

Managing Respiratory Optimizing Healthcare Delivery Through Interprofessional Teamwork: A Qualitative Study on the Synergy Between Nurses, Doctors, and Pharmacy Technicians in Saudi Arabian Healthcare Facilities

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1Nursing

2Doctor

3Pharmacy Technician

Abstract

Background: Interprofessional teamwork is crucial for optimizing healthcare delivery and patient outcomes. This qualitative study explored the synergistic dynamics between nurses, doctors, and pharmacy technicians in Saudi Arabian healthcare facilities.

Methods: Semi-structured interviews were conducted with 20 healthcare professionals (6 nurses, 6 doctors, 8 pharmacy technicians) working in tertiary care hospitals in Saudi Arabia. Interview transcripts underwent thematic analysis.

Findings: Three main themes emerged: 1) Benefits of interprofessional collaboration for patient care, including improved communication, coordination, and safety; 2) Facilitators of effective teamwork, such as mutual respect, trust, and shared goals; and 3) Barriers to interprofessional synergy, including hierarchical structures, role ambiguity and professional silos.

Conclusions: Interprofessional teamwork enhances healthcare delivery when marked by open communication, shared understanding, and mutual respect. Overcoming entrenched hierarchies and professional territoriality is essential for unlocking the full potential of nurse-doctor-pharmacy cooperation. Interprofessional education and organizational cultures that prioritize teamwork can cultivate the synergy required for optimal patient care.

Introduction

Interprofessional teamwork, defined as the cooperative interaction between healthcare professionals from different disciplines, is increasingly recognized as a cornerstone of high-quality, patient-centered care delivery (Reeves et al., 2017). In the complex ecosystem of healthcare, no single profession can fully address the multifaceted needs of patients. Rather, the coordinated efforts of various professionals, each contributing their unique expertise, are necessary for comprehensive care (Schot et al., 2020).

Effective collaboration between nurses, doctors, and pharmacists is particularly vital given their central roles in care delivery. Nurses' close and continuous interaction with patients, doctors' diagnostic and treatment planning responsibilities, and pharmacists' medication management duties create interdependencies that necessitate seamless teamwork (Fiscella et al., 2017). When these professionals work in synergy, the result is often enhanced patient safety, improved clinical outcomes, and increased patient satisfaction (Caricati et al., 2015; Patel et al., 2018).

However, realizing the full potential of interprofessional collaboration remains an ongoing challenge. Professional silos, hierarchical power dynamics, role ambiguity, and communication

barriers can hinder effective teamwork (Pomare et al., 2019; Teng et al., 2019). These issues may be especially pronounced in cultural contexts with robust professional hierarchies and a limited tradition of interprofessional education, such as in Saudi Arabia (Alrasheed, 2022).

This qualitative study aimed to explore the experiences and perceptions of interprofessional teamwork among nurses, doctors, and pharmacy technicians in Saudi Arabian healthcare facilities. By illuminating the benefits, facilitators, and barriers to effective collaboration, this research can inform strategies for optimizing healthcare delivery through enhanced interprofessional synergy.

Literature Review

The Importance of Interprofessional Teamwork

Interprofessional teamwork is widely recognized as a critical factor in healthcare quality and safety. When diverse healthcare professionals work together effectively, they can provide more comprehensive, coordinated, and patient-centered care (Rosen et al., 2018). A robust body of evidence links interprofessional collaboration to improved patient outcomes, reduced medical errors, enhanced patient and provider satisfaction, and more efficient use of healthcare resources (Reeves et al., 2017; WHO, 2010).

The World Health Organization (2010) has long advocated for interprofessional collaboration as a strategy for strengthening health systems and improving health outcomes. The Institute of Medicine (2015) also highlights the importance of teamwork in its framework for high-quality healthcare, emphasizing that the best outcomes occur when professionals work to their full scope of practice in collaborative teams.

Nurse-Doctor-Pharmacy Collaboration

The triad of nurses, doctors, and pharmacists forms the core of many healthcare teams. Each profession brings unique knowledge, skills, and perspectives that, when harmonized, can greatly enhance care delivery.

Nurses, with their holistic focus and close patient contact, play a vital role in monitoring patient status, implementing treatment plans, and coordinating care (Frenk et al., 2010). Doctors, as medical experts, hold primary responsibility for diagnosing conditions and making treatment decisions (Keller et al., 2019). Pharmacists, with their specialized knowledge of medications, ensure safe and effective pharmacotherapy (Xi et al., 2021).

