

## Original Article

**Medical students' perception of online assessment at a private medical college**Sundus Iftikhar<sup>1</sup>, Khalid Mahmood Cheema<sup>2</sup>,<sup>1</sup> Senior Demonstrator, Department of Medical Education Shalamar Medical and Dental College<sup>2</sup> Deputy Director Medical Education, Shalamar Medical and Dental College**ABSTRACT**

**Introduction:** During COVID-19 lockdown, Shalamar Medical College opted for an unproctored online formative assessment. Medical institutes have conducted online assessments before COVID-19 and literature presents contrasting views on its acceptability by teachers and students alike.

**Objective:** This study aims to determine medical students' perception of the unproctored online assessments.

**Methods:** A survey questionnaire was disseminated through Google forms to all MBBS students of SMDC on WhatsApp. Consent to take part in the survey was added to the questionnaire and students consenting to be a part of the survey were requested to fill in the questionnaire. The questionnaire consisted of closed ended as well as open-ended questions. The data was analyzed by IBM SPSS 20.

**Results:** Network issues are believed to be a major issue in taking online tests (83%) and 45% of the students feel it is more difficult to take an online test. Fifty-eight percent of the students feel it is easy to cheat on online tests. A considerable number of students ( $P = 0.00$ ) believe that MCQs are more reliable than SEQs.

**Conclusion:** The results of this study showed that students do not consider online tests as reliable and effective as classroom tests because of network issues, and unconducive environment at home, limited time, and academic dishonesty. However, if they are unavoidable, students would be more receptive to MCQs than SEQs.

**KEYWORDS:** Reliability, cheating, effectiveness, online assessment.

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**INTRODUCTION**

COVID-19 had a huge impact on medical education and due to its unpredictability not much can be said about how long it will last or whether medical education will revert to pre-COVID 19 times or not (Ferrel & Ryan, 2020). Therefore, many medical colleges all over the world shifted to online mechanisms of teaching and learning (Anwar et al., 2021). Online teaching came with a lot of challenges including but not limited to network issues, internet availability, and the unwillingness of students and teachers to adopt the system (Iftikhar et al., 2021). Conducting online assessment posed many challenges since assessment plays a significant role in the learning of the students so the mode of assessment must be acceptable to all stakeholders (Piryani, Piryani, Piryani, Shankar, & Shakya, 2020). The first step toward shifting to online teaching and learning is to make sure that medical educators and students are well aware and trained in technology (Elzainy, El Sadik, & Al Abdulmonem, 2020).

Medical institutes have conducted online assessments before COVID-19 and literature presents disputed views on its

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acceptability by teachers and students alike (Walsh, 2015). Some experts claim that sudden conversion from face-to-face to online education will have adverse effects on education because educators as well as students, did not have ample time to make the transition gradually. Secondly, being stuck at home meant additional responsibility for other family members for example younger siblings who were also not attending school. While on the other hand it is also believed that COVID-19 would give a boost to online educational tools which otherwise would have taken many years (Rajab, Gazal, & Alkattan, 2020). Since assessment is an integral part of learning, different strategies were proposed to conduct an assessment in an online setting. Medical institutes referred to different guidelines available on the internet to explore different options and ways to conduct online assessments effectively in their setting (Rahim, 2020).

After weighing different options during the COVID-19 lockdown, Shalamar Medical and Dental College (SMDC) opted for an unproctored online formative assessment.

This study aims to determine medical students' perception of the unproctored online assessments to evaluate their understanding of the subject, its benefits in terms of the feedback they receive on their performance and practical issues in taking these tests. Online education will continue for a long period and medical colleges will resort to online assessment (Ferrel & Ryan, 2020).

Since the major stakeholders of online education are students so it is necessary to find out how they perceive online assessment and to take their suggestions on how to improve the system further. Therefore, the objective of the study was to analyze the perception of students regarding online assessment in SMDC and take their feedback to utilize the information to improve online assessment in SMDC.

