

## Correspondence

### Journal-reading practices among Indian undergraduate medical students

Early exploration of the primary literature is crucial in engaging students in an enquiry-based, self-directed learning that enhances critical thinking skills.<sup>1</sup> Journal-reading also helps students gain self-confidence, communication skills and develop an interest in medical innovations.<sup>2,3</sup> We aimed to establish the current journal-reading trends to identify areas of innovation in medical education pedagogy to promote and cultivate a habit of journal-reading among medical undergraduate students.

We did this cross-sectional study over a period of 3 months (June–August 2022) after approval from the institutional ethics committee. Participants were undergraduate medical students from various medical colleges in India. Informed consent was taken before recording their response. Snowball and purposive sampling techniques were used. A self-designed online eight-item questionnaire (open- and close-ended questions) was prepared in English and validated by two experts not related to the study. The Likert scale (1 to 5) was used to record their interests, difficulties in reading scientific literature, and their perceived importance of research articles on academic and scientific development.

The responses received on Google Forms were extracted and compiled in Microsoft Excel; percentages and frequencies were calculated for categorical variables.

A total of 141 undergraduate medical students (61 men, 43.2%) with a mean age (SD) of 20.23 (1.32) years responded. The year-wise distribution was 22 (15.6%) in the first year, 78 (55.3%) in second year, 19 (13.4%) in third year, 15 (10.6%) in final year, and 7 (4.9%) in internship, respectively. The majority, 107 (75.9%) students had no prior research experience, and 119 (84.4%) had no experience in writing a scientific article. Thirty-three (23%) students had never read a research article. Most students, 60 (42.2%) preferred an online view of the journal, 54 (38%) preferred the hardcopy format and 27 (19%) a mobile view.

Among the given specialties of journals, 196 (41.7%) responses indicated interest in basic sciences, laboratory research and genomics, 138 (29.3%) in technology and 136 (28.9%) in public health. The most commonly used medical data sources were Pubmed followed by Google Scholar (Table I). Figure 1 shows the reasons why the students did not read journals. The student's suggested approaches for journal-reading were (i) institutional access to journals; (ii) tutorials/journal club discussions; (iii) journal-reading workshops for students; (iv) appraising students about relevant articles after classroom teaching; and (v) appreciation/recognition to students who read journals.

We explored the journal-reading attitude and constraints of undergraduate medical students from different medical colleges in

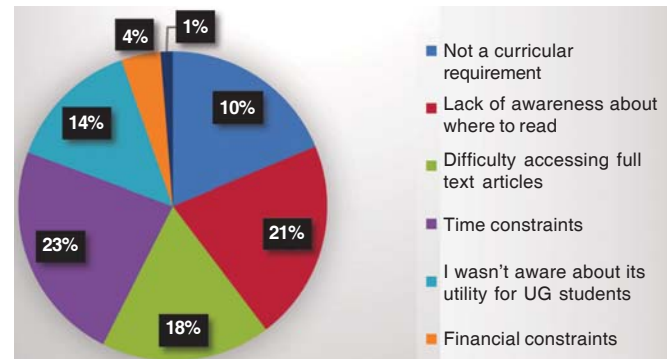


FIG 1. Limitations to journal reading

India. A few suggestions that emerged for improving journal-reading behaviour were improved institutional support, training workshops and journal club activities.

The heterogeneity of the respondents and small sample size was a perceived limitation. The earlier exposure to journals could have also been variable across different colleges. Most students in first and second year were not exposed to regular college or library facilities due to lockdown in preceding years, which could have resulted in poorer awareness of journals.

Most medical undergraduate students agreed that reading scientific papers invoked interest in the subject and helped them stay updated, similar to earlier studies.<sup>3,4</sup> Journal-reading was practised poorly and superficially by students in this study, similar to other studies.<sup>5</sup> Our study highlights the need to inculcate the culture of research and evidence-based medicine into medical education.<sup>6</sup> Focused journal club discussions and appraising students about articles relevant to their curriculum or interest (such as genomics, technology) may promote journal-reading habit, as suggested in earlier studies.<sup>6,7</sup>

To conclude, there was a felt need among undergraduate students to read scientific articles and participate in research. Faculty and institutions will be the key stakeholders to initiate these activities to help achieve attributes of self-directed learning and life-long learning in medical students.

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TABLE I. Perspectives of undergraduate students towards reading journals

Issue	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Invoke interest in the subject	4 (2.8)	5 (3.5)	17 (12)	89 (63.1)	25 (17.7)
Valuable addition to medical studies	3 (2.1)	5 (3.5)	17 (12)	92 (65.2)	24 (17)
Staying updated	2 (1.4)	1 (0.7)	15 (10.6)	89 (63.1)	32 (22.7)
Useful only for research purposes	26 (18.4)	69 (49)	34 (24.1)	11 (7.8)	1 (0.7)
Should be part of medical curriculum	1 (0.7)	5 (3.5)	24 (17)	71 (50.4)	40 (28.4)
Difficult and daunting process	2 (1.4)	26 (18.4)	51 (36.2)	54 (38.3)	8 (5.7)
Institution/faculty cultivates a research environment	18 (12.7)	34 (23.9)	48 (33.8)	36 (25.3)	5 (3.5)

Values in parentheses are percentages Likert scale scored from 1 to 5 as Strongly disagree to Strongly agree

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### Competency-based medical curriculum: Response

I read with interest the article by Aprajita *et al*.<sup>1</sup> The authors have comprehensively examined both the pedagogical and technical readiness of preclinical medical teachers, while also highlighting potential challenges.<sup>1</sup>

While the study specifically focused on faculty for the first-year MBBS, similar observations across all years of medical college have been noted in other studies.<sup>2–4</sup> The faculty–student disparity (vis-à-vis faculty strength in departments) and the need for infrastructure and technology enhancement emerged as major impediments to the effective implementation of competency-based medical education (CBME).

The revised infrastructure and technology requirements especially for small group teaching, audiovisual upgradation and internet linking of demonstration and practical halls with lecture halls, establishment of skills laboratory, etc. are evidence that CBME is a work in progress.<sup>5</sup> The recommendation to enhance teachers' knowledge and skills

through continuous faculty development programmes aligns with the vision and directives of the National Medical Commission and Graduate Medical Education Regulations for medical institutions.<sup>3–6</sup>

We are aware that educational reforms require time and patience and the role described for regional and institutional medical education units, curriculum committee, skills laboratories and technology departments cannot be emphasized enough for continuous professional development of educators.<sup>6</sup> Overcoming challenges such as limited human and information technology resources, cumbersome paperwork, and exhaustive workloads mentioned in various studies can be successfully addressed through integrated teaching approaches, use of digital resources, multimedia and the adoption of e-learning platforms, including technology integration via learner management systems and simulated learning.<sup>1–4</sup>

Acknowledging and accepting CBME, followed by continuous targeted training programmes and systemic support mechanisms, are imperative for each institution to ensure effective implementation.

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