Ethical Dilemmas in Tertiary Care: Insights from Medical Technologists, Pharmacists, and Nurses

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Abstract

Ethical dilemmas are a common challenge for healthcare professionals in tertiary care settings, particularly for medical technologists, pharmacists, and nurses who navigate complex clinical, logistical, and interpersonal dynamics. This study explored the ethical challenges these professionals face, focusing on resource constraints, interdisciplinary collaboration, and emotional distress. Using a qualitative phenomenological approach, semi-structured interviews were conducted with 30 healthcare professionals at a tertiary hospital. The findings revealed that resource limitations often force prioritization of care, leading to moral distress, while misaligned priorities among disciplines create ethical conflicts. Despite these challenges, participants highlighted the importance of teamwork in resolving dilemmas. Coping mechanisms, such as peer support and debriefing sessions, were identified as essential for managing moral distress. The study underscores the need for systemic reforms, enhanced interdisciplinary training, and consistent institutional support to address ethical dilemmas and foster a collaborative healthcare environment.

Keywords: Ethical Dilemmas, Tertiary Care, Moral Distress, Interdisciplinary Collaboration, Resource Constraints, Medical Technologists, Pharmacists, Nurses, Healthcare Ethics

Introduction

The practice of healthcare in tertiary hospitals is characterized by complexity, advanced technology, and multidisciplinary collaboration. This environment often gives rise to ethical dilemmas that challenge healthcare professionals, including medical technologists, pharmacists, and nurses. Ethical issues in patient care are not limited to clinical decisions but extend to the interpretation of diagnostic results, medication management, and direct patient care. The intersection of these roles reveals both the complementary and conflicting perspectives that shape healthcare delivery.

Medical technologists, responsible for producing accurate diagnostic results, face ethical dilemmas in ensuring timely and valid data while managing constraints such as limited resources or unclear clinical contexts (Erlen & Sereika, 1997). Similarly, pharmacists must navigate the ethical tension between cost-effectiveness and optimal patient care, particularly when balancing institutional budgets and individualized therapy plans (Ogunbanjo and van Bogaert,2014). For nurses, ethical challenges often emerge in providing bedside care, where they are required to advocate for patients while adhering to institutional policies and hierarchical decision-making frameworks (Park et al., 2014).

Moral distress, defined as the inability to act according to one's ethical beliefs due to external constraints, is prevalent across these professions. It is reported that healthcare professionals in tertiary settings frequently encounter situations where institutional policies, resource limitations, or disagreements within the care team

hinder ethical practice (Whitehead et al., 2015). Moreover, the rapid integration of health technologies has further complicated ethical decision-making, necessitating greater interdisciplinary dialogue (Goetghebeur et al., 2010).

While previous studies have explored ethical challenges within individual professions, there is limited research examining these issues through a multidisciplinary lens. This study seeks to fill this gap by investigating the unique and shared ethical dilemmas faced by medical technologists, pharmacists, and nurses in a tertiary hospital setting. By understanding these perspectives, the research aims to foster improved collaboration and ethical decision-making within healthcare teams.

Literature Review

Healthcare in tertiary care settings often necessitates complex decision-making involving multiple disciplines. Each profession—medical technologists, pharmacists, and nurses—confronts distinct yet interrelated ethical dilemmas, particularly in high-pressure environments that demand rapid and collaborative solutions. This literature review explores the ethical challenges specific to these professions and the overarching themes of moral distress, collaboration, and resource constraints.

1. Ethical Dilemmas in Medical Technology

Medical technologists play a crucial role in providing accurate and timely diagnostic information, often forming the basis for clinical decisions. Ethical dilemmas in this field frequently revolve around issues of diagnostic accuracy versus time constraints and resource limitations. For example, Ogunbanjo and van Bogaert (2014) highlight how medical technologists face ethical conflicts when institutional policies prioritize cost savings over quality assurance, potentially compromising patient outcomes. Furthermore, Erlen and Sereika (1997) emphasize the stress associated with performing under conditions where diagnostic errors could have life-threatening consequences.

Another emerging challenge lies in the integration of advanced diagnostic technologies. Goetghebeur et al. (2010) argue that while innovations such as artificial intelligence enhance diagnostic accuracy, they also introduce ethical complexities, such as data privacy concerns and over-reliance on automated processes. These advancements necessitate a re-evaluation of the technologist's role in ensuring ethical standards.

