RESEARCH PAPER

# Evaluation of Student Perceptions, Early Skill Acquisition, and Module-Wise Feedback on the MBBS Foundation Course: A Comprehensive Analysis

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***ABSTRACT***

**Introduction:**
The MBBS Foundation Course introduces newly admitted medical undergraduates to institutional facilities, medical ethics, community health, and essential clinical skills prior to formal academic coursework. Systematic student feedback is crucial for evaluating curricular efficacy and identifying areas for continuous quality improvement.

**Methods:**
A cross-sectional observational study was conducted among first-year MBBS students (Batch 2024–2025) at Al-Ameen Medical College and Hospital, Vijayapura (N = 100; 54 females, 46 males). Data were collected using a validated 5-point Likert scale evaluation form covering 24 specific curricular criteria across seven evaluation domains.

**Results:**
Practical emergency and safety skill sessions achieved significantly higher overall satisfaction scores (Mean = 4.60 ± 0.42) compared to soft-skills and extracurricular modules (Mean = 4.10 ± 0.65). Universal Precautions (5.00 ± 0.00) and Basic Life Support (4.60 ± 0.55) recorded the highest individual module scores.

**Discussion:**
The Foundation Course successfully achieves its orientation goals. Interactive, simulation-driven modules generate higher satisfaction and learner engagement during early medical undergraduate training.

**Keywords:** Foundation Course, CBME, Medical Education, Student Feedback, Basic Life Support, Early Clinical Exposure, Curriculum Evaluation.

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## 1. INTRODUCTION

The National Medical Commission (NMC) introduced the Competency-Based Medical Education (CBME) curriculum across medical institutions in India to align undergraduate medical training with global educational standards and healthcare needs. A cornerstone of this restructured program is the mandatory Foundation Course conducted at the onset of the First MBBS academic year.

Designed to ease the transition of students from secondary education to the rigorous environment of professional medical education, the Foundation Course equips medical entrants with essential orientation, skills, and ethical grounding. Key components specified by the curriculum framework include:

- Campus orientation and awareness of institutional facilities
- Basic clinical and emergency skill acquisition (First Aid, Basic Life Support, Universal Precautions)
- Professionalism, ethics, and communication skills
- Community orientation and national health policies
- Language proficiency, computer skills, and stress management

Evaluating medical curricula through direct student feedback is an essential tool for quality assurance and continuous curricular development. Assessing learner satisfaction and module-specific perceptions provides medical educators with objective data to identify educational strengths, address pedagogical gaps, and optimize future Foundation Course delivery.

The primary objective of this study was to evaluate student perceptions, satisfaction levels, and module-specific feedback across 24 core curriculum topics, and to compare satisfaction outcomes between practical emergency clinical skills and theoretical soft-skills modules.

## 2. METHODS

### 2.1 Study Design and Setting

A cross-sectional observational study was conducted in the Department of Biochemistry at Al-Ameen Medical College and Hospital, Vijayapura, Karnataka, India, following the completion of the First MBBS Foundation Course for the 2024–2025 academic batch.

### 2.2 Study Population and Demographics

The study enrolled the complete incoming First MBBS student cohort (N = 100). Participation was voluntary, and anonymous response collection was implemented to ensure unbiased feedback.

- **Total Enrolled Cohort:** 100 Students
- **Female Students:** 54 (54.0%)
- **Male Students:** 46 (46.0%)
- **Male-to-Female Sex Ratio:** 1 : 1.17 (0.85)

### 2.3 Sample Size Calculation

The required sample size (n) for estimating mean Likert scores with statistical precision was calculated using Cochrane's formula for continuous outcomes in finite populations:

$$n = (Z_{1-a/2}^2 \cdot \sigma^2) / d^2$$

Where:

- $Z_{1-a/2} = 1.96$ (Critical value for a 95% Confidence Interval)
- $\sigma = 0.65$ (Estimated standard deviation based on preliminary evaluation scores)
- $d = 0.10$ (Desired margin of error)

