AMALA INSTITUTE OF MEDICAL SCIENCES, THRISSUR

Special Report on Student Interest Areas, Aptitude, and Attitudinal Issues

Introduction

Medical education in India has undergone a significant transformation with the advent of the Competency-Based Medical Education (CBME) model introduced by the National Medical Commission (NMC). However, despite structural reforms, many students continue to face challenges related to aligning their academic pursuits with personal interests, aptitude, and professional attitude. At Amala Institute of Medical Sciences, we aim to address these concerns proactively through early identification and structured support. This report summarizes key observations, common issues, and institutional interventions related to student interest areas, aptitude, and attitudinal challenges.

Observations

Observations were systematically gathered through the following methods:

- Continuous monitoring during theory classes, practical sessions, and clinical postings.
- Analysis of student participation in academic discussions, assignments, and laboratory work.
- Feedback from internal assessments and skill-based evaluations.
- Mentor feedback from the institutional mentoring system.

Key findings

1. Lack of Aptitude:

- Difficulty applying theoretical knowledge in clinical settings.
- Poor psychomotor coordination and laboratory skills.
- Weak critical thinking and analytical ability.

2. Attitudinal Issues:

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- Irregular attendance and disengagement in classroom and clinical activities.
- Low motivation levels and disinterest in self-directed learning.
- Resistance or passivity towards constructive feedback.

3. Mismatch of Interests:

- Students showing interest in areas misaligned with their academic strengths.
- Lack of clarity regarding future career paths within medicine.
- Over-dependence on peer trends or parental expectations rather than self-evaluation.

Institutional Interventions

Amala Institute of Medical Sciences has implemented a range of targeted support systems to address these challenges holistically:

1. **Dedicated Mentorship System**: Each faculty mentor is assigned a maximum of three students. Regular one-on-one mentoring sessions track progress, identify barriers, and set goals. Personalized guidance plans are developed to address aptitude and attitude issues.

2. **SSGP (Student Support and Guidance Program):** A KUHS initiative coordinated by two trained nodal faculty members. The program focuses on academic remediation, emotional well-being, and professional development through confidential student evaluations and referral pathways.

3. **Career Counseling Centre:** Offers individual counseling sessions, psychometric tools, and interactive workshops to align student interests with realistic career paths.

4. **Psychological Counseling Centre:** Provides support for academic stress, anxiety, and self-esteem issues, with on-campus access and confidentiality.

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5. **Skill Development Workshops:** Conducted regularly to improve communication skills, clinical competence, time management, and teamwork.

6. **Peer Learning and Support Programs:** Encourages academic buddy systems, student-led seminars, and group learning activities to enhance accountability and peer support.

Outcomes:

- Enhanced student performance in targeted skill areas.
- Improved engagement levels and attendance.
- Greater clarity in career planning and academic goal-setting.
- Notable positive changes in interpersonal behavior and professional attitude.
- Reduced instances of academic burnout and dropout risk.

Conclusion:

The academic and emotional journey of a medical student is intricate, requiring more than just curricular competence. Early identification and structured support for interest, aptitude, and attitude-related issues are vital. At Amala Institute of Medical Sciences, the convergence of mentorship, specialized counseling, and skill-based interventions has created a nurturing ecosystem that empowers our students to grow into empathetic and competent medical professionals.
Continued monitoring, stakeholder collaboration, and institutional commitment will ensure that every learner receives the support necessary to reach their fullest potential.

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Report of Psychometric Evaluation of 2024 batch students

A psychometric assessment was conducted for a cohort of 64 students from the 2024 batch to evaluate cognitive and psychological traits using a standardized test by the Psychiatry department, AIMS, Thrissur. The total scores ranged from 0 to 100, and the data followed a normal distribution, indicating that the test reliably captured the spread of performance across the group. The statistical analysis of the results yielded a mean score of 56.46 and a standard deviation of 17.00, suggesting that most students performed around a mid-level average, with a moderate level of variation.