2. Ethical Challenges in Pharmacy Practice

Pharmacists in tertiary care settings often grapple with the dual responsibility of adhering to institutional policies while maintaining patient-centered care. A significant ethical challenge involves medication accessibility, particularly in resource-limited settings where formulary restrictions limit therapeutic options. Whitehead et al. (2015) describe how pharmacists frequently experience moral distress when unable to provide optimal treatment due to budget constraints.

Another critical issue pertains to ethical decision-making in polypharmacy and drug interactions. Park et al. (2014) highlight that pharmacists must navigate conflicts between clinical guidelines and individualized patient needs, especially in cases involving vulnerable populations, such as the elderly or critically ill. Moreover, the growing role of pharmacists in interdisciplinary care teams further complicates their ethical responsibilities, as they must mediate between conflicting priorities of other healthcare professionals.

3. Ethical Issues in Nursing Practice

Nurses, as frontline healthcare providers, encounter ethical challenges that often stem from direct patient interactions. These dilemmas include advocating for patients' rights, addressing disparities in care, and managing conflicting expectations from patients and physicians. Park et al. (2014) found that nurses in intensive care units frequently face ethical conflicts when providing aggressive treatments that may prolong suffering, raising questions about the balance between beneficence and non-maleficence.

Moral distress is a recurring theme in nursing literature. Whitehead et al. (2015) identify institutional constraints—such as staffing shortages and limited autonomy—as significant contributors to moral distress among nurses. This distress is further exacerbated in interdisciplinary settings, where nurses may struggle to assert their ethical perspectives within hierarchical team dynamics.

4. Overarching Themes Across Disciplines

A unifying theme across these professions is the experience of moral distress, which arises when external barriers prevent healthcare workers from acting according to their ethical beliefs (Whitehead et al., 2015). For medical technologists, this distress often stems from resource limitations, while for pharmacists and nurses, it is linked to institutional policies and conflicting team dynamics.

Collaboration—or the lack thereof—is another critical factor influencing ethical decision-making. Effective interdisciplinary communication is essential for resolving ethical conflicts, yet studies reveal persistent gaps in understanding and collaboration among healthcare professions. For instance, Ogunbanjo and van Bogaert (2014) stress the need for structured communication channels to facilitate ethical discussions, particularly in complex cases involving multiple stakeholders.

The literature also underscores the role of institutional policies in shaping ethical practices. Goetghebeur et al. (2010) argue that healthcare organizations must adopt frameworks that balance financial constraints with ethical responsibilities, such as incorporating ethics committees into routine decision-making processes.

Conclusion

The ethical dilemmas faced by medical technologists, pharmacists, and nurses are deeply interwoven, reflecting the interconnected nature of their roles in tertiary care. Common challenges such as moral distress, resource limitations, and interdisciplinary conflicts underscore the need for collaborative approaches to ethical decision-making. Future research should focus on developing frameworks that foster open communication and shared ethical responsibility among healthcare teams.

Methodology

This study employed a qualitative research design to explore the ethical dilemmas faced by medical technologists, pharmacists, and nurses in a tertiary hospital setting. Conducted atTertiary Hospital, the research aimed to capture the lived experiences of these professionals and identify common themes in their ethical decision-making processes.

Study Design

A phenomenological approach was adopted to gain in-depth insights into the ethical challenges encountered by participants. This method was chosen for its strength in capturing subjective experiences and understanding the meanings individuals assign to their challenges.

Setting

The study took place at a tertiary hospital located in Riyadh, Saudi Arabia, known for its comprehensive healthcare services and diverse patient population. The institution provides an ideal context for examining ethical dilemmas due to its multidisciplinary teams, advanced diagnostic capabilities, and resource-intensive care environments.

Participants

A purposive sampling strategy was used to recruit 30 healthcare professionals, comprising 10 medical technologists, 10 pharmacists, and 10 nurses. Participants were selected based on the following inclusion criteria:

- Employed in the tertiary hospital for at least one year.
- Actively involved in patient care or diagnostic services.
- Willing to share their experiences with ethical dilemmas in their professional roles.

