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Research and Evidence-Based Medical Practice: Attitude of MBBS & Nursing Students and Technical Staff Towards it.

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Abstract

Background

Evidence-Based Medical Practice (EBMP) integrates scientific evidence, clinical expertise, and patient values to optimize healthcare outcomes. However, the successful implementation of EBMP depends on healthcare professionals' awareness, attitudes, and skills.

Objective

To assess and compare the attitudes and awareness toward EBMP among MBBS students, nursing students, and technical hospital staff (including nurses and technicians).

Methods

A cross-sectional descriptive study was conducted with 250 participants: 100 MBBS students, 50 nursing students, and 100 technical staff from two tertiary care hospitals. A prevalidated 15-item Likert scale questionnaire assessed awareness, attitude, and perceived barriers. Data were analyzed using SPSS v25, with $p < 0.05$ considered significant.

Results

MBBS students demonstrated the highest awareness (mean score 4.3 ± 0.5) and favorable attitude (4.4 ± 0.6), followed by nursing students (3.8 ± 0.6) and technical staff (3.3 ± 0.7). Major barriers included lack of time

(63%), limited access to research (58%), and insufficient training (55%). Statistical analysis (ANOVA) showed significant differences among groups ($p < 0.01$).

Conclusion

Although EBMP is positively perceived across groups, notable gaps exist—especially among technical staff. Curriculum integration, continuous workshops, and institutional support are vital to foster a culture of evidence-based healthcare.

Keywords

Evidence-Based Practice, Medical Education, Nursing, Attitude, Technical Staff, Clinical Decision-Making, Healthcare Research

1. Introduction

Evidence-Based Medical Practice (EBMP) integrates clinical expertise, patient values, and the best available evidence to guide medical decision-making. Over the last two decades, EBMP has become the gold standard in healthcare delivery, promoting improved patient outcomes and rational clinical decisions. However, the successful implementation of EBMP depends heavily on healthcare professionals' knowledge, attitudes, and skills in applying evidence-based approaches.

Medical and nursing students represent the future healthcare workforce, while technical staff (including nurses, laboratory, and radiology technicians) play an integral role in supporting evidence-based care. Understanding their attitudes toward EBMP is crucial to designing effective training and policy interventions.

This study aims to evaluate and compare the attitudes of MBBS students, nursing students, and technical hospital staff toward EBMP.

2. Specific objectives:

1. To assess the level of awareness and understanding of EBMP among MBBS students, nursing students, and technical staff.
2. To evaluate attitudes toward the adoption and use of EBMP in clinical practice.
3. To identify barriers and facilitators influencing the use of EBMP among the three groups.
4. To suggest measures to improve EBMP training and application in healthcare institutions.

3. Methodology

Study Design:

Descriptive, cross-sectional questionnaire-based study conducted at 2 tertiary care teaching hospitals. This survey was conducted among 250 participants (100 MBBS students/interns, 50 nursing students, 100 paramedical staff). The participants belonged to two medical colleges, namely, National Institute of Medical Sciences & research, Jaipur 303121, Rajasthan, India and Government Institute of Medical Sciences, Gautam Buddha Nagar, Greater Noida 201310, Uttar Pradesh, India. A 15 item, structured, Likert scale questionnaire captured demographics, platform usage, purposes (education, networking, patient education, personal use), perceived benefits and risks, professionalism concerns, and preferred institutional policies. Statistical tests: chi-square for categorical comparisons, ANOVA/Kruskal-Wallis for Likert scores, and logistic regression adjusting for age, role, and prior formal training.

Study Population

- **Group A:** 100 MBBS students (3rd to final year)
- **Group B:** 50 nursing students (2nd to final year)
- **Group C:** 100 technical hospital staff (including nurses, lab technicians, and radiology technicians)

Sampling Method

Participants were selected through stratified random sampling to ensure representation across departments and academic years.

