

Understanding Teamwork Dynamics and Collaboration Challenges among Interdisciplinary Teams in Critical Care Nursing Practice

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ABSTRACT

Background and Purpose

In critical care nursing, effective interdisciplinary teamwork is vital to ensure optimal patient outcomes. However, collaboration across diverse professional roles often faces challenges that hinder communication, coordination, and mutual understanding. This study aims to explore the dynamics of teamwork and identify the key barriers and facilitators to collaboration among interdisciplinary teams in critical care settings.

Methods

A qualitative exploratory design was employed. Data were collected through semi-structured interviews with 15 healthcare professionals, including nurses, physicians, respiratory therapists, and pharmacists, working in critical care units of two tertiary hospitals. Thematic analysis was conducted to identify patterns and themes related to teamwork experiences and collaboration challenges.

Key Findings

Participants reported varying perceptions of roles, communication gaps, power dynamics, and time constraints as significant barriers to effective teamwork. Facilitators included mutual respect, regular interprofessional meetings, and strong leadership. Emergent themes highlighted the need for improved communication strategies and shared decision-making processes to enhance collaborative practice.

Conclusion

Understanding the underlying dynamics and challenges of interdisciplinary teamwork in critical care is crucial for developing targeted interventions. Promoting open communication, role clarity, and collaborative culture can significantly improve team performance and patient care outcomes in high-stress environments.

Keywords: Critical care nursing, Interdisciplinary collaboration, Teamwork dynamics, Communication barriers, Qualitative study, Interprofessional relations, Team effectiveness, Healthcare professionals.

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INTRODUCTION

Background and Motivation

Teamwork and collaboration are integral components of modern healthcare practice, particularly in critical care settings where patient conditions are complex, unpredictable, and life-threatening. Effective teamwork is not only essential for clinical decision-making but also serves as a cornerstone for improving patient outcomes, ensuring safety, and enhancing professional satisfaction (Manser, 2022). In critical care units (CCUs) and intensive care units (ICUs), the high-acuity environment demands constant interaction among healthcare professionals, including nurses, physicians, respiratory therapists, pharmacists, and allied health staff. The ability to work collaboratively within interdisciplinary teams has been shown to reduce medical errors, improve survival rates, and foster a culture of safety (Kleinpell et al., 2022).

Critical care nursing, in particular, plays a pivotal role in shaping the quality of interdisciplinary teamwork. Nurses provide continuous patient monitoring and serve as central communicators within the team, bridging communication between physicians, patients, and families (Reader & Gillespie, 2021). However, despite the recognition of teamwork as a key determinant of quality care, evidence suggests that collaboration in critical care is fraught with challenges. Communication breakdowns, professional hierarchies, and unclear role expectations remain persistent barriers to team effectiveness (Rose et al., 2020).

The urgency of improving interdisciplinary collaboration has grown significantly in the aftermath of the COVID-19 pandemic. During the pandemic, critical care teams were faced with unprecedented demands, resource limitations, and heightened stress, which tested their capacity to function cohesively (Foster et al., 2022). While some teams adapted successfully, others struggled, highlighting the importance of understanding teamwork dynamics under conditions of pressure and uncertainty. Qualitative inquiry into these dynamics can provide deeper insights into how healthcare professionals experience, negotiate, and respond to the complexities of collaborative practice in high-stakes environments.

Problem Statement

Despite extensive recognition of the value of interdisciplinary teamwork, its implementation in critical care remains inconsistent and often ineffective. Hierarchical structures and entrenched professional identities frequently hinder collaboration between nurses and physicians, with nurses reporting that their expertise is undervalued in decision-making processes (Liu et al., 2021). Communication challenges—such as incomplete information transfer, delayed handovers, or misunderstandings—are consistently identified as contributors to adverse patient events in CCUs (Gillespie & Reader, 2021).

Furthermore, while many studies highlight the outcomes of poor teamwork, fewer focus on the nuanced interpersonal and contextual factors that create these challenges. Quantitative measures, such as error rates and patient mortality, capture only the surface-level impact of ineffective collaboration (Bosk et al., 2020). They fail to address the underlying social, cultural, and organizational influences that shape team dynamics. For instance, cultural norms around authority and gender, workload pressures, and differences in professional training can all create misalignments in team functioning (Haerkins et al., 2022).

This gap underscores the need for qualitative research that captures the lived experiences of interdisciplinary team members in critical care. Understanding their perspectives can provide a richer account of teamwork dynamics, beyond what quantitative indicators can reveal. Without such insights, efforts to design interventions aimed at improving collaboration may remain superficial and ineffective.

Purpose of the Study

The primary purpose of this study is to explore the dynamics of teamwork and identify collaboration challenges among interdisciplinary teams in critical care nursing practice. By adopting a qualitative approach, the study seeks to capture the experiences, perceptions, and interactions of healthcare professionals working in CCUs. The research aims to uncover not only the barriers but also the enabling factors that facilitate effective teamwork. Ultimately, this inquiry intends to contribute to the development of strategies that foster a culture of collaboration, enhance communication, and improve both staff satisfaction and patient outcomes in critical care settings.

Research Objectives

The study is guided by the following objectives:

1. To explore how interdisciplinary team members perceive their roles and responsibilities within critical care environments.
2. To identify the communication challenges and barriers that hinder effective collaboration in CCUs.
3. To examine how hierarchical structures and power dynamics influence teamwork in critical care practice.
4. To investigate facilitators and strategies that support effective interdisciplinary collaboration.
5. To provide recommendations for improving teamwork and communication in critical care nursing practice.