Effective collaboration between these professions has been linked to numerous benefits. Nurse-doctor teamwork is associated with reduced mortality rates, fewer adverse events, and higher patient satisfaction (Caricati et al., 2015; Patel et al., 2018). Doctor-pharmacist collaboration can improve medication safety, reduce prescribing errors, and optimize pharmacotherapy (Leguelinel-Blache et al., 2021). Nurse-pharmacist cooperation can enhance medication management, patient education, and adherence (Feldman et al., 2021).

However, collaboration between these professions is not always seamless. Historical power imbalances, differing communication styles, and conflicting role perceptions can create barriers to effective teamwork (Tan et al., 2017; Tang et al., 2018). Overcoming these challenges requires a commitment to interprofessional education, clear role definitions, and supportive organizational cultures (Suter et al., 2009).

Interprofessional Collaboration in Saudi Arabia

In Saudi Arabia, the traditional healthcare hierarchy and limited exposure to interprofessional education can pose challenges for effective teamwork (Alrasheed, 2022). Nurses, doctors, and pharmacists often operate in silos, with limited understanding of each other's roles and contributions (Alsubaie, 2020).

However, the Saudi healthcare system is evolving, with increasing recognition of the importance of interprofessional collaboration. The Saudi Vision 2030 and the National Transformation Program emphasize the need for integrated, patient-centered care (Kingdom of Saudi Arabia, 2016). Several Saudi universities have introduced interprofessional education programs to foster collaborative competencies among health professions students (Fallatah et al., 2017).

Despite these positive developments, empirical research on the realities of interprofessional collaboration in Saudi healthcare practice remains limited. This study aims to address this gap by providing insight into the experiences and perceptions of nurses, doctors, and pharmacy technicians working in Saudi hospitals. Understanding the current state of interprofessional teamwork is crucial for identifying areas for improvement and designing interventions to optimize collaboration.

Methods

Study Design

This study employed a qualitative descriptive design using semi-structured interviews. Qualitative description is a pragmatic approach that stays close to the data, providing a comprehensive summary of events in everyday language (Sandelowski, 2000). This method was chosen for its ability to capture the nuances of participants' experiences and generate practical insights for enhancing interprofessional collaboration.

Setting and Participants

The study was conducted in three tertiary care hospitals in the capital city of Saudi Arabia. A purposive sampling strategy was used to recruit 20 healthcare professionals: 6 nurses, 6 doctors, and 8 pharmacy technicians. Inclusion criteria were: 1) currently employed as a nurse, doctor, or pharmacy technician; 2) working in a Saudi hospital for at least one year; and 3) experience working in interprofessional teams.

Participant characteristics are summarized in Table 1. The mean age was 36.4 years (range: 28-52), and the average professional experience was 10.6 years (range: 3-25). Eleven participants (55%) were male, and nine (45%) were female.

Table 1
Participant Characteristics (N = 20)

Characteristic	n (%)
Profession	
Nurse	6 (30%)
Doctor	6 (30%)
Pharmacy Technician	8 (40%)
Gender	
Male	11 (55%)
Female	9 (45%)
Age (years)	
25-34	8 (40%)
35-44	9 (45%)
45-54	3 (15%)
Experience (years)	
1-5	4 (20%)
6-10	7 (35%)
11-15	5 (25%)
16-20	2 (10%)

20 | 2 (10%)

Data Collection

Semi-structured interviews were conducted between January and March 2023. The interview guide (Table 2) was developed based on a review of the literature and the study's research questions. It explored participants' experiences of interprofessional collaboration, perceived benefits and challenges, and suggestions for improvement.

Interviews were conducted in a private room at each hospital, lasting 45-60 minutes. They were audio-recorded, transcribed verbatim, and translated from Arabic to English by a bilingual researcher.

Table

2

Interview Guide

Research Question Interview Questions

Experiences of interprofessional collaboration	- How do you collaborate with [nurses/doctors/pharmacists] in your daily work? - Can you share a positive experience of working with other professions? - Can you share a challenging experience of working with other professions?
Perceived benefits and challenges	- What do you see as the main benefits of interprofessional collaboration for patient care? - What factors facilitate effective teamwork between nurses, doctors, and pharmacists? - What are the main barriers to effective interprofessional collaboration?
Suggestions for improvement	- How could interprofessional collaboration be improved in your workplace? - What changes would you like to see in education or training to prepare professionals for teamwork? - Do you have any other suggestions for enhancing nurse-doctor-pharmacist collaboration?

