

Medical education during COVID-19 associated lockdown: Faculty perspective on online education

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ABSTRACT

TITLE: Medical education during COVID-19 associated lockdown: Faculty perspective on online education.

Objective: This study aimed to collect the experiences of faculty regarding e-learning in medical colleges during COVID-19 and to analyse the likely perceived benefits and problems to choose blended learning activities after the COVID crisis.

Study Design: A six months Cross sectional online study. Methods: A cross-sectional online survey for faculty members of two Medical Colleges of Karachi (Pakistan). The participants were provided with a questionnaire through an online Google form to assess their perceptions of online learning during COVID-19 lockdown. Total 50 participants .Data were recorded on a MS excel sheet and analyzed using SPSS, version 23.

Results: There were 50 responses from the faculty who had an experience of taking online classes, 26 (56.5%) had more than ten years of teaching experience, 10 (21.7%) teachers had <5 years' experience and 10 had experience between 5 and 10 years. There were 36 (78.3%) teachers from clinical fields, 8 (17.4%) from preclinical and 2 (4.3%) from paraclinical subjects. From the perspective of the faculty members, 30 (65.2%) were interested in including online teaching modules in routine curriculum once classroom teaching restarts, 6 (13%) were against it and 10 (21.7%) remained neutral. 32 (69.6%) teachers suggested a 70%:30% distribution of traditional and online classes, 8 (17.4%) wanted it to be equally distributed and 6 (13%) preferred only classroom teaching. For the overall experience of online class/lecture/webinar (rated on a 5-point Likert scale , 10 faculty members (21.7%) found the experience to be excellent with a score of five, 14 (30.4%) gave a score of four, 18 (39.1%) gave a score of 3 and 2 (4.3%) each gave a score of 2 and 1. Technical difficulties and internet issues faced by the teachers resulting in frequent interruptions was perceived by majority. In the post lockdown phase, 54.4% want online classes to be continued in addition to classroom teaching for the cognitive domain, 42 (16.9%) want it for both cognitive and psychomotor domain and 24.1% do not want online classes. The majority of the faculty members (65.2%) were in favour of including online teaching modules in routine curriculum and 69.6% suggested a 70%:30% distribution of traditional and online classes after the COVID lockdown.

Conclusion: We have to anticipate further incorporation of online teaching methods in medical schools. Research is, however, needed to maximize its benefits and to have a greater understanding of the perceived advantages and drawbacks by both the learners and teachers.

INTRODUCTION

Novel coronavirus disease 2019 (COVID-19) caused widespread panic and disease globally and in Pakistan.¹ In addition to healthcare and economic losses, the lockdown imposed during COVID adversely affected educational opportunities.²

Traditional educational activities use the live experience of a facilitator with the students. This can be in the form of a large group or small group activity for teaching any of the three domains—cognitive, psychomotor or affective.³

E-learning was the only possible mode of education during COVID crisis for students. Medical education is more challenging and stressful as it involves bedside and soft skills training which cannot get adequately represented through e-learning. We therefore planned this study to assess the students' and faculty's perceptions towards e-learning as a mode of education when widely implemented during the COVID pandemic.

OBJECTIVES

This study aimed to collect the experiences of faculty regarding e-learning in medical colleges during COVID-19 and to analyse the likely perceived benefits and problems to choose blended learning activities after the COVID crisis

MATERIAL & METHOD

This was a cross-sectional online survey administered to the faculty members of two medical colleges of Karachi Pakistan.

The participants were provided with a questionnaire through an online Google form to assess their perceptions of online learning during COVID-19 lockdown.

In the faculty questionnaire, experience related to the various features of online learning such as timing, connectivity, logistics, lesson preparation, convenience and access, interest and interaction with students were graded from 1-poor to 5-excellent. A 5-point Likert scale was used to rate the overall experience of an online class, where one was unsatisfactory and five was excellent. The form collected all responses in an anonymous manner without personal identification information . A convenient sample of 50 faculties was chosen to record the facilitators' perceptions.