### METHODS

Online assessment is being conducted in Shalamar Medical and Dental College (SMDC) through a learning management system Modular object-oriented dynamic learning environment (MOODLE). The assessment consists of MCQs and SEQs for all examining subjects of respective years from year 1 to year 5. The assessment is largely un-proctored. This means that the faculty cannot see the students attempting the assessment. However, the assessment is timed strictly, and copy-paste option has been disabled in Moodle.

After receiving approval from the IRB, a survey questionnaire was disseminated as Google forms to all MBBS students of SMDC on their class WhatsApp groups which have been made to share information regarding online classes with the students (See appendix for questionnaire). The students who had taken at least one or more than one online assessment on Moodle were included in the study. The students who had not taken any test in an online setting were excluded from the study. The questionnaire was applicable in a previous study and permission to re-use the questionnaire was sought from the corresponding author before planning the study (Snekalatha et al., 2021). The questionnaire was used with slight modification in the questions inquiring about the feedback. Additional optional stating "I did not receive any feedback" was added below the other options. Consent to take part in the survey was added to the questionnaire and students consenting to be a part of the survey were requested to fill in the questionnaire.

The questionnaire consisted of closed-ended questions for quantitative analysis. Most of the items had a scale of 1 – 5 which ranged from "strongly disagree" to "strongly agree". The open-ended questions asked the respondents to give suggestions to improve the aspects of online assessments that they were dissatisfied with. The form did not contain any identifiable information about the participating students. The data was analyzed by IBM SPSS 20.

### Results

A total of 188 students were included in the study. The majority of the students, 72% (136) belonged to urban areas while 17% (32) and 10% (20) lived in semi-urban and rural areas respectively. Online classes were taken on personal laptops or computers by 66% (124) of the students while 32% (60) used mobile phones, and the remaining students

used tablets. Fifty-five percent of the students consider online tests important however only 20% and 30% of the students consider them effective and reliable respectively.

The majority of the students (70%) feel they are less stressed during online tests as compared to classroom tests. Network issues are believed to be a major issue in taking online tests (83%) and 45% of the students feel it is practically more difficult to take an online test. Nearly half of the respondents (53.4%) also felt that the home environment was more distracting to take an online test. Table I shows the responses of students related to cheating, reliability, and stress during online tests.

**Table I Responses of students to questions related to malpractice (cheating), stress, and reliability.**

Item	Strongly Agree %	Agree %	Neutral %	Disagree %	Strongly Disagree %	P - value
Easy to do malpractice in online tests than in classroom tests	25.5	31.9	21.3	12.8	8.5	0.03
It does not matter if there is any malpractice when the online test is conducted unmonitored for internal assessment	6.4	14.9	34.0	29.8	14.9	
Online tests are less stressful than classroom tests	23.4	46.8	10.6	8.5	10.6	0.03
Online assessment is as reliable in the assessment of knowledge as classroom assessment	17	12.8	14.9	38.3	17	

### MCQs and SEQs

Most of the students (68%) believe that feedback is received faster when MCQs are taken online while 53% believe that feedback they received for online SEQs was adequate. Adhering to the time limit was considered an issue for both MCQs and SEQs in online formats (64 – 66%). Table II shows the responses of students related to stress and the reliability of the two assessment strategies. For purpose of statistical analysis "agree" and "strongly agree" were combined as well as "disagree and strongly disagree"

**Table II Responses of students to questions related to cheating and reliability of online tests.**

Item	Strongly Agree %	Agree %	Neutral %	Disagree %	Strongly Disagree %	P - value
MCQ test is reliable in the assessment of knowledge when used online	19.1	40.4	25.5	12.8	2.1	0.00
SEQ test is reliable in the assessment of knowledge when used online	17	27.7	27.7	23.4	4.3	
Malpractice is difficult in MCQ type of online assessment	10.6	19.1	31.9	23.4	14.9	0.00
There is more scope for doing malpractice when doing theory tests unmonitored online	19.1	40.4	21.3	12.8	6.4	

The students thought that high stake exams like send-ups should not be taken online format as the professional exam conducted by the university will be face-to-face so the sendups should follow a similar strategy to better prepare the students. However, they understood that during these uncertain times, taking online exams may be the only option as one of the students' said "It will be better not to but if the circumstances don't allow physical assessments then this is always an option. Preference must always be given to physical tests to ensure maximum transparency".

