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Student Feedback on the Foundation Course for Competency-Based Medical Education in India: A Mixed-Method Cross-Sectional Study

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Abstract:

Background: Medical education in India faces challenges in adequately preparing students for the demands of modern healthcare due to an emphasis on exam performance rather than holistic competencies. The Foundation Course (FC), a component of Competency-Based Medical Education (CBME), was introduced to address this gap.

Methods: This mixed-method cross-sectional study aimed to evaluate student feedback on the FC at Tomo Riba Institute of Health and Medical Sciences (TRIHMS) in Arunachal Pradesh.

Results: Quantitative analysis of feedback from 48 first-year MBBS students revealed positive perceptions of the FC's overall quality (66.7%) and its role as a foundation for further studies (87.4%). Faculty support was highly rated (91.7%), while teaching-learning methods elicited mixed responses, with 64.5% rating them good/excellent and 39.5% rating them average/below. Basic computer skills, AETCOM, yoga, and time management sessions were popular among students, in that order. The qualitative analysis highlighted the importance of sessions on basic computer skills, AETCOM (Attitude, Ethics, and Communication), time management, and mental health awareness. Conversely, hostel instructions were considered the least beneficial.

Conclusions: These findings underscore the necessity of aligning medical education with student needs and enhancing teaching methodologies. By incorporating student feedback, educators can optimize the FC to better prepare students for medical practice. Future research should explore larger study populations and integrate faculty perspectives to understand curriculum effectiveness comprehensively. Overall, this study contributes valuable insights into enhancing medical education in India to meet the evolving needs of students and the healthcare system.

Keywords: Medical education, Foundation Course (FC), Competency-Based Medical Education (CBME), Student feedback, Teaching-learning methods (TLM)

Introduction: Medical education has significantly transformed into a burgeoning field where diverse innovative approaches are actively explored and integrated. Medical education entails extensive altruistic training, characterized by diverse human interactions and interpersonal dynamics across various hospital environments. However, the current method of selecting students for medical colleges in India relies solely on their performance in competitive entrance examinations, [1] overlooking the importance of other influencing areas like communications, mental and physical health, fluency in English which is the medium of instruction, computer skills, time management, and adaptability to a new environment amongst others. This renders failure of a smooth transition from school to a professional course. To address these needs the Foundation Course (FC), the cornerstone of Competency-Based Medical Education (CBME), was initiated during the first year of MBBS. [2] It aims to familiarize, alleviate concerns, and prepare newcomers for advanced studies through adult learning methodologies. The National Medical Council (NMC) or the erstwhile Medical Council of India (MCI) has provided guidelines for the standardized execution of FC nationwide. It encompasses an overview of the curriculum, the prevailing national health landscape, demographic trends, medical ethics, communication skills, and various learning methodologies. It also addresses time management, motivational skills, the societal role of doctors and Indian Medical Graduates (IMGs), [3] teamwork in healthcare settings, biohazard safety, peer and faculty interactions, computer literacy, multilingualism, and holistic well-being through sports, yoga, and meditation. Additionally, it introduces the fundamental subjects of Phase I MBBS. [4] This comprehensive orientation and sensitization to these diverse topics span the initial period of the MBBS program, ensuring students' immersion into the medical field from the outset. While considering the resources at our disposal, like other medical institutes our institute too devised an implementation plan and timetable for FC following the NMC/MCI directives.

Feedback allows for ongoing evaluation and refinement of the FC curriculum and its delivery methods. Soliciting feedback enhances engagement and satisfaction, promotes transparency and accountability within the medical education system, identification of blind spots. Feedback helps ensure that the FC remains relevant and responsive to the changing needs of students, enabling it to better meet their expectations and prepare them for the challenges of medical practice. Hence, this study aimed to evaluate student feedback regarding the foundation course, to implement any necessary improvements.

Material and methods:

2.1 Study Design

This mixed-method cross-sectional study focused on gathering feedback from first-year medical students regarding the orientation program.