STATISTIC & ANALYSIS

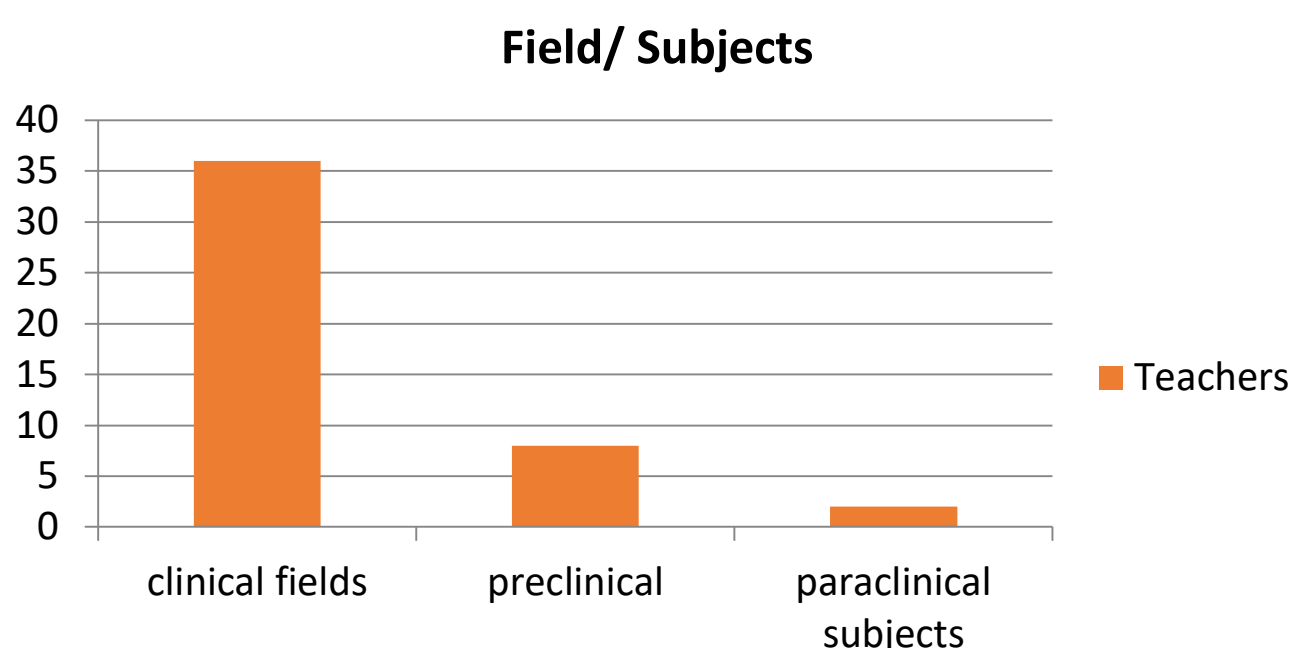
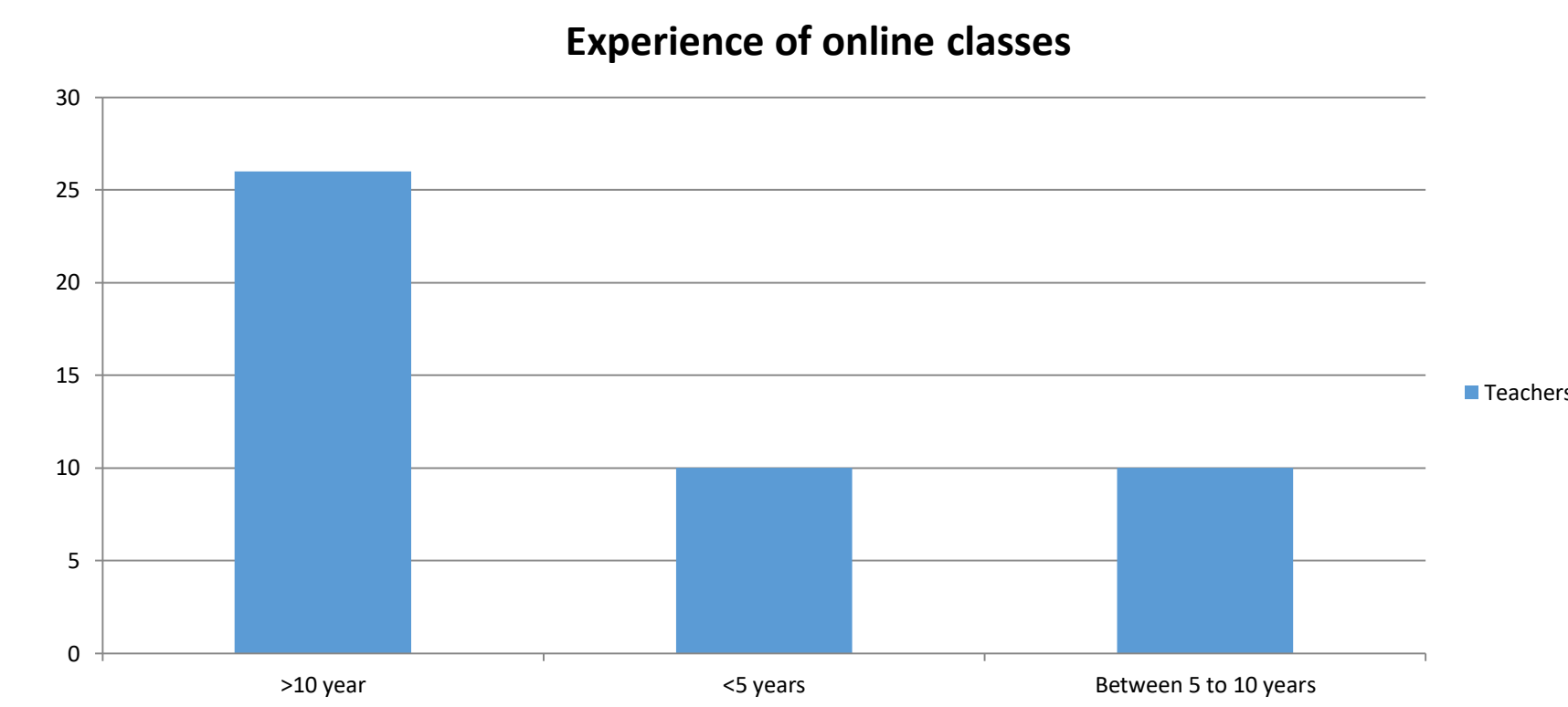
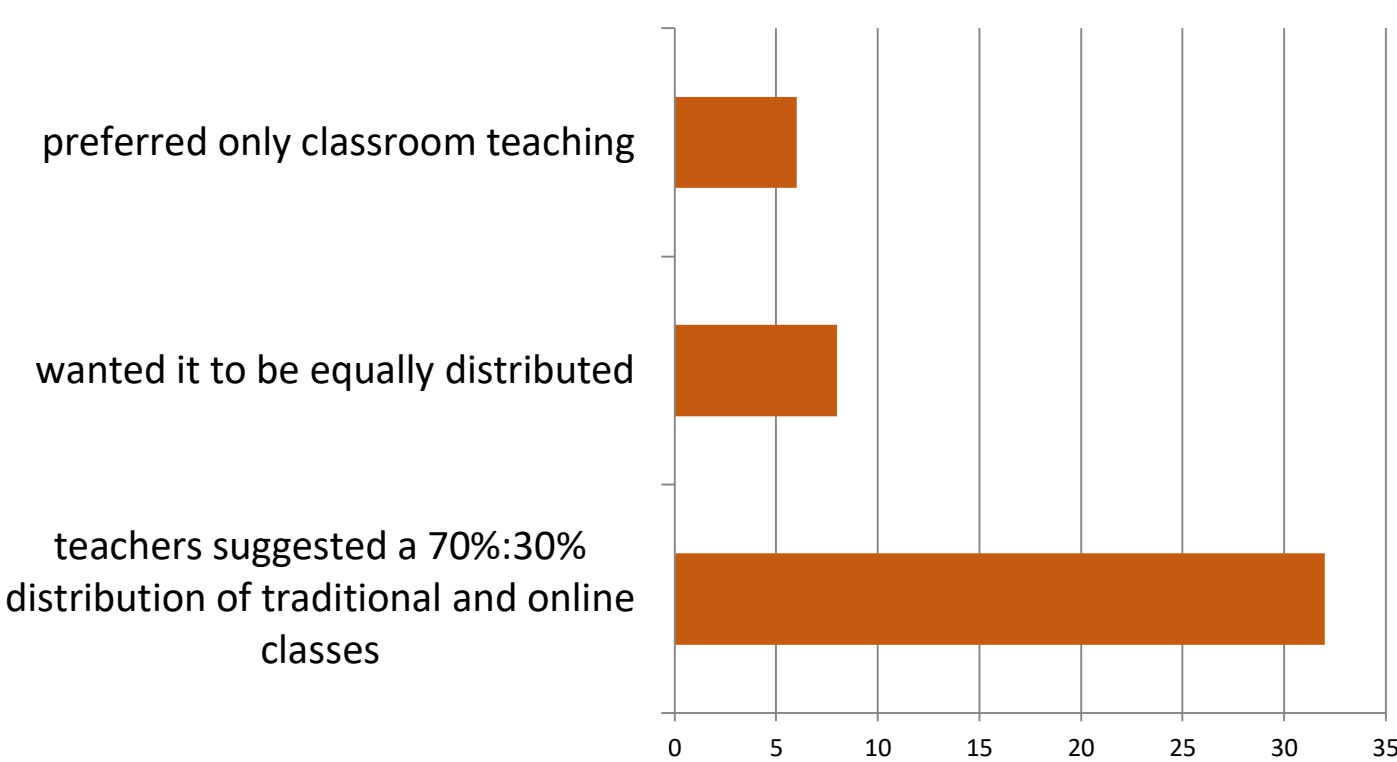
Data were recorded on a MS excel sheet and analysed using SPSS, version 23. Quantitative data were expressed by mean and standard deviation and significance level of differences between the means were tested by Student's t-test (unpaired). Proportions were compared by chi-square test or Fisher's exact-test. A P value of <0.05 was considered statistically significant.

