An Analysis Of Perception And Attitude Of Second Year MBBS Students Towards Offline And Online Mode Of Learning In A Tertiary Care Teaching Hospital

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Abstract

Background: Due to the coronavirus outbreak, all educational institutions were shut down and relocated to online platforms. The purpose of this study is to analyse the effect on students due to the swapping of the educational mode of learning from physical to fully virtual during the coronavirus pandemic.

Materials and Method: A prospective, cross sectional study was conducted on second year MBBS students having exposure of both online and offline mode of lectures. After obtaining written informed consent, a validated questionnaire consisting of 20 questions with 4 options each was given to 210 students. Questionnaire forms were collected and response was analysed using Microsoft excel software.

Result: Maximum number of students felt that offline class is superior to online class in terms of ease of understanding, engaging capacity, concept clarity, retention of knowledge, solving assignments, developing practical skills and boosting confidence for exams. Majority of students preferred offline class because of student teacher interaction whereas some preferred online class as it prevents contact hence chance of covid infection. Some preferred pre-recorded lectures as it fits according to their time schedule.

Conclusion: Maximum students expressed their desire to avail education that is a blend of maximum offline lectures with some online and pre-recorded lectures.

Keywords: coronavirus, online class, pandemic, questionnaire, recorded lectures

Introduction

The first case of COVID-19 was detected in Wuhan, China in December 2019 and soared swiftly across China and spread to 215 countries as of 25th May 2020 [1].

Many nations advised different measures to slow down the spread of coronavirus. The nationwide lockdown restrictions to control the spread of disease have impacted all aspects of life inevitably [2].Government officials have taken various safety measures like social distancing, quarantine, expanding health facilities to control the disease and asking people to work from home [3].Leisure activities took a backseat due to the closure of gyms, public parks, movie theaters, swimming pools, and other places with large gatherings. All educational institutions including schools and colleges were shut down and relocated to online platforms and distant learning programs [4].

The Coronavirus outbreak forced millions of students to study from home. Learning from home became a new normal for students [5]. Medical education has also been affected, with the halting of classroom lectures and offline examinations [6]. Impact of the COVID-19 outbreak has been immense on the education and mental health of university students.

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E-learning gained its popularity because of its efficiency in providing education in a planned and scheduled manner even under extraordinary conditions of a global pandemic with ease of accessibility at anytime and anyplace [7, 8].

The success of online education depends on several factors that includes good internet connections, learning software, digital skills, and access to technology [5]. However, the physical closure of schools, colleges, and universities has impacted students in ways that simply sitting at home and lack of social interaction among students has increased the sense of loneliness [4]. Some students have reported suffering from anxiety, depression, and mood swings [9].

Hence the present study was undertaken to detect the effect on students by the swapping of the educational mode of learning from physical to fully virtual due to the coronavirus pandemic [10].

Aim & Objectives:-

Aim: An analysis of perception and attitude of second year MBBS students towards offline and online mode of learning.

Objective: To study the impact of covid19 pandemic on medical education, mode of learning preferred by students and reasons for the same.

Materials & Methods:

A prospective, cross sectional study was conducted on second year MBBS students of tertiary care teaching hospital. This study was undertaken after obtaining approval from institutional ethics committee. The students having exposure of both online and offline mode of lectures were included in this study. A written consent was obtained from the students before initiating the survey. Students who were not willing to give their consent were excluded from the study. A validated questionnaire consisting of 20 questions with 4 options each were given to each student. They were informed that more than 1 option can be tick marked for each question. Questionnaire forms were collected from all students after they had completed filling them. The response of each student was entered into Microsoft excel software and analysed to know their preference for online or offline mode of learning and the reasons for the same.

Results:

Total 210 questionnaire forms were analysed. Maximum students felt that offline class is easier to understand (68% students), fairly engaging (55% students), lead to good concept clarity (65% students), helps in retaining knowledge(60% students), makes it easier to solve assignments (69% students), helps to develop practical skills (58% students) and boosts confidence to appear for exams (63% students) (Refer table 1). The major advantages reported for preferring offline class over online class were student teacher interaction and studious classroom ambience but many felt that lack of any form of recording or data for future reference becomes a drawback (Refer figure 1&3).

Higher number of students felt that online class is difficult to understand(44% students), not very engaging(55% students), lead to poor concepts (48% students), makes it difficult to retain knowledge(58% students) thus making assignments difficult to solve(56% students), hamper development of practical skills(80% students) and reduce confidence to appear for exams(52% students) (Refer table 1). Some students were more keen to attend online class on the grounds that it would prevent contact with other people hence reduce the chances of catching covid infection but also believed that easy distractibility at home makes it less fruitful (Refer figure 2&4).

Also many students showed increasing affinity towards pre-recorded lectures as it facilitates easy revision and also fits according to their time schedule (Refer figure 5).

However, Maximum students expressed their desire to avail education that is a blend of maximum offline lectures with some online and pre-recorded lectures (Refer figure 6).