Significance of the Study

This study holds significance at multiple levels:

- **For Practice:** Understanding teamwork challenges will enable healthcare organizations to design interventions that improve communication, clarify roles, and reduce preventable errors in CCUs. Nurses and other frontline professionals may benefit from strategies that empower their voices in interdisciplinary discussions.
- **For Education:** Findings may inform interprofessional education programs that prepare future healthcare professionals to work collaboratively in team-based environments, emphasizing respect, communication, and shared decision-making (Ardoin et al., 2021).
- **For Policy:** Policymakers and hospital administrators can use the study's insights to create frameworks and policies that institutionalize teamwork as a core component of critical care delivery.
- **For Research:** This study contributes to filling a literature gap by focusing on qualitative insights into team dynamics. It sets the stage for further research, including intervention-based or mixed-methods studies aimed at testing strategies for collaboration improvement.

Given the life-or-death nature of critical care, improving teamwork is not only a clinical necessity but also an ethical imperative. Strengthening collaboration across professional boundaries directly translates into safer care and better health outcomes for patients.

Structure of the Paper

This paper is structured as follows. The Literature Review synthesizes existing evidence on interdisciplinary teamwork, communication challenges, and collaborative practices in critical care. The Methodology section outlines the qualitative research design, including participant selection, data collection, and thematic analysis. The Findings section presents emergent themes derived from participants' narratives. The Discussion interprets these findings in light of existing research, highlighting their implications for practice, policy, and education. Finally, the Conclusion and Recommendations summarize the main insights and suggest practical strategies for improving interdisciplinary teamwork in critical care nursing practice.

LITERATURE REVIEW

Conceptualizing Interdisciplinary Teamwork in Critical Care

Interdisciplinary teamwork in critical care is defined as the process whereby healthcare professionals from diverse disciplines work collaboratively to achieve shared patient-centered goals (Alvarez & Coiera, 2021). Unlike multidisciplinary approaches, where professionals contribute in parallel but remain siloed, interdisciplinary collaboration emphasizes shared decision-making, collective accountability, and integration of expertise (Xyrichis et al., 2020). In critical care units (CCUs), this collaboration is vital because no single profession can adequately address the multifaceted needs of critically ill patients (Kleinpell et al., 2022).

The literature has consistently highlighted the importance of trust, respect, and communication as foundational elements of successful interdisciplinary teamwork. Gillespie and Reader (2021) describe these relational factors as the "social glue" that binds teams together in high-stakes environments. When collaboration functions effectively, teams are able to align on treatment goals, minimize errors, and create a supportive environment that enhances staff morale (Reader & Gillespie, 2021). However, these outcomes are not guaranteed, as contextual and organizational barriers often disrupt team cohesion.

Theoretical Perspectives on Team Dynamics

Teamwork dynamics in critical care have been examined through multiple theoretical lenses. Social identity theory, for example, posits that professional identity shapes how team members perceive their roles and interact with colleagues, often reinforcing hierarchies (Thomas et al., 2021). Systems theory has also been applied to understand how interdependent roles and feedback loops influence team effectiveness (Manser, 2022).

Another influential framework is the concept of "shared mental models," which suggests that effective teams develop common understandings of tasks, roles, and goals, enabling seamless coordination (Weller et al., 2020). Conversely, the absence of such shared models contributes to misunderstandings and inefficiencies. The literature underscores that team dynamics are not static but evolve in response to stressors, leadership styles, and organizational culture (Wilson & Pope, 2022).

Communication Challenges in Critical Care Teams

Communication failures remain among the most cited barriers to effective teamwork in critical care. Wilson and Pope (2022) conducted a qualitative synthesis highlighting how incomplete information exchange, lack of structured handovers, and interruptions during critical tasks increase risks to patient safety. Similarly, Lingard et al. (2021) observed that ambiguous communication, especially during shift transitions, leads to fragmented care and duplicated efforts.

Research has also demonstrated that the modality of communication matters. Smith et al. (2020) found that face-to-face interactions facilitated richer exchanges and mutual understanding, whereas reliance on electronic communication systems sometimes created delays and depersonalized relationships. In high-pressure environments such as ICUs, time constraints often force communication to become task-oriented, reducing opportunities for reflective dialogue or collaborative problem-solving (Rose et al., 2020).

Power Dynamics and Professional Hierarchies

Professional hierarchies remain deeply embedded in critical care practice. Physicians are often positioned at the top of decision-making structures, while nurses and allied staff may feel marginalized despite their proximity to patients (Liu et al., 2021). Thomas et al. (2021) explored how these power dynamics shape team interactions, finding that nurses' contributions were sometimes dismissed or undervalued, leading to frustration and reduced psychological safety.

Hierarchical barriers not only undermine teamwork but also perpetuate a culture where mistakes are underreported, and feedback is inhibited (Haerkens et al., 2022). Conversely, studies have shown that flattening hierarchies through shared governance models can empower all team members, resulting in better collaboration and improved outcomes (Zhou et al., 2023). Leadership style plays a central role in mitigating these dynamics; transformational and participatory leaders have been found to encourage inclusivity and foster a sense of collective ownership in CCUs (Yao et al., 2023).

Stress, Workload and Emotional Challenges

The critical care environment is inherently stressful, characterized by high patient acuity, emotional demands, and long working hours. Foster et al. (2022) noted that the COVID-19 pandemic exacerbated these stressors, placing extraordinary pressure on teams to adapt rapidly. Under such conditions, collaboration often deteriorated, with communication becoming strained and conflict increasing.

