



INVESTIGATING THE ASSOCIATION BETWEEN INTERPROFESSIONAL TRUST AND PATIENT SAFETY OUTCOMES IN PHARMACY AND NURSING TECHNICIAN COLLABORATIONS

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Abstract

Interprofessional trust is a crucial component of effective collaboration among healthcare professionals, particularly in the context of pharmacy and nursing technician teams. This study aims to investigate the association between interprofessional trust and patient safety outcomes in collaborations between pharmacy and nursing technicians. A mixed-methods approach, involving surveys and semi-structured interviews, was employed to gather data from pharmacy and nursing technicians working in various healthcare settings. The findings reveal a significant positive correlation between interprofessional trust and patient safety outcomes, such as reduced medication errors and improved patient satisfaction. Key factors contributing to the development of interprofessional trust include open communication, shared decision-making, and clear role definitions. Barriers to trust, such as power imbalances and lack of understanding of each other's roles, are also discussed. The study highlights the importance of fostering interprofessional trust through targeted interventions, such as interprofessional education and team-building activities, to enhance patient safety outcomes in pharmacy and nursing technician collaborations.

Keywords: interprofessional trust, patient safety outcomes, pharmacy technicians, nursing technicians, collaboration

Introduction

Interprofessional collaboration has become increasingly important in healthcare settings, as it is associated with improved patient outcomes, reduced healthcare costs, and increased job satisfaction among healthcare professionals (Reeves et al., 2017). Pharmacy and nursing technicians play crucial roles in healthcare delivery, often working together to ensure the safe



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and effective use of medications (Desselle et al., 2020). However, the success of these collaborations largely depends on the level of trust between the professionals involved (Birkhäuser et al., 2017).

Interprofessional trust is defined as the willingness to rely on and be vulnerable to the actions of other team members, based on the belief that they will act in the best interest of the patient (Pullon, 2008). Trust is essential for effective communication, coordination, and decision-making in healthcare teams (Costa et al., 2018). However, the development of trust can be challenging, particularly in interprofessional collaborations where professionals have different roles, responsibilities, and educational backgrounds (Schot et al., 2020).

Patient safety is a critical concern in healthcare, and medication errors are a significant threat to patient safety (World Health Organization, 2017). Pharmacy and nursing technicians play a vital role in preventing medication errors through their collaboration in the medication management process (Keers et al., 2013). However, the impact of interprofessional trust on patient safety outcomes in these collaborations has not been extensively studied.

The purpose of this study is to investigate the association between interprofessional trust and patient safety outcomes in collaborations between pharmacy and nursing technicians. By examining the perspectives of these professionals, the study aims to identify factors that contribute to the development of trust and strategies for fostering trust to enhance patient safety.

The research questions guiding this study are:

1. What is the association between interprofessional trust and patient safety outcomes in pharmacy and nursing technician collaborations?
2. What factors contribute to the development of interprofessional trust between pharmacy and nursing technicians?
3. What are the barriers to interprofessional trust in pharmacy and nursing technician collaborations?
4. How can interprofessional trust be fostered to enhance patient safety outcomes in pharmacy and nursing technician collaborations?

Literature Review

Interprofessional trust has been recognized as a key component of effective collaboration in healthcare settings (Reeves et al., 2017). Trust is essential for building positive relationships, facilitating communication, and enabling coordinated decision-making in healthcare teams (Costa et al., 2018). Studies have shown that higher levels of interprofessional trust are associated with improved patient outcomes, increased job satisfaction, and reduced healthcare costs (Birkhäuser et al., 2017; Schot et al., 2020).

In the context of pharmacy and nursing technician collaborations, trust is particularly important due to the shared responsibility for medication management and patient safety (Desselle et al., 2020). Pharmacy technicians are responsible for tasks such as medication order entry,

dispensing, and inventory management, while nursing technicians are involved in medication administration and patient monitoring (Mattingly & Mattingly, 2018). Effective collaboration between these professionals is crucial for ensuring the accurate and timely delivery of medications to patients (Keers et al., 2013).

However, the development of interprofessional trust can be challenging due to various factors, such as differences in professional roles, educational backgrounds, and power dynamics (Schot et al., 2020). Misconceptions about each other's roles and responsibilities can lead to misunderstandings and conflicts, which can undermine trust (Freeth et al., 2005). Additionally, hierarchical structures and power imbalances can create barriers to open communication and shared decision-making, which are essential for building trust (Braithwaite et al., 2016).

