

Original Article

Self-Admitted Dishonesty and use of Academic Survival tools by Medical undergraduate students for Completion of Online assessment during COVID-19 Pandemic

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ABSTRACT

Background: The rising dependence on online assessment has sparked discussions over whether this mode of performance evaluation poses greater hazards to academic integrity than on-site exams, because students allegedly have more opportunity to cheat. The present study aimed to explore undergraduate medical student's perspective and self-reported experiences regarding online assessment during the COVID 19 pandemic.

Material & Method: The present cross-sectional questionnaire-based study was conducted at MNR Medical College & Hospital, among the undergraduate medical students who provided informed consent to participate.

All the MBBS undergraduate students were selected for the study. Students who did not provide consent were excluded. A pre-designed questionnaire was prepared, and pilot testing was done on 20 volunteer students.

After validating the questionnaire, it was distributed to all students using Google forms via WhatsApp, email and QR code were displayed in notice boards. **Results:** Total of 378 students responded to the questionnaire with mean age of 21.1 ± 1.6 yrs and 69.8% were female and 30.2% male students. 74.6% students reported using external resources to assist them during online examinations. Among the study materials, 55.6% used textbooks, 47.6% used google search. Students perceived that the ease of accessing external resource during online examination reduced their learning (65.1%) and made subsequent offline university examination more difficult (76.2%).

Conclusion: The students reported of high rate of use of assistance during the online mode of examination during the lockdown. Students perceived that limited monitoring during online examinations facilitated greater use of external resources.

Keyword: Academic Integrity, COVID-19, Dishonesty, Undergraduate Medical Students

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INTRODUCTION

Academic dishonesty is defined as the purposeful violation of academic regulations for personal advantage (for example, lying, plagiarism, and falsifications). A complex model of academic dishonesty best reflects such a description. Academic dishonesty, on the other hand, can be characterized more strictly in terms of individual clear-cut behaviors such as exam cheating.^{1,2} Academic dishonesty in general, and test cheating in particular, are extremely common in higher education institutions.^{3,4} The COVID-19 pandemic compelled many higher education institutions throughout the world to implement innovative methods of teaching and assessment in order to reduce risks for teachers and students. The rising dependence on online assessment, in particular, has sparked discussions over whether this mode of performance evaluation poses greater hazards to academic integrity than on-site exams, because students allegedly have more opportunity to cheat.⁵⁻⁸

Academic cheating is generally defined as the act or attempt of taking advantage of academic output and education by undermining the value of integrity.⁹ While past research on academic dishonesty has been ambiguous on whether online testing encourages dishonest behavior,¹⁰ the widespread and abrupt change from on-site to online testing in the higher education sector in the aftermath of the pandemic marks an unprecedented occurrence. This large-scale transformation in performance evaluation posed a greater risk to academic integrity than prior minor advances towards digitization. Higher education practitioners were frequently pressed for time to prepare for the changeover.¹¹

From the students' point of view, the prospect of less accountability for cheating combined with difficulties preparing for the online exams (e.g., due to new family and community obligations emerging during COVID-19, unfamiliarity with new exam formats, or a lack of necessary self-regulated learning skills) may have increased the appeal to cheat in online exams.^{7,8}

Although emergency remote teaching has largely ended, online and hybrid assessments continue to be widely used in medical education. Limited evidence is available regarding students' self-reported use of external resources during online examinations in Indian medical colleges and how these experiences

may inform future assessment practices. Understanding these perceptions is important for designing fair, valid and secure online assessment systems. There is a paucity of literature regarding students' perceptions on breach during online exams with use of external resources during online examinations. Therefore, the present study aimed to evaluate undergraduate medical students' self-reported experiences with online assessments and their use of external resources during the COVID-19 pandemic.

MATERIAL AND METHOD

The present cross-sectional questionnaire-based study was conducted at MNR Medical College & Hospital, among the medical undergraduate students who consented to be part of study (December 2021 to February 2022). All the MBBS undergraduate students were selected for the study. Any student not willing to be part of study were excluded from the study. The convenience sampling was employed and the questionnaire distributed to 400 undergraduate medical students. The ethical approval was obtained from the institutional ethics committee (IEC/MNRMCH/2021/8/024) before commencement of the study.

The questionnaire was developed after literature review, reviewed by three experts in medical education for content validity and pilot tested among 20 undergraduate students. Based on feedback from the pilot study, minor modifications were made before final administration. It was shared with all the students in form of google form via WhatsApp, email and QR code was displayed in notice boards. The informed electronic consent was obtained from all the participants before questionnaire completion, and students were informed that they could decline participation or withdraw at any stage without any academic consequence. To maintain confidentiality, the questionnaire was completed anonymously using Google forms and no personally identifiable information was collected. The collected data was stored securely and analyzed in aggregate. Also, to minimize the potential power imbalance, undergraduate students were informed beforehand that participation or non-participation would not influence their relationship with faculty or academic assessment. Also, it was ensured that the response remained inaccessible to the other teaching faculty or department staff.

The Self-reported use of external resources was defined as use of books, internet search engines, mobile phones or assistance from peers while attempting online examinations.