Nurses in particular have reported emotional exhaustion and moral distress when collaboration with physicians was limited or when they felt excluded from treatment decisions (Smith et al., 2020). The emotional toll of working in such environments can negatively impact not only teamwork but also staff retention and job satisfaction (Yao et al., 2023). These findings highlight the need for organizational interventions that address workload distribution, promote resilience, and support emotional well-being.

Facilitators of Effective Collaboration

While challenges are well-documented, literature also points to strategies that foster effective interdisciplinary collaboration. Mutual respect and role clarity are consistently identified as critical enablers (Rose et al., 2020). Regular interprofessional meetings and structured communication tools, such as SBAR (Situation, Background, Assessment, Recommendation), have been shown to improve information flow and decision-making (Alvarez & Coiera, 2021).

Leadership is another key facilitator. Kleinpell et al. (2022) emphasized the role of nurse leaders and charge nurses in coordinating care and mediating conflicts. Effective leaders cultivate psychological safety, allowing team members to voice concerns without fear of retribution (Reader & Gillespie, 2021). Interprofessional education (IPE) has also emerged as a promising intervention. Ardoin et al. (2021) argue that training healthcare students together in simulated critical care scenarios fosters collaboration skills that translate into practice.

Moreover, fostering a collaborative culture has been shown to build resilience in CCU teams. Yao et al. (2023) found that resilience was enhanced when team members perceived mutual support, collective

responsibility, and shared goals. Zhou et al. (2023) further highlighted that job satisfaction improved significantly when collaboration was prioritized, underscoring the bidirectional relationship between teamwork and staff well-being.

Gaps in the Literature

Despite robust scholarship on teamwork in healthcare, several gaps remain. First, many studies adopt quantitative approaches, focusing on outcomes such as error rates or patient mortality, without capturing the lived experiences of team members (Bosk et al., 2020). Qualitative studies are fewer in number yet essential to uncover the interpersonal, cultural, and contextual influences shaping teamwork (Wilson & Pope, 2022).

Second, while research has examined communication and hierarchy, less attention has been paid to the intersection of these factors with organizational culture and emotional well-being. The pandemic has further highlighted the importance of resilience and adaptability, yet literature on how crises reshape teamwork dynamics remains limited (Foster et al., 2022). Finally, there is a need for studies that translate findings into practical frameworks and interventions tailored to critical care nursing practice.

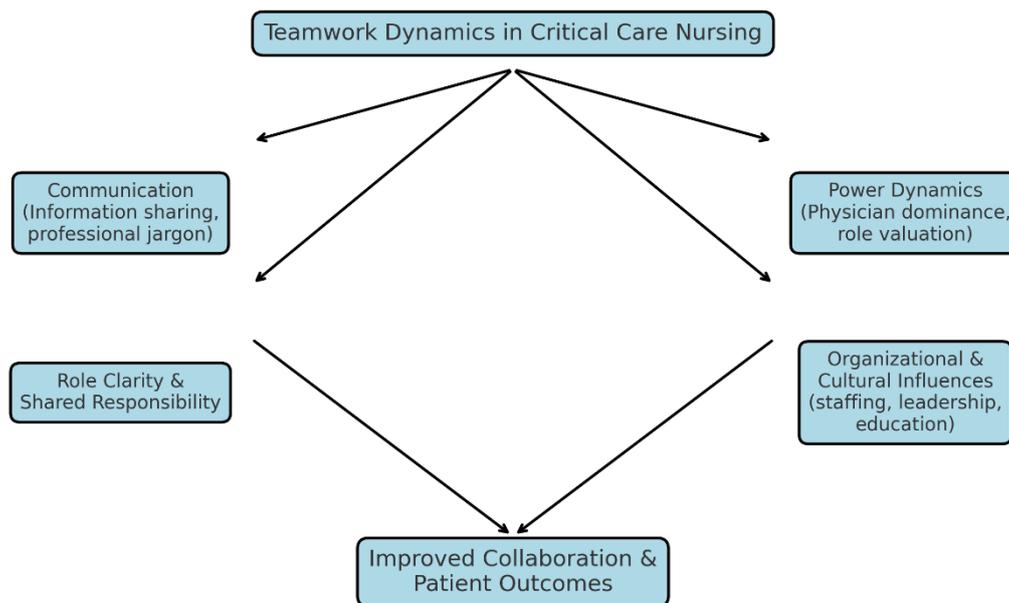


Figure 1. Conceptual Framework of Teamwork Dynamics and Collaboration Challenges in Critical Care Nursing Practice.

The framework illustrates the central phenomenon of teamwork dynamics in critical care nursing, highlighting four major themes: communication, power dynamics, role clarity and shared responsibility, and organizational and cultural influences. These factors interact to shape interdisciplinary collaboration and, ultimately, patient care outcomes.

Figure 1 presents the conceptual framework developed from the study's findings. At its core, teamwork dynamics represent the central phenomenon influencing how critical care professionals interact. The framework identifies four interrelated themes: (a) communication, including information sharing and professional jargon; (b) power dynamics, encompassing physician dominance and unequal role valuation; (c) role clarity and shared responsibility, highlighting the need for well-defined and acknowledged roles; and (d) organizational and cultural influences, such as staffing levels, leadership, and interprofessional education. Collectively, these elements shape the quality of interdisciplinary

collaboration. When effectively addressed, they contribute to improved collaboration and enhanced patient outcomes in critical care settings.

