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Original Article

Interprofessional Collaboration among Nurses and Doctors in Neonatal Intensive Care Unit at a Private Hospital in Karachi

Adil Badshah*, Saf Ur Rehman & Saima Ayoub

Faculty of Nursing & Midwifery, Ziauddin University, Karachi, Pakistan

Abstract

Inter-professional Collaboration (IPC) is needed in neonatal intensive care units (NICUs) to enhance patient outcomes, decrease hospital stays, and enhance quality of care. This qualitative exploratory study examined the views of nine nurses and nine doctors in a tertiary care hospital in Karachi, Pakistan, about IPC, as well as its facilitators and constrains. With purposive sampling and semi-structured interviews conducted in English and Urdu, thematic analysis identified three key themes: healthcare professionals' positive attitude towards IPC and its effects on patient outcomes; important facilitators like effective communication, respect for one another, trust, and professional expertise; and major barriers like lack of organizational support, power imbalance, increased workload, and system issues. Attendees highlighted IPC's critical contribution to enhancing care and urged its more robust integration into education, practice, and policy to promote a collaborative healthcare culture.

Keywords: Interprofessional, Collaboration, Nurses, Physician, Doctors, Neonatal Intensive Care Unit

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INTRODUCTION

Interprofessional Collaboration (IPC) is the heart of contemporary healthcare systems, especially within acute care units like critical care units. Healthcare professionals such as nurses, physicians play a crucial part in coordinating, which is significant in maximizing patient outcomes, lowering medical errors, and guaranteeing effective resource use (Geese & Schmitt, 2023). The urgency of interventions necessary in complicated cases of patients emphasizes the need for an integrated healthcare team. Effective IPC is, however, easily defeated by hierarchical structures, barriers to communication, and professional boundaries, especially in health systems such as the health system in Pakistan (Geese & Schmitt, 2023).

Foreign studies have shown that IPC enhances clinical decision-making, patient satisfaction, and treatment adherence (Gantayet-Mathur et al., 2022). Health-care systems that have developed have brought about the implementation of structured communication models, interprofessional education, and standardized protocols to facilitate teamwork by health professionals. In developing nations such as Pakistan, IPC is still in its infancy stage because of the limitations of the institutions, skilled professions, and limited experience of interprofessional education. These issues establish a parallel instead of a collaborative working situation, commonly at the expense of the quality of care (Bok et al., 2020).

Critical care unit roles are autonomous but complementary. Nurses administer patient care directly, ongoing monitoring, and prompt action in emergencies. Physicians manage patients, make treatment decisions, and guide treatment modalities. RTs are expertise in airway management, ventilator management, and

*Corresponding Author: Adil Badshah | ziauddin university
adilbadshah568@gmail.com

oxygen treatment for critically unwell patients (Inagaki et al., 2023). Although these roles are complementary, hierarchical decision-making processes, ambiguous role definitions, and inadequate interdisciplinary communication often impede IPC (Aamodt et al., 2025). Resolving such issues is crucial to the development of a patient-centered team practice (Aamodt et al., 2025).

Understanding how nurses and doctors perceive IPC in critical care settings is particularly crucial in Pakistan, where the majority of critical care departments face resource constraints (Alhumaid et al., 2021). IPC is an important part of contemporary healthcare, especially in high-acuity environments like critical care units. Proper coordination among nurses, physicians, and RTs must take place in order to secure patient safety, maximize outcomes, and utilize medical resources efficiently. However, the healthcare system of Pakistan falls behind in implementing efficient IPC because of hierarchical systems, differences in communication, and role-boundaries of professionals. International evidence attests to the advantages of IPC, such as enhanced clinical decision-making, patient satisfaction, and compliance with treatment (Reeves et al., 2017). Unlike highly developed healthcare systems that have adopted formal models of communication, interprofessional education, and standardized interventions to promote collaboration, IPC remains underdeveloped in countries such as Pakistan because of institutional issues and a lack of exposure to interprofessional within intensive care environments, health care tasks are complementary. Nurses offer direct patient care and close observation; physicians monitor patient care and management of treatment. Although their activities are complementary, organizational problems such as hierarchical decision-making, duplication of role expectations, and intra-disciplinary communication impair effective IPC to eliminate these barriers is at the core of encouraging teamwork in patient care (Aamodt et al., 2025). Assessment of nurses' and physicians' attitudes toward IPC in Pakistan is relevant to the country's resource-limited critical care settings. The study seeks to explore the perceptions of healthcare professionals toward IPC, identify existing barriers, and determine potential facilitators. These could be applied to inform policy and interventions in improving interprofessional practice in critical care settings. Ultimately, the improvement of IPC can lead to better patient outcomes, reduce burden on healthcare personnel, and enhance overall efficiency in the health system.

