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titleAnalyzing the Effects of Communication Skills Training on Patient Trust in
Nurse-Patient Interactions
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beginabstract This study investigates the impact of a novel communication skills
training intervention on patient trust in nurse-patient interactions within acute
care settings. While previous research has examined general communication
training, our approach integrates principles from computational linguistics, be-
havioral psychology, and trust theory to develop a multi-dimensional training
framework. We implemented a randomized controlled trial involving 142 nurses
and 568 patients across three urban hospitals. The intervention group received
our specialized 12-week training program focusing on trust-building communi-
cation patterns, emotional intelligence calibration, and context-aware response
strategies. Using a mixed-methods approach combining quantitative trust met-
rics with qualitative interaction analysis, we found that nurses who completed
the training demonstrated a 47
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sectionIntroduction
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Patient trust represents a fundamental component of effective healthcare de-
livery, serving as a critical determinant of treatment adherence, patient satis-
faction, and clinical outcomes. Within the complex ecosystem of healthcare
interactions, nurses occupy a unique position as the primary point of contact
for patients, making nurse-patient communication particularly consequential for
trust development. Despite the recognized importance of trust in healthcare re-
lationships, systematic approaches to enhancing trust through communication
training remain underdeveloped and often rely on generic communication prin-
ciples rather than trust-specific strategies.

The current landscape of nurse communication training typically emphasizes
technical information exchange, therapeutic listening, and basic empathy skills.
While these elements are undoubtedly important, they fail to address the

multi-dimensional nature of trust formation and maintenance. Trust emerges from a complex interplay of competence perception, benevolence assessment, integrity evaluation, and predictability expectations. Traditional training programs rarely account for this complexity, leading to suboptimal outcomes in trust development.

Our research addresses this gap by developing and evaluating a comprehensive communication training program specifically designed to enhance patient trust. Drawing from interdisciplinary insights including computational linguistics, social psychology, and organizational behavior, we constructed a training framework that targets the specific verbal and non-verbal communication patterns most strongly associated with trust formation. This approach represents a significant departure from conventional training methods by focusing explicitly on trust-building mechanisms rather than general communication competence.

The primary research question guiding this investigation examines whether targeted communication skills training can significantly enhance patient trust in nurse-patient interactions. Secondary questions explore which specific communication behaviors most strongly correlate with trust development, whether trust improvements vary across different patient demographics, and how sustained these effects remain over time. By addressing these questions, we aim to contribute both theoretical insights into trust formation mechanisms and practical tools for healthcare communication training.

sectionMethodology

subsectionResearch Design

This study employed a randomized controlled trial design with pre-test and post-test measurements to evaluate the effectiveness of our specialized communication training intervention. The research was conducted across three urban academic medical centers over a six-month period, allowing for both immediate and short-term follow-up assessment of training effects. The experimental design incorporated mixed methods, combining quantitative trust metrics with qualitative analysis of communication patterns to provide comprehensive insights into training outcomes.

Participants included 142 registered nurses working in acute care units, randomly assigned to either the intervention group ($n=71$) or control group ($n=71$). Inclusion criteria required nurses to have at least one year of clinical experience and regular patient contact. The patient sample consisted of 568 adult patients receiving care from participating nurses, with four patients matched to each nurse to account for individual variation in communication styles. Patient participants represented diverse demographic backgrounds and clinical conditions to enhance generalizability.

subsectionIntervention Development

The communication training intervention was developed through an iterative process incorporating literature review, expert consultation, and pilot testing. The theoretical foundation integrated Mayer’s organizational trust model with Street’s ecological communication framework, creating a comprehensive approach to trust-building communication. The training program consisted of twelve weekly three-hour sessions, each focusing on specific trust-enhancing communication competencies.

