

## ORIGINAL ARTICLE

**MEDICAL AND DENTAL STUDENTS' PERSPECTIVE REGARDING ONLINE EDUCATION DURING COVID-19**

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**ABSTRACT**

**Introduction:** Online education was adopted due to the spread of COVID-19, however, student satisfaction was not assessed before its implementation. This study aims to find out the opinions of students and their perspective regarding online education.

**Material & Methods:** This cross-sectional study was conducted on a population of 372 students of 7 medical and dental colleges. A convenient sampling method was used and data was collected through an online questionnaire over a period of around 2 weeks.

**Results:** There was a significant difference ( $p=.005$ ) regarding perspectives between medical and dental students. There was a difference ( $p=.007$ ) but not significant among the students of different professional years regarding perspective. However, the maximum number of students showed a positive perspective. There was no significant difference ( $p=.663$ ) among the different age groups of the participants. There was a significant difference ( $p=.000$ ) between genders regarding perspectives. Female showed a positive perspective.

**Conclusion:** Overall students were satisfied with the online learning system.

**Key Words:** COVID-19, distance education, students' perspectives

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**INTRODUCTION**

Pneumonia with an unknown aetiology was first detected in Wuhan City, China, in late December 2019.<sup>1</sup> This infection was eventually called coronavirus disease by the World Health Organization. COVID-19 the spread of this infection was a major concern for the people belonging to all walks of life.<sup>2</sup> Keeping in view the transmission of this infection, social distancing and distance learning were the best possible solutions to this pandemic.

Keeping in view the current challenge, strategically, online education was the best alternative possible for medical and dental education continuation in times of pandemic. Face-to-face medical and dental education was disrupted in this regard, particularly owing to

education processes involving the potential of intimate contact with symptomatic and asymptomatic COVID-19 patients and the use of aerosol-producing therapy.<sup>3</sup>

According to Howlett, online learning is "the use of electronic technology and media to deliver, assist, and enhance both learning and teaching, also involves contact between learners and teachers through online tools."<sup>4</sup> The shift from conventional to online schooling, however, was not without its difficulties. Students and instructors alike face increasing challenges, limitations and demands, forcing departments to develop innovative methods to provide a more individualized learning experience.<sup>5</sup> Despite the problems created by the SARS outbreak, a

number of innovative efforts were conducted, resulting in advancements in medical education. The insights learnt from this abrupt change in medical and dental education have the potential to positively improve post-pandemic learning and teaching, particularly in programmes that rely largely on electronic media and e learning. This study aims to explore the perception of medical and dental students with regard to online education.

Our research also aims to enhance the educational system in the short and long term by identifying the limitations, benefits, and drawbacks of online learning, emphasizing the challenges, and identifying certain vulnerable populations in this category. Remote learning during the pandemic has birthed many more potent and efficient modes of education. Already existing modes of online education were a lot improved because of the increased need during time of pandemic.

### **MATERIAL AND METHODS**

This cross-sectional study was conducted in April 2021 after all institutions' students have had at least two to three months of online learning experience. Participants include 372 students of 8 medical and dental colleges. Prior approval was taken from the ethical committee of the College (registration number Prime/ERC/2022-26). The sample size was not predetermined. A sampling technique based on maximum variance was used. However, through institutional WhatsApp groups, convenient sampling was adopted and data was collected through an online questionnaire over a period of around 2 weeks i.e. 21st April 2021 to 5th May 2021.

Demographic questions (age, gender, etc.) were included in the survey instrument. Questions include some baseline information about the online learning experience, student's satisfaction from the internet connection, teacher's response and structure of the online learning.

SPSS version 21 was used for the analysis of the results.

### **RESULTS**

A total of 106 BDS students and 266 MBBS students participated of which 22.0 percent (82) were male students and 78.0 percent (290) were female students.

Table 1: Gender wise perspective

Table 2: Profession wise perspective

1 student (3%) participated from 1st year BDS, 24 (6.5%) from 2nd year BDS, 46

students (12.4%) from 3rd year BDS, 34 students (9.1%) from final year BDS. Similarly, 44 students (11.18%) participated from 2nd year MBBS, 115 students (31.5%) from 3rd year MBBS and 106 students (28.5%) from 4th year MBBS.