RESULTS

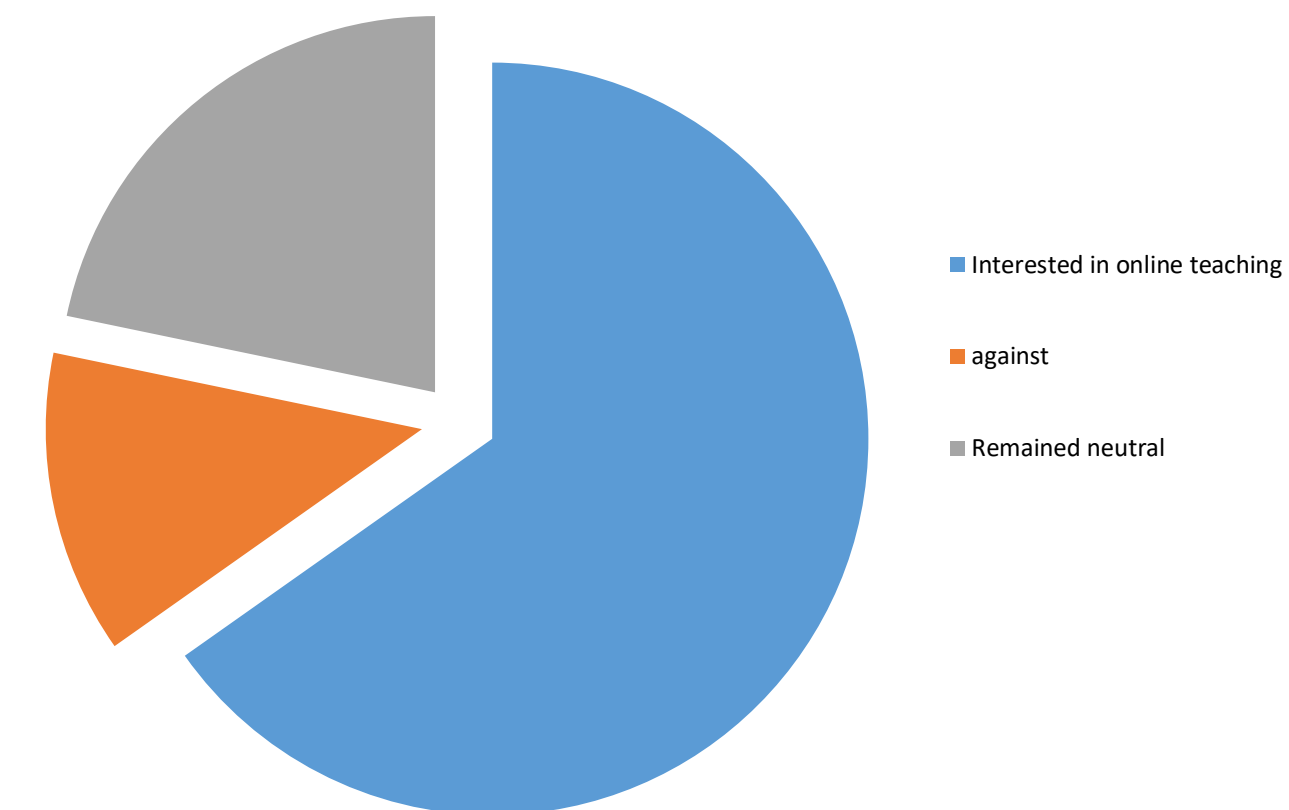
There were 50 responses from the faculty who had an experience of taking online classes, 26 (56.5%) had more than ten years of teaching experience, 10 (21.7%) teachers had <5 years' experience and 10 had experience between 5 and 10 years. There were 36 (78.3%) teachers from clinical fields, 8 (17.4%) from preclinical and 2 (4.3%) from paraclinical subjects.