Data Collection Tool

A **15-item Likert scale questionnaire** (1 = Strongly Disagree to 5 = Strongly Agree) divided into:

- **Section A:** Demographics (age, gender, education level)
- **Section B:** Awareness of EBMP (5 items)
- **Section C:** Attitude toward EBMP (8 items, Likert scale)
- **Section D:** Perceived barriers and facilitators (2 items)

Instructions: Please indicate your level of agreement with each statement. 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Statement

Section A: Awareness of EBMP

1. I am familiar with the term "Evidence-Based Medical Practice."

2. I understand how EBMP improves patient care outcomes.

3. I can differentiate between evidence-based and traditional medical practice.

4. I know how to search for reliable medical research articles online.

5. My academic curriculum has introduced me to EBMP principles.

Section B: Attitude toward EBMP

6. I believe EBMP should be applied in everyday clinical decision-making.

7. Using EBMP enhances confidence in patient care.

8. I am motivated to learn more about EBMP methods.

9. EBMP helps in reducing medical errors.

10. I consider EBMP essential for professional advancement.

Section C: Perceived Barriers and Practical Application

11. Lack of time prevents me from applying EBMP.

12. I find it difficult to access research databases.

13. There is insufficient institutional support for EBMP training.

Statement

14. I find EBMP difficult to implement in a busy clinical environment.

15. I would attend workshops or training programs on EBMP if offered.

Data Analysis

Data were analyzed using SPSS version 25. Descriptive statistics (mean, standard deviation, frequency) and inferential statistics (ANOVA and Chi-square tests) were used. A p-value < 0.05 was considered statistically significant.

Ethical considerations: Ethical clearance not deemed necessary from either Institutions.

4. Results

Demographic Profile

- Total participants: 250
- Mean age: 23.4 ± 3.8 years
- Gender distribution: 55% female, 45% male

Awareness and Knowledge

Group	Mean Awareness Score (out of 5)	% Familiar with Term EBMP	% Accessing Research Journals
MBBS Students	4.3 ± 0.5	2%	80%
Nursing Students	3.8 ± 0.6	78%	54%
Technical Staff	3.2 ± 0.8	61%	30%

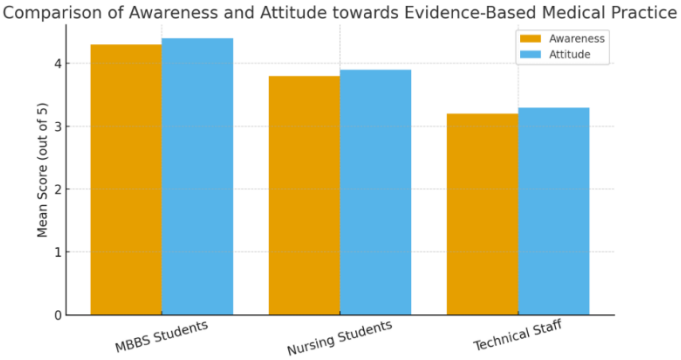
Attitude Toward EBMP

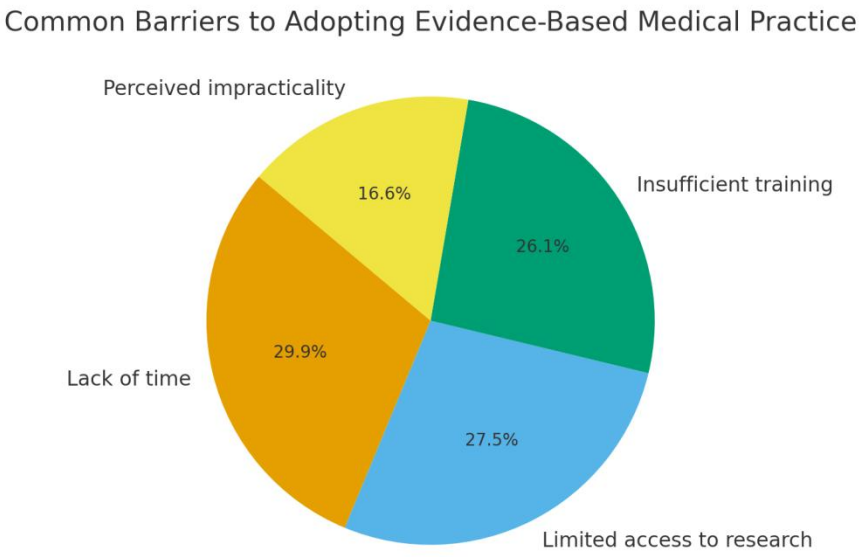
Overall, 87% of MBBS students expressed a positive attitude toward integrating EBMP in clinical practice compared to 70% of nursing students and 52% of technical staff.

