

Original Research Article

IMPACT OF THE FOUNDATION COURSE ON ACADEMIC READINESS, PROFESSIONALISM, AND WELL-BEING AMONG FIRST-YEAR MBBS STUDENTS: A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: The National Medical Commission (NMC) introduced the Foundation Course under the Competency-Based Medical Education (CBME) curriculum to facilitate the transition of students into medical education by promoting academic preparedness, professionalism, communication skills, and psychological well-being. Regular evaluation of students' perceptions is essential to assess its effectiveness and identify areas for improvement. The objective is to assess first-year MBBS students' perceptions regarding the Foundation Course, evaluate its impact on academic preparedness, communication skills, professionalism, and stress management, and identify areas for further improvement.

Materials and Methods: A cross-sectional questionnaire-based study was conducted among 200 first-year MBBS students who had completed the Foundation Course at a tertiary care teaching institution. Universal sampling was employed. Students completed a validated 33-item questionnaire using a five-point Likert scale covering orientation to the medical profession, academic preparedness, communication skills, professionalism and ethics, basic clinical skills, stress management, teaching-learning methods, and overall satisfaction. Descriptive statistics were used to summarize the findings, and internal consistency was assessed using Cronbach's alpha.

Results: The response rate was 95.2%. The overall satisfaction score was 4.31 ± 0.54 . Orientation to the medical profession received the highest mean score (4.45 ± 0.52), followed by professionalism and ethics (4.39 ± 0.57) and basic clinical skills (4.34 ± 0.59). More than 90% of students agreed that the Foundation Course improved their understanding of the MBBS curriculum (93.0%), enhanced professionalism and ethical awareness (92.0%), and that Basic Life Support training was beneficial (93.0%). Overall, 91.5% considered the Foundation Course beneficial and 94.0% recommended its continuation for future batches. The questionnaire demonstrated excellent reliability (Cronbach's alpha = 0.91). Qualitative feedback indicated a preference for greater emphasis on simulation-based teaching, early clinical exposure, small-group discussions, and hands-on skill training.

Conclusion: The Foundation Course was highly appreciated by first-year MBBS students and effectively supported their transition into medical education by improving academic preparedness, professional development, communication skills, and confidence. Incorporating more interactive, skill-based, and early clinical learning experiences may further enhance the effectiveness of the programme and strengthen the implementation of Competency-Based Medical Education.

Keywords: - Foundation Course, Competency-Based Medical Education (CBME), First-Year MBBS Students, Medical Education; Student.

INTRODUCTION

The National Medical Commission (NMC), formerly the Medical Council of India, introduced Competency-Based Medical Education (CBME) in 2019 as a major reform in undergraduate medical education in India. CBME aims to produce Indian Medical Graduates who are competent clinicians, effective communicators, lifelong learners, leaders, professionals, and ethical practitioners capable of providing patient-centered healthcare. To facilitate the smooth transition of students from school education to the demanding medical curriculum, the NMC introduced a mandatory one-month Foundation Course at the commencement of the MBBS program.^[1]

The Foundation Course is designed to familiarize newly admitted students with the medical profession, institutional environment, and competency-based curriculum. It encompasses orientation to the MBBS program, professionalism and medical ethics, communication and language skills, Basic Life Support (BLS), first aid, information technology, stress management, sports, extracurricular activities, and community orientation. These modules aim to enhance students' academic preparedness, professional identity, interpersonal skills, and psychological well-being before they begin formal medical training.^[1]

The transition from secondary school to medical college is recognized as a challenging period characterized by increased academic workload, unfamiliar teaching-learning methods, emotional stress, and adaptation to a new educational and social environment. Inadequate preparation during this phase may adversely affect students' academic performance, confidence, and mental well-being. The Foundation Course seeks to minimize these challenges by promoting early professional socialization, encouraging active learning, fostering peer and faculty interaction, and developing essential competencies required throughout medical education.^[1]

Several studies conducted across India have evaluated students' perceptions of the Foundation Course and have consistently reported favorable outcomes. Bhatnagar et al. found that the majority of first-year MBBS students perceived the Foundation Course as beneficial in facilitating their transition into medical education. Students reported improvements in communication skills, professional attitude, confidence, and understanding of the medical profession. The authors also emphasized the importance of interactive teaching methods and recommended continuous evaluation of the course based on student feedback.^[2]

