



Original Article

Knowledge, Attitude, and Practice Regarding Postoperative Wound Care in Surgical, Orthopaedic, and Obstetric Settings Among MBBS Students

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ABSTRACT

Background: Postoperative wound care is a critical component of patient recovery and prevention of surgical site infections. MBBS students, as future frontline clinicians, play an essential role in wound management during clinical postings. However, variations in knowledge, attitude, and practice (KAP) may influence the quality of care delivered across surgical specialties.

Objectives: To assess the knowledge, attitude, and practice regarding postoperative wound care among MBBS students exposed to surgical, orthopaedic, and obstetric clinical settings.

Methods: A cross-sectional, questionnaire-based study was conducted among 130 MBBS students who had completed clinical postings in surgery, orthopaedics, and obstetrics & gynaecology. A structured and prevalidated tool assessed knowledge, attitude, and practice related to postoperative wound care. Data were analyzed using descriptive statistics and expressed as frequencies and percentages.

Results: Adequate knowledge regarding postoperative wound care was observed in 82.3% of students. High awareness was noted for aseptic technique (91.5%) and hand hygiene (89.2%), while knowledge gaps were identified in wound dressing intervals (64.6%) and appropriate use of topical antibiotics (58.5%). A positive attitude towards wound care was reported by 88.5%, with most students acknowledging its role in reducing postoperative complications (92.3%). Good wound care practices were reported by 71.5% of participants. Although hand hygiene (78.5%) and use of personal protective equipment (74.6%) were commonly practiced, adherence to institutional protocols (62.3%) and proper documentation (55.4%) were suboptimal, indicating a gap between knowledge and practical implementation.

Conclusion: Despite satisfactory knowledge and favorable attitudes, postoperative wound care practices among MBBS students remain inconsistent. Strengthening practical training, protocol-based teaching, and supervised clinical exposure is essential to bridge the knowledge–practice gap and enhance patient safety.

Keywords: Postoperative wound care; Knowledge attitude practice; MBBS students; Surgical site infection.

INTRODUCTION

Postoperative wound care is a core component of surgical management and has a direct influence on patient recovery, duration of hospital stay, and overall clinical outcomes. Inadequate wound care practices are strongly associated with complications such as surgical site infections, delayed healing, wound dehiscence, and increased healthcare expenditure, making this an ongoing concern across surgical, orthopaedic, and obstetric settings [1,5,6]. These challenges are

particularly pronounced in resource-limited healthcare environments, where standardized wound care practices may not be consistently implemented [6].

Medical undergraduates, especially MBBS students during their clinical postings, actively participate in postoperative patient care under supervision. Their routine responsibilities often include wound inspection, dressing changes, adherence to aseptic precautions, and documentation of wound findings. As future physicians, their competence in evidence-based wound care is essential for ensuring patient safety and reducing preventable postoperative complications. However, prior studies suggest that mere clinical exposure may not be sufficient to ensure consistent and correct wound care practices, as gaps frequently exist between theoretical knowledge and actual bedside application [3,5].

Knowledge, attitude, and practice (KAP) studies provide a structured framework to assess awareness, perceptions, and real-world behaviors related to healthcare procedures. Previous research among the general population and healthcare professionals has demonstrated variable levels of knowledge and practice regarding wound care, highlighting the need for targeted educational interventions [1–4,6]. Despite the pivotal role of medical students in postoperative care, limited data are available assessing their preparedness in this domain.

Evaluating KAP related to postoperative wound care among MBBS students can therefore help identify training deficiencies and guide curriculum strengthening to promote safe, standardized, and evidence-based wound management practices during undergraduate medical education [2,4,6].

Given the multidisciplinary nature of postoperative care, involving surgery, orthopaedics, and obstetrics & gynaecology, it is essential to ensure uniform competency among undergraduate trainees across these specialties. The present study was therefore undertaken to assess the knowledge, attitude, and practice regarding postoperative wound care among MBBS students and to identify gaps that may inform curriculum strengthening and targeted skill-based training during undergraduate medical education.

METHODOLOGY

Study design and setting:

This cross-sectional, questionnaire-based study was conducted at RVM Institute of Medical Sciences and Research Centre, Laxmakkapally, Telangana, India a tertiary care teaching hospital. The study was carried out over a period of eight months, from January 2025 to August 2025, during which undergraduate medical students were actively undergoing clinical postings.

Study population and sample size:

The study population comprised MBBS students who had completed clinical rotations in general surgery, orthopaedics, and obstetrics & gynaecology. A total of 130 students were included in the study. All eligible and consenting students present during the study period were enrolled using a convenient sampling technique.

Inclusion and exclusion criteria:

Students who had completed postings in all three disciplines and were willing to participate were included. Students who had not yet commenced clinical postings or who submitted incomplete questionnaires were excluded from the study.

