

**Original Article****MEDICAL STUDENTS' PERCEPTION TOWARDS ONLINE ASSESSMENT***\*Rajeshwar Reddy Kasarla<sup>1</sup>, Laxmi Pathak<sup>2</sup>, Nikita Singh Yadav<sup>3</sup>*<sup>1</sup>Department of Microbiology, <sup>2</sup>Department of Anesthesiology & Critical Care Medicine, <sup>3</sup>Department of Microbiology, Universal College of Medical Sciences, Bhairahawa, NepalSubmitted: 2<sup>nd</sup> -March-2024    Revised: 26<sup>th</sup> -April-2024    Accepted: 5<sup>th</sup> -May-2024DOI: <https://doi.org/10.3126/mjen.v3i01.67445>**ABSTRACT****Background**

Universal College of Medical Sciences (UCMS), Bhairahawa, Nepal conducted online assessment MCQ tests during covid-19 lock down period. This study was taken up to measure/assess the basic science MBBS students' perception towards online assessment tests.

**Methods**

A descriptive, cross-sectional study was conducted by administering Google Forms questionnaire to basic sciences MBBS students of UCMS during the period the period of 2 October 2021 to 30 December 2021, using non-probability purposive sampling. General information profroma for socio-demography, and a questionnaire on the lines of Likert's summated rating scale to assess the perception of MBBS basic science students towards online assessment was constructed. Simple frequency tables, cross tables, and mean tables have been used to analyze data. Characteristics of the sample were categorized using mean and standard deviation.


**Results**

The overall mean and standard deviation for perception of online assessment tests were 3.17 and 0.65 respectively. The results indicate that MBBS students were satisfied with online assessment tests.

**Conclusion**

Online assessment tests were well received by MBBS students. The online assessment tests enhance student learning by allowing immediate feedback. Online tests should be conducted in medical colleges on a regular basis.

**Keywords :** MCQ test, Medical students, Online assessment, Perception.

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## INTRODUCTION

The COVID-19 pandemic forced all medical colleges to adopt online teaching and learning methods, and Universal College of Medical Sciences (UCMS), Bhairahawa, Nepal also conducted online classes, and subsequently online assessment MCQ tests, for the first time.<sup>1,2</sup> The study was taken up to know how medical students perceive online assessment tests, and to improve the effectiveness of online assessment tests. The aim of this study was to measure the undergraduate medical (MBBS) students' from basic sciences perception towards unproctored online assessment tests conducted during the COVID-19 lockdown period.

## METHODS

A descriptive, cross-sectional study was conducted during COVID-19 lockdown period by administering Google Forms questionnaire to 1<sup>st</sup> and 2<sup>nd</sup> year MBBS basic science students of Universal College of Medical Sciences (UCMS), Bhairahawa, Nepal during the period of 2 October 2021 to 30 December 2021, using non-probability purposive sampling. Google Forms questionnaire was sent to 95 students of basic sciences, 1<sup>st</sup> year MBBS, and 100 students of 2<sup>nd</sup> year MBBS. Among them 130 MBBS students who filled and sent the questionnaire within three months were included in data analysis.

General information proforma elicits the socio-demographic characteristics such as gender, age, locality of residence (urban/rural), parent's occupation, and nationality of the respondents. A Google Form questionnaire to measure/assess the perceptions of MBBS students towards online assessment was constructed on the lines of Likert's summated rating scale. The statements relating the areas such as social, psychological, academic, administrative, curricular, and economic aspects were constructed by collecting from relevant literature and MBBS students' opinion about medical profession, and screened and validated after thorough scrutiny. Ambiguous statements were modified or rejected. Thus, the content validity of the tool was assumed.

The perspective of online assessment test was graded in terms of things using five options: strongly agree, agree, neutral, disagree, and strongly disagree. Among the 22 questionnaire

items, 17 were favorable to online assessment tests, scoring 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree, and 1 for strongly disagree. The other five questionnaire items were against (unfavorable) to online assessment test, scoring 1 for strongly agree, 2 for agree, 3 for neutral, 4 for disagree, and 5 for strongly disagree. The collected data were entered into Microsoft Excel and exported SPSS version 22 for analysis. Simple frequency tables, cross tables, and mean tables have been used to analyze data. Characteristics of the sample were categorized using mean and standard deviation.