2.2. Study setting

The present study was conducted at Tomo Riba Institute of Health and Medical Sciences (TRIHMS), the maiden medical college of the north-eastern state of Arunachal Pradesh.

2.3. Study duration

The present study was conducted for a duration of 6 months from October 2023 to March 2024.

2.4. Study population

The study population included first-year MBBS students who joined TRIHMS in September 2023.

2.5. Inclusion and Exclusion criteria

All MBBS students who took admission in September 2023 were recruited in the study while those who did not consent or were unavailable were excluded from the study.

2.6 Study Tool

A pre-designed, semi-structured self-administered feedback form consisting of 10 items was used to collect data online (google form). It comprised of the following components:

1. Instructions for completing the questionnaire. All items were mandatory to be answered;
2. A closed-ended inquiry assessing the overall course experience, rated on a five-point Likert Scale;
3. Closed-ended queries eliciting opinions on the significance of specific modules and their respective topics, also rated on a five-point Likert scale;
4. Open-ended prompts inviting participants to share their perspectives on the course, faculties, teaching methods, and feedback.

2.7 Ethical issues

Written informed consent was taken. Anonymity was maintained.

3. Results

Quantitative part: Out of 50 students in the 2023-2024 batch, 48 students participated in the present study.

1. **Quality of the FC:** Most of the students considered the overall quality of the FC to be good or excellent (66.7%). (Table. 1)
2. **Foundation for Further MBBS Program:** Considered as a strong foundation by a significant proportion (87.4%). (Table. 1)
3. **Faculty Support:** Most students perceived good support from faculties (91.7%). (Table. 1)
4. **Teaching Learning Methods:** Around 64.5% considered Teaching Learning Methods to be either good or excellent. However, a variability in perception was observed and, a notable portion rated it as average or below (39.5%). (Table. 1)
5. **Popular Sessions:** Basic Computer Skills (70.8%), AETCOM (50%), Yoga (35.4%), and Time Management (18.8%) (multiple responses) (Fig 1)
6. **Reasons why some sessions were preferred over others:** needful & relevant (89.6%), students perceived some sessions important for a doctor (22.9%), interesting (22.9%) amongst other reasons. (multiple responses) (Fig 2)

Qualitative part:

1. Most beneficial sessions:

- a. **Basic computer skills:** A session on basic computer skills was considered beneficial by students. Most of the students found it very relevant and interesting. It was seen as very helpful in coping with the demanding workload of medical education. Highly relevant and interesting to most students. One of the students said, *“It helped us to learn fundamentals of computer such as making PPT slides, spreadsheets, etc.”*. Another student added, *“...it tells about the need of today's doctor to learn to use basic technological needs. This topic also covers the new technologies being developed in the medical field which will be beneficial to both doctors and patients.”*
- b. **AETCOM Classes (Attitude, Ethics, and Communication):** Some students found AETCOM classes to be important for teaching communication skills and maintaining doctor-patient relationships and, as one student, *“It taught us how to communicate with patients which is very needful in this profession. It taught us how to maintain the doctor-patient relationship.”*

- c. **Time Management Classes:** Students perceived this session as essential for balancing personal responsibilities and extracurricular activities. They reflected that soon they will get a rigorous workload with numerous classes, labs, assignments, clinical rotations, and exams. Proper time management will help them allocate sufficient time for each task without feeling overwhelmed.
 - d. **Mental Health and Anti-Ragging Sessions:** It was deemed helpful and necessary by students. As one student put it, *“It gave us reassurance that we will be safe and can approach if we feel otherwise.”*
2. **Least Beneficial Topic:** The session on hostel Instructions was considered to be least beneficial by most students. Students felt they were already familiar and said, *“Hostel rules were read and learned by us before the instructions class.”*