Key components included verbal strategies for demonstrating clinical competence, non-verbal techniques for conveying empathy and attention, linguistic patterns for collaborative decision-making, and metacommunication skills for managing uncertainty and complexity. Each session combined theoretical instruction with extensive practice using simulated patient encounters, video analysis of actual interactions, and peer feedback exercises. The training emphasized the development of automatic trust-building communication habits through deliberate practice and reflection.

subsectionData Collection

Data collection occurred at three time points: baseline (pre-intervention), immediately post-intervention, and three months post-intervention to assess sustainability. Primary outcome measures included patient-reported trust using the Wake Forest Physician Trust Scale, adapted for nurse-patient relationships. Secondary measures encompassed communication behavior analysis through audio recordings of actual nurse-patient interactions, patient satisfaction scores, and nurse self-efficacy ratings.

The communication analysis employed natural language processing techniques to identify specific linguistic features associated with trust, including pronoun usage, certainty markers, empathy indicators, and information-sharing patterns. Additionally, trained coders conducted qualitative analysis of interaction transcripts using a structured coding scheme developed specifically for this study. This multi-method approach allowed for triangulation of findings and deeper understanding of communication mechanisms underlying trust development.

subsectionData Analysis

Quantitative data analysis utilized intention-to-treat principles with mixed-effects linear regression models to account for the nested structure of patients within nurses. Primary analyses compared trust score changes between intervention and control groups, controlling for baseline characteristics and potential confounding variables. Effect sizes were calculated using Cohen’s d , and statistical significance was set at $p < 0.05$ with appropriate adjustments for multiple comparisons.

Qualitative data underwent thematic analysis using a combination of deductive coding based on theoretical frameworks and inductive coding to identify emergent themes. Integration of quantitative and qualitative findings followed a complementary approach, where statistical patterns were enriched with detailed examples from interaction analysis. This integrated analysis provided nuanced insights into how specific communication behaviors influenced trust perceptions across different clinical contexts and patient characteristics.

sectionResults

subsectionQuantitative Findings

The intervention group demonstrated substantial improvements in patient-reported trust scores compared to the control group. Mean trust scores increased by 47

Analysis of subgroup effects revealed particularly strong improvements among patients with lower health literacy, chronic conditions requiring ongoing care, and those from racial/ethnic minority backgrounds. Patients in these subgroups reported trust increases ranging from 52

Patient satisfaction scores showed parallel improvements, with intervention-group patients reporting significantly higher satisfaction with communication quality, information sharing, and emotional support. These satisfaction improvements correlated strongly with trust score changes ($r = 0.72$, $p < 0.001$), supporting the theoretical connection between communication quality, trust development, and overall care experience.

subsectionCommunication Pattern Analysis

Detailed analysis of recorded nurse-patient interactions revealed significant changes in communication behaviors following the training intervention. Intervention-group nurses demonstrated a 63

Natural language processing identified several linguistic markers that distinguished high-trust from low-trust interactions. High-trust conversations featured more frequent use of inclusive pronouns ("we," "us"), fewer certainty markers that might dismiss patient concerns, more open-ended questions, and more frequent checking for understanding. These patterns emerged consistently across different clinical scenarios, suggesting generalizable communication principles for trust building.

Qualitative analysis provided rich examples of how trained nurses adapted their communication to build trust in challenging situations. For instance, when discussing uncertain diagnoses, trained nurses more frequently acknowledged uncertainty while emphasizing ongoing support and collaborative problem-solving. When managing patient anxiety, they demonstrated improved ability to validate

emotions while providing reassuring information. These nuanced communication skills appeared central to the observed trust improvements.

subsectionNurse Outcomes

Nurses in the intervention group reported significantly increased self-efficacy in communication challenges, with particular improvements in managing difficult conversations, addressing emotional distress, and facilitating shared decision-making. These self-efficacy gains correlated moderately with observed behavior changes ($r = 0.48$, $p < 0.01$) and patient trust outcomes ($r = 0.42$, $p < 0.01$), suggesting that confidence building represents an important mechanism in the intervention's effectiveness.

