test was used to compare between academic years. P-value<0/05 was considered as significant.

RESULTS

We have 150 students in every medical year. In this study, all 1750 medical students were included (345 male and 405 females). Responses were collected regarding total of 59 teachers at University College of Medicine, The University of Lahore. We recorded on line response about medical teachers in every class during 2020 and 2021. Finally we compared the results about same teachers during on-line teaching session of 2020 with 2021, when mostly all teaching was face to face.

Comparison of academic year 2020 and 2021 by t- test, revealed difference between the two groups (2020 and 2021 years). When compared, we found significant difference in satisfaction of medical students with same teacher's teaching during on line, in 2020 (4.11 ± 0.21) versus face to face in 2021 session (4.26 ± 0.23). Details of year wise mean are given in Table 2.

Table No.1: Comparison of academic year 2020 (online teaching year) &2021(Face to face teaching year)

Classes	Group	Mean ± SD	t	Sig
	Year 2020 (N=65)	4.11±0.21	-3.83	0.00
	Year 2021 (N=65)	4.26±0.23		

Table No.2: Five-year medical program comparison.

Five Year Medical program comparison		Group N=Number of teachers	Mean ± SD	t	Sig.
	First Year	2020 (N=9)	4.28±0.17	-0.24	0.80
2021 (N=9)		4.31±0.32			
Second Year	2020(N=11)	4.07±0.23	-0.21	0.04	
	2021 (N=11)	4.26±0.17			
Third Year	2020 (N=17)	4.06±0.15	-3.14	0.004	
	2021 (N=17)	4.23±0.16			
Fourth Year	2020 (N=43)	4.18±0.23	-1.14	0.26	
	2021 (N=43)	4.29±0.30			
Final Year	2020 (N=45)	4.00±0.18	-2.80	0.01	
	2021 (N=45)	4.23±0.19			

When analyzed, only second, third and final year medical teacher’s evaluation showed a significant difference between groups (P<0.05).While first and fourth year medical years had insignificant difference between groups (P>0.05).

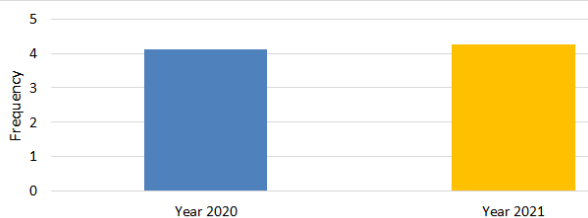


Figure No.1: Graphical Comparison between mean student satisfaction years 2020-2021

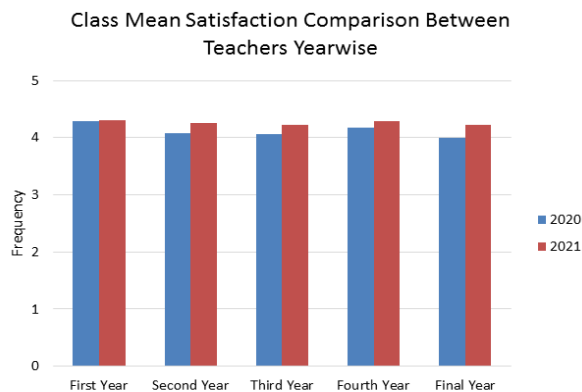


Figure No.2: Graphical comparison of all academic year medical students with teachers between academic years first to final Years 2020-2021

DISCUSSION

The pandemic, Covid-19 has left the world in a state of uncertainty. The lock-downs, physical distancing and quarantine has short and long term effects on almost every sector of society, including education. One of the obvious effect is transfer from face to face to online distance learning all across the Pakistan. ⁽⁹⁾

This on-line teaching and learning was equally challenging for students and teachers. Beside all emergency measures taken by institutes they also facilitated and enhanced on line teaching skills of teachers to improve the learning experience of students.

According to Chickering and Gamson, who both worked on good teaching, the seven principles of good teaching practice included the following: (a) it should encourage contacts between students and faculty, (b) it encourages cooperation among students, (c) it encourages active learning, (d) able to give prompt feedback, (e) emphasizes time on task, (f) to communicates high expectations, and (g) respects diverse talents and ways of learning.

According to same authors, neither faculty nor technology alone can transform learning in an electronic environment. For good learning, Students must take responsibility of their own learning and take opportunities to “search out additional resources or go to the teachers for more substantial activities and feedback”. ⁽¹⁰⁾

A recent report written by faculty at the University of Illinois, emphasizes the value of emotional interaction not only between teacher and student but amongst students themselves. This type of interaction is theoretically present in the traditional classroom. The absence of this emotional component in online education is problematic. ⁽¹¹⁾

In Pakistan, we have five years of medical teaching, and in our study, we have seen that medical students are more satisfied with face to face teaching of teachers as compare to on line teaching even with same teachers. We found significant difference in satisfaction of medical students with same teacher’s teaching during on line, in 2020 (4.11±0.21) versus face to face in 2021 session (4.26±0.23). This result is highly significant with p value P< 0.00. This all may be due to absence of social dimension. Medical requires emphasis on the social dimension more in comparison to other fields. A medical student has to deal with human beings hence they should interact with patients in a hospital based environment. This social interaction not only make a medical student emotionally stable but also feel more satisfied with their learning and contribution to society. A common saying is “there is no substitute for real classroom interaction”, through our study we found the same. Our results show that with on line teaching most of medical academic year students are felt less satisfied with the teachers. On the other hand, they felt

comparatively more satisfied with face to face teaching of same teachers. This finding is supported by Stern at James Madison University who found that students between 18-25 years felt more satisfied with face to face teaching. ⁽¹²⁻¹³⁾

Our findings are not same as Fletcher Lu, Manon Lemonde who found satisfaction level of on line and face to face teaching as same. ⁽¹⁴⁻¹⁶⁾

In our study, year-wise medical year comparison revealed that medical students in all years of medical teaching are satisfied with face to face teaching of same teachers as compare to on line. The mean of satisfaction of students with their teacher's teaching during on line session of 2020 in first, second, third, fourth, and final year of medical studies were found (4.28±0.17), (4.07±0.23), (4.06±0.15), (4.18±0.23) and (4.00±0.18) respectively. The mean of satisfaction of students with their teacher's teaching during face to face session in 2021 in first, second, third fourth, and final year of medical studies were found (4.31±0.32), (4.26±0.17), (4.23±0.16), (4.29±0.30) and (4.23±0.19) respectively. Year wise comparison shows highly significant results in first, third and final year medical studies, and while insignificant in fourth and first year of medical studies. On initial inspection of data there was a difference in mean even in first and fourth year favoring face to face teaching but on analysis it was found to be insignificant.

Many studies have covered student satisfaction during COVID-19 with online teaching even in Pakistan the nearest to home was conducted in the capital by Faize and Nawaz ⁽¹³⁾ but very few have done a comparison specifically of teacher satisfaction between both the instructional methods.

CONCLUSION

It is concluded that medical students are found more satisfied with face to face as compare to on line teaching of same teachers. As social interaction is basic requirement of medical education and plays important role in medical teaching and learning.

Author's Contribution:

Concept & Design of Study: Mahwish Arooj
 Drafting: Ghazala Irshad, Khadijah Mukhtar
 Data Analysis: Sadia Leghari, Khadijah Mastoor, Khizar Ansar Malik
 Revisiting Critically: Mahwish Arooj, Ghazala Irshad
 Final Approval of version: Mahwish Arooj

Conflict of Interest: The study has no conflict of interest to declare by any author.

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