The students had huge concerns about conducting the online SEQ (short essay question) exam, especially regarding the timings. They felt that more than a test of knowledge it is about the test of typing speed as one of the students' claimed ' No matter how short the time period may be, some students type fast and get through the test without preparing."

The students who were in favor of the online format of assessment explained that it is because taking assessments online gives them ample time to sleep and study in the comfort of their homes rather than in hostels.

### DISCUSSION

The University of Health Sciences conducts annual professional exams face-to-face while many medical colleges adopted a hybrid system for assessment whereby tests conducted for internal

assessment are conducted face-to-face in normal conditions and via online means during the lockdown. It is believed that it will take another half-decade or so to recover from COVID 19, hence medical education must take steps to adapt to the changes so that the learning of the students is not affected adversely (Rajab et al., 2020).

This study aimed at analyzing the perception of students regarding online assessment during the lockdown. The majority of the students belonged to urban areas while some of the students belonged to smaller cities and rural areas. Understandably, semi-urban and rural areas would face network issues, but it is worth noting that a huge proportion of students claimed that they faced network issues during tests. This issue has been observed worldwide, not only from students' perspectives but also from the faculty's perspective as well since large traffic often results in the system crashing down. To resolve the issue from the faculty's perspective, it has been suggested that medical institutes invest in reliable software. To resolve the issues from the students' perspective, it has been recommended that the administration should come up with ways to provide the necessary resources and assistance to students for the smooth running of online academic activities (Jiang et al., 2021).

Although the students considered these tests to be important they feel that they are not as effective and reliable as classroom tests. The author feels that this could be because the students find it practically difficult to take the tests in a home environment. Literature reveals that even during normal conditions moving large classes to online modalities poses great challenges and Covid-19 is far from the normal condition. The home environment is always not suitable for students as some might need to balance other responsibilities as well when attending classes or taking the assessment online. Therefore, these aspects need to be considered when taking the online assessment (Hornsby, 2020).

The significant difference between responses to questions related to cheating shows that students believe that the tendency to resort to cheating is rife even in low stake assessment. This coincided with the results of a previous study (Snekalatha et al., 2021). This is also evident from a study in which the students taking proctored exams scored significantly less than the scores they obtained when they were monitored.(Dendir & Maxwell, 2020). Regarding the two assessment strategies, the students felt that cheating is easily possible in MCQs as well SEQs. Although the students perceive online assessment to be less reliable than classroom tests between MCQ and SEQ, MCQs were considered more reliable by a significant number of students. MCQ assessment has been recommended in the literature for the assessment of low and high-order cognitive thinking skills via an online medium (Khan & Jawaid, 2020). To reduce the risk of

cheating during the SEQ test, it is recommended that proctoring through multiple cameras should be carried out. However it should be considered that proctoring a large group of 150 students is a challenge. It is important to evaluate the feasibility and preparedness of the students before this type of proctoring is initiated. The evaluation must consider the background of the students, the readiness of the faculty as well as the students, and the cheating practices (Tuah & Naing, 2021).

The students were more receptive to MCQs than SEQs because they felt that it was easier to cheat in SEQs and the limited time provided tested their typing speed instead of their knowledge. Although the students were dissatisfied with the online assessment, they are well aware that lockdown may be unavoidable in the future, and in such circumstances, online tests will be the only option. If another situation like this occurs, the students would be willing to take MCQs and not SEQs because of the innumerable issues that arise. However, cheating seems unavoidable without proper proctoring. Khan et al. suggest other assessment modalities for asynchronous assessment such as assignments and assessment portfolios, while synchronous assessment viva or open-book exam can overcome some of the shortcomings of online assessment (Khan & Jawaid, 2020).

#### CONCLUSION

The results of this study showed that students do not consider online tests as reliable and effective as classroom tests because of network issues, and unconducive environment at home, limited time, and potential for academic dishonesty. However, they are more receptive to MCQs rather than SEQs. To address these issues, following steps should be taken; training of stakeholders, infrastructure development, effective monitoring mechanisms and appropriate time to complete tests

#### DECLARATION

The author report no declaration of interest.

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