Statistical analysis: The data were entered in Microsoft excel. The data were presented using tables, figures and bar diagrams. The data were summarized as frequency and percentage. All statistical analysis were performed using SPSS v21 operating on Windows 10.

RESULTS

Total of 378 students responded to the questionnaire submitted to them (response rate $378/400 = 94.5\%$), with mean age of 21.1 ± 1.6 yrs. Among the students, 69.8% were female and 30.2% were male students with female predominance. Responding to question, year of MBBS during COVID-19 lockdown (2020-2021) 54% students were in 1st MBBS, 23.8% in final

MBBS, 14.3% in second MBBS and 7.9% were in third MBBS.

Majority of the students attended online examinations conducted during the lockdown (95.2%), 52.4% of students responded that they found online exams were easier than the offline exams and 74.6% students have taken the help of material for assisting to complete the examinations on online mode. Among the study materials, 55.6% used the help of books, 47.6% with google search, followed by using other source on phone and 15.9% from the friends completed assessment answer sheets shared via WhatsApp and Telegram. Also, students responded that due to such conducive and benefit to cheating they did not learn the subject properly (65.1%) and when they appeared the offline university found it as difficult to complete in 76.2% students because of such conducive unmonitored exam at home during pandemic period.

Table 1: Showing the response to questionnaire by participants (n=378)

Factor	Response	Frequency	Percent
Gender	Male	114	30.2
	Female	264	69.8
Year of MBBS during 2020-2021	1 st MBBS	204	54.0
	2 nd MBBS	54	14.3
	3 rd MBBS	30	7.9
	4 th MBBS	90	23.8
Have you gone through the online assessment exams	Yes	360	95.2
	No	18	4.8
Did you find it easier than the offline exams	Yes	198	52.4
	No	180	47.6
Did you take any help of the material for assisting to complete the exam	Yes	282	74.6
	No	96	25.4
Assisting material used during examination (multiple response permitted)	Nil	96	25.4
	Books	210	55.6
	Google search	180	47.6
	Friends	60	15.9
	Phone	132	34.9
Did you feel, because of such benefit you did not learn properly subject	Yes	246	65.1
	No	132	34.9
Did you find difficulty in offline university because of such conducive unmonitored exam at home during pandemic period.	Yes	288	76.2
	No	90	23.8

DISCUSSION

The COVID-19 outbreak caused significant

interruption in teaching in higher education institutions throughout the world. University teachers needed quick replies and frequently switched from on-site to online instruction in a couple of days.^{12,13} This meant

that higher education practitioners were completely engaged with creating virtual learning environments, experimenting with new technologies, and looking for new methods to interact with their students, which was frequently viewed as a taxing experience.¹⁴

In present study, 74.6% students have taken the help of material for assisting to complete the examinations on online mode. Among the study materials, 55.6% used the help of books, 47.6% with google search, followed by using other source on phone and 15.9% from the friends completed assessment answer sheets shared via WhatsApp and Telegram. In study by Pongchaikul P et al., based on anonymous undisclosed confessions submitted to the head of the preclinical academic unit, the prevalence of cheating in the exams of this study was 13.7% (28 out of 204). Only 15 examinee self-confessed prior to the announcement of the cheating suspicion.⁹ Dar UF et al., research performed among medical students in Pakistan indicated that test cheating may be done using different strategies, including sharing answers with others on mobile during examinations, giving information to others, and bringing illegal materials into the exam.¹⁵

Most higher education institutions including medical education system lack expertise, equipment, or clear standards for using proctoring in online tests at present time.¹⁶ Closing this gap in testing methods might therefore be a significant step forward for higher education institutions all around the world, as online tests are increasingly being employed for performance evaluation, especially as the pandemic continues. Also, students responded that due to such conducive and benefit to cheat they did not learn the subject properly (65.1%) and when they appeared the offline university found it as difficult to complete in 76.2% students because of such conducive unmonitored exam at home during pandemic period. The global COVID-19 pandemic has created significant concerns to civilizations all over the world. The necessity for fast digitization of all life domains, including education, was one of these growing difficulties. According to our findings, the enforced pressure on the medical education system also puts a strain on academic integrity.¹⁷

Printed textbooks emerged as the most commonly used resource, followed by Google searches, indicating that students relied on readily available materials to complete assessments in a home-based environment.

While access to these resources may facilitate information retrieval, it may also reduce independent learning and long-term knowledge retention when examinations primarily assess factual recall. Students' perception that inadequate monitoring during online examinations enabled greater use of external resources highlights the need to strengthen assessment practices; however, these findings should be interpreted as participants' perceptions rather than objective evidence of academic misconduct. Instead of relying solely on remote invigilation, future online assessments should be redesigned to emphasize authentic evaluation of competency through open-book examination formats, case-based and scenario-based questions, and assessment of higher-order cognitive skills such as application, analysis, and clinical reasoning. The use of randomized question banks and individualized assessment formats may further minimize opportunities for inappropriate collaboration while improving examination validity. Moreover, with the rapid emergence of artificial intelligence (AI)-assisted tools in education, medical institutions should establish clear guidelines regarding their ethical use and develop assessment methods that evaluate students' ability to interpret, integrate, and apply knowledge rather than merely retrieve information. Such competency-based assessment strategies are likely to enhance academic integrity while promoting meaningful learning in the evolving landscape of medical education.