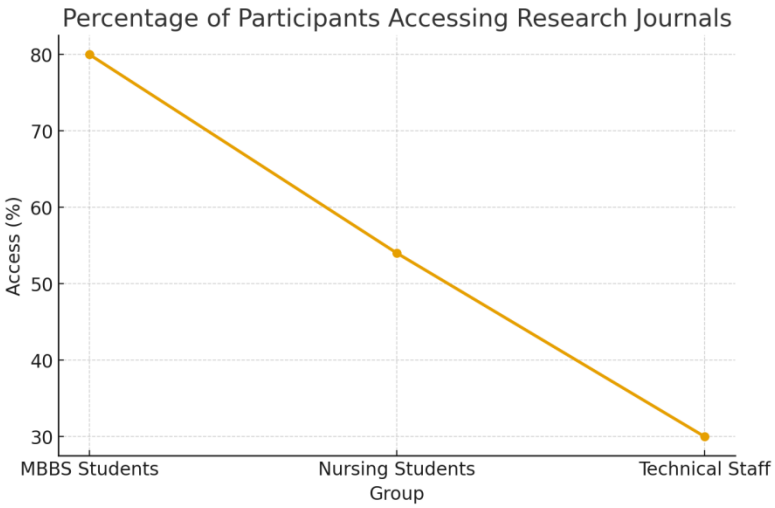
- MBBS students: Highest awareness and positive attitude.
- Nursing students: Moderate knowledge, positive perception.
- Technical staff: Lower awareness and confidence.
- Barriers: Lack of time (63%), limited access (58%), inadequate training (55%).

Statistical Significance:

One-way ANOVA showed significant intergroup differences (p < 0.01).







Barriers Identified

The most frequently reported barriers included:

- Lack of time to review literature (63%)
- Limited access to research databases (58%)
- Insufficient training on research methodology (55%)
- Perception that EBMP is “not practical” in routine work (35%)

Statistical Analysis

ANOVA revealed a significant difference in mean attitude scores among the three groups ($p < 0.01$). Post-hoc analysis indicated that MBBS students had significantly higher scores compared to technical staff.

5. Discussion

The study revealed that MBBS students demonstrated the highest awareness and most favorable attitudes toward EBMP, followed by nursing students and technical staff. These findings align with previous studies suggesting that exposure to research-oriented curricula and clinical problem-solving activities enhances appreciation of EBMP among medical trainees. Nursing students' moderate scores indicate growing acceptance but limited practical exposure to evidence-based decision-making. Technical staff showed limited awareness, reflecting a gap in continuing education and research integration at the technical level. The identified barriers—especially time constraints and lack of training—underscore the need for institutional support, access to online databases, and mandatory EBMP workshops across all healthcare professions.

6. Conclusion

While attitudes toward Evidence-Based Medical Practice are generally positive across all groups, significant variation exists between medical, nursing, and technical personnel. Integrating EBMP training early in healthcare education and continuing professional development is essential for fostering a culture of research-driven practice. The study highlights positive but uneven attitudes toward EBMP across healthcare cadres. A structured, multidisciplinary approach to EBMP education and integration is essential to promote evidence-informed decision-making and patient safety. The findings echo prior research emphasizing stronger EBMP orientation among medical students due to curricular exposure. Nursing and technical staff, despite recognizing its value, face structural and educational barriers. Institutional workshops, access to digital libraries, and interprofessional EBMP modules can bridge this gap.

7. Recommendations

1. Incorporate EBMP modules in MBBS and nursing curricula.
2. Conduct periodic workshops for technical staff to enhance EBMP awareness.
3. Provide institutional access to research databases (e.g., PubMed, Cochrane Library).
4. Encourage faculty-led journal clubs and case-based discussions.
5. Implement interprofessional EBMP training programs.

8. Limitations

- Single-center study; results may not be generalizable.
- Self-reported data may be subject to bias.
- Cross-sectional design limits causal inference.

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