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Perception of Medical Students Towards Online and Offline Teaching

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ABSTRACT

Introduction: In medical education, online teaching mode has become a talk of the town since the advent of COVID-19 pandemic. In this qualitative study, we aimed to explore the perception of medical students for offline & online teaching modes.

Material and Methods: 122 students of 1st year MBBS Batch 2020-21 of a medical college were selected after obtaining voluntary consent. A self-styled, closed ended response questionnaire was distributed. Collected questionnaire responses were analyzed in excel sheet.

Results: 63.1%(n=77) students opined that offline teaching were more interactive than online teaching (27.9%, n=34). Distraction was present in online teaching as reported by 81.1%(n=99) students as opposed to 18.9%(n=23) in offline teaching. Offline teaching was better understandable (67.2%, n=82), more satisfactory (68.8%, n=84), more motivating (91%, n=111) than online teaching. However, 78.7% (n=96) reported online teaching as comfortable. Nearly all students ie. 99.2% (n=121) preferred offline teaching mode for practical sessions.

Conclusion: In this study, students opined that offline teaching are better than online teaching as they are more interactive, devoid of distraction during teaching, more understandable, more satisfactory, more motivating and are highly effective for practical sessions as compared to online teaching. Although online teaching mode provides students with comfortability, flexibility, more time for self-study, it is less advantageous as compared to offline teaching mode especially in medical education. Online teaching cannot completely replace offline teaching. However, considering the ongoing boom of online teaching mode in market, digital training of teachers along with new teaching modalities such as mixed approach are urgent necessities in medical education.

Keywords: Medical, Online, Offline, Student, Teaching.

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INTRODUCTION

Traditionally, offline teaching mode was the major mode of teaching in all institutions usually done in classroom and practical laboratory settings. Online teaching mode is an educational process considered to be a form of distant education that makes use of web-based techniques taking place over the internet.[1] In 1840, an English educator, Sir Isaac Pitman devised a method for distant education termed as "mail and shorthand technique" so as to teach and collaborate with students.[2]

In the ongoing crisis of COVID-19 pandemic when the government ordered strict lockdown, it was clearly understood that online mode was the only teaching mode available for imparting knowledge to students. Consequently, online teaching developed rapidly due to increasing market demand.[3] It is now considered that online teaching mode has already entered mainstream and has an extraordinary potential to expand its access to learning in medical and non-medical institutions.[4] Both online and offline teaching sessions have different patterns of engagement.[5] Accordingly, both favourable and unfavourable perceptions for online teaching modality have been documented by various studies conducted previously. Studies in favour of online teaching mode are Khalil et al and Agasisti T et al.[6,7]

On the contrary, few studies are of the opinion that offline teaching mode is better as compared to online mode.[8-11] Few studies have documented that there is not much difference in outcomes of both the teaching modes.[12,13]

These studies thereby indicate that confusion and controversy exist when the two modes of teaching have been researched upon. Therefore, in the present study, we aimed to explore the perception of medical students for offline & online teaching modes.

MATERIALS & METHODS

This qualitative study was conducted on 122 students (1st year MBBS students of Batch 2020-21) of a medical college. Detailed voluntary consent was taken from all the participating students. A self-styled, closed ended response questionnaire was formulated and distributed among the students. During the process of data collection from students, students were given guidance to understand the nature of questions so that they can check for proper response. All the questionnaire papers were collected at the same time; data anonymity and identity confidentiality were maintained. Collected questionnaire responses were analyzed in microsoft excel worksheet with help of proper table and graphical method such as Bar diagram.

Inclusion Criteria
1. Proper voluntary consent for study.
2. Attended regular online and offline classes (Minimum 75% attendance in both teaching modes-online and offline).

Exclusion Criteria
1. Students who are not willing to give consent for the study.
2. Students who attended less numbers of online and offline classes (< 75% attendance in both teaching modes-online and offline).

Table 1: Number of students giving responses to various variables selected in the questionnaire.