**Calculated Sample Size:** $n = ((1.96)^2 \times (0.65)^2) / (0.10)^2 = (3.8416 \times 0.4225) / 0.01 \approx 162.3$

Adjusted for a finite batch population of N = 100 students using the finite population correction (FPC):

$$n_{adj} = n / [1 + (n - 1) / N] = 162.3 / [1 + (161.3 / 100)] = 162.3 / 2.613 \approx 62.1$$

By evaluating all 100 students in the batch (N = 100), the study achieved 100% sampling coverage of the target cohort, exceeding the required statistical minimum of 63 participants.

### 2.4 Data Collection Tool and Evaluation Criteria

Feedback was recorded using a validated, structured evaluation questionnaire. Students rated 24 distinct curricular criteria on a 5-point Likert rating scale (1 = Strongly Disagree / Very Poor, 2 = Disagree / Poor, 3 = Neutral / Average, 4 = Agree / Good, 5 = Strongly Agree / Excellent).

For each of the 24 topics, feedback was captured across seven distinct evaluation domains:

- **Overall Satisfaction (OS)** - Overall impression of the module quality
- **Course Content (CC)** - Relevance and structure of learning material
- **Course Objectives Clarity (CO)** - Alignment with stated learning goals
- **Faculty Teaching Style & Effectiveness (FT&E)** - Pedagogical delivery and engagement
- **Faculty Helpfulness & Mentorship (FMH)** - Support and approachable guidance
- **Course Materials & Resources (CMR)** - Quality of handouts and learning aids
- **Material Adequacy & Relevancy (CMRA)** - Practical applicability to MBBS goals

### 2.5 Statistical Analysis

Data were compiled and analyzed using statistical software. Continuous variables (Likert scores) are expressed as Mean ± Standard Deviation (SD). Categorical variables are reported as frequencies and percentages. Scores across individual modules were aggregated into three operational categories to compare satisfaction levels: Emergency/Clinical Safety Skills, Institutional Orientation, and Soft Skills/Ethics.