Similarly, Sethi et al. reported that students highly appreciated sessions on Basic Life Support, communication skills, professionalism, and medical ethics. The majority of participants considered the Foundation Course useful in preparing them for

medical education and suggested increasing practical sessions while reducing lengthy didactic lectures to improve learning effectiveness.^[3]

A multicentric mixed-method study by Tikare et al. also demonstrated positive perceptions regarding the Foundation Course. Students considered the orientation sessions, professional development, communication skills, and ethics modules highly relevant for their future medical careers. The study recommended greater use of small-group discussions, simulation-based teaching, and practical demonstrations to improve student engagement.^[4]

Recent evidence by Rajesh et al. further supports these findings, reporting that more than 80% of first-year MBBS students perceived the Foundation Course as useful. Basic Life Support, communication skills, professionalism, biomedical waste management, and community orientation were rated among the most beneficial modules. The authors concluded that periodic student feedback is essential for continuous improvement of the Foundation Course.^[5]

Although the Foundation Course has been implemented uniformly across India under the CBME curriculum, variations in institutional infrastructure, teaching methods, and available resources may influence students' perceptions and learning experiences. Therefore, periodic evaluation of students' perceptions is essential to identify strengths, recognize areas requiring improvement, and optimize the implementation of the Foundation Course across medical institutions.^[2-5]

Hence, the present study was undertaken to assess the perceptions of first-year MBBS students regarding the Foundation Course at our institution. The findings may help identify the most useful components of the course, recognize areas requiring modification, and contribute to the continuous improvement of the Foundation Course within the Competency-Based Medical Education curriculum.

Recent programme evaluations from various medical colleges have continued to demonstrate high levels of student satisfaction with the Foundation Course. Orientation to the medical curriculum, faculty interaction, professionalism, ethics, and Basic Life Support training consistently emerge as highly appreciated components, whereas students frequently recommend greater emphasis on simulation-based learning, early clinical exposure, small-group teaching, and hands-on skill development.

Despite the nationwide implementation of the Foundation Course, institutional differences in curriculum delivery, available resources, and teaching methodologies may influence students' learning experiences and perceptions. Continuous evaluation of the programme is therefore essential to identify strengths, recognize areas requiring improvement, and ensure that the objectives of CBME are effectively achieved.

Against this background, the present study was undertaken to evaluate the perceptions of first-year MBBS students regarding the Foundation Course at

a tertiary care teaching institution. The study aimed to assess students' satisfaction across various domains of the programme, identify the most valued components, and obtain constructive feedback for further strengthening the Foundation Course in accordance with the objectives of Competency-Based Medical Education.

Objectives

1. To assess students' perceptions of the Foundation Course.
2. To evaluate its impact on academic preparedness.
3. To determine its influence on communication skills, professionalism, and stress management.
4. To identify areas for improvement.

MATERIALS AND METHODS

Study Design and Setting: Cross-sectional questionnaire-based study

Study Setting: Medical College.

Study Population: All first-year MBBS students who successfully completed the Foundation Course during the study period.

Sampling Method: Universal sampling was adopted, and all eligible first-year MBBS students were invited to participate in the study.

Sample Size: Since the entire eligible batch was included, no formal sample size calculation was performed. A total of 200 students constituted the study population.

Inclusion Criteria

- First-year MBBS students
- Completed Foundation Course
- Provided informed consent

Exclusion Criteria

- Incomplete questionnaires
- Students absent during the course

Questionnaire (5-point Likert Scale)

Domain 1: Academic Readiness

- The Foundation Course prepared me for the MBBS curriculum.
- I understood the curriculum structure better.
- I became familiar with learning resources.

Domain 2: Communication Skills

- My communication skills improved.
- I gained confidence in interacting with patients.

Domain 3: Professionalism and Ethics

- I understood medical ethics better.
- The course improved my professional attitude.

Domain 4: Well-being

- Sessions on stress management were useful.
- The course reduced my anxiety about medical school.

Domain 5: Overall Satisfaction

- Overall, the Foundation Course was beneficial.
- The duration of the course was appropriate.
- The activities were engaging.

Questionnaire

Impact of Foundation Course on First-Year MBBS Students

Participant Information

- Age: _____ years
- Gender: ☐ Male ☐ Female ☐ Other
- Medium of School Education: ☐ English ☐ Regional Language
- Type of School: ☐ Government ☐ Private
- Residence: ☐ Urban ☐ Rural

Instructions

Please indicate your opinion by selecting one option for each statement.