Discussion:

During covid19 times, it was realised that education can be carried out in a planned and scheduled manner even under extraordinary circumstances. However, the sudden transition to distant learning had an ambiguous impact on education. This study suggests that students prefer offline class followed by pre-recorded lectures and lastly online class

Student's Perception Of Offline Class:

Maximum number of students felt that offline class is easier to understand hence helps in making good clear concepts. It is more engaging hence students could concentrate better. It helps in retaining knowledge and makes solving assignments easier. Practical/clinical skills can be developed only after actually performing the practical which gives an extra edge to offline class as compared to online class. Overall satisfactory feeling after offline class boosts confidence for exams. Students believed that offline class has an upper hand because of studious classroom ambience and student teacher interaction. Also no requirement of electronic device like laptop or smartphones makes education available to all students irrespective of their economic status. These findings are consistent with a study conducted in Gujarat by Patel AM et al [11] and another study conducted in Poland by Pokryszko-Dragan

A. et al [12]. However when asked about possible drawbacks of offline class, students reported lack of recording or data for further reference, difficulty in time management, difficulty in travelling for students residing away from college and fear of catching covid infection due to contact.

Student's Perception Of Online Class:

Higher number of students felt online classes are difficult to understand, not very engaging and lack concept clarity. Due to these reasons, students found assignments difficult to solve and felt underconfident for exams. Also practical/clinical skill formation took a backseat because of no physical access to college labs & clinics. Maximum number of students experienced hurdles in attending the class due to internet connectivity issues. Other remarkable negative opinions reported by students for not favouring online class were easy distractibility at home, difficulty in doubt solving on online platform and lack of facilities like laptop or smartphone. The major reason for students liking online class was that it abolishes contact with other people hence eliminates the risk of catching coronavirus infection, travelling to college is not required and more time can be saved for self-study or other activities. These findings are consistent with the findings of a study conducted in UK by Dost S. et al [13] and another study conducted in Poland by Bączek M et al [14].

Student's Perception Of Pre-Recorded Lectures:

Though the concept of pre-recorded lectures is not new but the use was very limited before pandemic. Students reported inclination towards pre-recorded lectures due to ease of attending them according to their schedule and provision of revising the lectures again whenever required.

Conclusion:

It is concluded that students have both positive and negative opinion about each mode of learning. Traditional classroom lectures are deeply rooted into our education system owing to its advantages hence most acceptable to students. Although online learning does not seem to be wholeheartedly accepted by many students, the advantages has given a major breakthrough in the education system during covid19 pandemic. Maximum students expressed their desire to avail education that is a blend of maximum offline lectures with some online and pre-recorded lectures.

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Legends:

Table 1: Comparison between online and offline class Fig 1: Advantages of online class.

Fig 2: Advantages of offline class.

Fig 3: Drawbacks of online class. Fig 4: Drawbacks of offline class.

Fig 5: Opinion about pre-recorded lectures.

Fig 6: Class preference after COVID19 pandemic

Table 1: Comparison between online and offline class

Parameter assessed	Options	Online class (%)	Offline class (%)
Ease of understanding	Very difficult	44	2
	Difficult	31	15
	Same as the other type of class	9	14
	Easy	8	68
Engaging capacity	Excellent	4	21
	Good	27	55

	Same as the other type of class	12	13
	Poor	55	8
Concept clarity	Very good	5	28
	Good	40	65
	Poor	48	4
	Very Poor	6	1
Retention of knowledge	Very good	4	16
	Good	20	60
	Same in both	15	18
	Less than the other type of class	58	5
Level of difficulty in solving assignments after class	Very difficult	9	1
	Difficult	56	19
	Easy	32	69
	Very easy	2	11
Confidence for exams after attending class	No confidence	24	3
	Less confidence	52	13
	Same as the other type of class	18	19
	More confidence	2	63
Practical skills after	Very Poor	80	4
	Very Good	6	28

class	Better than the other type of class	1	58
	Same in both class	13	12

Fig 1: Advantages of online class

ADVANTAGES OF ONLINE CLASS

- A-Travelling to college not required
- B-Saves time
- C-Abolishes contact with other people hence reduces fear of spread of coronavirus
- D-I prefer offline class over online class
- abc
- abcd