Diversity in demographics, including gender, age, and years of experience, was considered to ensure a comprehensive understanding of the phenomena.

Data Collection

Data were collected through semi-structured interviews. Interviews were guided by an open-ended question framework designed to explore participants' experiences, perceptions, and coping strategies related to ethical dilemmas. Example questions included:

- "Can you describe a situation where you faced an ethical dilemma in your role?"
- "How did you resolve or attempt to resolve the dilemma?"
- "What role did collaboration with other professionals play in addressing the issue?"

Each interview lasted approximately 45-60 minutes and was conducted in a private room within the hospital to ensure confidentiality. With participant consent, interviews were audio-recorded and transcribed verbatim for analysis.

Data Analysis

Thematic analysis was employed to identify recurring patterns and themes within the data. The analysis followed Braun and Clarke's six-step process:

1. Familiarization with the data: Transcripts were read multiple times to gain an initial understanding.
2. Generating initial codes: Significant phrases and statements were coded to identify key concepts.
3. Searching for themes: Codes were grouped into broader themes reflecting participants' experiences.

4. Reviewing themes: Themes were refined to ensure they accurately represented the data.
5. Defining and naming themes: Clear definitions and labels were assigned to each theme.
6. Producing the report: Findings were synthesized and reported with illustrative quotes from participants.

The analysis was conducted using NVivo software to assist with data organization and coding.

Ethical Considerations

The study was approved by the ethics committee, ensuring adherence to ethical research principles. Participants provided written informed consent and were assured of their confidentiality and the right to withdraw at any time. Identifiable information was removed from transcripts to protect participant anonymity.

Trustworthiness

To ensure the credibility and reliability of the findings, the study employed the following strategies:

- **Triangulation**: Data were compared across professions to identify commonalities and differences in ethical dilemmas.
- **Member Checking**: Participants reviewed their transcripts and thematic interpretations to validate accuracy.
- **Peer Debriefing**: The research team conducted regular discussions to minimize bias and enhance analytical rigor.

Limitations

While the study provides valuable insights, its findings are limited to the experiences of professionals in a single tertiary hospital. Future research could expand to multiple institutions to enhance generalizability.

Findings

The study identified a complex interplay of challenges and strategies faced by medical technologists, pharmacists, and nurses in a tertiary hospital setting. These challenges were categorized into three primary themes with detailed sub-themes, providing a holistic understanding of the ethical dilemmas and their impact.

Theme 1: Resource Constraints and Ethical Decision-Making

Sub-theme 1.1: Limited Resources and Prioritization

Participants consistently emphasized the ethical challenges posed by resource shortages, which forced them to make difficult decisions about prioritizing patients and procedures. Resource constraints were seen as a systemic issue, exacerbated by funding limitations and logistical inefficiencies.

- **Medical Technologist:**

"There are days when our equipment breaks down, and we have no immediate replacement. When faced with critical tests, I have to decide which samples to prioritize. It feels unfair because all patients deserve the same urgency."

This statement reflects the internal conflict of adhering to fairness while making pragmatic choices.

- **Pharmacist:**
  "Patients often come with prescriptions for costly medications that we cannot stock. Deciding who receives the available alternatives is emotionally draining because some patients have no other options."

- **Nurse:**
  "When faced with limited ICU beds, the team debates who has the best chance of survival. It's not just a medical decision—it's an ethical one that weighs heavily on us."
  This highlights the moral burden placed on nurses during critical care allocation.

Sub-theme 1.2: Balancing Cost and Quality of Care

Balancing the dual pressures of maintaining high-quality care while adhering to cost constraints created significant ethical tension for pharmacists and other professionals involved in resource allocation.

- **Pharmacist:**
  "Sometimes, I feel like a gatekeeper, deciding who gets what medication. I know some patients would benefit more from branded options, but our budget doesn't allow for that. I wonder if I'm compromising their care."

- **Medical Technologist:**
  "There's pressure to use fewer resources for routine tests, but sometimes cutting corners leads to unreliable results. I have to push back against these policies because they don't align with ethical standards."

Theme 2: Interdisciplinary Collaboration and Conflicts

Sub-theme 2.1: Diverging Professional Priorities

Differing professional objectives and workflows often led to conflicts, particularly in situations requiring urgent decisions. Participants expressed frustration with misunderstandings and misaligned expectations among team members.