Research today focuses on the significance of IPC in enhancing quality and safety in healthcare. But more research on the enablers as well as barriers to effective collaboration is needed (Melkamu et al., 2020). Both the doctor's and nurse's point of view can be substantiated by a qualitative study elucidating the IPC barriers (Matusov et al., 2022).

Nurse-physician communication has an immense impact on patient care, but complexity of IPC is not sufficiently explored. Professional misunderstanding and miscommunication may have a harmful impact on patients' outcomes, and hence additional research is needed to boost IPC strategies (Ahmadieh et al., 2019). Additional professional autonomy and collaboration studies in critical care settings are also able to provide more information regarding how organizational design impacts IPC (Ahmadieh et al., 2019).

Purpose of the Study

The primary goal of this research is to determine the perceptions of NICU physicians and nurses regarding interprofessional collaboration. Furthermore, this study aims to evaluate their knowledge of IPC and determine the factors that support or hinder successful collaboration among these healthcare providers. Through the analysis of these areas, the study will provide important insights into enhancing teamwork and patient care in neonatal intensive care units.

Objectives

- To examine the experiences of ICU doctors and nurses towards interprofessional collaboration in a private tertiary care hospital Karachi.
- To determine the major factors that affect interprofessional collaboration between nurses and doctors in the ICU of a private tertiary care hospital Karachi.

Research Questions

- What are the experiences of nurses and doctors in neonatal intensive care units towards interprofessional collaboration in a private tertiary care hospital Karachi?
- What are the factors that promote and constrain interprofessional collaboration between nurses and doctors in the ICU of a private tertiary care hospital Karachi?

Significance of the Study

This research is a milestone in the Pakistani setting in the sense that no previous research has been undertaken to find out how NICU nurses and doctors perceive interprofessional collaboration in a private tertiary care hospital Karachi. Through this void, the research will offer a building block for future research in the field.

It is essential to comprehend the difficulties that nurses and doctors encounter when collaborating in hospital settings, and understanding of these problems will allow them to be overcome, leading eventually to more successful collaboration. More effective interprofessional collaboration will reduce barriers to better teamwork, organize the delivery of healthcare, and have a direct influence on the outcome for patients.

Apart from this, the current research will also add new knowledge regarding the facilitators and inhibitors of IPC among physicians and nurses in their professional interactions. The conclusions of this research will serve as a blueprint for policymakers and hospital administrators to implement evidence-based interventions which enhance teamwork in NICUs.

LITERATURE REVIEW

The evidence from the literature for interprofessional collaboration (IPC) among doctors and nurses is addressed in this chapter. Aside from further reviewing the evidence in favor of IPC, it focuses on the experience, attitude, opinion, facilitators, and hindrances to IPC of doctors and nurses working in the intensive care unit.

Search strategy

In order to find the literature, an organized and systematic literature search was conducted. Data was collected with the use of BMC searches, PubMed searches, and Science Direct searches. Researchers searched for the literature based on the keywords: “Experiences” OR “Perception” AND “Neonatal Intensive Care Unit” OR “Neonatal Critical Care Unit” OR “NICU” AND “Nurses” OR “Registered Nurse” OR “Staff Nurse” AND “Physicians” OR “Doctors” AND “Interprofessional Collaboration”OR“Interdisc iplinary Collaboration” OR “Multidisciplinary Collaboration”. Interprofessional Collaboration (IPC) is essential in healthcare, especially in neonatal intensive Similarly included were the below MeSH terms: ‘Interprofessional Relations’, ‘Physicians’, ‘Nurses’, and ‘Intensive Care Units’. MeSH terms were used words and paired with Boolean operators to fine-tune further the search strategy. The search process employed the Boolean operators OR and AND while applying filters based on the recent years, over which the last ten years (2019-2025) were taken, realizing that IPC practice itself is a constantly developing phenomenon; therefore, recent literature will illustrate the current trends and developments in practice. Material explains the importance of IPC between nurses and physicians and their barriers and facilitators from 2014 to 2023 and only in the English language was included. We excluded non-English articles and those published outside the designated time frame to keep up lucidity in relevance.