From the perspective of the faculty members, 30 (65.2%) were interested in including online teaching modules in routine curriculum once classroom teaching restarts, 6 (13%) were against it and 10 (21.7%) remained neutral. 32 (69.6%) teachers suggested a 70%:30% distribution of traditional and online classes, 8 (17.4%) wanted it to be equally distributed and 6 (13%) preferred only classroom teaching. Use of online platforms for internal assessments in routine curriculum was recommended by 20 (43.5%) faculty, 8 (17.4%) did not prefer it and the 18 (39.1%) were neutral

Total No. of Faculty	Experience	Teachers
46	>10 year	26
	<5 years	10
	Between 5 to 10 years	10
Total No. of Faculty	Field / Subjects	Teachers
46	clinical fields	36
	preclinical	8
	paraclinical subjects	2



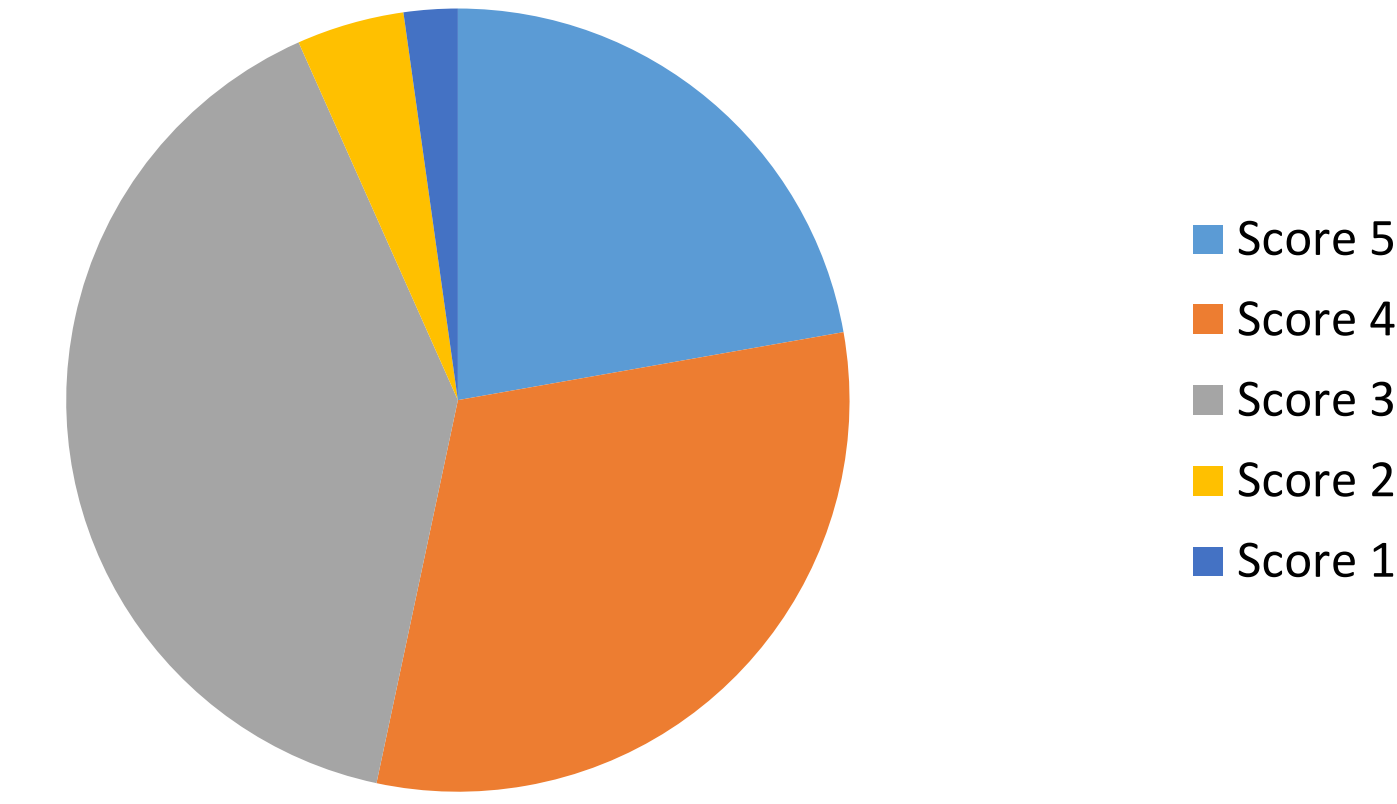
The perspective of the faculty members,		
	Behavior	Teacher
46	Interested in online teaching	30
	against	6
	Remained neutral	10
	Behavior	Teacher
46	teachers suggested a 70%:30% distribution of traditional and online classes	32
	wanted it to be equally distributed	8
	preferred only classroom teaching	6