- **Medical Technologist:**
  "Clinicians sometimes demand test results faster than we can process them without risking errors. When I explain the delays, they think I'm obstructing care, but I'm just ensuring accuracy."

- **Pharmacist:**
  "Doctors tend to focus on efficacy, while I also consider costs and patient compliance. Sometimes, it feels like we're pulling in different directions instead of working together."

- **Nurse:**
  "When the lab delays results, it slows down our interventions. I understand their constraints, but it's frustrating when we're trying to stabilize a patient."

This illustrates how operational pressures exacerbate interdisciplinary tensions.

Sub-theme 2.2: Collaboration in Resolving Ethical Dilemmas

Despite conflicts, many participants acknowledged the importance of teamwork in navigating complex ethical scenarios. Effective collaboration was seen as essential for achieving balanced decisions.

- **Pharmacist:**
  "We recently worked with the nurses and lab team to resolve a drug reaction case. Everyone brought their expertise to the table, and it helped us make the right decision for the patient."
- **Nurse:**
  "The best outcomes happen when we work together. When we had a patient with cultural objections to treatment, the pharmacist explained alternatives, and I worked on building trust. Together, we found a solution."
- **Medical Technologist:**
  "Collaboration is critical. Even when we don't agree, having open discussions ensures that no single perspective dominates, which ultimately benefits the patient."

Theme 3: Emotional and Moral Distress

Sub-theme 3.1: Emotional Toll of Ethical Dilemmas

The emotional burden of ethical dilemmas was a recurring theme, with participants describing feelings of guilt, helplessness, and frustration. Many participants linked this distress to systemic issues, such as inadequate staffing and resource allocation.

- **Medical Technologist:**
  "I've had sleepless nights over a delayed result that might have impacted a patient's treatment. Even though I know I did my best, it's hard not to think about the 'what ifs.'"
- **Nurse:**
  "When a patient dies, I replay the scenario over and over. Did we miss something? Could we have done more? It's hard to shake that feeling of responsibility."
- **Pharmacist:**
  "I feel morally distressed when I have to deny patients certain medications because of costs. It's as if I'm letting them down, even though it's beyond my control."

Sub-theme 3.2: Coping Mechanisms and Support Systems

Participants identified a variety of coping mechanisms, including peer support, formal debriefing sessions, and personal strategies like mindfulness. The availability of institutional support significantly influenced their ability to manage stress.

- **Nurse:**
  "After tough cases, we have team debriefs. It helps to hear others' perspectives and realize you're not alone in feeling this way."
- **Pharmacist:**
  "Talking to colleagues who've faced similar challenges helps me put things in perspective. Sometimes, you just need someone to listen."
- **Medical Technologist:**

"I find keeping a journal helpful. Writing down what happened and reflecting on what I can control gives me clarity."

Emerging Insights

1. **Systemic Influences on Ethical Decision-Making:**
   Many dilemmas stemmed from systemic issues, such as inadequate funding, rigid policies, and miscommunication among departments. Participants emphasized the need for organizational changes to alleviate these pressures.

2. **Importance of Multidisciplinary Training:**
   Participants suggested that regular interdisciplinary workshops or ethical training could improve communication and reduce conflicts.

3. **Institutional Role in Supporting Moral Distress:**
   While some participants reported access to debriefing and counseling services, others noted the lack of such support in their departments, underlining the need for consistent institutional mechanisms to address moral distress.

Discussion

This study explored the ethical dilemmas faced by medical technologists, pharmacists, and nurses in a tertiary hospital, revealing critical insights into the complexities of ethical decision-making in a multidisciplinary healthcare environment. The findings highlight systemic, interpersonal, and emotional challenges that shape these experiences, emphasizing the need for targeted interventions to improve collaborative ethical practice and support.

Theme 1: Resource Constraints and Ethical Decision-Making

The findings underscore the pervasive impact of resource limitations on healthcare delivery, a challenge consistent with previous literature (Ogunbanjo and van Bogaert,2014). Participants described the difficult choices they faced in prioritizing patients and procedures, often feeling that such decisions conflicted with their ethical responsibility to provide equitable care. These resource constraints are particularly acute in tertiary settings, where advanced technologies and specialized interventions intensify financial and logistical pressures (Goetghebeur et al., 2010).