Fig 2: Advantages of offline class

ADVANTAGES OF OFFLINE CLASS

- A-Classroom ambience promotes learning
- B-Student teacher interaction
- C-No internet connectivity/smartphone/laptop required
- D-I prefer offline class over online class
- ab
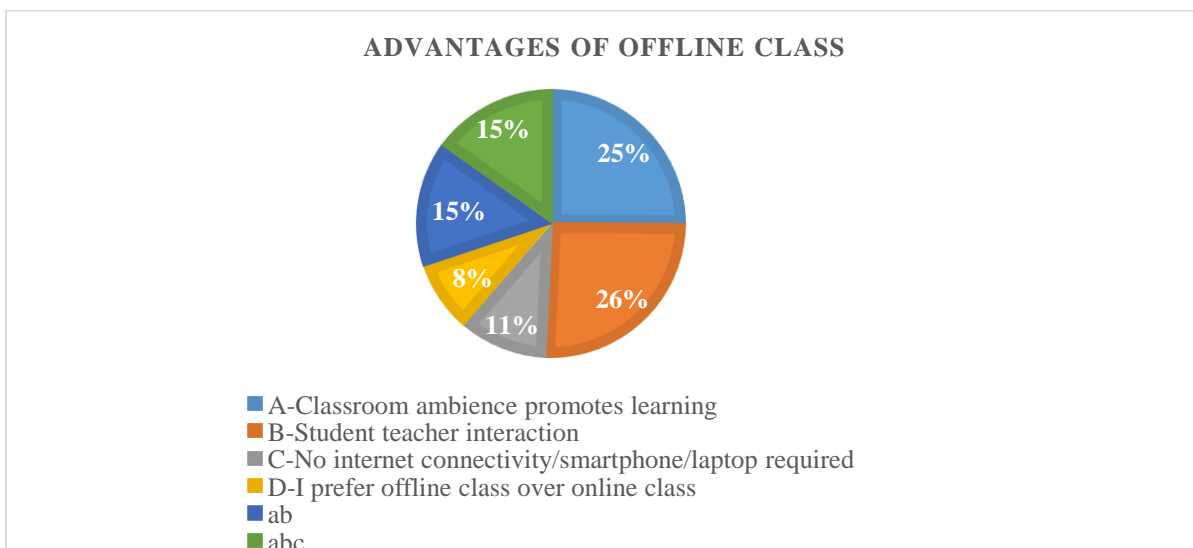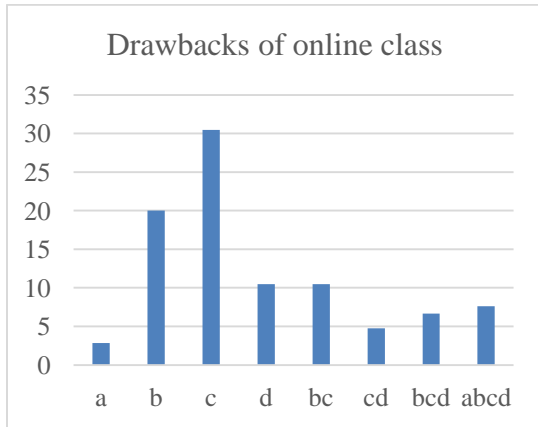- abc

Fig 3: Drawbacks of online class
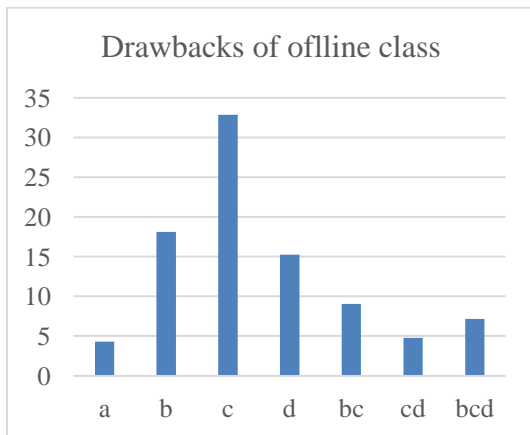

Drawbacks of online class

A-Not affordable to all since a smartphone/laptop is required
B-Internet connectivity problems poses hurdles to attending the class properly
C-Easy distractibility at home
D-Doubt solving becomes difficult on online platform

Fig 4: Drawbacks of offline class

Drawbacks of oflline class

Drawbacks of offline class
a-Students may lack the opportunity to learn advancing technology
b-Time management becomes an issue for students residing far away from campus
c-No recording or any other form of data is available for students who missed the class or for later reference
d-Contact with other people can pose a risk to spread of coronavirus

Fig 5: Opinion about pre-recorded lectures
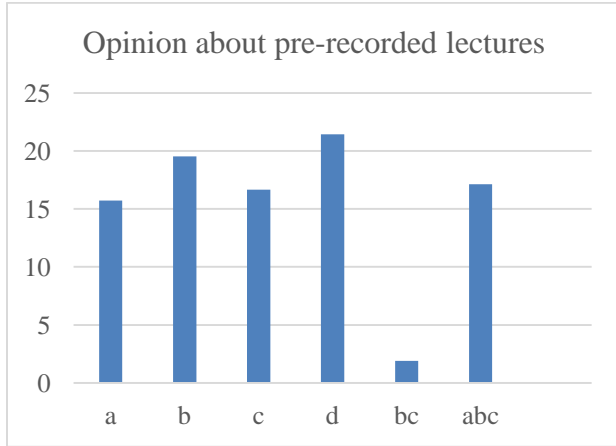
Opinion about pre-recorded lectures	
Better than offline class because	a-I can attend them according to my schedule
	b-I can revise the lectures again
	c-I can make notes by pausing the lectures
d-I prefer offline lectures over pre-recorded lectures	

Fig 6: Class preference after COVID19 pandemic