

Patient safety challenges faced by nursing students during clinical rotations: a cross-sectional study

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Abstract

Background: Ensuring patient safety is a crucial aspect of high-quality healthcare. Nursing students encounter intricate healthcare settings during clinical rotations, where various challenges can jeopardize patient safety. Grasping these difficulties is vital for enhancing clinical education and care results. To investigate the patient safety issues encountered by nursing students during their clinical rotations in Multan, Pakistan

Methods: A qualitative exploratory research approach was employed. Twelve nursing students were chosen via

purposive sampling from tertiary care hospitals and associated institutions in Multan. Data were gathered through semi-structured, comprehensive interviews. Every interview took 30–45 minutes and was recorded with audio permission. Data were transcribed word-for-word and examined with thematic analysis to uncover codes, subthemes, and themes.

Results: Four key themes were identified: (1) gaps in clinical competence and skill inadequacy, encompassing a shortage of practical abilities and the disparity between theory and practice; (2) insufficient oversight and assistance, underscoring ineffective mentorship and unfavorable attitudes from staff; (3) problems with communication and collaboration, including reluctance to seek clarification and ambiguous guidance; and (4) challenges related to workload, stress, and safety culture, such as excessive workloads, stress, and apprehension regarding reporting mistakes. These elements together led to a heightened risk of jeopardized patient safety in clinical practice.

Conclusion: Nursing students encounter complex patient safety issues shaped by personal, educational, and institutional elements. Fortifying clinical oversight, boosting communication, refining skill-based education, and fostering a supportive, non-punitive atmosphere are crucial to guarantee secure clinical learning and patient care results.

INTRODUCTION

Patient safety is a vital aspect of quality healthcare, focusing on minimizing unnecessary harm in clinical settings. Nursing students, during their clinical rotations, are instrumental in healthcare delivery, transitioning from theory to practice. This experience is crucial for competency development but also presents challenges associated with patient safety risks in complex healthcare environments [1]. Nursing students are crucial in healthcare delivery through clinical rotations, transitioning from theory to practical patient care. While essential for competency development, these rotations expose them to complex environments with risks to patient safety [2]. Inexperienced and often lacking confidence, nursing students may make errors during clinical procedures, leading to adverse events like medication errors that compromise safety [3].

Patient safety competencies are vital in nursing education, encompassing the necessary knowledge, skills, and attitudes for safe and effective care [4]. Evidence indicates that nursing curricula frequently fall short in addressing patient safety and the theory-practice gap, resulting in confusion, decreased confidence, and potential safety hazards in clinical settings [5]. Clinical learning environments critically affect students' capacity to provide safe care, with challenges stemming from insufficient supervision, poor mentorship, and negative staff attitudes [6]. Research highlights that issues in clinical settings can arise from instructors, healthcare personnel, and institutional constraints. Additionally, limited clinical exposure and practice opportunities hinder the development of essential nursing skills, adversely impacting patient safety outcomes [7].

Psychological factors like stress, anxiety, and fear of making mistakes negatively affect nursing students during clinical rotations, impairing their decision-making and performance, which can lead to patient care errors [8]. Additionally, communication barriers between nursing students and healthcare professionals create misunderstandings and incorrect interventions, further compromising patient safety in high-pressure environments [9]. Workload and fatigue significantly impact patient safety by causing performance issues and increasing clinical errors among healthcare providers [10]. The absence of a supportive learning environment hinders students from reporting incidents, which stifles learning opportunities [11].

In developing countries like Pakistan, these issues are worsened by resource limitations, high patient loads, and a scarcity of trained clinical instructors, making safe clinical practice for nursing students even more challenging. In Punjab, nursing students encounter heightened patient safety risks due to overcrowded healthcare facilities and insufficient supervision, necessitating localized research. While international studies have

addressed this issue, evidence specific to Punjab is scarce. This study aims to identify the patient safety challenges faced by nursing students during clinical rotations, with the goal of improving nursing education and promoting safer patient care practices.