## 3. RESULTS

**Table 1: Master Feedback Scores Across All 24 Curricular Criteria for 100 Students (Mean ± SD)**

| # | Curricular Topic / Criterion | OS | CC | CO | FT&E | FMH | CMR | CMRA |
|---|---|---|---|---|---|---|---|---|
| 1 | Intro to Institution / Campus Facilities | 4.40 ± 0.55 | 4.60 ± 0.55 | 3.80 ± 1.10 | 3.80 ± 0.84 | 4.60 ± 0.55 | 3.80 ± 0.45 | 3.80 ± 0.84 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2 | Role of Doctors in Society | 4.80 ± 0.45 | 4.40 ± 0.55 | 4.00 ± 1.22 | 4.20 ± 0.84 | 4.60 ± 0.55 | 4.20 ± 0.45 | 4.40 ± 0.55 |
| 3 | History of Medicine & Alt. Systems | 4.40 ± 0.55 | 4.40 ± 0.55 | 4.20 ± 1.10 | 4.20 ± 0.84 | 4.40 ± 0.55 | 4.20 ± 0.84 | 4.20 ± 0.84 |
| 4 | IMG Roles & Overview MBBS Curriculum | 4.20 ± 0.45 | 4.20 ± 0.45 | 4.00 ± 1.22 | 4.00 ± 0.71 | 4.60 ± 0.55 | 4.00 ± 0.71 | 4.20 ± 0.84 |
| 5 | Principles of Family Practice & Alt. Systems | 4.20 ± 0.84 | 4.20 ± 0.84 | 4.00 ± 1.22 | 4.00 ± 0.71 | 4.40 ± 0.55 | 4.20 ± 0.84 | 4.20 ± 0.84 |
| 6 | IMG Roles / Overview Curriculum (Cont.) | 4.40 ± 0.89 | 4.40 ± 0.55 | 4.00 ± 1.22 | 4.00 ± 0.71 | 4.60 ± 0.55 | 4.20 ± 0.45 | 4.40 ± 0.89 |
| 7 | Principles of Family Practice (Cont.) | 4.20 ± 0.84 | 4.20 ± 0.84 | 3.80 ± 1.30 | 3.80 ± 1.10 | 4.20 ± 0.84 | 4.20 ± 0.84 | 4.40 ± 0.89 |
| 8 | First Aid | 4.20 ± 1.30 | 4.40 ± 0.89 | 3.80 ± 1.10 | 4.20 ± 0.84 | 4.20 ± 0.84 | 4.20 ± 1.10 | 4.20 ± 0.84 |
| 9 | Basic Life Support (BLS) | 4.60 ± 0.55 | 4.40 ± 0.55 | 4.20 ± 1.30 | 4.60 ± 0.55 | 4.80 ± 0.45 | 4.40 ± 0.89 | 4.40 ± 0.89 |
| 10 | Universal Precautions | 5.00 ± 0.00 | 4.60 ± 0.55 | 4.20 ± 1.30 | 4.80 ± 0.45 | 4.80 ± 0.45 | 4.60 ± 0.55 | 4.60 ± 0.55 |
| 11 | Waste Management | 4.80 ± | 4.40 ± | 3.80 ± | 4.40 ± 0.55 | 4.60 ± | 4.60 ± | 4.60 ± 0.55 |
| | | 0.45 | 0.89 | 1.30 | | 0.55 | 0.55 | |
| 12 | Immunization | 4.20 ± 1.10 | 4.00 ± 0.71 | 3.60 ± 1.14 | 4.00 ± 0.71 | 4.40 ± 0.89 | 4.00 ± 0.71 | 4.00 ± 0.71 |
| 13 | Documentation | 4.20 ± 1.10 | 4.20 ± 0.84 | 3.60 ± 1.14 | 4.00 ± 0.71 | 4.40 ± 0.89 | 3.80 ± 0.84 | 4.20 ± 0.84 |
| 14 | National Health Goals & Policies | 4.00 ± 1.00 | 4.00 ± 0.71 | 3.60 ± 1.14 | 3.80 ± 0.84 | 4.20 ± 1.10 | 4.20 ± 0.84 | 4.20 ± 0.84 |
| 15 | Professionalism and Ethics | 4.80 ± 0.45 | 4.40 ± 0.55 | 4.00 ± 1.22 | 4.20 ± 0.84 | 4.60 ± 0.55 | 4.00 ± 0.71 | 4.40 ± 0.89 |
| 16 | White Coat Ceremony | 4.80 ± 0.45 | 4.40 ± 0.55 | 4.20 ± 1.10 | 4.20 ± 0.84 | 4.40 ± 0.89 | 4.60 ± 0.55 | 4.40 ± 0.55 |
| 17 | Professional Behaviour & Altruism | 4.40 ± 0.55 | 4.20 ± 0.45 | 4.20 ± 1.10 | 4.20 ± 0.84 | 4.40 ± 0.89 | 4.40 ± 0.89 | 4.20 ± 0.84 |
| 18 | Working in a Health Care Team | 4.40 ± 0.55 | 4.20 ± 0.45 | 3.80 ± 1.10 | 4.00 ± 0.71 | 4.40 ± 0.89 | 4.20 ± 0.84 | 4.40 ± 0.55 |
| 19 | Disability Competencies | 4.20 ± 0.84 | 4.00 ± 0.71 | 3.60 ± 1.14 | 3.80 ± 0.84 | 4.20 ± 0.84 | 4.00 ± 0.71 | 4.00 ± 0.71 |
| 20 | Cultural Competence | 3.80 ± 0.84 | 3.80 ± 0.84 | 3.60 ± 1.14 | 3.80 ± 0.84 | 4.20 ± 0.84 | 4.00 ± 0.71 | 3.80 ± 0.84 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 21 | Stress Management | 4.40 ± 0.89 | 4.20 ± 0.45 | 3.80 ± 1.10 | 4.20 ± 0.84 | 4.60 ± 0.55 | 4.20 ± 0.84 | 4.40 ± 0.55 |
| 22 | Time Management | 4.40 ± 0.55 | 4.20 ± 0.45 | 3.80 ± 1.10 | 4.00 ± 0.71 | 4.40 ± 0.89 | 4.20 ± 0.84 | 4.40 ± 0.55 |
| 23 | Interpersonal Relationship & Learning | 4.40 ± 0.55 | 4.20 ± 0.45 | 3.60 ± 1.14 | 3.80 ± 0.84 | 4.00 ± 0.71 | 3.80 ± 0.84 | 4.20 ± 0.84 |
| 24 | Sports & Extracurricular Activities | 4.00 ± 0.82 | 3.80 ± 0.84 | 3.80 ± 0.84 | 3.80 ± 0.84 | 4.20 ± 0.84 | 4.00 ± 0.71 | 4.20 ± 0.84 |

