

Enhancing Patient Safety through Multidisciplinary Collaboration: Insights from Occupational Therapy, Laboratory Sciences, and Nursing

Ali M. Alashri¹, Zaid A. Alhussain², Abeer K. Alagily³, Eman M. Alanizi⁴,
Reem H. Alanazi⁵

Health Affairs at the Ministry of National Guard

Abstract

Background: Patient safety is a fundamental aspect of healthcare, and interdisciplinary collaboration plays a crucial role in enhancing safety outcomes. This study explores the contributions of occupational therapy, laboratory sciences, and nursing to patient safety within a tertiary hospital and identifies challenges and strategies for improving interdisciplinary collaboration.

Methods: A qualitative research design was employed, involving semi-structured interviews and focus groups with 45 participants from occupational therapy, laboratory sciences, and nursing. Thematic analysis was used to analyze the data.

Findings: Each profession significantly contributes to patient safety through specific roles: occupational therapy enhances functional safety, laboratory sciences ensure diagnostic accuracy, and nursing manages patient monitoring and medication. Challenges identified include communication barriers, role clarity, and coordination issues. Strategies suggested for improvement include regular interdisciplinary meetings, shared electronic platforms, standardized protocols, and ongoing training.

Conclusion: Effective interdisciplinary collaboration is essential for optimizing patient safety. Addressing communication and coordination challenges through structured strategies can enhance the overall safety outcomes in healthcare settings.

Keywords: Patient Safety, Interdisciplinary Collaboration, Occupational Therapy, Laboratory Sciences, Nursing, Healthcare Quality, Qualitative Research

Introduction

Patient safety remains a paramount concern in healthcare, with evidence indicating that adverse events and medical errors continue to impact patient outcomes globally (World Health Organization, 2019). Despite significant advancements in medical technology and practices, maintaining patient safety requires ongoing vigilance and coordinated efforts across various healthcare disciplines. Multidisciplinary collaboration is increasingly recognized as a critical component in addressing patient safety challenges effectively (Pelone et al., 2017).

Occupational therapists, laboratory specialists, and nurses each play unique and essential roles in patient care. Occupational therapists focus on enhancing patients' ability to perform daily activities, often identifying safety risks related to mobility and function (American Occupational Therapy Association, 2019). Laboratory specialists contribute by providing accurate diagnostic information crucial for appropriate treatment decisions, thereby preventing errors in diagnosis and treatment (Plebani, 2015). Nurses, as primary caregivers, manage a wide range of responsibilities, including monitoring patient conditions, administering medications, and coordinating care, which are integral to ensuring patient safety (Henneman et al., 2012).

The integration of these roles through effective communication and collaboration can significantly enhance patient safety. However, challenges remain in achieving seamless interprofessional coordination. This paper aims to explore the contributions of occupational therapy, laboratory sciences, and nursing to patient safety and to identify strategies for improving interdisciplinary collaboration.

Literature Review

Patient Safety Concepts

Patient safety is a critical component of quality healthcare, defined as the prevention of harm to patients during the course of medical care. The Institute of Medicine (2000) highlighted that safety issues arise from medical errors, which are often systemic rather than individual failures. Key strategies for improving patient safety include developing a culture of safety, implementing evidence-based practices, and fostering effective communication among healthcare professionals.

Role of Occupational Therapy in Patient Safety

Occupational therapists (OTs) play a pivotal role in promoting patient safety through their focus on functional abilities and environmental modifications. OTs assess and address safety risks related to daily activities and mobility, which can significantly reduce the risk of falls and injuries in various settings (AOTA, 2019). Research by Leland et al. (2012) demonstrated that OT interventions, such as home modifications and adaptive equipment, effectively prevent accidents and enhance patient safety, particularly for older adults and those with chronic conditions.

Role of Laboratory Sciences in Patient Safety

Laboratory specialists are crucial in ensuring patient safety through accurate and timely diagnostic testing. Errors in laboratory results can lead to incorrect diagnoses and inappropriate treatments, underscoring the importance of precision in laboratory practices (Plebani, 2015). A study by Allen (2013) emphasized that improved laboratory quality control and interprofessional communication are essential for reducing diagnostic errors and enhancing patient safety.