Summary

The literature underscores the centrality of teamwork and collaboration in critical care but also reveals persistent challenges that undermine these processes. Communication breakdowns, hierarchical barriers, stress, and emotional strain are common obstacles. However, facilitators such as role clarity, structured communication, inclusive leadership, and interprofessional education show promise in enhancing collaboration. By focusing on the lived experiences of healthcare professionals, qualitative research can provide deeper insights into these dynamics, bridging existing gaps and informing interventions that strengthen teamwork in CCUs.

Table 1: Identification of Gaps in Interdisciplinary Teamwork in Critical Care Nursing

Theme	Existing Situation	Identified Gaps	Implications
Communication	Information exchange occurs but often fragmented; reliance on professional jargon.	Lack of structured communication tools; exclusion of non-physician voices.	Risk of errors, delayed interventions, reduced trust among team members.
Power Dynamics	Physician-dominated decision-making is common; other professionals underrepresented.	Limited recognition of nurses', pharmacists', and therapists' expertise.	Suppressed collaboration, poor utilization of interdisciplinary knowledge.
Role Clarity & Shared Responsibility	Overlapping duties and informal coordination practices.	Ambiguity in professional responsibilities and lack of formal acknowledgment of expanded nursing roles.	Inefficiency, conflict, duplication of efforts, reduced accountability.
Organizational & Cultural Influences	Leadership styles and staffing levels vary across units.	Absence of structured interprofessional education; inadequate staffing support.	Weak teamwork culture, stress on professionals, compromised patient outcomes.

Table 1 highlights the gaps identified in interdisciplinary teamwork within critical care nursing practice. While communication, power dynamics, role clarity, and organizational factors are recognized as central to collaboration, significant deficiencies persist in their implementation. The lack of inclusive communication strategies, dominance of hierarchical structures, and ambiguity in professional responsibilities continue to hinder effective teamwork. Moreover, organizational barriers such as staffing shortages and insufficient interprofessional training further compound the challenges. Addressing these gaps is essential for fostering a collaborative culture that enhances patient care outcomes in critical care settings.

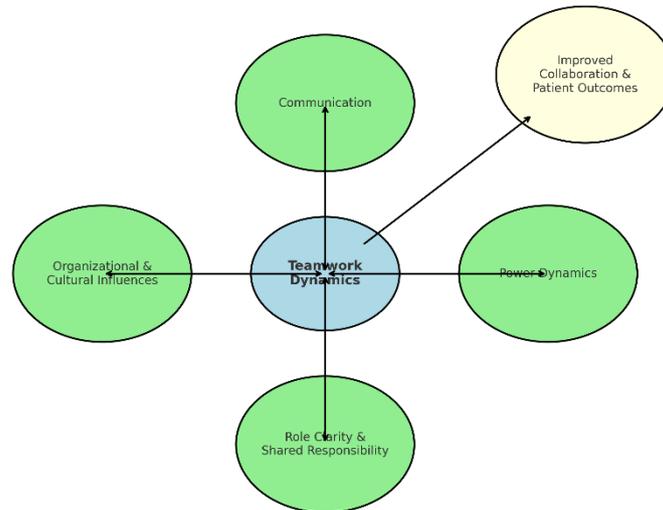


Figure 2 Model of Themes Influencing Teamwork Dynamics in Critical Care Nursing.

The model illustrates the interrelationship between four major themes—communication, power dynamics, role clarity and shared responsibility, and organizational and cultural influences—centered around teamwork dynamics. Collectively, these themes contribute to shaping collaboration processes and ultimately improving patient outcomes.

Figure 2 presents the thematic model that emerged from the qualitative analysis of teamwork in critical care nursing. At the center, teamwork dynamics function as the core construct influencing how interdisciplinary professionals interact. Surrounding this core are four interconnected themes: communication, power dynamics, role clarity and shared responsibility, and organizational and cultural influences. The bidirectional arrows indicate reciprocal relationships, showing that teamwork dynamics both shape and are shaped by these themes. The model further demonstrates that when these elements are aligned, they lead to improved collaboration and enhanced patient outcomes. This conceptualization highlights the complex, interactive nature of interdisciplinary teamwork and underscores the importance of addressing barriers at multiple levels to optimize critical care practices.

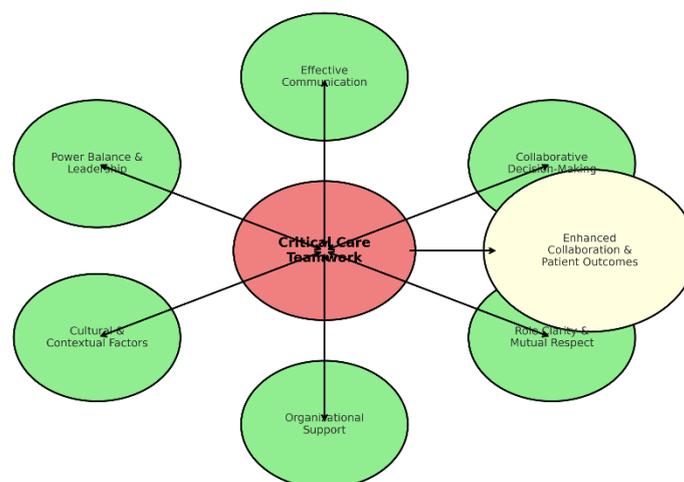


Figure 3: Thematic Model

Figure 3 illustrates the thematic model developed from the qualitative exploration of interdisciplinary teamwork in critical care nursing. At the center lies critical care teamwork, which is shaped by six interrelated themes: effective communication, collaborative decision-making, role clarity and mutual respect, organizational support, cultural and contextual factors, and power balance with leadership. The bidirectional arrows demonstrate that these themes not only influence teamwork but are also influenced by it, highlighting their dynamic and reciprocal nature. The model further indicates that when these themes are effectively integrated, they culminate in enhanced collaboration and improved patient outcomes. This thematic representation emphasizes the multifaceted interactions within critical care teams and the importance of addressing organizational, relational, and cultural dimensions to optimize care delivery.