The bell-shaped normal distribution curve indicates that a significant proportion of students scored near the mean, forming a symmetrical distribution. Based on standard distribution principles:

- Approximately 68% of the students (around 44 students) scored within one standard deviation of the mean, i.e., between 39.46 and 73.46.
- Approximately 95% of the students (around 61 students) scored within two standard deviations of the mean, i.e., between 22.46 and 90.46.
- This implies that the majority of the students fall within the expected performance range, with only a small number of outliers.

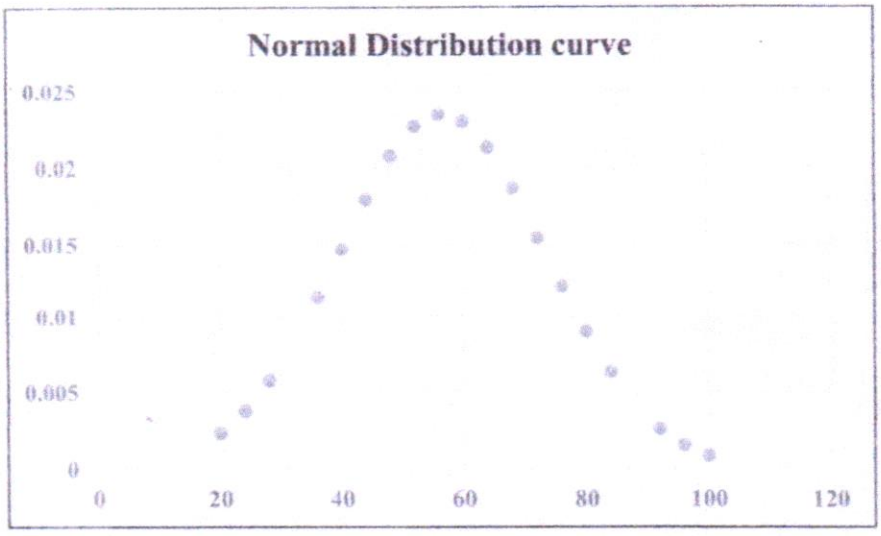

Fig 1. Normal Distribution curve of Psychometric analysis of 2024 batch students

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Detailed score Band Breakdown

A closer examination of the score distribution reveals important insights when the data is segmented according to standard deviation intervals. Students who scored between one and two standard deviations below the mean specifically within the range of 22.46 to 39.46 are considered to be slightly below average, yet still within a reasonable and expected performance range. In this category, three students were identified with scores of 24, 28, and 36, indicating that while they may benefit from academic support, their scores do not represent extreme deviation from the norm.

On the other hand, students scoring between one and two standard deviations above the mean, that is, within the range of 73.46 to 90.46, demonstrated above-average performance, reflecting stronger psychometric capabilities. A total of nine students fell into this bracket, with scores of 76 (3 students), 80 (5 students), and 84 (1 student). These students show signs of higher-than-average cognitive or psychological performance and may be strong candidates for enrichment opportunities, advanced coursework, or further developmental tracking.

Outlier Analysis

In terms of outliers, which are students who scored beyond two standard deviations from the mean, the analysis identified both high and low extremes. On the higher end, three students scored above 90.46, with specific scores of 92, 96, and 100. These students can be considered exceptional performers, indicating superior psychometric functioning and high potential. On the lower end, one student scored below 22.46, with a score of 20, placing them more than two standard deviations below the mean. This student may be at risk and would likely benefit from individualized attention, academic intervention, or psychological support, depending on the broader context of their learning profile.

Conclusion

The psychometric profile of the 2024 batch demonstrates a statistically sound and normally distributed pattern of performance. The majority of students scored within one standard deviation of the mean (39.46–73.46), representing the central band of performance. Additionally, 12 students fell between one and two standard deviations from the mean 3 below and 9 above showing a healthy range of variability. Only four students (one on the lower end and three on the higher end) scored beyond two standard deviations, identifying them as

statistical outliers. These students should be considered for additional support or enrichment based on their individual needs.

Overall, the results reflect a balanced academic and cognitive profile across the batch and provide a strong foundation for personalized academic planning, enrichment opportunities, and targeted interventions.

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