Role of Nursing in Patient Safety

Nurses are at the frontline of patient care and are integral to maintaining patient safety. They are responsible for monitoring patients, administering medications, and implementing care plans (Henneman et al., 2012). Evidence suggests that nurse-led safety initiatives, such as regular patient assessments and adherence to safety protocols, are effective in reducing incidents of adverse events (Hanrahan et al., 2010). The role of nurses in identifying and reporting safety concerns is critical in creating a culture of safety within healthcare settings.

Interdisciplinary Approaches to Patient Safety

Effective interdisciplinary collaboration is essential for addressing complex patient safety issues. Research indicates that coordinated efforts among different healthcare professionals lead to better patient outcomes and reduced errors (Pelone et al., 2017). A study by Thannhauser et al. (2010) found that structured interprofessional education and collaborative practice models improve communication and teamwork, which are vital for enhancing patient safety.

The literature highlights the distinct yet complementary roles of occupational therapy, laboratory sciences, and nursing in safeguarding patient safety. Each profession contributes uniquely to the safety continuum, and their collaborative efforts are crucial in addressing the multifaceted challenges in patient care. Further research into optimizing interdisciplinary strategies can help bridge gaps and improve patient safety outcomes.

Methodology

Research Design

This study utilized a qualitative research design to explore the roles and contributions of occupational therapy, laboratory sciences, and nursing in enhancing patient safety within a tertiary hospital. The qualitative approach provided an in-depth understanding of the experiences, perceptions, and challenges faced by professionals from these disciplines in ensuring patient safety.

Setting

The research was conducted at a tertiary hospital with a comprehensive range of specialized services. The hospital's multidisciplinary environment provided a rich context for examining how occupational therapists, laboratory specialists, and nurses contribute to patient safety.

Participants

A total of 45 participants were recruited for the study, including 15 occupational therapists, 15 laboratory specialists, and 15 nurses. Participants were selected through purposive sampling to ensure representation from each profession involved in patient safety initiatives within the hospital.

Data Collection

Interviews:

- Semi-Structured Interviews: In-depth semi-structured interviews were conducted with each participant to gather detailed insights into their experiences and perspectives on patient safety. The interview guide included open-ended questions focusing on roles in patient safety, challenges encountered, and perceptions of interdisciplinary collaboration.
- Interview Procedure: Interviews were conducted individually and lasted between 45 and 60 minutes. They were audio-recorded with participant consent and transcribed verbatim for analysis.

Focus Groups:

- Focus Groups: Two focus groups, each comprising five participants from different professions (one group of occupational therapists and laboratory specialists, and another of nurses), were organized to facilitate discussions on collaborative practices and patient safety. These sessions allowed for exploration of shared experiences and collective problem-solving strategies.
- Focus Group Procedure: Focus groups were moderated by a researcher and recorded for transcription. Each session lasted approximately 90 minutes.

Data Analysis

Thematic Analysis:

- Coding and Theme Development: Data from interviews and focus groups were analyzed using thematic analysis. Transcripts were reviewed and coded to identify recurring themes and patterns related to patient safety and interdisciplinary collaboration.
- Theme Identification: Key themes were developed through an iterative process, involving multiple readings of the data and discussions among researchers to ensure the reliability and validity of the findings.

Ethical Considerations

The study received approval from the ethics committee. Participants provided informed consent and were assured of confidentiality and anonymity. All data were securely stored and handled in accordance with ethical guidelines to protect participant privacy.

Limitations

The study's qualitative nature and focus on a single tertiary hospital may limit the generalizability of the findings. Additionally, the subjective nature of qualitative data may introduce personal biases in participants' responses.

Findings

Theme 1: Role of Each Profession in Patient Safety

Sub-Theme 1.1: Occupational Therapy's Contributions

- Enhancing Functional Safety: Occupational therapists (OTs) focus on improving patients' functional abilities, which is crucial for preventing accidents. For example, OT1 mentioned, "We assess patients' home environments and recommend modifications to reduce fall risks. Simple changes, like installing grab bars, can make a big difference in patient safety."
- Identifying Risk Factors: OTs play a role in identifying potential safety issues related to patients' daily activities. OT2 noted, "By evaluating patients' abilities to perform daily tasks, we can pinpoint areas where they might be at risk and suggest appropriate interventions."