Methodology

In order to fully comprehend the patient safety issues that nursing students encountered throughout their clinical rotations, a qualitative exploratory methodology was employed. This method enables investigation of participants' perspectives, lived experiences, and contextual elements affecting patient safety. In Multan, Pakistan, the study was carried out in linked nursing facilities and tertiary care hospitals. Nursing students actively participate in patient care in a variety of clinical settings, such as medical, surgical, and critical care units. Undergraduate nursing students (BSN and Post RN) undergoing clinical rotations at the time of data collection comprised the study population. In order to get depth and data saturation in qualitative research, a sample size of 12 participants was used.

In order to attain depth and data saturation in qualitative research, a sample size of twelve participants was used. Participants with appropriate clinical experience who could offer rich, detailed information on patient safety challenges were recruited using a purposive sample technique. Data collection, transcription, and analysis were all done over the course of two to three months, from December 2025 to February 2026.

Participants in the study had to be nursing students enrolled in BSN or post-RN programs, actively participating in clinical rotations, and willing to participate and give informed permission. This study excludes students who are not participating in clinical placements, nurses who have graduated or completed their internship, and those who are unwilling to take part.

Semi-structured, in-depth interviews were used to gather data using an interview guide created based on the goals of the study and the literature. Participants were able to freely share their experiences during interviews while keeping patient safety concerns front and center. Each interview took place in a quiet, private area of the organization and lasted between thirty and forty-five minutes. Interviews were audio recorded with participants' consent, and field notes were added.

Open-ended questions like these were included in the interview guide:

1. Could you explain what you learned about patient safety during your clinical rotations? What kinds of difficulties have you encountered that might compromise patient safety?
2. How do you respond when you believe patient safety is in jeopardy? Additionally, could you describe any mistakes or near-misses that occurred during your clinical practice?
3. What is the importance of supervision in maintaining safe patient care? Additionally, how do communication challenges impact patient safety in your clinical environment?
4. What difficulties do you encounter when putting theoretical knowledge into practice? How do workload and stress affect your clinical performance?
5. What resources are accessible to assist you in ensuring patient safety? What recommendations do you have for enhancing patient safety throughout clinical training?

Data were examined using the Braun and Clarke (2006) framework for thematic analysis, adhering to a structured procedure: in **Transcription**, interviews were transcribed exactly, then in the second stage of **Familiarization**, transcripts were read multiple times to discern the content, followed by the third step of **Coding**, where significant units were identified and preliminary codes were created, During the fourth stage, **Theme Development**

commenced, categorizing the grouped Codes into themes. During the subsequent phase, **themes were reviewed** and refined for consistency and relevance, and in the final stage of **Interpretation**, themes were analyzed concerning the study objectives [12].

Trustworthiness were performed through Lincoln and Guba (1985), that was established to ensure that the results are accurate and authentic, reflecting participants' experiences instead of the investigator's opinions or biases. Therefore, in this study, the findings were made certain to be credible, transferable, dependable, and conformable [13]. In the initial stage of **Credibility**, there was member checking and extended engagement, while in the subsequent stage of **Dependability**, the documentation of the research process was clear. For **Confirmability**, the researcher utilized an audit trail and reflexivity, and in the final stage of **Transferability**, a thorough description of the context and participants was documented and presented.

Approval from the appropriate institutional review committee was obtained for ethical considerations. Initially, informed consent was garnered from every participant, with confidentiality and anonymity being secured. Participants were made aware that they could withdraw at any moment, and their data was securely stored and utilized solely for research purposes.

Results

Data from 12 participants were analyzed using **thematic analysis**, resulting in **four major themes**, several subthemes, and corresponding codes. Verbatim quotes are presented to support each theme.