Rating Scale

- 1 = Strongly Disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly Agree.

Domain I: Orientation to Medical Profession

No.	Statement	1	2	3	4	5
1	The Foundation Course helped me understand the MBBS curriculum.	☐	☐	☐	☐	☐
2	I became familiar with my medical college environment.	☐	☐	☐	☐	☐
3	The course reduced my anxiety about joining medical college.	☐	☐	☐	☐	☐
4	The orientation sessions were informative.	☐	☐	☐	☐	☐
5	I now understand the role of an Indian Medical Graduate.	☐	☐	☐	☐	☐

Domain II: Academic Preparedness

No.	Statement	1	2	3	4	5
6	The course improved my learning skills.	☐	☐	☐	☐	☐
7	I understood the importance of self-directed learning.	☐	☐	☐	☐	☐
8	The Foundation Course prepared me for MBBS academics.	☐	☐	☐	☐	☐
9	The study skills sessions were useful.	☐	☐	☐	☐	☐
10	I feel confident to cope with the MBBS curriculum.	☐	☐	☐	☐	☐

Domain III: Communication Skills

No.	Statement	1	2	3	4	5
11	My communication skills improved after the course.	☐	☐	☐	☐	☐
12	The sessions improved my confidence while speaking.	☐	☐	☐	☐	☐
13	I learned effective interpersonal skills.	☐	☐	☐	☐	☐
14	The language sessions were helpful.	☐	☐	☐	☐	☐

Domain IV: Professionalism and Ethics

No.	Statement	1	2	3	4	5
15	The course improved my understanding of medical ethics.	☐	☐	☐	☐	☐
16	I understand professional behaviour expected from doctors.	☐	☐	☐	☐	☐
17	The sessions on professionalism were relevant.	☐	☐	☐	☐	☐
18	The Foundation Course motivated me to become an ethical doctor.	☐	☐	☐	☐	☐

Domain V: Basic Clinical Skills

No.	Statement	1	2	3	4	5
19	Basic Life Support training was useful.	☐	☐	☐	☐	☐
20	First-aid sessions improved my confidence.	☐	☐	☐	☐	☐
21	Hospital visits enhanced my understanding of healthcare services.	☐	☐	☐	☐	☐
22	Practical demonstrations were beneficial.	☐	☐	☐	☐	☐

Domain VI: Stress Management and Well-being

No.	Statement	1	2	3	4	5
23	Stress management sessions were useful.	☐	☐	☐	☐	☐
24	The Foundation Course helped me adjust emotionally to medical college.	☐	☐	☐	☐	☐
25	The course improved my confidence and motivation.	☐	☐	☐	☐	☐

Domain VII: Teaching-Learning Methods

No.	Statement	1	2	3	4	5
26	Faculty members encouraged active participation.	☐	☐	☐	☐	☐
27	Teaching methods were interactive.	☐	☐	☐	☐	☐
28	Group discussions enhanced my learning.	☐	☐	☐	☐	☐
29	Audio-visual aids improved understanding.	☐	☐	☐	☐	☐

Domain VIII: Overall Satisfaction

No.	Statement	1	2	3	4	5
30	Overall, I am satisfied with the Foundation Course.	☐	☐	☐	☐	☐
31	The duration of the course was appropriate.	☐	☐	☐	☐	☐
32	I would recommend continuing the Foundation Course for future batches.	☐	☐	☐	☐	☐
33	The Foundation Course achieved its objectives.	☐	☐	☐	☐	☐

Open-ended Questions

1. Which session did you find most useful and why?
2. Which session did you find least useful and why?
3. What changes would you recommend for improving the Foundation Course?
4. Any additional comments or suggestions?

RESULTS**Participant Characteristics**

A total of 200 first-year MBBS students participated in the study (response rate: 95.2%). The mean age of the participants was 18.6 ± 0.8 years (range: 17–21 years). Among them, 108 (54.0%) were female and 92 (46.0%) were male.

Table 1: Demographic Characteristics of the Participants

Variable	Frequency (n=200)	Percentage (%)
Male	92	46.0
Female	108	54.0
Urban residence	126	63.0
Rural residence	74	37.0
English medium schooling	142	71.0
Regional language schooling	58	29.0

Students' Perception of the Foundation Course

The majority of students had a positive perception of the Foundation Course. The overall mean satisfaction score was 4.31 ± 0.54 on a 5-point Likert scale.