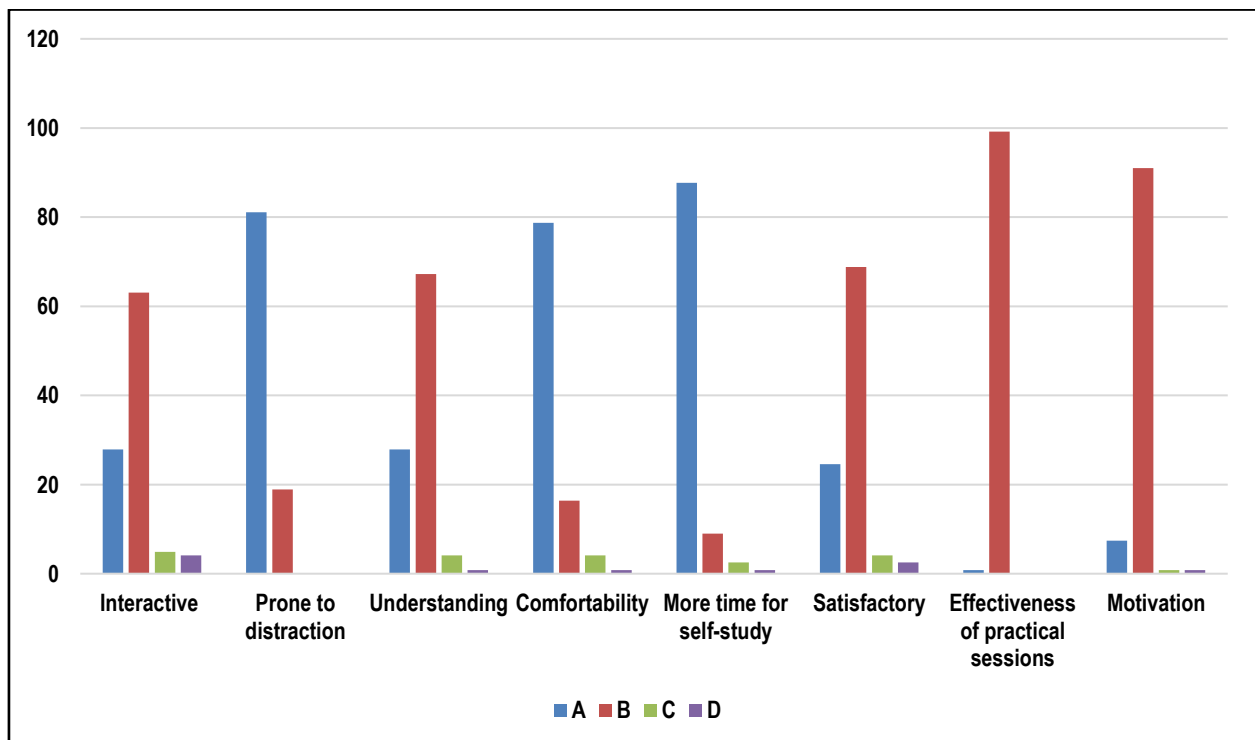|	No. (and %) of students giving response variablewise			
VARIABLES	Positive response for online teaching	Positive response for offline teaching	Positive response for both online and offline teaching	Neutral response for both online and offline teaching
Interactive	34 (27.9)	77 (63.1)	6 (4.9)	5 (4.1)
Prone to distraction	99 (81.1)	23 (18.9)	0 (0)	0 (0)
Understanding	34 (27.9)	82 (67.2)	5 (4.1)	1 (0.8)
Comfortability	96 (78.7)	20 (16.4)	5 (4.1)	1 (0.8)
More time for self-study	107 (87.7)	11 (9.0)	3 (2.5)	1 (0.8)
Satisfactory	30 (24.6)	84 (68.8)	5 (4.1)	3 (2.5)
Effectiveness of practical sessions	1 (0.8)	121 (99.2)	0 (0)	0 (0)
Motivation	9 (7.4)	111 (91.0)	1 (0.8)	1 (0.8)

Total participating students- 122

Fig. 1: Comparative bar diagram showing percentage of students giving responses to various variables selected in the questionnaire,
A- Percentage of students giving positive response for online teaching,
B- Percentage of students giving positive response for offline teaching,
C- Percentage of students giving positive response for both online and offline teaching.
D- Percentage of students giving neutral response for both online and offline teaching

RESULTS

In the present study, a total of 122 students participated in the questionnaire study. 63.1 % (n=77) students opined that offline teaching was more interactive as compared to online teaching (27.9%, n=34). 4.9% (n=6) students found both online and offline teaching mode as interactive, whereas 4.1%(n=5) were neutral ie. could not find either of the teaching modes as interactive.