## RESULTS

**Table 1: Demographic information of basic science MBBS students**

	MBBS (n=130)	
	Frequency	Percentage
Age		
≤ 19 years	12	9.2
> 20 years	118	90.8
Gender		
Male	88	67.7
Female	42	32.3
Residence		
Rural	42	32.3
Urban	88	67.7
Parent's occupation		
White-collared	70	53.8
Agriculture	60	46.2
Socio-economic status		
Middle class	22	16.9
High income group	108	83.1
Nationality		
Nepali	117	90
Indian	13	10
Foreign	-	-

The socio-demographic characteristics of the students were depicted in Table 1. The age distribution of the students showed that more than ninety percent (90.8%) of them belonged to age group greater than 20 years. More than half (67.7%) of the students were male. Nearly one third (32.3%) of the students reside in rural areas. More than two fifth (46.2%) of the students' parents were engaged in agriculture. Ninety percent (90.8%) of the students were Nepali whereas 10% were Indian.

Table 2: Basic science MBBS students’ perceptions towards online assessment

Statements	Number (n=130)					Mean	Standard deviation	Level of perception
	SA	A	U	D	SD			
1 Online tests helps in learning the subject	4 3.08%	74 56.92%	23 17.69%	21 16.15%	8 6.15%	3.35	0.92	High
2 Online tests are as important as classroom tests	12 9.23%	54 41.54%	14 10.77%	37 28.46%	13 10.00%	3.12	0.61	Low
3 Multiple choice question type of online assessment is easier to score marks	35 26.92%	67 51.54%	16 12.31%	12 9.23%	0 0.00%	3.96	0.88	High
4 MCQ type of online assessment is just mere recall of answer; it does not allow me for critical thinking	13 10.00%	45 34.62%	23 17.69%	42 32.31%	7 5.38%	3.12	0.46	Low
5 Online assessment is a good method for evaluation	5 3.85%	31 23.85%	23 17.69%	53 40.77%	18 13.85%	2.63	0.36	Low
6 Online tests should be conducted on a regular basis	15 11.54%	47 36.15%	30 23.08%	32 24.62%	6 4.62%	3.25	0.51	High
7 Taking up online test is, in practice, more difficult than class room tests	7 5.38%	38 29.23%	20 15.38%	51 39.23%	14 10.77%	2.79	0.42	Low
8 Home environment is more distracting and not suitable for taking online tests	30 23.08%	62 47.69%	10 7.69%	27 20.77%	1 0.77%	3.72	0.41	High
9 Time limit was sufficient to answer and finish the test and prevent from copying	12 9.23%	77 59.23%	15 11.54%	22 16.92%	4 3.08%	3.55	0.94	High
10 The time was not wasted once the test was started, since it had to be completed within a set time	19 14.62%	84 64.62%	15 11.54%	11 8.46%	1 0.77%	3.84	1.05	High
11 Adherence to time schedule is as strict in online tests as in class room tests	24 18.46%	68 52.31%	16 12.31%	18 13.85%	4 3.08%	3.69	0.82	High
12 Online assessment is advantageous in being able to see grade and feedback immediately after finishing the test	18 13.85%	73 56.15%	19 14.62%	17 13.08%	3 2.31%	3.66	0.88	High
13 Feedback from online assessment is not as adequate as class room assessment	33 25.38%	68 52.31%	12 9.23%	11 8.46%	1 0.77%	3.82	0.89	High
14 It is hard to concentrate on the questions when doing online test	13 10.00%	42 32.31%	25 19.23%	45 34.62%	5 3.85%	3.10	0.51	Low
15 Online assessment is as reliable in assessment of knowledge as classroom assessment	2 1.54%	38 29.23%	20 15.38%	55 42.31%	15 11.54%	2.67	0.47	Low
16 It is easier to cheat in online tests than paper based classroom tests	48 36.92%	47 36.15%	21 16.15%	13 10.00%	1 0.77%	3.98	0.25	High
17 Online tests are fairer than paper based exams as no one can manipulate it	12 9.23%	28 21.54%	22 16.92%	49 37.69%	19 14.62%	2.73	0.28	Low
18 Feedback on the performance that I receive after online tests has motivated me to study	8 6.15%	54 41.54%	30 23.08%	28 21.54%	10 7.69%	3.17	0.62	High
19 Online tests are less stressful than classroom tests	31 23.85%	69 53.08%	14 10.77%	16 12.31%	0 0.00%	3.88	0.88	High
20 Marking / evaluation is more accurate because computers don't suffer from human error	34 26.15%	74 56.92%	16 12.31%	3 2.31%	3 2.31%	4.02	0.97	High
21 Network issues are a matter of serious concern in the conduct of online tests	94 72.31%	29 22.31%	5 3.85%	2 1.54%	0 0.00%	4.65	0.31	High
22 Good IT skills will help me do online exams easier and faster	45 34.62%	63 48.46%	12 9.23%	9 6.92%	1 0.77%	4.09	0.94	High