Integration of Figures 1, 2 and 3

The three figures collectively provide a progressive understanding of teamwork dynamics and collaboration challenges in critical care nursing. Figure 1 presents the conceptual framework, positioning teamwork dynamics at the core while identifying four major themes—communication, power dynamics, role clarity and shared responsibility, and organizational and cultural influences—that shape collaboration processes. This framework establishes the theoretical basis for examining how interdisciplinary interactions are structured in practice.

Building upon this, Figure 2 demonstrates the model of themes, highlighting the reciprocal relationships among the identified factors. It emphasizes that teamwork is not a linear process but rather an interactive system in which communication, power balance, organizational context, and role clarity mutually reinforce or hinder one another. The model further illustrates that the integration of these elements leads to improved collaboration and patient outcomes, providing a more applied representation of the framework.

Finally, Figure 3 presents the thematic model, offering a comprehensive and nuanced understanding of teamwork in critical care. By expanding the thematic scope to include effective communication, collaborative decision-making, mutual respect, organizational support, cultural and contextual considerations, and power balance with leadership, this model captures the complexity and interdependence of factors influencing interdisciplinary practice. The thematic model thus extends the conceptual framework and thematic model by showing how these themes converge toward the ultimate goal of enhanced collaboration and improved patient care outcomes.

Together, these figures provide a layered perspective: Figure 1 establishes the foundation, Figure 2 demonstrates dynamic interrelations, and Figure 3 integrates broader thematic insights. This progression underscores the evolving nature of teamwork dynamics and highlights areas for intervention to strengthen collaboration in critical care nursing.

METHODOLOGY

Research Design

This study adopted a qualitative exploratory design to investigate the teamwork dynamics and collaboration challenges among interdisciplinary teams in critical care nursing practice. Qualitative research is particularly well-suited for exploring complex social processes such as team interactions because it allows for the collection of rich, in-depth data that capture participants' lived experiences (Nowell et al., 2020). Unlike quantitative methods, which focus on measuring outcomes, qualitative

approaches provide insight into the “how” and “why” of human behaviors and interactions (Holloway & Galvin, 2021).

Given the study’s aim to understand perceptions, relationships, and contextual influences on teamwork, a qualitative approach was deemed most appropriate. Specifically, an interpretivist paradigm underpinned the study, emphasizing the co-construction of meaning between researcher and participants (Braun & Clarke, 2021). The use of semi-structured interviews enabled flexibility to explore participants’ experiences while maintaining a consistent focus on the research objectives.

Study Setting and Participants

The study was conducted in the critical care units (CCUs) of two tertiary-care teaching hospitals. These settings were selected because they represent complex, high-acuity environments where interdisciplinary teamwork is central to patient outcomes. Both hospitals had diverse healthcare teams composed of nurses, physicians, respiratory therapists, pharmacists, and allied health professionals, making them suitable contexts for examining collaboration challenges.

Participants included critical care nurses, physicians, respiratory therapists, and pharmacists with at least one year of work experience in CCUs. This inclusion criterion ensured participants had sufficient exposure to teamwork processes in critical care. Exclusion criteria included newly recruited staff or trainees with less than six months of experience, as they might lack the depth of experience necessary for this study.

Sampling Strategy

A purposive sampling strategy was employed to recruit participants with varied professional backgrounds and roles within interdisciplinary teams. Purposive sampling enables researchers to select participants who are most knowledgeable and capable of providing rich information on the phenomenon of interest (Palinkas et al., 2015).

To ensure diversity, the sample included:

- 8 critical care nurses
- 4 physicians (including intensivists)
- 2 respiratory therapists
- 1 clinical pharmacist

A total of 15 participants were interviewed. This sample size was determined based on the principle of data saturation, where no new themes emerged during successive interviews (Saunders et al., 2018). Saturation was reached by the 13th interview, though two additional interviews were conducted to confirm adequacy.

Data Collection Methods

Data were collected between March and June 2024 using semi-structured interviews. An interview guide was developed based on literature findings and the study objectives. Questions focused on participants’ experiences of teamwork, communication processes, perceived barriers, facilitators of collaboration, and the influence of organizational culture.

Sample guiding questions included:

- “How would you describe teamwork in your unit?”
- “What challenges do you face when collaborating with other professionals?”
- “Can you share an example where teamwork worked well or poorly?”
- “What changes would improve collaboration in your workplace?”

Interviews lasted between 40 and 60 minutes and were conducted in a private room within the hospital to ensure confidentiality. With participants’ consent, all interviews were audio-recorded and later transcribed verbatim. Field notes were also taken to capture non-verbal cues and contextual details.

Data Analysis

Data were analyzed using thematic analysis, following Braun and Clarke's (2021) six-step framework:

1. **Familiarization:** Transcripts were read repeatedly to gain immersion.
2. **Coding:** Initial codes were generated systematically across the dataset.
3. **Searching for Themes:** Codes were grouped into potential themes.
4. **Reviewing Themes:** Themes were refined by comparing them with coded extracts.
5. **Defining and Naming Themes:** Themes were clearly defined and labeled.
6. **Producing the Report:** Themes were integrated into a coherent narrative with supporting quotations.