Data Analysis

Thematic analysis, as described by Braun and Clarke (2006), was used to analyze the interview data. This involved six phases: 1) familiarization with the data through repeated reading; 2) generating initial codes; 3) searching for themes; 4) reviewing themes; 5) defining and naming themes; and 6) producing the report.

Two researchers independently coded the transcripts and then met to compare codes and agree on themes. Discrepancies were resolved through discussion and referral back to the original data. NVivo 12 software was used to manage the data and facilitate analysis.

Trustworthiness

Several strategies were employed to ensure the trustworthiness of the findings (Lincoln & Guba, 1985). Credibility was enhanced through member checking, where a summary of the findings was shared with participants for feedback. Dependability was addressed through detailed methodological descriptions and an audit trail of decisions. Confirmability was supported by researcher reflexivity and the use of verbatim quotes to ground findings in participants' voices. Transferability was facilitated through rich descriptions of the context and participants.

Results

Three main themes emerged from the data analysis: 1) Benefits of interprofessional collaboration for patient care; 2) Facilitators of effective teamwork; and 3) Barriers to interprofessional synergy. Each theme is described below with supporting quotes from participants. To protect confidentiality, quotes are identified by profession and participant number (e.g., Nurse 1, Doctor 2, Pharmacist 3).

Theme 1: Benefits of Interprofessional Collaboration for Patient Care

Participants across all professions emphasized the positive impact of collaboration on patient care quality and safety. Three sub-themes were identified:

1.1 Improved communication and coordination

Effective teamwork was seen as essential for ensuring smooth communication and coordinated care delivery. As one doctor explained:

"When we work together as a team, there's better communication. The nurse can alert me to changes in the patient's condition, and I can adjust the treatment plan accordingly. The pharmacist can flag any potential drug interactions. It's all about sharing information and coordinating our efforts for the best patient outcomes." (Doctor 4)

1.2 Enhanced patient safety

Collaboration was perceived as a key strategy for reducing errors and enhancing patient safety. A pharmacy technician highlighted:

"Having multiple sets of eyes on the patient's medications is crucial. If I notice a discrepancy or potential adverse effect, I can communicate with the doctor and nurse to double-check and make adjustments if needed. This teamwork approach definitely reduces the risk of medication errors." (Pharmacy Technician 7)

1.3 Holistic patient care

Participants valued the different perspectives and expertise that each profession brought to patient care. A nurse reflected:

"Doctors focus on diagnosing and treating the medical issue, while we as nurses look at the whole patient - their physical, emotional, and social needs. And the pharmacists ensure the medication piece fits into the overall care plan. When we bring all these perspectives together, we can provide more comprehensive, patient-centered care." (Nurse 2)

Theme 2: Facilitators of Effective Teamwork

Participants identified several factors that enabled successful interprofessional collaboration:

2.1 Mutual respect and trust

A foundation of mutual respect and trust was seen as essential for teamwork. A doctor shared:

"When there's mutual respect between doctors, nurses, and pharmacists, we can have open dialogues and feel comfortable questioning each other or offering suggestions. We trust that everyone is working towards the same goal of providing the best care for the patient." (Doctor 1)

2.2 Clear roles and responsibilities

Having a shared understanding of each profession's roles and scopes of practice facilitated effective collaboration. A pharmacy technician explained:

"When we're all clear on our roles and how they intersect, it's easier to work together seamlessly. I know what information the doctor needs from me, and what the nurse's responsibilities are in administering medications. It prevents misunderstandings and duplication of efforts." (Pharmacy Technician 5)

2.3 Supportive organizational culture

Participants highlighted the importance of an organizational culture that values and enables interprofessional collaboration. A nurse described:

"Our hospital leadership really emphasizes teamwork and provides opportunities for interprofessional training and feedback sessions. This creates an environment where collaboration is the norm and everyone feels empowered to contribute." (Nurse 6)

Theme 3: Barriers to Interprofessional Synergy

Despite recognizing the benefits of teamwork, participants also encountered challenges in practice:

3.1 Hierarchical structures

Traditional hierarchies and power dynamics were seen as barriers to open communication and equal participation. A doctor admitted:

"Historically, there has been a power imbalance between doctors and other professions. Even though we're trying to move towards more collaborative models, some of those hierarchical attitudes persist and can make nurses or pharmacists hesitant to speak up or challenge a doctor's decision." (Doctor 5)

3.2 Siloed thinking and territoriality

Participants described how professional silos and territoriality could hinder collaboration. A pharmacy technician shared:

"Sometimes there's this mentality of 'staying in your lane' and not stepping on another profession's toes. But in reality, our roles do overlap, and we need to be able to work in that shared space for the patient's benefit. Getting past that territorial thinking is an ongoing challenge." (Pharmacy Technician 2)

3.3 Lack of interprofessional education

Limited exposure to interprofessional education and training was identified as a root cause of collaboration challenges. A nurse explained:

"In our education, we're largely trained separately from other professions, so we don't fully understand each other's roles or how to communicate effectively. More interprofessional learning opportunities, both in school and on the job, would go a long way in breaking down those barriers." (Nurse 3)

Discussion

This study provides insights into the experiences and perceptions of interprofessional collaboration among nurses, doctors, and pharmacy technicians in Saudi Arabian healthcare settings. The findings highlight the benefits of effective teamwork for patient care quality and safety, the factors that facilitate successful collaboration, and the persistent challenges faced by healthcare professionals.

Participants' emphasis on the positive impact of collaboration aligns with the extensive evidence linking interprofessional teamwork to improved patient outcomes, reduced errors, and enhanced satisfaction (Rosen et al., 2018; WHO, 2010). The sub-themes of improved communication, enhanced safety, and holistic care echo the key mechanisms through which collaboration is thought to benefit patients (Schot et al., 2020). These findings underscore the importance of continuing to prioritize and invest in interprofessional collaboration as a cornerstone of healthcare delivery.

The facilitators of effective teamwork identified by participants, including mutual respect, clear roles, and supportive organizational cultures, are consistent with the literature on interprofessional collaboration enablers (Suter et al., 2009). Creating work environments that value and promote these factors can foster the interprofessional synergy needed for optimal patient care.

However, the barriers to collaboration described by participants, such as hierarchical structures, professional silos, and lack of interprofessional education, highlight the ongoing challenges in realizing the full potential of teamwork. These barriers mirror those identified in other settings (Pomare et al., 2019; Teng et al., 2019) and may be particularly entrenched in the Saudi context due to the traditional healthcare hierarchy and limited history of interprofessional education (Alrasheed, 2022).

Overcoming these barriers will require commitment and action at multiple levels. At the individual level, healthcare professionals can strive to cultivate the collaboration competencies of communication, role clarity, and mutual respect (Interprofessional Education Collaborative, 2016). At the organizational level, hospitals can create structures and processes that enable teamwork, such as interprofessional rounds, shared documentation systems, and team training (Tan et al., 2021). At the educational level, universities can expand interprofessional learning opportunities to equip future healthcare professionals with the skills and attitudes needed for collaborative practice (Alrasheedy et al., 2020).

This study has several limitations. First, the qualitative design and small sample size limit the generalizability of the findings. Second, the study was conducted in tertiary care hospitals in one city, so the experiences may not reflect those in other settings or regions. Third, the reliance on self-report data is subject to social desirability bias, although the use of individual interviews may have mitigated this.

Despite these limitations, this study makes a valuable contribution by providing a rich, contextual understanding of interprofessional collaboration in Saudi healthcare practice. The findings can inform efforts to enhance teamwork and optimize care delivery in this setting. Future research could build on this work by quantitatively measuring collaboration outcomes, exploring experiences in other contexts, and evaluating the impact of interventions to promote teamwork.

In conclusion, this study underscores the vital importance of interprofessional collaboration for high-quality, safe patient care. By illuminating the benefits, facilitators, and barriers to effective teamwork, it provides a roadmap for strengthening collaboration between nurses, doctors, and pharmacy technicians in Saudi Arabia and beyond. Investing in interprofessional education, cultivating collaborative cultures, and dismantling hierarchical barriers will be key to unlocking the full potential of healthcare teams. Ultimately, it is through the synergistic efforts of diverse professionals working in concert that we can optimize healthcare delivery and achieve the best outcomes for those we serve.

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