Total score=411.59, Grand mean=3.17, Standard deviation=0.65  
SA=Strongly Agree, A=Agree, N=Neutral,  
D=Disagree, SD=Strongly Disagree

Table 2 demonstrates how MBBS students perceived about online assessment tests during COVID-19 pandemic lockdown period. The overall mean and standard deviation for perception of online assessment tests were 3.17 and 0.65 respectively. The level of perception towards online assessment tests was recorded using grand mean of overall perception related statement as per previous study.<sup>3</sup> When an individual's mean is greater than or equal to the grand mean (3.17), the perception of online assessment tests is rated as high, and poor in the opposite situation. Seven questionnaire statements have low level perception, while the mean scores for responses to 15 questionnaire statements are almost close to high perception.

## DISCUSSION

Online assessment tests were conducted even in the pre-COVID-19 times and were found to be well received by the students.<sup>4</sup> This study was done to assess the basic science MBBS students' perceptions towards online assessment MCQ tests conducted during COVID-19 lock down period. The students have low level perception towards seven questionnaire statements (2, 4, 5, 7, 14, 15, and 17), and high level perception towards the rest of 15 questionnaire statements (Table 2). The findings show that despite feeling underperforming on seven of the components, students were happy with other components of online assessment.

In the present study, majority of students felt that internet connectivity issues were a matter of concern in conducting online assessment tests. Studies by Snekalatha S et al,<sup>5</sup> Fathima et al,<sup>6</sup> Kumar LR et al,<sup>7</sup> Maharjan BR et al,<sup>8</sup> and Reddy KR<sup>9</sup> have also reported similar issues which is in agreement with our study. Majority of students agreed that IT skills helped them to do online assessment tests easier and faster, but lack of information communication and technology (ICT) skill did not affect their performance in online tests. These findings are similar to the findings by Maharjan BR et al,<sup>8</sup> Ranganath R et al,<sup>10</sup> and Abdelrahman KM et al<sup>11</sup>.

In this study, most of the students appreciated the feasibility and quickness of feed back in the

online assessment tests, and the feedback had motivated them to study and helped them in learning process. This was in concurrence with the study conducted by Snekalatha S et al,<sup>5</sup> Maharjan BR et al,<sup>8</sup> Nigam B et al,<sup>12</sup> and Jana I et al.<sup>13</sup> Majority of students felt that copying and malpractice, and cheating in online tests is easier than regular examinations, which is in agreement to the findings made by Gopalakrishnan S et al,<sup>2</sup> Snekalatha S et al,<sup>5</sup> Maharjan BR et al,<sup>8</sup> Aisyah S et al,<sup>14</sup> and Mellar H et al.<sup>15</sup>

In our study, most of the students felt that online assessment tests are as reliable as classroom tests, but home environment was more distracting than the class room and was considered not suitable for taking online tests. Our findings were consistent with the results of Gopalakrishnan S et al,<sup>2</sup> Snekalatha S et al,<sup>5</sup> and Iftikhar S et al.<sup>16</sup> In this study, most of the students felt that it is easier to score marks, which is in agreement with the findings by Ranganath R et al,<sup>10</sup> Iftikhar S et al.<sup>16</sup> Aisyah S et al<sup>14</sup> reported in her study that 95% of the students could not do online test in the stipulated time, which is in correlation with our findings.

## CONCLUSION

The study concludes that online assessment MCQ tests were well received by basic science MBBS students, and appreciated the usefulness in enhancing student learning by allowing immediate feedback, with several practical challenges such as internet connectivity issues, unconducive environment at home, and cheating. Online assessment tests should be conducted in medical colleges on a regular basis, with strict monitoring, to make it more reliable.

## LIMITATIONS OF THE STUDY

The study is confined to only MBBS students of basic sciences and one medical college only.

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**Conflict of interest:** None

**Ethical approval:** Yes



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