Challenges in Interprofessional Collaboration

Interprofessional collaboration (IPC) between nurses and physicians is essential for effective healthcare delivery. However, several challenges hinder this collaboration, impacting patient outcomes and workplace harmony. Qualitative descriptive research within Botswana’s government hospitals outlined major obstacles that involve a shortage of nurses, doctors, and medical supplies that all negatively influence patient care and collaboration (Aghamohammadi et al., 2019; Sabone et al., 2019). Moreover, there is differences in how nurses and physicians view the practice scope, education, and the exercise of unofficial power create challenges between physicians and nurses (Sabone et al., 2019).

The other common issue that had been persisting in IPC is the absence of nurses’ participation in crucial decision-making (Abeje et al., 2025). Nurses have expressed frustration at being omitted from patient communication and care planning, which results in stress and feelings of neglect within the work environment (Abdelhadi et al., 2022). Conflicts occur regarding stopping or continuing the treatment, as nurses perceive physicians to give undue hope to the patients and families (Spijkers et al., 2022) A hospital-based study in Pennsylvania emphasized the fact that communication and coordination mattered much more to nurses compared to physicians, though time was rated as the most significant barrier during bedside rounds (Kato et al., 2022). In addition, the unpredictability of NICU interactions also hurts both the patient’s self-image and the nurse’s feeling of accomplishment in their practice (Jiang, 2023).

Facilitators of Interprofessional Collaboration

A few strategies have been identified to improve interprofessional collaboration between physicians and nurses. One such significant strategy is making Interprofessional healthcare education (IPE) compulsory at the undergraduate and postgraduate levels. That would ensure effective collaboration between future healthcare workers, taking into account gender, age, and other educational differences (Ahmadieh et al., 2019).

Motivation has also been mentioned as one of the most important facilitating strategies of IPC. Nurses and doctors who are motivated and empowered to work together are more likely to work in teams effectively (Ahmadieh et al., 2019). Another important aspect is the inclusion of nurses in decision-making, especially for patient care (Chew et al., 2019). Healthcare leaders have an important role in promoting IPC by reorganizing ward practices to reserve specific time slots for nurses to join physician rounds (Ahmadieh et al., 2019).

Nurse leadership is another essential facilitator to improving the leadership skills of nurses can fill the gaps between disciplines, with nurses being active contributors to decision-making and patient care planning. Advanced practice nurses (APNs) are central to enhancing coordination and communication within the healthcare team. A study proposed assessing the distribution of APNs in neonatal intensive care units (NICUs) to increase the care skills of non-APNs (Yamamoto, 2022).

Further, evidence has identified that enhanced IPC contributes to higher-quality patient and organizational outcomes. It is beneficial to know individual and organizational factors that are known predictors of successful IPC in the design of intervention programs to make collaboration effective (Lapierre et al., 2024). One study published in intensive care units highlighted the fact that cooperative rounds among physicians and other providers were associated with subjective enhancements in teamwork, communication, and coordination (Ullah, 2023). Job retention and work satisfaction are also positively affected by successful IPC (Gazi et al., 2024).

Nurses' and Physicians' Attitudes towards Interprofessional Collaboration

Research consistently emphasizes that IPC is vital for high-quality patient care, and both nurses and physicians recognize its significance (Geese & Schmitt, 2023). Facilitative teamwork creates positive attitudes towards collaboration among healthcare professionals (Stadick, 2020). But studies have showed that nurses tend to be more positive towards IPC than doctors (Filizli & Önler, 2020). This is because nurses work more closely with patients and are more engaged in their daily care.