Distraction was mainly present in online teaching as reported by 81.1% (n=99) students as opposed to 18.9% (n=23) in offline teaching mode.

67.2 % (n=82) students were of the view that the understanding of the topic is better in offline teaching as compared to online teaching (27.9%, n=34). 4.1% (n=5) students found both online and offline teaching as easily understandable; whereas 0.8% (n=1) student were neutral ie. could not found any of the teaching modes as understandable.

As far as comfortability is concerned, 78.7% (n=96) students were in favour of online teaching mode as opposed to 16.4% (n=20) students for offline teaching mode. However, 4.1% (n=5) students were comfortable with both the teaching modes and 0.8% (n=1) were neutral ie. did not find comfortability in both the teaching modes.

Majority of the students were of the view that they get more time for self-study in online teaching mode (87.7%, n=107) as compared to offline teaching mode (9%, n=11). Moreover, 2.5% (n=3) students were in favour of both whereas 0.8% (n=1) were neutral ie. did not favour both the teaching modes.

68.8% (n=84) students were satisfied with offline teaching mode, whereas only 24.6% (n=30) students showed satisfaction with online teaching mode. 4.1% (n=5) students were satisfied by both whereas 2.5% (n=3) were not satisfied by both the teaching modes.

Nearly all students ie. 99.2% (n=121) responded to the use of offline teaching mode for practical sessions.

Majority of students (91%, n=111) felt motivated in offline teaching mode as compared to online mode (7.4%, n=9). However, 0.8% (n=1) were motivated by both and 0.8% (n=1) were not motivated by either of the teaching modes. (Table 1 & Fig 1)

DISCUSSION

In the present study, majority of the students were of the view that offline teaching sessions are more interactive as compared to online teaching sessions. This goes in accordance with studies conducted by Bignoux et al, Muthuprasad et al.[14,15] This is because of the fact that students tend to have more social engagement with teachers in offline mode. Offline teaching helps in creating an environment of more direct engagement. Such an environment motivates and encourages students to have an interactive two-way detailed doubt-solving discussions, ultimately clearing multiple concepts in a single-go. Moreover, offline teaching is also considered to be the best way to conduct group discussions, a teaching method that is more interactive in nature. This is in accordance with studies conducted by Amir et al and Kemp et al.[8,11]

Our study also focused on the fact that there is more distraction in online teaching mode as compared to offline mode. This is supported by various studies conducted by Schmidt SJ and Dontre AJ.[16,17] Multitasking behavior at homes by engaging in multiple activities such as social media platforms, television, etc.

during an ongoing online teaching session amounts to distraction. Many studies have already proven that distraction leads to less attention, less focus and concentration, thereby creating a detrimental effect on learning process.[18-20] Distractions need to be addressed and proper effective ways need to be developed to eliminate them. However, most of the times in online teaching mode, the classroom is nothing but student's home and certain distractions at home are almost impossible to eliminate. This implies that online teaching mode can put a negative impact on the overall learning process. On the contrary, distractions during offline mode in classroom settings are usually controllable and can be easily and immediately dealt with by the teacher and/or by the institution thereby providing an atmosphere of indistractable learning.

A study conducted by Favale et al stressed on an important fact that teaching-learning process can be slowed down in case users (both teachers and students) face some technical difficulties such as unstable internet connectivity and other IT related issues.[21] Such hindrances make students feel disconnected with teachers and peers. A study conducted by Otter et al 2013, has discussed that when students feel disconnected, it has got a major negative impact on learning process and is responsible for paving a way for less attention, difficulty in focusing for longer duration, less knowledge reception and consequently less understanding of the topic.[22] Ultimately, there is emergence of dissatisfaction among the students for online teaching sessions which is also seen in our study.