Table 3: shows age wise perspective.

### **DISCUSSION**

Our study shows that students were satisfied with online education during covid 19 because it is the best alternative during times of social distancing otherwise the time would have been wasted. e-learning enhances the motivation of students and made them more engaged in their studies.<sup>6</sup> Despite certain difficulties, undergraduate dental students could adjust to the new teaching techniques of distance learning and that, on average, distant learning was more effective than classroom instruction.<sup>7</sup>

Another study demonstrated the flexibility and effectiveness of online learning methods, as well as some of their drawbacks. According to teachers and students alike, online learning is a flexible and successful method of instruction and learning since it facilitates distance learning with simple administration, accessibility, and sparing use of time and resources.<sup>8</sup>

The incorporation of online learning was largely viewed favourably by both students and lecturers, opening the door for its application in future curricula beyond COVID-19.<sup>9</sup>

Students and teachers had never encountered confinement before, and the current online learning environment offered a novel pedagogical opportunity.<sup>10</sup> The findings revealed that although students acknowledged missing out on many educational opportunities, they still believed that the new system with e-lectures and discussion forums was not a replacement for in-person clinical practice but a good alternative as discussed in our study too.<sup>11</sup>

Within the constraints of this study, students' and lecturers' perspectives on the use of online learning were overwhelmingly positive, opening the door for its usage in future curricula that go beyond COVID-19.<sup>12</sup>

The study showed how well the students adapted to technology use and online learning.<sup>13</sup>

Although there are many obstacles for students to overcome, in light of the current health

crisis, a move to online learning must be encouraged.<sup>14</sup> According to teachers and students alike, online learning is a flexible and successful method of learning since it facilitates distance learning with simple administration, accessibility, and sparing use of time and resources.<sup>15</sup> COVID-19 pandemic gives a future insight as well as how technology is used in the classroom.<sup>16,17,18</sup> Additionally, how students view the online delivery of the theoretical course material may influence how university instructors improve their e-teaching methods.<sup>19,20,21,22,23</sup>

During the COVID-19 epidemic, it was discovered that the absence of an Online learning management system was associated with students' dissatisfaction with online education. Also, it was discovered that the students' dissatisfaction was closely connected with a lack of time allotted and support from online training.<sup>24,25,26</sup>

As the study participants belonged to the medical and dental colleges of KPK, therefore, this study results only apply to situations that are similar. To ensure generalization, similar studies different setups should be conducted.

They advised lessening the cognitive strain and boosting interaction during online instruction. Those still in their clinical years offered suggestions on how to begin online case-based learning. After the COVID-19 epidemic is under control, some people, however, also felt that there should be revision classes in addition to psychomotor hands-on instruction. They advised purchasing premium software as well as additional proctoring tools to prevent plagiarism and dishonesty in order to improve quality.

## CONCLUSION

Despite some differences, the students were satisfied with the online system and this new system proved to be an alternative solution.

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Table 1: Gender wise perspective

PERSPECTIVES SCORE	MALE (22%)	FEMALE (78%)
0	5	0
1	1	2
2	22	42
3	10	38
4	5	45
5	7	55
6	15	56
7	20	38
8	9	25
9	15	5

Table 2: Profession wise perspective

PERSPECTIVES SCORE	BDS	MBBS
0	0	3
1	0	3
2	7	7
3	10	37
4	28	25
5	18	42
6	20	49
7	10	50
8	10	25
9	1	15

Table 3: Age wise perspective

PERSPECTIV ESCORE	AGE in years								
	18	19	20	21	22	23	24	25	26
0	0	0	0	1	2	0	0	0	0
1	0	0	0	0	1	1	1	0	0
2	1	0	1	7	15	2	0	0	0
3	0	2	9	11	28	6	2	0	0
4	1	1	2	19	15	12	1	0	0
5	0	2	8	10	28	12	1	0	0
6	0	1	7	20	21	27	2	1	1
7	0	0	6	19	21	26	1	0	0
8	0	1	7	9	11	8	2	0	0
9	0	0	1	1	5	6	2	0	0