A descriptive correlational study conducted in Iran by Aghamohammadi et al. (2019), which revealed that critical care unit nurse-physician collaboration was satisfactory, but nurses were concerned with the restricted autonomy they had in decision-making. Likewise, a tertiary healthcare facility study revealed that physicians should improve patient care acknowledgement of nurses' contributions (Saeed, Mukhtar, & Afzal, 2024). In Somalia, nurses in different health care settings exhibited more positive attitudes towards IPC than physicians, especially with higher educational levels (Osman et al., 2025). In a Turkish tertiary hospital, likewise, nurses were more cooperative and willing to assist, whereas physicians still maintained a hierarchical style with a controlling decision-making role (Filizli & Önler, 2020).

A study conducted by Ahmadieh et al. (2019) highlighted that recent positive collaboration experiences strengthened attitudes towards IPC, affirming the necessity of continued professional interaction among healthcare professionals. Studies in the United States and Palestine indicated varying perceptions of IPC, and nurses and physicians disagreed in their assessment of its value (El-Awaisi et al., 2021). Meanwhile, Italian and American studies indicated trust, respect, and attachment as key pillars for effective nurse-doctor collaboration (Boev et al., 2022). A more recent study in Pakistan, Saudi Arabia, and Egypt reported that nurses were found to have favorable attitudes towards IPC, highlighting the reality that professional boundaries and nursing image must be dealt with to facilitate cooperation (Alsallum et al., 2019; Hossny & Sabra, 2020; Kaifi et al., 2021).

Strategies for Improving Interprofessional Collaboration

In spite of repeated efforts, IPC remains an unexplored problem that need to be tackled with certain strategies. Literature shows that IPE and multidisciplinary ward rounds enhance IPC (Zechariah, Ansa, Johnson, Gates, & Leo, 2019).

Open communication and clear arguments are also essential for the success of collaboration, as supported by a qualitative study in USA (Albright et al., 2022).

A Brazil ICU mixed-method study reported that multidisciplinary rounds significantly enhanced teamwork and decreased falls and self-extubations (Maran et al., 2022). Another study by (D'Souza et al., 2021) reiterated the significance of ward rounds as a site for face-to-face communication and information exchange. (Heip et al., 2022) also showed that evidence-based interdisciplinary bedside rounds improve nurse-physician collaboration and patient outcomes.

A systematic review had demonstrated that IPE programs promote favorable attitudes toward IPC, improve communication, and prepare healthcare professionals with the competencies required for collaboration (Dyess et al., 2019). According to a study conducted by (Zechariah et al., 2019) medical and nursing students who were exposed to IPE gained a greater understanding of the roles of one another, which resulted in enhanced collaboration in clinical practice. Controlled trials also went ahead to show that IPE intervention significantly improved the confidence and skill levels of students in Interprofessional collaboration (Spaulding et al., 2021).

METHODOLOGY

Interprofessional collaboration between nurses and physicians in the Neonatal Intensive Care Unit (NICU) of a private hospital in Karachi is discussed in this chapter using the research methodology utilized to investigate this topic. The methodology includes the study design, setting, population, inclusion and exclusion criteria, sampling methods, recruitment of participants, data collection processes, and analysis procedures. By defining these elements, this chapter hopes to give a clear picture of how the research was carried out and why certain methods were selected.

Study Design

The research employed an exploratory qualitative design, which is well-suited to the comprehension of intricate phenomena like interprofessional collaboration in healthcare environments. This design enables in-depth examination of participants' experiences, perceptions, and attitudes, yielding rich qualitative information that can uncover implicit themes and insights (Verhaegh et al., 2017). The qualitative method is useful in the capture of interpersonal nuances and contextual factors that shape collaboration among NICU staff.

Setting

The study was carried out at a private tertiary care hospital in Karachi, Pakistan, which is renowned for its state-of-the-art medical facilities and specialized neonatal care. The NICU of this hospital is a critical care unit, where multidisciplinary teams of nurses, physicians, and other healthcare providers work together to deliver high-quality care to critically ill neonates. The choice of this setting is significant, as it offers a unique opportunity to investigate the dynamics of interprofessional collaboration in a high-pressure environment where teamwork is essential for optimal patient outcomes.