In our study, students were of the opinion that they are more comfortable with online teaching mode as compared to offline teaching modes. This has been previously explained in study conducted by Van Wart M et al.[23] This is probably because the learning environment provided by online teaching mode is independent of time and place. In online teaching mode, the timescale can be made flexible and both teacher and learner be located practically anywhere in the world. Comfortability is also enhanced because students get to decide their own personal space and also can record lecture sessions.

However, as per the studies conducted by Angeli C and Valanides N, Kali Y et al, Ching YH et al, more than 50 percent of teachers are not comfortable with online teaching mode probably due to skill gap.[24-26] Such issues need to be worked upon because comfortability of both teacher and learner is a must for effective teaching process.

A study conducted by Dhawan S. has focused on importance of effective digital/technological training of teachers.[27] Institutes must initiate continuous skilling and up-skilling programs for teachers to effectively use the digital tools.

Moreover, in our study, students mentioned that they get more time for self-study and sufficient time to spend with family members as substantial amount of time is saved in online teaching mode. This is because in offline mode, students lose time in transit ie. reaching different classrooms, practical rooms, demonstration rooms etc. Also, certain amount of time is lost in taking attendance which is not the scenario in online teaching sessions. These positive factors contribute to the fact that less time is required to teach a particular theory-based topics in online teaching mode as compared to offline mode. This is supported by a study conducted by Van de Vord R & Pogue K.[28] However, it is noteworthy that in our study, all students have strongly opined the

use of offline teaching mode for practical teaching sessions. This is because the students enrolled in our study belong to first year MBBS stream and practicals in subjects like Anatomy, Physiology and Biochemistry involves human body dissection, human body examination, laboratory investigations respectively, study of which relies intensely on more hands-on practical sessions ie. offline sessions for effective learning. Hands-on practical sessions are more interesting, engaging and accelerates the process of knowledge acquisition providing more satisfaction to the students. These views are supported by study conducted by Eluru R et al, Al Balas M et al.[29,30] Thereby, it can be deduced that barring few theoretical topics, most of the curriculum of MBBS needs face-to-face teacher- student interaction in offline mode.

This study also emphasizes that students feel more motivated in offline teaching mode. This is in accordance with various studies conducted earlier by Mese E. & Sevilen C, Range BG et al.[31,32] The reason behind this is in offline mode, students tend to get more personal attention by teachers and there is more recognition of students by teachers. Also face to face teaching in classroom settings motivates students thereby increases their confidence level to interact and socialize more so as to build healthy relationship with peers and teachers.[33]

This process of teacher-student relation and student-student relation building is missing in online mode of teaching as there is meagre socialization of students and consequently there are hindrances in overall personality development of the students. This will jeopardize or limit the success of training undergraduate medical students to become a doctor meant for offering health services to society.

In this study, few students giving neutral responses should not be ignored. Neutral responses indicate that there are few students who have found both online and offline teaching mode as non-interactive, non-understandable, uncomfortable, unsatisfactory, etc. This probably gives birth to an idea of evolving a new modality of teaching and its introduction in the near future.

CONCLUSION

The present study concludes that according to student's perspective, offline teaching mode is better than online teaching mode and online teaching cannot completely replace offline teaching in medical education. Although online teaching mode provides students with comfortability, flexibility, more time for self-study, etc., these advantages are not sufficient enough to blindly put the online teaching mode too high considering the demerits explained in the study. On the other hand, the advantages of offline mode of teaching such as being more interactive, devoid of distraction during teaching, more understandable, more satisfactory, more motivating and highly effective for practical sessions have been elucidated in the present study. However, considering the fact that online teaching mode is going to stay and will be evolved more in the near future, digital training of teachers is the need of an hour. As there are benefits of both online and offline teaching modes, the authors of this study would like to suggest that a new combined approach of teaching ie. mixed teaching modality seems to be a good shining future in the field of medical education. Mixed teaching mode of education model can certainly integrate inside and outside of classrooms and would meet the requirements of both students and teachers in medical education.

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