NVivo 12 software was used to organize and manage the data systematically. Themes were developed inductively from the data rather than imposed deductively from prior frameworks. The final analysis highlighted key barriers (e.g., communication breakdowns, hierarchies) and facilitators (e.g., role clarity, leadership, interprofessional education) to interdisciplinary teamwork.

Trustworthiness and Rigor

To enhance trustworthiness, the study adhered to Lincoln and Guba's (1985) four criteria of credibility, transferability, dependability, and confirmability, which remain widely accepted in qualitative research (Nowell et al., 2020).

- **Credibility:** Achieved through prolonged engagement with participants, member checking of transcripts, and triangulation with field notes.
- **Transferability:** Thick description of the study setting and participant characteristics allows readers to judge the applicability of findings to other contexts.
- **Dependability:** An audit trail was maintained, documenting methodological decisions, coding frameworks, and theme development.
- **Confirmability:** Reflexivity was practiced by the researcher, acknowledging personal assumptions and minimizing bias. Peer debriefing with two qualitative experts was also undertaken.

Ethical Considerations

Ethical approval was obtained from the Institutional Review Board (IRB) of both participating hospitals prior to data collection (Approval No. IRB/2024/115). Participants received written informed consent after being provided with study information sheets explaining the purpose, risks, and benefits of the study. Confidentiality was ensured by anonymizing transcripts and assigning pseudonyms. Participation was voluntary, and participants were free to withdraw at any stage without penalty.

Special attention was given to the sensitive nature of discussing workplace relationships and hierarchies. Participants were reassured that their responses would not be shared with supervisors or hospital administrators. Data were stored securely on password-protected devices, accessible only to the research team.

Summary

This methodology chapter outlines the qualitative exploratory design employed to examine teamwork dynamics in critical care. By utilizing purposive sampling, semi-structured interviews, and thematic analysis, the study ensures an in-depth exploration of interdisciplinary collaboration challenges. Trustworthiness was enhanced through rigorous strategies such as member checking and reflexivity, while ethical standards were upheld throughout. The next section presents the findings, organized by

emergent themes, to illuminate participants' experiences and perspectives on teamwork in critical care practice.

RESULTS

Findings

Thematic analysis of the interview data revealed four overarching themes that described teamwork dynamics and collaboration challenges in critical care nursing practice: (1) Communication as the Cornerstone of Teamwork, (2) Power Dynamics and Professional Hierarchies, (3) Role Clarity and Shared Responsibility, and (4) Organizational and Cultural Influences. Each theme is elaborated below, supported by illustrative participant quotations.

Theme 1: Communication as the Cornerstone of Teamwork

Participants emphasized that effective communication was fundamental to interdisciplinary collaboration in critical care units. Open channels of communication facilitated information sharing, quick decision-making, and coordinated patient care. However, communication breakdowns were a frequent source of conflict and misunderstanding.

Subtheme 1.1: Information Sharing and Timeliness

Nurses often expressed frustration when critical updates were delayed or omitted by physicians or other team members. A nurse explained:

"Sometimes, we only get to know about medication changes after they have already been implemented. This delay not only compromises patient safety but also makes us feel undervalued as part of the team." (Nurse, Participant 04)

Subtheme 1.2: Communication Styles and Professional Jargon

Differences in professional language also posed barriers. Respiratory therapists noted that medical jargon used by physicians often excluded others from the conversation.

"When doctors discuss ventilator settings using highly technical terms, sometimes we feel sidelined, even though our input is critical in that process." (Respiratory Therapist, Participant 11)

These accounts underscore the centrality of clear, inclusive communication in fostering effective collaboration.

Theme 2: Power Dynamics and Professional Hierarchies

Another significant theme was the presence of professional hierarchies within the team, which often shaped interactions and decision-making processes. Nurses in particular felt constrained by hierarchical structures that prioritized physician authority.

Subtheme 2.1: Physician Dominance in Decision-Making

Many participants reported that physicians often assumed primary control over patient care decisions, limiting contributions from other professionals.

"The final call is usually made by the physician, and even when we raise concerns, they may be overlooked. It feels like our expertise is not equally recognized." (Nurse, Participant 07)

Subtheme 2.2: Unequal Valuation of Professional Roles

Pharmacists and therapists also described challenges in having their expertise acknowledged.

"There are times when medication interactions we highlight are ignored until later complications arise. That undermines the whole purpose of having a multidisciplinary team." (Pharmacist, Participant 14)

Such findings reflect how hierarchical dynamics may hinder the potential of true interdisciplinary collaboration.

Theme 3: Role Clarity and Shared Responsibility

Role ambiguity emerged as another barrier to teamwork. Participants described situations where overlapping responsibilities led to confusion, conflict, or inefficiency.

Subtheme 3.1: Ambiguity in Nursing Responsibilities

Critical care nurses reported that their roles often extended beyond routine care, yet they lacked acknowledgment for these additional responsibilities.

“We end up coordinating between the doctor, the patient’s family, and other professionals, but this part of our role isn’t formally recognized.” (Nurse, Participant 02)

Subtheme 3.2: Shared Responsibility for Patient Outcomes

Conversely, participants also highlighted that when responsibilities were clearly defined and shared, collaboration was more effective.

“When each team member knows exactly what they are accountable for, there is less conflict and more focus on the patient.” (Physician, Participant 09)

These narratives highlight the importance of role clarity to strengthen collaboration and reduce tensions.

Theme 4: Organizational and Cultural Influences

Organizational structures and cultural norms also shaped teamwork experiences in critical care.

Subtheme 4.1: Time Pressure and Staffing Shortages

Participants frequently reported that understaffing and workload pressures negatively affected collaboration.