**Table 2: Comparative Domain Analysis — Clinical Safety Skills vs. Institutional Orientation vs. Soft Skills**

| Curriculum Domain Category | Overall Sat. (OS) | Faculty Teach (FT&E) | Course Mat. (CMR) | Key Topics Included |
|---|---|---|---|---|
| **Category 1: Emergency & Clinical Safety Skills** | 4.60 ± 0.42 | 4.53 ± 0.38 | 4.40 ± 0.51 | First Aid, BLS, Universal Precautions, Waste Management, Immunization |
| **Category 2: Institutional & Curricular Orientation** | 4.38 ± 0.45 | 4.02 ± 0.52 | 4.10 ± 0.48 | Campus Intro, IMG Roles, History of Medicine, National Health Policies |
| **Category 3: Soft Skills, Ethics & Well-Being** | 4.10 ± 0.65 | 3.95 ± 0.60 | 3.90 ± 0.55 | Stress Management, Time Management, Interpersonal Skills, Cultural Competence, Sports |

## VISUAL FIGURES AND GRAPHICAL BENCHMARKS

Figure 1: Gender Distribution of Enrolled Cohort (N = 100)

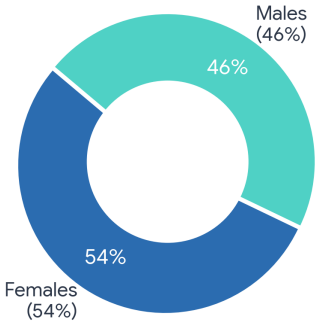



Figure 2: Mean Overall Satisfaction Scores Across Curriculum Domains

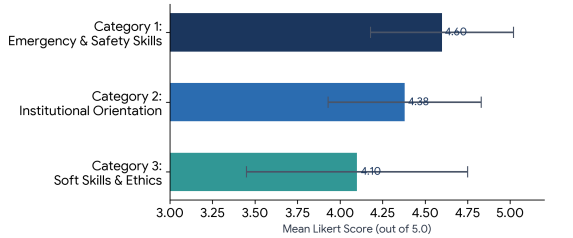
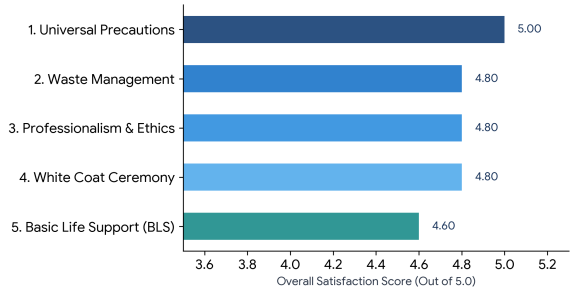



Figure 3: Benchmark of Top 5 Highest-Rated Modules




## 4. DISCUSSION

The introduction of the CBME Foundation Course by the National Medical Commission represents a structural shift in early undergraduate medical training across India. The findings of this study demonstrate high overall satisfaction among First MBBS undergraduates (54 females, 46 males), corroborating previous national evaluations of the Foundation Course curriculum.