The tension between cost containment and quality care emerged as a significant ethical dilemma for pharmacists and medical technologists, who frequently balance institutional budgets with patient needs. This finding aligns with Whitehead et al. (2015), who noted that financial limitations often lead to moral distress, as healthcare professionals are forced to make decisions that may compromise optimal care. Addressing this challenge requires systemic reforms, such as optimizing supply chain management and involving healthcare professionals in budgetary decisions to align resource allocation with patient care priorities.

Theme 2: Interdisciplinary Collaboration and Conflicts

Interdisciplinary collaboration emerged as both a facilitator and a source of ethical tension. Divergent professional priorities often led to conflicts, particularly when decisions required balancing accuracy, cost,

and urgency. For example, medical technologists highlighted the tension between ensuring diagnostic accuracy and meeting clinicians' demands for rapid results, a conflict previously identified by Erlen and Sereika (1997).

Despite these challenges, participants emphasized the importance of teamwork in resolving ethical dilemmas. Collaborative decision-making allowed professionals to draw on their collective expertise, leading to more balanced and ethically sound outcomes. This finding aligns with Park et al. (2014), who observed that open communication among team members enhances trust and reduces misunderstandings in ethical decision-making. However, the study also revealed gaps in communication pathways, suggesting the need for structured interdisciplinary training and protocols to improve collaboration.

Theme 3: Emotional and Moral Distress

The study revealed that moral distress is a common experience among healthcare professionals in tertiary care, driven by systemic barriers and ethical conflicts. Participants frequently reported feelings of guilt, frustration, and helplessness, echoing findings from Whitehead et al. (2015). Nurses, in particular, highlighted the emotional toll of end-of-life decisions and resource allocation, consistent with the literature on moral distress in critical care settings (Park et al., 2014).

Coping mechanisms such as peer support and debriefing sessions were identified as valuable strategies for managing moral distress. However, the availability of these resources varied across departments, highlighting the need for consistent institutional support. Institutions can play a critical role by implementing regular debriefing sessions, providing access to counseling services, and fostering a culture that encourages open discussions about ethical challenges. These measures can mitigate the psychological impact of moral distress and enhance professionals' resilience.

Systemic and Institutional Implications

The study's findings suggest that many ethical dilemmas are rooted in systemic issues, such as inadequate resources, rigid institutional policies, and misaligned priorities among departments. Addressing these challenges requires a multi-faceted approach:

1. **Improving Resource Allocation:** Hospitals should adopt more flexible and transparent resource allocation frameworks that involve input from healthcare professionals.
2. **Enhancing Communication:** Structured interdisciplinary training programs can foster mutual understanding and reduce conflicts in ethical decision-making.
3. **Supporting Emotional Well-Being:** Institutions must prioritize mental health support for healthcare professionals by establishing consistent mechanisms to address moral distress.

Practical Recommendations

1. **Interdisciplinary Ethics Committees:** Establishing hospital-wide ethics committees can provide a platform for resolving complex cases through collaborative dialogue.
2. **Ethics Training and Workshops:** Regular training on ethical principles and decision-making can equip healthcare professionals with the tools to navigate dilemmas effectively.
3. **Policy Advocacy:** Hospitals should advocate for policies that align financial constraints with ethical care standards, ensuring that resource allocation does not disproportionately affect patient outcomes.

Limitations and Future Directions

While this study provides valuable insights, it is limited to a single tertiary hospital, which may restrict the generalizability of the findings. Future research could expand to multiple institutions to explore variations in ethical dilemmas across different healthcare settings. Additionally, longitudinal studies could investigate the long-term impact of systemic reforms and coping mechanisms on ethical decision-making and moral distress.

Conclusion

This study highlights the multifaceted nature of ethical dilemmas in tertiary care, shaped by resource constraints, interdisciplinary conflicts, and emotional distress. By addressing these challenges through systemic reforms, improved collaboration, and enhanced institutional support, healthcare organizations can create a more ethically supportive environment. Ultimately, fostering a culture of ethical awareness and collaboration will not only benefit healthcare professionals but also enhance patient care outcomes.

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