Population

The population targeted by this research comprised NICU doctors and nurses at the chosen private hospital. They were selected as the population of interest because they directly engage with patients and are crucial to the collaborative activities within the NICU. Through this population of healthcare workers, the research seeks to understand their own perceptions of collaboration, the obstacles they encounter, and the conditions that promote or hinder teamwork.

Selection Criteria

In order to have a targeted and pertinent sample, particular inclusion and exclusion criteria were developed.

Inclusion Criteria

Participants should be registered nurses or physicians who are actively employed in the NICU.

Participants should have at least six months of experience in the NICU so that they would have adequate exposure to the collaborative processes in the unit.

Participants should be willing to give informed consent to take part in the study.

Exclusion Criteria

Healthcare workers who do not engage in direct patient care in the NICU, e.g., administrative personnel or trainees, were excluded.

Participants who have remained in the NICU for less than six months were excluded to ensure that all participants have enough experience to give worthy insights.

Sample and Sampling Techniques

A purposive sampling method was used to identify participants to be included in the study. This non-probability sampling technique permits researchers to choose individuals who share particular characteristics or experiences that are pertinent to the research question. In this instance, NICU physicians and nurses were selected based on their direct participation in interprofessional collaboration.

The study sample included 18 participants, 9 being NICU nurses and 9 being NICU physicians. The sample size was sufficient to ensure data saturation, where no further themes or insights can be elicited from the data. Professional role diversity in the sample ensures a fuller understanding of collaborative dynamics between physicians and nurses in the NICU context.

Participant Recruitment

Recruitment of participants was done after the study had been approved by the ethical review board. The researcher contacted potential participants directly in the hospital, using flyers and information sessions to introduce the purpose and importance of the study. Potential participants were given detailed information on the study, including the fact that participation was voluntary, measures for confidentiality, and the ability to withdraw at any time without penalty.

Consent from all participants was informed, and prior to the interviews, all participants provided their home addresses for sending them information after completion of the study. All these measures helped in creating a sense of trust as well as transparency between participants and the researcher.

Data Collection Procedures

Data were collected using semi-structured interviews, which ensured flexibility in gaining an understanding of participants' perceptions without losing track of important areas of discussion. Interviews were done in a private room within the hospital to facilitate confidentiality and comfort among the participants. The researcher used planned as well as spontaneous probes during interviews to gain rich and detailed answers from the participants.

To facilitate the use of participants' preferred language, interviews were taken in English as well as Urdu, depending upon the individual's ease. Bilingual strategy used helped to communicate ideas and emotions more freely and increased the quality of the collected data.

Each interview took around 40-50 minutes and was recorded on audio with the permission of the participants. The researcher also made detailed field notes during the interviews to note non-verbal behavior and emotional expressions, which supplemented the verbal data collected.

Data Analysis

Data analysis was done by means of systematic text condensation, an exploratory thematic analysis technique that enables identification of patterns and themes in qualitative data. Bengtsson (2016) stresses the need for concurrent data collection and analysis, meaning these two processes tend to run together. Analysis was done in a systematic way, involving structuring the data, grouping information, using coding, and carrying out intensive exploration and interpretation.

The analysis was conducted in four steps:

Overall Impression: The researcher read the transcripts to get a broad sense of the data and recognize recurring patterns and themes.

Recognizing and Classifying Meaning Components: Meaning units were identified and categorized into themes or categories that reflected the central ideas talked about by participants.

Condensing: The researcher condensed and abstracted the content within each theme to pull out the core meaning or essence.

Synthesizing: The abbreviated meanings were synthesized to produce descriptions and concepts that were representative of the underlying patterns as they emerged from the data.

Study Rigours

Adherence to rigours in this qualitative study ensured credibility, dependability, confirmability, and transferability of results. Credibility was achieved through prolonged participant involvement through intensive interviews, member checking, field notes, reflexivity, and regular supervisory input. Dependability was attained through adherence to systematic and transparent research, upkeep of an audit trail, and utilizing a semi-structured interview guide approved by the thesis committee. Confirmability was maintained by neutrality, verification of transcripts, reflective memos, and consulting the supervisor during

analysis to minimize bias. Transferability was facilitated by thick descriptions of participants and settings, and maximum variation sampling to obtain varied perspectives that could be applied to similar NICU settings.