Study tool and data collection:

Data were collected using a structured, prevalidated questionnaire designed to assess knowledge, attitude, and practice regarding postoperative wound care. The knowledge section evaluated understanding of aseptic technique, wound assessment, infection prevention, and dressing practices. The attitude section explored perceptions towards the importance of wound care and adherence to protocols. The practice section assessed self-reported wound care behaviors during clinical postings. Questionnaires were administered in person, and anonymity was ensured.

Data analysis:

Data were entered into Microsoft Excel and analyzed using appropriate statistical software. Results were expressed as frequencies and percentages. Descriptive statistics were used to summarize demographic characteristics and KAP outcomes.

Ethical considerations:

Ethical approval was obtained from the Institutional Ethics Committee of RVM Institute of Medical Sciences and Research Centre. Written informed consent was obtained from all participants, and confidentiality of data was strictly maintained throughout the study.

RESULTS

A total of 130 MBBS students were included in the present study. The demographic profile of the participants is summarized in Table 1. Most students were aged 22–23 years (47.7%), followed by those aged 20–21 years (36.9%),

with a smaller proportion aged ≥ 24 years (15.4%). There was a slight female predominance (55.4%) compared to males (44.6%). All participants had completed clinical postings in surgery, orthopaedics, and obstetrics & gynaecology, ensuring uniform exposure to postoperative wound care practices.

Table 1. Demographic Characteristics of Study Participants (n = 130)

Variable	Category	Number (n)	Percentage (%)
Age (years)	20–21	48	36.9
	22–23	62	47.7
	≥ 24	20	15.4
Gender	Male	58	44.6
	Female	72	55.4
Clinical Posting Exposure	Surgery	130	100
	Orthopaedics	130	100
	Obstetrics & Gynaecology	130	100

Knowledge regarding postoperative wound care is presented in Table 2. Adequate overall knowledge was observed in 82.3% of students. Awareness of fundamental principles was high, with 91.5% recognizing the importance of aseptic technique and 89.2% acknowledging the role of hand hygiene. Early signs of surgical site infection were correctly identified by 86.2% of participants. However, comparatively lower knowledge levels were noted regarding ideal wound dressing intervals (64.6%) and appropriate use of topical antibiotics (58.5%).

Table 2. Knowledge Regarding Postoperative Wound Care Among MBBS Students (n = 130)

Knowledge Parameter	Correct Response n (%)
Importance of aseptic technique	119 (91.5)
Identification of early signs of SSI	112 (86.2)
Ideal wound dressing interval	84 (64.6)
Role of hand hygiene in wound care	116 (89.2)
Appropriate use of topical antibiotics	76 (58.5)
Overall adequate knowledge	107 (82.3)

Attitude towards postoperative wound care is detailed in Table 3. A positive overall attitude was recorded in 88.5% of students. The majority agreed that proper wound care reduces postoperative complications (92.3%) and requires supervision by trained personnel (89.2%). Although 78.5% considered wound care to be as important as surgical procedures, 21.5% perceived it as a low-priority activity during busy clinical hours, indicating a potential attitudinal challenge in high-workload settings.

Table 3. Attitude Towards Postoperative Wound Care (n = 130)

Attitude Statement	Agree n (%)
Wound care reduces postoperative complications	120 (92.3)
Requires supervision by trained staff	116 (89.2)
Equal importance as surgical procedures	102 (78.5)
Considered low priority during busy hours	28 (21.5)
Willingness to follow standard protocols	114 (87.7)
Overall positive attitude	115 (88.5)

The practice patterns of postoperative wound care among MBBS students are shown in Table 4. Good overall practice was reported by 71.5% of participants. Hand hygiene before and after wound care was practiced by 78.5%, and 74.6% reported consistent use of personal protective equipment. Adherence to institutional protocols (62.3%) and systematic wound assessment (67.7%) were comparatively lower. Proper documentation of wound findings was the least consistently followed practice, reported by only 55.4% of students.

Table 4. Practice of Postoperative Wound Care Among MBBS Students (n = 130)

Practice Parameter	Appropriate Practice n (%)
Hand hygiene before and after wound care	102 (78.5)
Use of personal protective equipment	97 (74.6)
Adherence to institutional protocols	81 (62.3)
Systematic wound assessment	88 (67.7)
Proper documentation of wound findings	72 (55.4)
Overall good practice	93 (71.5)