Sub-Theme 1.2: Laboratory Sciences' Contributions

- Accuracy in Diagnostics: Laboratory specialists are essential for providing accurate diagnostic information. Lab1 highlighted, "Ensuring the precision of test results is fundamental. Any errors in lab results can lead to misdiagnosis and inappropriate treatment, which directly impacts patient safety."
- Quality Control Measures: Implementing stringent quality control measures is crucial. Lab2 mentioned, "We routinely check and calibrate our equipment to avoid any inaccuracies. This helps in maintaining the reliability of diagnostic results."

Sub-Theme 1.3: Nursing's Contributions

- Monitoring and Reporting: Nurses are responsible for continuous patient monitoring and reporting any changes in condition. Nurse1 said, "Regular monitoring and documenting changes in patients' conditions are vital. Promptly reporting any abnormalities helps in preventing potential safety issues."

- Medication Management: Nurses manage medication administration and ensure adherence to safety protocols. Nurse2 added, “Double-checking medication orders and dosages before administration helps in minimizing medication errors and enhancing patient safety.”

Theme 2: Challenges in Interdisciplinary Collaboration

Sub-Theme 2.1: Communication Barriers

- Lack of Standardized Communication: Participants reported difficulties in communication between disciplines. OT3 noted, “Sometimes, there’s a lack of standardized communication protocols between our teams. This can lead to misunderstandings or missed information regarding patient safety.”
- Information Silos: Information is not always shared effectively. Lab3 explained, “There are instances where important information from the lab doesn’t reach the nursing staff or OTs in a timely manner, which can delay intervention and affect patient safety.”

Sub-Theme 2.2: Role Clarity and Coordination

- Unclear Roles: Participants identified issues with role clarity and coordination. Nurse3 mentioned, “There are times when roles overlap or are unclear, leading to confusion about who is responsible for specific safety tasks.”
- Coordination Challenges: Effective coordination among different professions is challenging. OT4 said, “Coordinating care between different teams can be difficult. We need clearer protocols for how and when to communicate about safety concerns.”

Theme 3: Strategies for Improving Patient Safety through Collaboration

Sub-Theme 3.1: Enhancing Communication

- Implementing Regular Meetings: Regular interdisciplinary meetings can improve communication. Lab1 suggested, “Holding regular team meetings where we discuss patient cases can improve our coordination and ensure everyone is on the same page regarding patient safety.”
- Using Shared Platforms: Utilizing shared electronic platforms for information exchange. OT2 noted, “A shared electronic health record system where all disciplines can update and view patient information would enhance our ability to collaborate effectively.”

Sub-Theme 3.2: Developing Joint Protocols

- Creating Standardized Protocols: Developing standardized protocols for safety-related tasks. Nurse2 proposed, “Developing joint protocols for handling patient safety issues can streamline our processes and reduce the chances of errors.”
- Training and Education: Ongoing training on interdisciplinary collaboration. Lab2 mentioned, “Regular training sessions on how to work effectively with other disciplines can help bridge gaps in understanding and improve our collaborative efforts.”

Discussion

This study explored the contributions of occupational therapy, laboratory sciences, and nursing to patient safety within a tertiary hospital, highlighting both the roles of each profession and the challenges faced in interdisciplinary collaboration. The findings underscore the importance of each profession’s unique contributions to patient safety and reveal areas where improved communication and coordination could enhance overall safety outcomes.

Contributions to Patient Safety

The results indicate that occupational therapists, laboratory specialists, and nurses each play critical roles in ensuring patient safety. Occupational therapists focus on preventing functional impairments and recommending modifications to reduce fall risks, which aligns with existing literature emphasizing the role of environmental modifications in enhancing patient safety (Leland et al., 2012). Laboratory specialists ensure the accuracy of diagnostic tests, a fundamental aspect of preventing diagnostic errors and inappropriate treatments (Plebani, 2015). Nurses, on the other hand, are integral in monitoring patients, managing medications, and implementing safety protocols, reflecting their pivotal role in frontline patient care (Henneman et al., 2012).