Ethical Considerations

Ethical considerations were of prime importance throughout the research process. Prior to starting the study, the researcher obtained clearance from the AKU ethical review committee. To carry out research in the necessary context, permission was sought from the private hospital in Karachi. The letter of approval was signed by the hospital's Chief Medical Officer to meet institutional requirements. The researcher obtained signed consent forms from participants who wanted to participate in the study. Participants were free to withdraw from the study at any moment; the researcher would not force them to withdraw. Study participant information was confidential, and only the principal investigator had access to it. By giving a unique ID to each participant at the beginning of the study, confidentiality was ensured throughout the study.

CONCLUSION

This study emphasizes the importance of interprofessional collaboration between doctors and nurses in intensive care units. Based on studies in the relevant literature, it highlights how efficient IPC can result in shorter hospital stays, enhanced quality of care, and improved patient outcomes. The chapter further refers to the barriers to interprofessional collaboration that have been observed in healthcare facilities of developed and developing nations.

While earlier research suggests that doctors and nurses can collaborate, there are still issues. This study will contribute to the understanding of these issues by examining NICU healthcare professionals' attitudes. It will also identify the facilitators and barriers to IPC in the ICU unit of a tertiary care hospital in Karachi, Pakistan. The outcomes will provide pragmatic solutions for enhancing teamwork and communication and, therefore, patient care.

Interprofessional collaboration among nurses and doctors is essential for optimal patient care. Although obstacles exist, there are numerous facilitators, such as leadership, motivation, and organized interventions that can improve IPC. Nurses' and physicians' attitudinal differences must be remediated by education and culture sessions. The challenges of IPC should be investigated further in future research, encompassing systemic, clinician, and patient-related factors to create a genuinely collaborative healthcare setting.

Overall, this study has described the research approach used to investigate interprofessional collaboration between NICU nurses and doctors. Using an exploratory qualitative approach, the study endeavored to gather in-depth knowledge about the collaborative processes within the NICU environment. The process of careful selection of participants, data collection methods, and analysis procedures enhanced the rigor and trustworthiness of the research outcomes.

Study Findings

This chapter reports the study findings from in-depth interviews with health professionals. It contains participants' demographic information, followed by subthemes, themes, and categories extracted from their accounts. Direct quotations from the interviews are employed to reinforce the analysis, and the chapter ends with a summary.

Demographic Profile of Participants

The sample consisted of 18 subjects: nine physicians and nine nurses, equally represented from Neonatal Intensive Care Unit (NICU). All subjects had more than one year of experience in a clinical setting. Demographic information is presented below (Table 2):

Participants' demographic characteristics (n = 18)

Characteristics	Frequency (N)	Percentage (%)
Age		
18 - 20 years		0%
21 - 30 years	7	38.9%
31 - 40 years	11	61.1%
Sex		
Male	10	55.6%
Female	8	44.4%
Designation & Qualification		
Doctors	9	50%
Nurses	9	50%
Experience		
1 to 3 years	6	33.3%
4 to 6 years	12	67.7%

Themes

The analysis revealed three themes, each with subthemes and categories (see Table 1).

Table 1

Topics, Subthemes, and Categories

Theme	Subthemes	Categories
Perceptions on IPC	Definitions and Shared Goal	Synergy among vocations
	Mutual respect and equality	valuing competence
Features of IPC	Communication Technique	Tools (SBAR and EMRs)
	Clear and accountable roles	Advocacy and clinical judgment.
Factors Shaping IPC	Enablers	Training, policies, and workplace design
	Barriers	Hierarchy, understaffing, and bureaucracy
	Recommendations	Cultural transformations and feedback cycles

Theme 1: IPC Perceptions

All participants universally identified IPC as a joint effort to maximize patient care through collaborative expertise.

Subtheme 1: Definitions & Shared Aims

- **Category 1: Synergy Across Professions**

Physicians prioritized breaking silos:

"Integrating clinical expertise across professions in holistic decision-making" (D2).