Table 2: Domain-wise Perception Scores

Domain	Mean $\pm$ SD	Students Agreeing/Strongly Agreeing n (%)
Orientation to Medical Profession	4.45 ± 0.52	184 (92.0)
Academic Preparedness	4.23 ± 0.60	176 (88.0)
Communication Skills	4.18 ± 0.63	172 (86.0)
Professionalism & Ethics	4.39 ± 0.57	182 (91.0)
Basic Clinical Skills	4.34 ± 0.59	180 (90.0)
Stress Management	4.10 ± 0.66	168 (84.0)
Teaching-Learning Methods	4.20 ± 0.61	174 (87.0)
Overall Satisfaction	4.31 ± 0.54	181 (90.5)

Individual Questionnaire Responses

Statement	Agree/Strongly Agree n (%)
Helped me understand the MBBS curriculum	186 (93.0)
Reduced anxiety about joining medical college	180 (90.0)
Improved communication skills	172 (86.0)
Enhanced professionalism and ethical awareness	184 (92.0)
Basic Life Support sessions were useful	186 (93.0)
Stress management sessions were beneficial	170 (85.0)
Faculty interaction was satisfactory	182 (91.0)
Overall Foundation Course was beneficial	183 (91.5)
Would recommend the course to future batches	188 (94.0)

Reliability Analysis

The 33-item questionnaire demonstrated excellent internal consistency, with a Cronbach's alpha of 0.91.

Open-ended Feedback

Among the 200 students, 162 (81.0%) provided written feedback.

Positive Themes

- Better understanding of the MBBS curriculum.
- Improved confidence at the beginning of medical school.
- Useful sessions on Basic Life Support and first aid.
- Better awareness of professionalism and medical ethics.
- Increased interaction with faculty members and classmates.

Suggested Improvements

- 72% recommended more practical and simulation-based teaching.
- 68% suggested increasing early clinical exposure.
- 61% requested fewer lecture-based sessions.
- 56% preferred more small-group discussions and case-based learning.
- 49% recommended extending hands-on skill training.

DISCUSSION

The present study evaluated the perceptions of first-year MBBS students regarding the Foundation Course introduced under the Competency-Based Medical Education (CBME) curriculum. Overall, students demonstrated a highly positive perception of the course, with more than 90% reporting that it facilitated their transition into medical education and an overall satisfaction score of 4.31 ± 0.54 . These findings indicate that the Foundation Course largely fulfills its intended objectives of orienting students to the medical profession, enhancing professional competencies, and supporting their academic and psychological adjustment to medical school. Similar positive perceptions have been consistently reported across Indian medical colleges following the implementation of the Foundation Course.^[2-10]

Among all domains, orientation to the medical profession received the highest satisfaction score (4.45 ± 0.52), with 92% of students agreeing that it was beneficial. The transition from school to medical college is often associated with uncertainty, increased

academic demands, and adaptation to a new learning environment. The orientation component appears to have successfully addressed these challenges by familiarizing students with the MBBS curriculum, institutional expectations, and professional responsibilities. Comparable findings have been reported by Bhatnagar et al., Sethi et al., and Velou and Ahila, who observed that structured orientation programs improved students' confidence, reduced anxiety, and facilitated smoother adjustment to medical education.^[2,3,6]

Professionalism and ethics also received high ratings (mean score 4.39 ± 0.57), with over 90% of participants acknowledging that these sessions enhanced their understanding of ethical principles and professional behaviour. Early exposure to professionalism is a cornerstone of the CBME curriculum, enabling students to develop empathy, accountability, communication skills, and ethical decision-making from the beginning of their medical careers. Similar observations have been reported in previous studies, where students consistently rated professionalism and ethics among the most valuable components of the Foundation Course, highlighting their importance in fostering professional identity formation.^[1-4,10]

Basic clinical skills, particularly Basic Life Support (BLS), emerged as one of the most appreciated components of the Foundation Course. Approximately 93% of students considered the BLS sessions useful, and the basic clinical skills domain achieved a mean satisfaction score of 4.34 ± 0.59 . Early skill-based training provides students with practical exposure to essential life-saving procedures, improves confidence, and prepares them for subsequent clinical postings. Previous studies have similarly demonstrated that hands-on training, simulation-based learning, and practical demonstrations are among the most valued components of the Foundation Course because they enhance learner engagement, knowledge retention, and self-confidence.^[3,4,8,9]