Strengths of the Study: This study included a relatively large sample of undergraduate medical students from all MBBS years, providing a broad representation of students' experiences. The use of an anonymous, pilot-tested questionnaire encouraged honest responses, and to our knowledge, this is one of the few studies from the region exploring students' experiences with online assessments during the COVID-19 pandemic.

Limitations of the Study: This is a single-center medical institutional study and relied on self-reported responses, making it prone to recall and reporting bias. Although the questionnaire was pilot-tested among 20 undergraduate medical students to improve its clarity and comprehensibility before the main survey, formal psychometric reliability testing (e.g., internal consistency or test-retest reliability) was not performed. Furthermore, the cross-sectional design precludes causal inferences, and the findings represent students' self-reported perceptions and behaviors rather

than objectively verified instances of academic dishonesty.

CONCLUSION

The present study demonstrated that a substantial proportion of undergraduate medical students reported using external resources during online assessments conducted during the COVID-19 pandemic. Students perceived that limited monitoring during online examinations facilitated greater use of external resources. These findings represent participants' perceptions and should not be interpreted as evidence of actual academic misconduct. Also, students feel that they found it difficult to complete the onsite university exams at end of academic year due to the pattern they got adopted during online exams. These findings highlight the importance of developing secure, learner-centered assessment strategies while preserving academic integrity in future online and hybrid educational settings.

DECLARATIONS

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REFERENCES

1. Bashir H, Bala R. Development and validation of academic dishonesty scale (ADS): Presenting a multidimensional scale. *Int J Instr*. 2018;11(2):57–74.
2. Davis SF, Grover CA, Becker AH, McGregor LN. Academic dishonesty: Prevalence, determinants, techniques, and punishments. *Teach Psychol*. 1992;19(1):16–20.
3. Yadav A, Kumar T, Nagababu P, Kumar R, Hussain M, Yadav Golla A, et al. Effect of Lecture-Based Education, Role-Playing and Learning through Peers on Learning and Satisfaction among MBBS Students. *J Med Educ Dev*. 2023;17(4):334–41.
4. Yadav A, Mala RD, Padmasree D, Yadav NKL, Yadav M, Anmol G. Real-Time Reflection by Gamification as Teaching-Learning-Assessment Tool in Competency-Based Medical Education. *Futur Med Educ J*. 2022;12(3).
5. Bilen E, Matros A. Online cheating amid COVID-19. *J Econ Behav Organ*. 2021;182:196–211.
6. Gamage KAA, Silva EK de, Gunawardhana N. Online delivery and assessment during COVID-19: Safeguarding academic integrity. *Educ Sci*. 2020;10(11):301–5.
7. Janke S, Rudert SC, Petersen A, Fritz TM, Daumiller M. Cheating in the wake of COVID-19: How dangerous is ad-hoc online testing for academic integrity? *Comput Educ Open*. 2021;2:100055.
8. Oducado RM. Faculty perception toward online education in a state college in the Philippines during the coronavirus disease 19 (COVID-19) pandemic. *Univers J Educ Res*. 2020;8(10):4736–42.
9. Pongchaikul P, Vivithanaporn P, Somboon N, Tantasiri J, Suwanlikit T, Sukkul A, et al. Remote Online-exam Dishonesty in Medical School during COVID-19 Pandemic: A Real-world Case with a Multi-method Approach. *J Acad Ethics*. 2025;23(3):1097–106.
10. Holden O, Kuhlmeier VA, Norris M. Academic integrity in online testing: a research review. 2020;
11. Clark TM, Callam CS, Paul NM, Stoltzfus MW, Turner D. Testing in the time of COVID-19: A sudden transition to unproctored online exams. *J Chem Educ*. 2020;97(9):3413–7.
12. Crawford J, Butler-Henderson K, Rudolph J, Malkawi B, Glowatz M, Burton R, et al. COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *J Appl Learn Teach*. 2020;3(1):1–20.
13. Marinoni G, Van't Land H, Jensen T. The impact of Covid-19 on higher education around the world. *IAU Glob Surv Rep*. 2020;23:1–17.
14. Daumiller M, Rinas R, Hein J, Janke S, Dickhäuser O, Dresel M. Shifting from face-to-face to online teaching during COVID-19: The role of university faculty achievement goals for attitudes towards this sudden change, and their relevance for burnout/engagement and student evaluations of teaching quality. *Comput Human Behav*. 2021;118:106677.
15. Dar UF, Khan YS. Self-reported academic misconduct among medical students: perception and prevalence. *Sci World J*. 2021;2021(1):5580797.
16. Butler-Henderson K, Crawford J. A systematic review of online examinations: A pedagogical innovation for scalable authentication and integrity. *Comput Educ*. 2020;159:104024.
17. Amankwah-Amoah J, Khan Z, Wood G, Knight G. COVID-19 and digitalization: The great acceleration. *J Bus Res*. 2021;136:602–11.