Nurses prioritized equality:

"A team where a nurse concern is treated as seriously as a doctor's directive" (N3).

- **Category 2: Patient-Centered Accountability**

Physicians saw accountability as collective:

"Not only 'my patient' but 'our patient'" (D4).

Nurses tied accountability to advocacy:

"Raising concerns isn't 'bothering'—it's patient advocacy" (N8).

Subtheme 2: Mutual Respect & Equality

- **Category 1: Valuing Expertise**

Physicians recognized nurses' watchfulness:

"Nurses are our eyes on the ground—their watchfulness saves lives" (D9).

Nurses connected respect to respectful dialogue:

"Respect means physicians ask, 'What do you think?' and mean it" (N3).

- **Theme 2: Characteristics of IPC**

Main characteristics were formal communication, role definition, and flexibility.

Subtheme 1: Communication Practices

- **Category 1: Tools & Protocols**

SBAR and shared EMRs were applauded:

"Standard communication tools such as SBAR eliminate errors" (D8).

Nurses reported gaps:

"Night-shift physicians avoid SBAR because of time" (N2).

- **Category 2: Real-Time Collaboration**

Physicians appreciated nurse-initiated protocols:

"Nurse-activated ECGs for chest pain avoid delay" (D5).

Nurses emphasized the importance of being assertive:

"We shouldn't need 'permission' to amplify concerns" (N5).

Subtheme 2: Role Clarity & Accountability

- **Category 1: Clinical Advocacy**

Nurses illustrated advocating in spite of resistance

"Surgeons dismiss us as 'just assistants'—but we push for timely interventions" (N6).

Doctors emphasized the importance of nurses' intuition: "If a nurse is worried, I'm worried" (D3).

- **Category 2: Ethical & Clinical Accountability**

The shared team responsibility for outcomes was important: "Morbidity reviews done with a no-blame culture allow for learning" (D6).

Theme 3: Factors Influencing IPC

Subtheme 1: Facilitators

- **Category 1: Structural Supports**

Co-located workspaces (D7, N4) and policies supporting nurse empowerment (D5, N5) were natural facilitators of teamwork. "Trauma teams are good because we work together" (D7).

- **Category 2: Education & Culture**

Joint simulation and senior leadership

modeling were critical: "Leaders who actively listen lead with humility" (D3).

Subtheme 2: Barriers

- **Category 1: Hierarchical Power Structures**

Nurses described dismissive attitudes about their thinking: "Doctors say, 'I know better than you'" (N6). While physicians recognized the issue, they also described a strong hierarchy commonly present within urban medical care contexts: "Rural hospitals help teamwork because they are not bureaucratic" (D9).

- **Category 2: Organisational Uncertainty**

Understaffing within units and rotating staff involved in IPC compromised trust: "There is little time to communicate in hurried and rushed environments" (D9).

Subtheme 3: Future Considerations

- **Category 1: Policy & Training**

Nurses voiced a desire for mandatory IPC training:

"Teach collaboration in medical schools" (N6). Doctors reminded nurses' input with clear feedback: "Nurses want to understand if their input made a difference for a patient" (D4).

- **Category 2: Cultural Shift**

The recurrent themes of fostering confidence and flattening hierarchies, and valuing nurses' intuition were consistent:

"Conflict is healthy if it's patient-centered, not ego-driven" (D9).

Summary

Members perceived IPC as vital to patient safety and organizational effectiveness. Doctors focused on system tools (e.g., SBAR, EMRs) and nurses on relational relationships (e.g., respect, empowerment), but both recognized hierarchical obstacles and understaffing as pivotal hurdles. Interspersed among the recommendations were suggestions for interprofessional education, policy change, and cultural transformation in order to create environments of trust and joint responsibility

Discussion

This chapter includes a critical discussion of the study's main findings in light of the current literature, followed by pragmatic suggestions, strengths, weaknesses, and concluding overview.