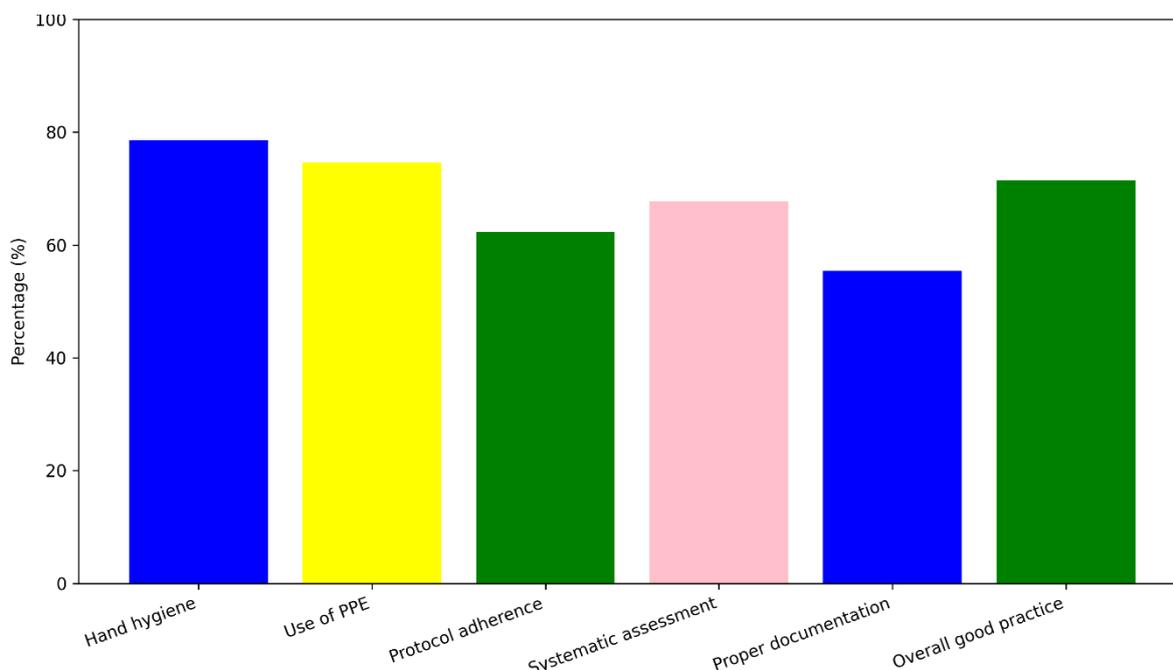


Figure 1: Practice of Postoperative Wound Care Among MBBS Students (n = 130)

DISCUSSION

The present study assessed the knowledge, attitude, and practice regarding postoperative wound care among MBBS students at RVM Institute of Medical Sciences and Research Centre. The findings highlight encouraging levels of knowledge and attitude, alongside notable gaps in practical implementation, underscoring the need for strengthened skills-based training during undergraduate medical education.

In this study, more than four-fifths of the participants demonstrated adequate knowledge of postoperative wound care. High awareness of aseptic technique and hand hygiene reflects effective theoretical teaching and early clinical orientation. Similar observations have been reported in earlier undergraduate KAP studies, where foundational infection prevention concepts were well understood by medical students. However, comparatively lower knowledge regarding ideal dressing intervals and appropriate use of topical antibiotics suggests insufficient emphasis on evidence-based wound management and antimicrobial stewardship during routine teaching sessions.

A positive attitude towards postoperative wound care was observed in the majority of students. Most participants acknowledged the role of meticulous wound care in reducing postoperative complications and recognized the need for supervision by trained personnel. These findings indicate a favorable perception of wound care as an essential component of patient management. Nevertheless, the perception of wound care as a low-priority activity during busy ward hours by a subset of students reflects the influence of clinical workload and hierarchical task allocation in teaching hospitals, a trend noted in previous studies.

Despite satisfactory knowledge and attitude scores, good wound care practices were reported by only about two-thirds of participants. Although hand hygiene and use of personal protective equipment were commonly practiced, adherence to institutional protocols and proper documentation remained suboptimal. This discrepancy highlights a persistent knowledge–practice gap, often attributed to limited hands-on training, inadequate supervision, and inconsistent reinforcement of standard operating procedures during clinical postings.

The multidisciplinary exposure of students to surgery, orthopaedics, and obstetrics & gynaecology strengthens the relevance of the present findings. However, the self-reported nature of practices and the single-center design limit the generalizability of the results. Future studies incorporating observational assessments and interventional training modules may provide deeper insights.

CONCLUSION

The present study demonstrates that MBBS students possess satisfactory knowledge and a favorable attitude towards postoperative wound care across surgical, orthopaedic, and obstetric settings. Awareness of aseptic techniques and infection prevention principles was high, reflecting adequate theoretical grounding. However, practical adherence to standard wound care protocols, documentation practices, and evidence-based dressing strategies remained suboptimal, indicating a clear knowledge–practice gap. These findings highlight the limitations of passive clinical exposure alone in developing procedural competence. Incorporation of structured skill-based training, regular demonstrations, protocol-oriented teaching, and supervised hands-on practice during undergraduate clinical postings is essential. Strengthening

these components may improve consistency in wound care practices and contribute to enhanced patient safety and postoperative outcomes.

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