For the overall experience of online class/lecture/webinar (rated on a 5-point Likert scale where one was unsatisfactory and five was excellent), 10 faculty members (21.7%) found the experience to be excellent with a score of five, 14 (30.4%) gave a score of four, 18 (39.1%) gave a score of three and 2 (4.3%) each gave a score of two and 1. Amongst the individual features of online learning, timing and scheduling, connectivity, logistics, lesson preparation, convenience and access for teachers, interest and interaction with students were all rated three by the majority, lesson experience was rated three and four by equal number of participants.

No. of Faculty	Score	Faculty Members
46	Score 5	10
	Score 4	14
	Score 3	18
	Score 2	2
	Score 1	1

The overall experience of online class/lecture/webinar.



Technical difficulties faced by the teachers leading to frequent interruptions during the class were disliked by students with suggestions to train the educators with the help of tutorials before the class. The teachers were satisfied with the participation of the students on the online platform. They were overall appreciative of the role of online learning in facilitating medical education during the pandemic associated lockdown. However, most of them were of the opinion that it should act as an adjunct and not a replacement of traditional classroom teaching in future.

50 faculty members participated in the study. 85.4%) considered medical education to be severely affected during the lockdown 88.3% found the online classes to be useful. Poor connectivity followed by lack of human interface and poor sound or acoustics were the major hindering factors, whereas convenience and access were reported as important facilitating factors. In the post lockdown phase, 54.4% want online classes to be continued in addition to classroom teaching for the cognitive domain, 42 (16.9%) want it for both cognitive and psychomotor domain and 24.1% do not want online classes. The majority of the faculty members (65.2%) were in favour of including online teaching modules in routine curriculum and 69.6% suggested a 70%:30% distribution of traditional and online classes after the COVID lockdown.

No. of Faculty	Behavior	Faculty Members
46	considered medical education to be severely affected during the lockdown	85.40%
	found the online classes to be useful	88.30%
	want online classes to be continued in addition to classroom teaching for the cognitive domain	54.40%
	want it for both cognitive and psychomotor domain	16.9%
	do not want online classes	24.10%
	were in favour of including online teaching modules in routine curriculum	65.20%
	suggested a 70%:30% distribution of traditional	69.60%

CONCLUSION

Medical education environment had to change rapidly with the COVID-19 pandemic. This worldwide pandemic did not only create the need but also may have provided a chance to accelerate digital transformation of medical education. We have to anticipate further incorporation of online teaching methods in medical schools. Research is, however, needed to maximize its benefits and to have a greater understanding of the perceived advantages and drawbacks by both the learners and teachers. Implementation of e-learning within the existing curriculum is bound to be challenging; however, it remains the only solution during COVID-19 imposed lockdown for maintaining the chain of learning.

CONFLICT OF INTEREST

None

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