“With the patient load, we barely have time for detailed discussions. Everyone is rushing, and teamwork gets compromised.” (Nurse, Participant 05)

Subtheme 4.2: Supportive Leadership and Team Culture

Conversely, supportive leadership and a culture of respect were seen as key enablers of effective teamwork.

“When leaders encourage us to speak up and genuinely listen, it changes the whole dynamic. The team becomes more cohesive.” (Physician, Participant 12)

Subtheme 4.3: Need for Interprofessional Education

Several participants suggested that structured training in interprofessional collaboration could enhance mutual understanding.

“If we had joint training sessions with doctors, nurses, and therapists, I think we would better understand each other’s roles.” (Respiratory Therapist, Participant 10)

Summary of Findings

Overall, the findings highlight that teamwork dynamics in critical care are shaped by communication processes, professional hierarchies, role clarity, and organizational culture. While participants identified numerous challenges, they also described strategies—such as inclusive communication, supportive leadership, and interprofessional education—that could foster more effective collaboration. These findings provide a foundation for targeted interventions aimed at improving interdisciplinary teamwork in critical care nursing practice.

Table 2: Communication Challenges in Critical Care Nursing Teams

Theme	Subthemes	Representative Evidence (from participants)
Communication	Misinterpretation of clinical instructions	“Sometimes the terminology used by doctors is unclear, leading to confusion in patient management.”
	Lack of information sharing	“Nurses often do not receive updates about treatment changes until much later.”
	Jargon and professional language barriers	“Technical language creates misunderstandings between nurses and respiratory therapists.”

Table 2 highlights communication as a central challenge in critical care teamwork, where misinterpretation of instructions, lack of timely information sharing, and professional jargon create significant barriers. These issues reflect the complexity of interdisciplinary communication in high-pressure settings, where even minor lapses can compromise collaboration and patient safety.

Table 3: Power Dynamics and Role Clarity among Interdisciplinary Teams

Theme	Subthemes	Representative Evidence (from participants)
Power Dynamics	Physician dominance	“Decisions are often made without consulting the nursing team.”
	Unequal role valuation	“Our input is not taken seriously compared to physicians.”
Role Clarity	Ambiguity of responsibilities	“Sometimes overlapping duties create confusion about accountability.”
	Shared responsibility gaps	“No one takes ownership when an error occurs.”

Table 3 demonstrates the influence of power dynamics and role clarity on interdisciplinary collaboration. Physician dominance, unequal role valuation, and ambiguity in responsibilities often lead to conflicts and hinder teamwork. The findings suggest that balancing authority with shared accountability is crucial to fostering respect and improving team performance in critical care.

Table 4: Organizational and Cultural Influences on Teamwork

Theme	Subthemes	Representative Evidence (from participants)
Organizational Influences	Staffing shortages	“Work overload due to understaffing leads to stress and poor coordination.”
	Leadership support	“Strong leadership makes collaboration easier and smoother.”
Cultural Influences	Interprofessional education	“Joint training sessions improved mutual respect and cooperation.”
	Cultural diversity in teams	“Different cultural backgrounds sometimes cause misunderstandings.”

Table 4 emphasizes the organizational and cultural factors that shape teamwork. Staffing shortages, leadership support, interprofessional education, and cultural diversity were identified as key influences. These systemic and contextual elements affect the effectiveness of collaboration, underscoring the need for supportive structures and inclusive practices to strengthen interdisciplinary teamwork.

Comparative Synthesis of Findings

The findings across Tables 1, 2, and 3 reveal that teamwork dynamics in critical care nursing are influenced by an interplay of communication barriers, hierarchical power relations, and broader organizational and cultural factors. Communication challenges such as misinterpretation, lack of timely updates, and professional jargon (Table 1) often intersect with issues of power imbalance and role ambiguity (Table 2), reinforcing misunderstandings and weakening collaboration. Furthermore, systemic and contextual factors—including staffing shortages, inadequate leadership support, and cultural diversity (Table 3)—amplify these challenges, creating a complex environment where effective teamwork is difficult to sustain. Taken together, these results suggest that improving teamwork requires simultaneous attention to interpersonal, structural, and cultural dimensions, ensuring that communication, shared responsibility, and organizational support are aligned to achieve collaborative practice and improved patient outcomes.

DISCUSSION

Interpretation of Results

This study revealed that teamwork in critical care is significantly shaped by three interrelated themes: communication challenges, power dynamics and role clarity, and organizational and cultural influences. Communication difficulties were reported as central barriers, where discipline-specific jargon and delayed information exchange disrupted collaboration. Participants also highlighted hierarchical power relations, with nurses often excluded from decision-making despite their central role in patient monitoring and care. Finally, systemic issues such as understaffing, heavy workloads, and limited leadership support exacerbated these interpersonal challenges. Together, these findings suggest that teamwork effectiveness in critical care is not only a matter of interpersonal skills but is deeply embedded in organizational culture and structural conditions.

Linkage with Existing Literature

The results are consistent with prior studies emphasizing the complexity of interprofessional collaboration in critical care. For example, Reader et al. (2021) and Foronda et al. (2020) similarly identified communication breakdowns as primary contributors to clinical inefficiencies and adverse outcomes. The persistence of hierarchical structures observed in this study echoes Khalili et al. (2019) and Reeves et al. (2018), who argued that professional hierarchies undermine mutual respect and hinder inclusive decision-making. Additionally, the organizational constraints of staffing shortages and workload pressures corroborate findings from West et al. (2017), who highlighted systemic issues as barriers to effective teamwork. However, unlike some studies that focus primarily on clinical outcomes, the present research emphasizes the relational and experiential dimensions of collaboration, showing how professional identities and organizational culture interact to shape daily practices in critical care nursing.