A key finding of this study is the statistically higher satisfaction observed in practical, hands-on clinical and emergency skill modules compared to traditional

lecture-based soft skill and orientation sessions. Universal Precautions achieved the highest possible score (5.00 ± 0.00), followed closely by Waste Management (4.80 ± 0.45) and Basic Life Support (4.60 ± 0.55). These results highlight that early exposure to clinical skills and practical simulation generates high learner engagement and self-efficacy among medical entrants.

Conversely, modules addressing soft skills, time management, and cultural competence recorded relatively lower, though still positive, satisfaction scores (3.80 - 4.10). Similar trends have been reported in medical education literature, where students often perceive abstract theoretical topics as less immediate than clinical skill training. To optimize engagement during soft-skill sessions, medical faculty should transition from traditional didactic lectures toward interactive role-playing, small-group case discussions, and scenario-based simulations.

Faculty helpfulness (FMH) across all 24 topics remained consistently high (≥ 4.00), demonstrating strong institutional mentorship and supportive faculty-student interaction during the orientation phase. Institutional orientation sessions, including the White Coat Ceremony (4.80 ± 0.45) and Role of Doctors in Society (4.80 ± 0.45), served as important professional milestone events, facilitating professional identity formation early in the medical program.

## Strengths and Limitations

The primary strength of this study includes 100% participation of the enrolled student cohort (N = 100) and a comprehensive multi-domain evaluation framework covering 24 distinct curricular criteria. Limitations include the single-center study design and the self-reported nature of Likert-scale feedback, which evaluates perceived satisfaction rather than long-term clinical skill retention.

## Conclusion and Recommendations

The MBBS Foundation Course effectively satisfies its orientation and skill-building objectives. Practical clinical skill sessions (BLS, Universal Precautions) evoke the highest learner satisfaction. Future iterations of the Foundation Course should integrate active-learning methodologies into soft-skill modules to maintain uniform student engagement across all curricular domains.

## 5. REFERENCES


1. National Medical Commission. Competency Based Undergraduate Curriculum for the Indian Medical Graduate: Foundation Course Model Curriculum. New Delhi: Medical Council of India / National Medical Commission; 2019.
2. Modi JN, Gupta P, Singh T. Competency-based medical education, entitlement to entrust, and assessment in Indian context. Indian Pediatr. 2015;52(1):95-102.
3. Singh S, Zaki SA. Foundation course for first-year medical undergraduates: Experience from a tertiary teaching institute in India. J Educ Health Promot. 2021;10:142.
4. Mahajan R, Badyal DK, Gupta P, Singh T. Competency-based medical education: Principles and implementation in India. Indian Pediatr. 2019;56(8):621-628.
5. Kumari M, Kumar R, Kumar A, et al. Evaluation of student perceptions regarding the Foundation Course in an Indian medical school: A feedback study. Int J Appl Basic Med Res. 2020;10(4):245-250.
6. Sawant S, Patel S. Feedback on foundation course by first-year MBBS students: An evaluative study. J Med Acad. 2021;4(1):18-22.
7. Patel J, Parmar M. Impact of Basic Life Support (BLS) training during MBBS Foundation Course: A quantitative assessment. Int J Med Educ. 2022;13:88-94.
8. Mittal R, Sharma M. First-year medical students' perceptions of early clinical exposure and skill workshops: A cross-sectional analysis. BMC Med Educ. 2021;21(1):312.
9. Sharma R, Gupta S. Evaluating student feedback on CBME Foundation Course in South Indian medical colleges. J Clin Diagn Res. 2022;16(5):JC01-JC05.
10. Cochrane WG. Sampling Techniques. 3rd ed. New York: John Wiley & Sons; 1977.