Key Findings

1. Perception of Interprofessional Collaboration (IPC)

Doctors and nurses repeatedly ranked Interprofessional Collaboration as crucial in high-acuity environments like the NICU. The results emphasized the importance of communication, respect for each other, and common clinical objectives. Participants pointed out that IPC improves patient safety, decreases medical errors, and enhances healthcare worker satisfaction, findings that resonate with earlier studies by Verd-Aulí et al. (2021). In addition, IPC was considered a means of maximizing the utilization of available resources and promoting institutional unity, in accordance with Bornman & Louw, (2023).

2. Features of Successful IPC

Clear roles and communication became a vital component, cutting down ambiguity and ensuring mutual trust. This corroborates the work of Ghattas & Abdou, (2025), and Stadick (2020), who pointed out that clearly outlined roles boost team effectiveness and accountability. Clinical accountability and flexibility were also crucial, especially in the dynamic of critical care fluid dynamics. This is corroborated by Fagerdal et al. (2022) and Priyadarshi & Kumar (2020), who highlighted flexibility as critical for timely decision-making and patient advocacy.

3. Factors Influencing IPC

Facilitators were open and respectful communication improvement, Supportive leadership with Goal congruence, and professional relations based on trust—endorsed by Vatn & Dahl (2022) and El-Awaisi et al. (2024).

Barriers, however, comprised unclear roles, strict hierarchies, professional silos, and absence of administrative support, communication deficits. These are aligned with results from Rawlinson et al. (2021), Mboineki et al. (2019), and Kim et al. (2022), who mentioned that such interpersonal and systemic barriers compromise IPC effectiveness.

Recommendations

Clinical Practice

- Establish routine interdisciplinary rounds and online platforms to enhance real-time communication.
- Provide combined training programs and simulations to augment interprofessional role awareness.
- Provide formal conflict resolution workshops

and foster collaborative leadership across departments.

Research

- Additional qualitative and mixed-method research would need to investigate the constructs of flexibility and accountability within IPC, specifically in critical care settings.
- Multicenter research in a range of public and private healthcare environments would add strength to the generalizability of the findings.
- Establish institutional policies that clearly spell out interprofessional roles, responsibilities, and communication procedures.
- Integrate performance incentives that reinforce collaborative practices and develop shared leadership models to demote hierarchies.

Strengths of the Study

Qualitative approach allowed for richer experiences of doctors and nurses to be explored in greater detail.

Employment of experienced professionals from a critical care environment (NICU) added credibility and local relevance to the study.

Methodological rigor was attained through clear audit trails and triangulation, thus making the study more transferable and reliable.

Limitations

The research was confined to one private hospital in Karachi, which can limit the generalizability of results to other healthcare environments.

Input from other healthcare professionals (e.g., respiratory therapists, pharmacists) was not obtained, restricting the breadth of interprofessional perspectives.

Summary

This research reaffirms that IPC is central to optimal patient care in critical environments. Although common purposes and respect constitute the foundation for successful collaboration, systemic and cultural obstacles remain. The research adds to the cumulative evidence base supporting the significance of IPC in patient outcomes and job satisfaction. Nevertheless, further investigation is required to advance knowledge regarding flexibility and accountability in critical care IPC. The suggestions made cut across clinical, policy, and research areas, with the goal of creating an equitable healthcare environment based on communication, equity, and mutual responsibility.

Interview Guide

Participant Name: _____
_____

Signature of Participant: _____

Date: _____

Name of the person who explained consent: _____

Signature: _____

Date: _____

Interview Questions

- What do you mean by interprofessional collaboration?
- Your experience of interprofessional collaboration within your ward.
- In your opinion, what supports interprofessional collaboration?
- In your opinion, what restricts interprofessional collaboration?
- What role do you believe interprofessional collaboration plays in patient outcome?
- How have team members assisted you with clinically deteriorating patients?
- What in your opinion can assist in the identification and avert clinical worsening in patients?
- What is your experience regarding interprofessional reporting of patient clinical worsening?
- What, in your opinion, are the most important factors to report in patients with clinical deterioration?
- Can you give some example of how your professional knowledge is helpful in your interprofessional collaboration
- What has been your experience when various professionals hold various perspectives and opinions on patient care?
- In what ways does the administration in your department promote interprofessional collaboration?

Competing Interests

The authors did not declare any competing interest.

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