#	Theme	Sub-themes
Theme: 1	Clinical Competency Gaps and Skill Deficiency	Lack of practical skills
		Theory–practice gap
		Fear of performing procedures
Theme: 2	Inadequate Supervision and Support	Lack of clinical instructors
		Poor mentorship
		Negative staff attitude
Theme: 3	Communication Barriers and Teamwork Issues	Poor communication with staff
		Hesitation in asking questions
		Lack of teamwork
Theme: 4	Workload, Stress, and Safety Culture Issues	High workload
		Stress and anxiety
		Lack of error reporting culture

Theme 1: Clinical Competency Gaps and Skill Deficiency

Participants indicated a lack of adequate clinical skills and struggled to implement theoretical knowledge in practical situations, which directly impacted patient safety.

Theme	Subthemes	Codes
Clinical Competency Gaps	Lack of practical skills	Inadequate hands-on practice, skill anxiety

	Theory–practice gap	Differences between classroom and ward
	Fear of performing procedures	Fear of harming patient, hesitation

“We study processes in class, yet in the ward, everything differs significantly, leaving us feeling uncertain” (P3)

“I constantly feel anxious when administering injections because I worry I could hurt the patient” (P7)

Theme 2: Inadequate Supervision and Support

Students pointed out inadequate supervision and absence of encouraging mentorship as significant obstacles to secure clinical practice.

Theme	Sub-themes	Codes
Inadequate Supervision	Lack of clinical instructors	Limited supervision, instructor shortage
	Poor mentorship	Uncooperative staff, lack of guidance
	Negative staff attitude	Harsh behavior, discouragement

“Occasionally, there is no instructor present, and we must handle patients independently” (P1)

“Staff nurses frequently reprimand us rather than offering proper guidance” (P9).

Theme 3: Communication Barriers and Teamwork Issues

Communication gaps between students and healthcare staff contributed to misunderstandings and increased risk of errors.

Table 4: theme 3 Communication Barriers and Teamwork Issues		
Theme	Sub-themes	Codes
Communication Barriers	Poor communication with staff	Misunderstanding instructions
	Hesitation in asking questions	Fear of criticism, lack of confidence
	Lack of teamwork	Exclusion from team decisions

"We refrain from asking questions because staff might become annoyed (P5)

"Sometimes, the instructions are ambiguous, leading to confusion about our next steps." (P11)

Theme 4: Workload, Stress, and Safety Culture Issues

Participants indicated that a high workload, stress, and a punitive atmosphere adversely affected patient safety measures.

Table 5: theme 4: Workload, Stress, and Safety Culture Issues		
Theme	Sub-themes	Codes
Workload and Safety Culture	High workload	Overburdened wards, time pressure
	Stress and anxiety	Fear of mistakes, emotional exhaustion

	Lack of error reporting culture	Fear of blame, punishment
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"Too many patients exist, and we lack sufficient time to concentrate adequately (P2)

"If a mistake occurs, students are held responsible, so we attempt to conceal it (P8).

The findings reveal that patient safety challenges among nursing students are multifactorial, involving **skill deficits, inadequate supervision, communication barriers, and organizational factors**. These themes highlight the need for improved clinical training, supportive learning environments, and stronger patient safety culture in healthcare institutions.

Discussion

The present study found that nursing students experienced lack of clinical skills, fear of performing procedures, and difficulty applying theory into practice, which directly affected patient safety. The findings suggest that inadequate clinical preparation and limited skill mastery contribute significantly to patient safety risks. Strengthening simulation-based learning and supervised practice is essential to bridge this gap. These findings are consistent with recent evidence indicating that nursing students often demonstrate lower patient safety competence in clinical settings compared to classroom learning.

The study identified that nursing students struggle with clinical skills, fear of procedures, and applying theoretical knowledge in practice, negatively impacting patient safety. Inadequate clinical preparation and limited skills mastery were found to contribute to safety risks. It is recommended that simulation-based learning and supervised practice be enhanced to improve student competence, aligning with recent evidence of students performing better in classroom settings than in clinical environments [1]. A study (2022)

indicated that while students gain theoretical understanding, their application in clinical practice is insufficient, resulting in mistakes and diminished confidence. This aligns with the existing observation of a theory-practice gap, where students perceive themselves as unready for actual clinical scenarios. Additionally, qualitative research emphasizes that students often face fear and anxiety while carrying out procedures, potentially jeopardizing safe care provision. This corresponds with participants' indications of reluctance and concern about endangering patients [14]. A recent qualitative study (2026) highlighted that minimal exposure to evidence-based practice and a lack of practical experience impede the development of competency during clinical training [15].