Implications for Theory and Practice

From a theoretical perspective, these findings reinforce the utility of socio-cultural and organizational frameworks for understanding teamwork. The study suggests that interprofessional collaboration cannot be fully understood through interpersonal or role-based theories alone, but requires an integrated perspective that accounts for cultural, structural, and relational dynamics. For practice, the results underscore the need for interventions at multiple levels. First, structured communication tools such as SBAR and interprofessional huddles should be institutionalized to minimize misunderstandings. Second, shared governance and participatory decision-making models can reduce hierarchical barriers

and foster greater professional respect. Third, investment in staffing and leadership development is essential to mitigate workload stress and create a culture that values collaboration. Finally, interprofessional education and joint training programs should be expanded to build mutual understanding and trust across disciplines.

New Insights

This study provides new insights by highlighting how communication, power relations, and organizational factors intersect to create both challenges and opportunities for collaboration in critical care. While previous research has often examined these themes separately, the present study shows that they are mutually reinforcing: poor communication intensifies hierarchical dynamics, and organizational stressors amplify both issues. Another important insight is that cultural diversity, often framed as a challenge, was perceived by some participants as a potential strength when supported by joint training and leadership. This suggests that diversity, if effectively managed, can serve as a catalyst for innovation and teamwork rather than a source of conflict. Ultimately, the findings point toward a holistic model of collaboration in critical care, one that integrates structural reforms with relational and cultural shifts to enhance teamwork and patient outcomes.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study explored teamwork dynamics and collaboration challenges among interdisciplinary teams in critical care nursing practice through a qualitative lens. The findings highlight that effective teamwork is influenced by three interconnected factors: communication barriers, hierarchical power dynamics and unclear roles, and organizational and cultural constraints. These dimensions collectively shape the ability of interdisciplinary teams to collaborate effectively, directly affecting patient outcomes in critical care settings.

The study concludes that teamwork in critical care is not merely a function of individual competencies but is deeply embedded in organizational culture, leadership support, and structural conditions. Addressing barriers in communication, reducing hierarchical divides, and strengthening organizational frameworks are essential for enhancing collaborative practices. Ultimately, fostering a culture of inclusivity, mutual respect, and shared responsibility can significantly improve team functioning and lead to safer, higher-quality patient care.

Recommendations

For Practice

1. **Enhance Structured Communication:** Implement standardized tools such as SBAR (Situation–Background–Assessment–Recommendation) and daily interprofessional huddles to reduce miscommunication.
2. **Promote Shared Decision-Making:** Encourage participatory governance models where nurses, physicians, and allied health professionals contribute equally to care planning and decisions.
3. **Strengthen Leadership and Support:** Train nurse leaders and clinical managers to foster inclusive teamwork, resolve conflicts, and support interprofessional collaboration.
4. **Invest in Staffing and Resources:** Address workload and staffing shortages to minimize burnout and create conditions conducive to effective teamwork.

5. **Leverage Cultural Diversity:** Develop intercultural competence training to transform diversity from a barrier into a strength that enriches collaboration and patient care.

For Education

6. **Expand Interprofessional Training:** Integrate interprofessional education modules into nursing and medical curricula, focusing on collaboration, communication, and shared accountability.
7. **Simulation-Based Learning:** Use high-fidelity simulation exercises to train teams in handling critical scenarios collaboratively, reinforcing both technical and teamwork skills.

For Policy and Research

8. **Institutionalize Collaborative Policies:** Develop hospital-wide policies that support interprofessional collaboration, ensuring accountability for teamwork outcomes.
9. **Conduct Longitudinal Research:** Future studies should examine the long-term impact of interventions such as shared decision-making models and interprofessional education on patient outcomes.
10. **Explore Technology Integration:** Investigate the role of digital tools, such as electronic health records and tele-collaboration platforms, in improving interdisciplinary communication and teamwork.

LIMITATIONS AND FUTURE RESEARCH

Limitations

Although this study offers valuable insights into teamwork dynamics in critical care nursing, several limitations must be acknowledged. First, the qualitative design relied on participants' self-reported experiences, which may be influenced by recall bias or social desirability bias. Second, the sample was limited to a specific group of critical care professionals, which may not fully capture variations in teamwork experiences across different institutions or healthcare systems. Third, the study did not directly observe team interactions in practice, which could have provided richer contextual data to complement interview findings. Lastly, while the study identified organizational and cultural influences, it did not quantitatively assess their relative impact on teamwork outcomes, limiting the ability to generalize findings broadly.

Future Research

Building on these findings, future research should pursue several directions. First, mixed-methods studies combining qualitative interviews with quantitative surveys or observational data could provide a more comprehensive understanding of teamwork dynamics. Second, comparative studies across multiple hospitals or countries would help capture cultural and organizational variations in interprofessional collaboration. Third, longitudinal research is needed to evaluate the effectiveness of interventions such as structured communication tools, interprofessional education, and shared governance models over time. Fourth, future studies should explore the integration of technology, including electronic health records, mobile apps, and telehealth, as enablers of real-time interdisciplinary communication. Finally, expanding research to include patient and family perspectives may reveal additional insights into how teamwork influences the quality and safety of care in critical care settings.

CONFLICT OF INTEREST

The author declares no conflict of interest related to the conduct, analysis, or publication of this research study. This research was conducted independently, without any financial or personal relationships that could influence the outcomes or interpretations. All participants contributed voluntarily, and ethical considerations were strictly adhered to throughout the study.

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