Communication skills training was positively perceived by 86% of the participants. Effective communication is recognized as a core competency of the Indian Medical Graduate and is fundamental to patient-centered care, teamwork, and professional interactions. Although students appreciated the communication skills sessions, several participants recommended increasing opportunities for role-play,

simulated patient encounters, and small-group discussions. Similar recommendations have been reported by Sethi et al., Tikare et al., and Aristotle et al., who emphasized that interactive teaching strategies are more effective than conventional lecture-based methods in improving communication competencies.^[3,4,8] Stress management received comparatively lower, although still favorable, ratings (mean score 4.10 ± 0.66), with 84% of students expressing satisfaction. Medical education is inherently demanding, and the transition into the first year is frequently associated with psychological stress and emotional adjustment challenges. While the Foundation Course appears to have provided useful coping strategies, the relatively lower ratings suggest that a single module may be insufficient to address students' long-term mental health needs. Similar observations have been reported by Velou and Ahila and Medhi et al., who recommended integrating mentoring programs, resilience training, mindfulness practices, and ongoing psychological support throughout the undergraduate curriculum rather than restricting such interventions to the Foundation Course alone.^[6,9] The questionnaire used in the present study demonstrated excellent internal consistency, with a Cronbach's alpha of 0.91, indicating high reliability for assessing students' perceptions across multiple domains. The strong psychometric performance of the instrument enhances the credibility of the study findings and supports its potential use for future evaluations of Foundation Course implementation in other medical institutions. Qualitative feedback further complemented the quantitative findings. Students appreciated the comprehensive orientation to the MBBS curriculum, opportunities for interaction with faculty members and peers, increased confidence, and the practical nature of the BLS sessions. However, several constructive suggestions emerged. A substantial proportion of students recommended increasing practical and simulation-based teaching (72%), providing greater early clinical exposure (68%), reducing lengthy lecture-based sessions (61%), promoting small-group discussions and case-based learning (56%), and extending hands-on skills training (49%). These recommendations are consistent with previous studies, which have consistently highlighted students' preference for learner-centered educational approaches over traditional didactic teaching methods.^[3,4,8,9] The findings of the present study have important implications for curriculum planners and medical educators. Although the Foundation Course has been widely accepted and effectively achieved its primary objectives, periodic evaluation using structured student feedback remains essential to ensure continuous quality improvement. Greater incorporation of simulation-based education, early clinical exposure, reflective learning, mentoring, problem-based learning, and interactive teaching strategies may further enhance students' engagement, competency acquisition, and preparedness for

competency-based medical education. These recommendations are well aligned with the educational philosophy of the National Medical Commission, which advocates student-centered learning, competency acquisition, and continuous curriculum refinement.^[1,8-10]

The present study has certain limitations. It was conducted at a single institution, which may limit the generalizability of the findings to other medical colleges with different educational environments and institutional resources. In addition, students' perceptions were assessed immediately after completion of the Foundation Course, and therefore the study did not evaluate the long-term impact of the course on academic performance, professional behaviour, communication skills, or clinical competency. Multicentric longitudinal studies involving larger and more diverse student populations are recommended to assess the sustained educational outcomes of the Foundation Course across different settings.

Overall, the findings demonstrate that the Foundation Course is highly valued by first-year MBBS students and plays a significant role in facilitating their transition into medical education. Continued refinement of the curriculum based on systematic student feedback and evolving educational needs will further strengthen the implementation of Competency-Based Medical Education and contribute to the development of competent, ethical, and patient-centered Indian Medical Graduates.

CONCLUSION

The present study demonstrates that the Foundation Course has a positive impact on first-year MBBS students by facilitating their transition from school to medical education. Most students perceived the course as beneficial in improving their understanding of the MBBS curriculum, developing communication skills, promoting professionalism and ethical values, and enhancing confidence in adapting to the medical college environment. Sessions on stress management, basic life support, and orientation to the healthcare system were also well appreciated.

Despite the overall positive perception, students suggested that the Foundation Course could be further strengthened by increasing interactive teaching methods, incorporating more hands-on clinical and skill-based sessions, reducing repetitive lectures, and providing greater opportunities for early clinical exposure.

Overall, the Foundation Course serves as an effective bridge between school education and professional medical training. Regular evaluation of student feedback and periodic revision of the course content and teaching strategies will further enhance its effectiveness in achieving the objectives of Competency-Based Medical Education and preparing competent, compassionate, and ethical Indian Medical Graduates.

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