These findings are consistent with the literature, which highlights the need for a collaborative approach to address patient safety comprehensively (Pelone et al., 2017). Each profession contributes uniquely, and their combined efforts are essential for minimizing risks and improving patient outcomes.

Challenges in Interdisciplinary Collaboration

The study identified several challenges related to communication barriers and role clarity. Communication issues, such as lack of standardized protocols and information silos, were frequently reported. These challenges can lead to misunderstandings and delayed interventions, which are critical concerns in patient safety (Thannhauser et al., 2010). The difficulty in coordinating roles and responsibilities also emerged as a significant barrier, suggesting that unclear roles can lead to overlaps and gaps in care.

These findings are in line with previous research that emphasizes the importance of effective communication and clear role definitions in interdisciplinary settings (Pelone et al., 2017). The need for improved communication and coordination is essential for ensuring that safety concerns are addressed promptly and effectively.

Strategies for Improvement

Participants suggested several strategies to enhance patient safety through better collaboration. Regular interdisciplinary meetings and shared electronic platforms were recommended to improve communication. These suggestions reflect best practices identified in the literature, which advocate for structured communication channels and integrated systems to facilitate information sharing (Pelone et al., 2017; Allen, 2013).

The development of standardized protocols and ongoing training were also proposed to address role clarity and coordination challenges. These strategies align with the need for formalized processes and continuous education to support effective teamwork and patient safety (Henneman et al., 2012).

Implications for Practice

The study highlights the critical need for enhanced interdisciplinary collaboration in patient safety efforts. By addressing communication barriers, clarifying roles, and implementing structured protocols, healthcare organizations can improve the effectiveness of safety initiatives. Additionally, fostering a culture of teamwork and continuous improvement through training and regular meetings can help bridge gaps between professions and enhance overall patient safety.

Limitations

The study was conducted in a single tertiary hospital, which may limit the generalizability of the findings to other healthcare settings. The qualitative nature of the data, while providing rich insights, may also be subject to personal biases. Further research across multiple institutions and using mixed-methods approaches could provide a more comprehensive understanding of interdisciplinary collaboration in patient safety.

Conclusion

This study provides valuable insights into the roles of occupational therapy, laboratory sciences, and nursing in patient safety, as well as the challenges and strategies for improving interdisciplinary collaboration. By addressing the identified issues and implementing recommended strategies, healthcare teams can enhance their efforts to ensure patient safety and deliver high-quality care.

References

1. American Occupational Therapy Association. (2019). *Occupational therapy practice framework: Domain and process (4th ed.)*. AOTA Press.
2. Allen, L. C. (2013). Role of a quality management system in improving patient safety—laboratory aspects. *Clinical Biochemistry*, 46(13-14), 1187-1193.
3. Hanrahan, N. P., Aiken, L. H., McClaine, L., & Hanlon, A. L. (2010). Relationship between psychiatric nurse work environments and nurse burnout in acute care general hospitals. *Issues in mental health nursing*, 31(3), 198-207.
4. Henneman, E. A., Gawlinski, A., & Giuliano, K. K. (2012). Surveillance: a strategy for improving patient safety in acute and critical care units. *Critical Care Nurse*, 32(2), e9-e18.
5. Institute of Medicine. (2000). *To err is human: Building a safer health system*. National Academy Press.
6. Leland, N. E., Elliott, S. J., O'Malley, L., & Murphy, S. L. (2012). Occupational therapy in fall prevention: Current evidence and future directions. *The American Journal of Occupational Therapy*, 66(2), 149-160.
7. Plebani, M. (2015). Diagnostic errors and laboratory medicine—causes and strategies. *Ejifcc*, 26(1), 7.
8. Pelone, F., Harrison, R., Goldman, J., & Zwarenstein, M. (2017). Interprofessional collaboration to improve professional practice and healthcare outcomes. *Cochrane database of systematic reviews*, (6).
9. Thannhauser, J., Russell-Mayhew, S., & Scott, C. (2010). Measures of interprofessional education and collaboration. *Journal of interprofessional care*, 24(4), 336-349.
10. World Health Organization. (2019). *Patient safety*. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/patient-safety>