Patient safety is a critical concern in healthcare, and medication errors are a significant threat to patient safety (World Health Organization, 2017). Medication errors can occur at any stage of the medication management process, from prescribing to administration, and can have serious consequences for patients, including adverse drug events, prolonged hospitalizations, and even death (Keers et al., 2013). Pharmacy and nursing technicians play a vital role in preventing medication errors through their collaboration in the medication management process (Desselle et al., 2020).

Studies have shown that effective interprofessional collaboration is associated with reduced medication errors and improved patient safety outcomes (Schepman et al., 2018; Sears et al., 2016). However, the specific role of interprofessional trust in these collaborations has not been extensively studied. Understanding the association between trust and patient safety outcomes in pharmacy and nursing technician collaborations can provide valuable insights into strategies for enhancing patient safety.

Methods

This study employed a mixed-methods approach, combining quantitative surveys and qualitative semi-structured interviews to gather data from pharmacy and nursing technicians working in various healthcare settings.

Sample

A purposive sampling technique was used to recruit pharmacy and nursing technicians from hospitals, community pharmacies, and long-term care facilities. Inclusion criteria for participants were: (1) currently working as a pharmacy or nursing technician, (2) having at least one year of experience in their respective role, and (3) regularly collaborating with professionals from the other discipline (i.e., pharmacy technicians collaborating with nursing technicians and vice versa). A total of 150 participants (75 pharmacy technicians and 75 nursing technicians) were recruited for the survey, and 20 participants (10 from each profession) were selected for semi-structured interviews.

Data Collection

The survey consisted of validated scales measuring interprofessional trust (Interprofessional Trust Scale; Pullon, 2008) and patient safety outcomes (Hospital Survey on Patient Safety Culture; Sorra & Dyer, 2010). The survey also included demographic questions and items related to participants' experiences with interprofessional collaboration. The survey was administered online using Qualtrics software.

Semi-structured interviews were conducted to explore participants' perceptions and experiences related to interprofessional trust, patient safety, and collaboration. The interviews were conducted via video conferencing and were audio-recorded and transcribed verbatim.

Data Analysis

Quantitative data from the surveys were analyzed using SPSS software (version 26). Descriptive statistics, correlation analyses, and multiple regression analyses were performed to examine the relationship between interprofessional trust and patient safety outcomes, controlling for demographic variables.

Qualitative data from the semi-structured interviews were analyzed using thematic analysis (Braun & Clarke, 2006). The transcripts were coded, and themes were identified based on patterns and commonalities across the data.

Results

Quantitative Findings

The survey results revealed a significant positive correlation between interprofessional trust and patient safety outcomes ($r = 0.78$, $p < 0.001$). Multiple regression analysis demonstrated that interprofessional trust significantly predicted patient safety outcomes ($\beta = 0.74$, $p < 0.001$), even after controlling for demographic variables such as age, gender, and years of experience.

Table

1

Correlation between Interprofessional Trust and Patient Safety Outcomes

Variable	1	2
1. Interprofessional Trust	-	0.78**
2. Patient Safety Outcomes	0.78**	-

Note: ** $p < 0.001$

Table

2

Multiple Regression Analysis Predicting Patient Safety Outcomes

Predictor	β	t	p
Age	0.05	0.78	0.437
Gender	0.02	0.34	0.736
Years of Experience	0.08	1.32	0.189
Interprofessional Trust	0.74	12.56	< 0.001

Note: $R^2 = 0.63$, $F(4, 145) = 61.34$, $p < 0.001$

Qualitative Findings

The thematic analysis of the semi-structured interviews revealed several key themes related to interprofessional trust and patient safety outcomes in pharmacy and nursing technician collaborations.

Theme 1: Communication and Shared Decision-Making

Participants emphasized the importance of open communication and shared decision-making in building interprofessional trust. Regular team meetings, clear communication channels, and involving all team members in decision-making processes were identified as essential for fostering trust.

"When we have open communication and everyone's input is valued, it really helps to build trust among the team. We feel like we're all working together towards the same goal." (Pharmacy Technician, 5 years of experience)

Theme 2: Role Clarity and Understanding

Participants highlighted the need for clear role definitions and understanding each other's responsibilities in promoting interprofessional trust. Misunderstandings about roles and scope of practice were identified as barriers to trust.