Discussion: The findings of the present study offer a compelling glimpse into the perceptions of medical students concerning the foundation course, shedding light on crucial aspects that shape their educational journey. In the vast landscape of medical education, understanding how students perceive and engage with foundation course is paramount for designing effective curricula that meet their needs and aspirations. Throughout the scholarly discourse, numerous investigations have delved into medical students' perspectives on various facets of their academic journey, including the foundation course. Across these studies, a recurring theme emerges: students highly value courses that equip them with practical skills essential for their future roles as healthcare professionals. The results of various other studies reflected that the students deemed FC as important and relevant. [5,6] In the present study too, the majority of students viewed the foundation course positively, considering it either good or excellent. This aligns with the broader literature indicating that students often appreciate well-structured and comprehensive foundational programs, which lay the groundwork for further learning in their medical studies. [7] Indeed, the FC serves as a cornerstone upon which students build their knowledge and skills, setting the tone for their entire academic journey.

However, amidst the commendations, our study reveals a nuanced landscape of perceptions regarding teaching and learning methods employed within the foundational course. While a significant portion of students rated these methods positively, a notable percentage expressed more reserved sentiments, finding them average or below. This observation underscores the importance of employing diverse instructional approaches to accommodate the varied learning preferences among students. Herein lies a crucial insight: the effectiveness of medical education hinges on the ability to cater to the multifaceted needs of learners through the

integration of diverse teaching-learning methods (TLMs). By embracing a spectrum of instructional methods, educators can enhance student engagement and comprehension, thereby fostering a more enriching and effective learning environment. [8]

Basic computer skills, AETCOM, yoga, and time management emerged as popular sessions among students. This echoes the significance of integrating holistic wellness and practical skills development into medical curricula to foster well-rounded professionals capable of managing the demands of modern healthcare. [9] Students valued sessions on basic computer skills, recognizing their importance in modern medical practice. This finding resonates with the growing emphasis on digital literacy and technology integration in healthcare education and delivery. [10] Students highlighted the significance of communication skills training (AETCOM), emphasizing its relevance for building effective doctor-patient relationships. This aligns with established literature stressing the pivotal role of communication skills in clinical practice and patient outcomes. [11] Students appreciated time management classes, recognizing their value in coping with the demanding workload of medical education. This finding is consistent with research emphasizing the importance of time management skills in mitigating stress and enhancing academic performance among medical students. [12] The class on hostel instructions was perceived as least beneficial by students, indicating the importance of optimizing curriculum content to align with student needs and prior knowledge. [13] Doing such will maximize the educational value of the foundation course.

Conclusion: In conclusion, while the findings of the present study align with broader trends observed in medical education research globally, it is essential to consider the unique context of medical education in India. By addressing the specific needs and challenges faced by Indian medical students, educators can tailor the foundation course to better prepare students for their future roles as healthcare professionals. The study emphasizes on the importance of student-centered approaches and the holistic development of future healthcare professionals. By heeding these insights, educators can refine and innovate their curricula, nurturing a new generation of competent and compassionate medical practitioners poised to meet the challenges of tomorrow's healthcare landscape. However, future studies can increase the generalizability by involving multiple medical colleges. Additionally, valuable insights from both faculty members and students by conducting in-depth interviews (IDIs) and focus group discussions (FGDs) can be integrated. These sessions will serve to delve deeply into their perspectives, allowing for a more nuanced understanding of their perceptions.