This research revealed that inadequate oversight, insufficient mentor-ship, and negative attitudes among staff are significant obstacles to safe clinical practice. Lack of organized oversight and guiding mentor-ship undermines student education and patient safety. Creating preceptor-ship frameworks and enhancing instructor-to-student ratios is vital. These results are firmly backed by current research. Clinical instructors are essential for promoting safe practices; however, research indicates that they frequently encounter workload and organizational obstacles that hinder effective oversight [16]. This clarifies why participants in the present study indicated feeling unsupervised. A study utilizing mixed methods (2024) discovered that both organizational and staff-related elements greatly affect patient safety culture, particularly the provision of guidance and assistance [17]. Furthermore, studies show that the absence of mentorship and unhelpful clinical settings diminish learning prospects and heighten the likelihood of mistakes [18].

The research showed that inadequate communication, reluctance to ask questions, and absence of collaboration lead to unsafe practices. Communication gaps obstruct learning and elevate the chances of clinical mistakes. Developing communication abilities

and promoting a nurturing atmosphere for inquiries are crucial. These results correspond with evidence that breakdowns in communication are a significant factor in clinical mistakes and negative incidents [17]. A qualitative study (2024) indicated that students frequently feel anxious about speaking up and lack self-assurance when engaging with healthcare teams, hindering effective communication and learning [18]. Furthermore, difficulties in interprofessional communication have been recognized as significant obstacles to the advancement of patient safety culture, particularly for students moving into clinical positions [17].

Participants indicated elevated levels of workload, stress, fatigue, and fear of being blamed, all of which adversely affected patient safety. A non-supportive clinical setting with heavy workload and a culture of blame greatly compromises patient safety. Fostering a non-punitive safety environment and alleviating workload stress are crucial measures. Research indicates that clinical settings characterized by heavy workloads and insufficient staffing elevate the likelihood of errors and diminish supervision quality [19]. A 2025 study emphasized that unclear roles and heavy workload negatively impact students' capacity to attain clinical competencies, potentially jeopardizing safe practices [20]. Moreover, research highlights that a punitive environment hampers error reporting, constraining chances for learning and enhancing patient safety. Psychological stress and anxiety during clinical rotations are commonly documented, influencing students' decision-making and performance [21].

The findings of this study are consistent with global literature, demonstrating that patient safety challenges among nursing students are multifactorial, involving: Individual factors (skills, confidence), Educational gaps (theory–practice gap), Organizational issues (supervision, workload), Cultural barriers (communication, blame culture). Recent

literature emphasizes that patient safety education, supportive clinical environments, and structured mentorship are key to improving outcomes.

This study has limitations: a small sample size ($n = 12$) affects generalizability; purposive sampling introduces potential selection bias; it focuses on tertiary care hospitals in Multan, Pakistan, possibly not reflecting other regions; self-reported interviews may be subject to recall or social desirability bias; and time constraints restricted deeper exploration of some experiences.

Conclusion

Nursing students during clinical rotations encounter interconnected patient safety challenges, highlighting four main areas: clinical competency gaps, inadequate supervision, communication barriers, and workload-related safety culture issues. Difficulties in applying theoretical knowledge lead to fear and reduced confidence in clinical procedures. Insufficient mentorship exacerbates risks, while communication barriers hinder clarity and can cause errors. High workloads and a punitive environment discourage error reporting, further impacting performance. Overall, patient safety issues are not solely due to individual competence but are significantly shaped by educational, organizational, and cultural factors. Addressing these requires enhanced clinical training, better supervision, open communication, and a supportive safety culture.

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Qamar et al - 2026

3007-2387

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Qamar et al - 2026

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