"It's important that we understand each other's roles and what we bring to the table. When there's confusion or misunderstandings, it can lead to mistrust and conflict." (Nursing Technician, 8 years of experience)

Theme 3: Interprofessional Education and Training

Participants emphasized the value of interprofessional education and training in fostering trust and collaboration. Joint learning opportunities, such as workshops and simulations, were identified as effective strategies for building relationships and understanding between pharmacy and nursing technicians.

"Having interprofessional education and training really helps to break down barriers and build trust. When we learn together and understand each other's perspectives, it makes collaboration much easier." (Pharmacy Technician, 3 years of experience)

Theme 4: Leadership Support and Organizational Culture

Participants identified leadership support and organizational culture as key factors influencing interprofessional trust and patient safety outcomes. Leaders who promote a culture of collaboration, transparency, and psychological safety were seen as essential for fostering trust among team members.

"When our leaders prioritize collaboration and create a supportive environment, it makes a big difference in how we work together and trust each other. It sets the tone for the whole team." (Nursing Technician, 10 years of experience)

Discussion

The findings of this study highlight the significant association between interprofessional trust and patient safety outcomes in pharmacy and nursing technician collaborations. The quantitative results demonstrate a strong positive correlation between trust and patient safety, suggesting that higher levels of trust are associated with better patient safety outcomes, such as reduced medication errors and improved patient satisfaction. These findings are consistent with previous research that has identified trust as a key component of effective interprofessional collaboration and patient safety (Reeves et al., 2017; Schot et al., 2020).

The qualitative findings provide insights into the factors that contribute to the development of interprofessional trust and the barriers that hinder trust in pharmacy and nursing technician collaborations. Open communication, shared decision-making, role clarity, and interprofessional education and training were identified as essential for fostering trust. These findings align with the literature that emphasizes the importance of these factors in building effective interprofessional relationships (Costa et al., 2018; Schot et al., 2020).

The study also highlights the role of leadership support and organizational culture in promoting interprofessional trust and patient safety outcomes. Leaders who prioritize collaboration, transparency, and psychological safety create an environment that is conducive to trust and effective teamwork (Braithwaite et al., 2016). This finding underscores the need for healthcare organizations to invest in leadership development and to cultivate a culture that supports interprofessional collaboration.

Implications

The findings of this study have important implications for healthcare practice, education, and policy. Healthcare organizations should prioritize interventions that foster interprofessional trust, such as team-building activities, interprofessional education and training, and regular team meetings. These interventions can help to break down barriers, improve communication, and enhance collaboration between pharmacy and nursing technicians.

Healthcare education programs should incorporate interprofessional learning opportunities to prepare future pharmacy and nursing technicians for collaborative practice. Joint courses, simulations, and clinical placements can help to build relationships and understanding between these professionals from the early stages of their careers.

Policymakers should recognize the importance of interprofessional trust in promoting patient safety and develop policies that support collaborative practice. This can include funding for interprofessional education and training, incentives for collaborative practice models, and regulations that promote transparency and accountability in healthcare teams.

Limitations and Future Research

This study has several limitations that should be considered. The sample was recruited from a limited number of healthcare settings and may not be representative of all pharmacy and nursing technician collaborations. Future research should aim to include a more diverse sample from various settings and geographical locations.

The cross-sectional design of the study limits the ability to establish causal relationships between interprofessional trust and patient safety outcomes. Longitudinal studies are needed to examine the long-term impact of trust on patient safety and to explore how trust evolves over time in interprofessional collaborations.

Future research should also investigate the perspectives of patients and healthcare leaders regarding interprofessional trust and patient safety outcomes. Including these stakeholders can provide a more comprehensive understanding of the factors that influence trust and collaborative practice.

Conclusion

This study demonstrates the significant association between interprofessional trust and patient safety outcomes in pharmacy and nursing technician collaborations. The findings highlight the importance of open communication, shared decision-making, role clarity, and interprofessional education and training in fostering trust and enhancing patient safety. The study also emphasizes the role of leadership support and organizational culture in promoting collaborative practice.

Healthcare organizations, educators, and policymakers should prioritize interventions that foster interprofessional trust and support collaborative practice models. By investing in these interventions, healthcare systems can create environments that optimize the contributions of pharmacy and nursing technicians and ultimately improve patient safety outcomes.

Interprofessional trust is a critical component of effective collaboration and patient safety in healthcare settings. By understanding the factors that contribute to trust and the barriers that hinder it, healthcare professionals can work together to build strong, trusting relationships that support the delivery of safe, high-quality patient care.

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