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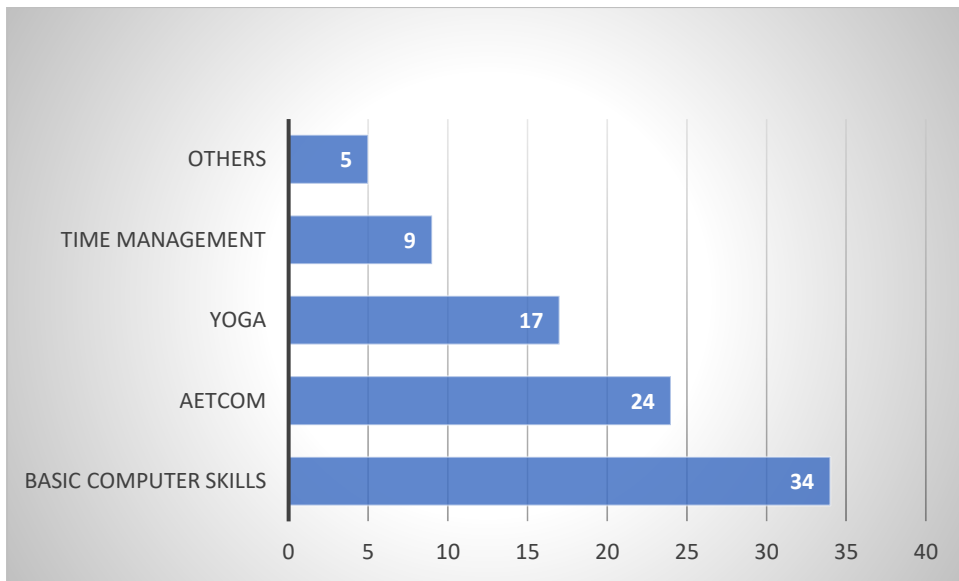
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Tables:**Table 1: Students' perception of the foundation course**

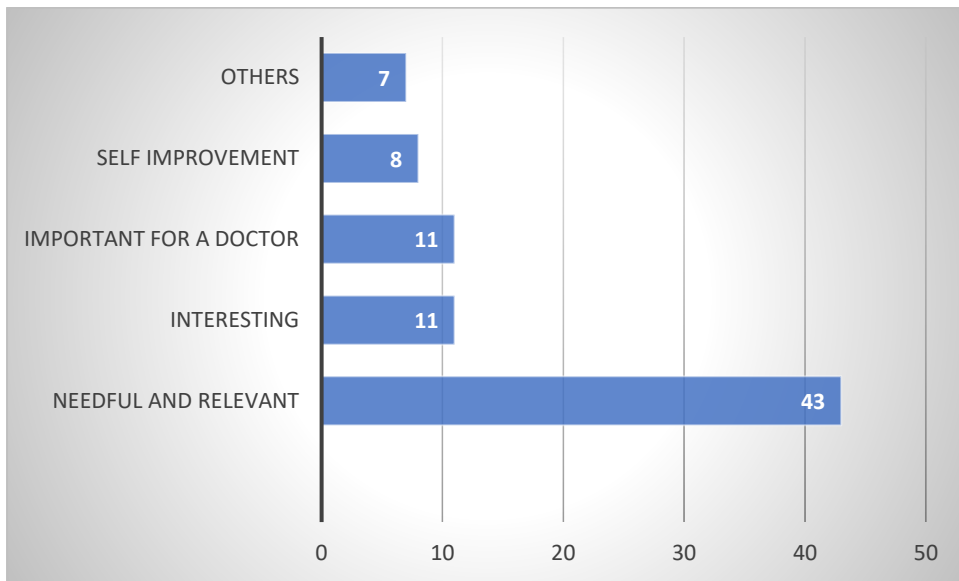
Student's perspectives	Likert scale grading				
	Excellent	Good	Average	Dissatisfactory	Very Dissatisfactory
Overall quality of the foundation course	7 (14.6%)	25 (52.1%)	14 (29.2%)	2 (4.2%)	1 (2.1%)
Foundation for further MBBS program	19 (39.6%)	23 (47.8%)	1 (2.2%)	5 (10.4%)	0 (0%)
Support and guidance provided by faculties	20 (41.7%)	24 (50%)	4 (8.3%)	0 (0%)	0 (0%)
Teaching Learning Methods	5 (10.3%)	26 (54.2%)	16 (33.3%)	3 (6.2%)	0 (0%)
Expectations met	19 (39.6%)	25 (52.1%)	(0%)	3 (6.2%)	1 (2.2%)

Fig.1: Chart showing popular sessions



**Multiple responses*

Fig. 2: Chart showing reasons why some sessions were more popular



**Multiple responses*