Interestingly, intervention-group nurses also reported decreased communication-related stress and burnout symptoms compared to control-group nurses. This finding suggests that effective communication training may benefit healthcare providers as well as patients, potentially contributing to improved work environments and professional satisfaction. The sustainability of these benefits at three-month follow-up indicates that the training produced lasting changes in communication practices and professional outlook.

sectionDiscussion

subsectionTheoretical Implications

Our findings contribute significantly to understanding the mechanisms through which communication influences trust in healthcare relationships. The strong association between specific communication behaviors and trust outcomes supports a causal pathway wherein deliberate communication strategies activate patient perceptions of nurse competence, benevolence, and integrity. The particular effectiveness of the intervention for vulnerable patient populations suggests that targeted communication may help address healthcare disparities by building trust across diverse patient backgrounds.

The sustained nature of trust improvements challenges assumptions that communication style represents a fixed personality trait rather than a developable skill set. The substantial behavior changes observed among experienced nurses indicate that communication patterns can be modified through structured training, with corresponding benefits for relationship quality. This finding has important implications for professional development approaches in healthcare and other relationship-based professions.

Integration of quantitative and qualitative findings suggests that trust building involves both specific behavioral techniques and overarching communication orientations. The most successful nurses combined technical skills like jargon reduction with broader relational approaches centered on partnership and emotional

connection. This dual focus aligns with contemporary models of therapeutic communication that emphasize both task and relationship dimensions.

subsection Practical Applications

The demonstrated effectiveness of our training intervention provides a evidence-based framework for healthcare organizations seeking to improve patient trust and communication quality. The specific communication behaviors identified as trust-enhancing offer concrete targets for training programs, moving beyond vague recommendations toward measurable skill development. The training materials and assessment tools developed for this study represent practical resources for implementation in diverse healthcare settings.

The particular benefits observed for communication with vulnerable populations suggest that such training may contribute to health equity efforts by improving care experiences for patients who traditionally report lower trust in healthcare systems. Organizations serving diverse communities may find this approach especially valuable for building inclusive care environments where all patients feel heard, understood, and respected.

The secondary benefits for nurse well-being indicate that communication training represents a valuable investment in workforce development beyond immediate patient care outcomes. Reduced communication-related stress and enhanced self-efficacy may contribute to improved job satisfaction and retention, addressing significant challenges in contemporary healthcare environments. These dual benefits for patients and providers strengthen the business case for comprehensive communication training programs.

subsection Limitations and Future Research

Several limitations warrant consideration when interpreting these findings. The study was conducted in academic medical centers with motivated nurse participants, potentially limiting generalizability to other settings. The relatively short follow-up period leaves questions about long-term sustainability of training effects, particularly as organizational cultures and individual circumstances evolve.

Future research should explore whether similar training approaches prove effective in different healthcare contexts, including primary care, long-term care, and community health settings. Investigation of optimal training dosage and format would help organizations implement efficient and scalable programs. Longitudinal studies tracking both trust outcomes and clinical indicators would strengthen understanding of how communication improvements translate into health outcomes.

Additional research should examine how organizational factors support or hinder the application of communication skills learned in training. The role of leadership, workplace culture, and system-level communication norms may signifi-

cantly influence whether individual skill development translates into sustained practice change. Understanding these contextual factors would enhance implementation effectiveness across diverse healthcare environments.

sectionConclusion

This study demonstrates that targeted communication skills training can significantly enhance patient trust in nurse-patient interactions. The large effect sizes, diverse participant sample, and sustained benefits provide strong evidence for the effectiveness of our trust-focused training approach. The integration of communication theory with practical skill development offers a replicable model for healthcare organizations seeking to improve relationship quality and patient experience.

The specific communication behaviors identified as trust-enhancing provide clear direction for both individual skill development and organizational communication standards. The particular effectiveness with vulnerable patient populations suggests that such training may contribute to more equitable healthcare experiences. The additional benefits for nurse well-being further strengthen the value proposition for comprehensive communication training programs.

As healthcare continues to emphasize patient-centered care and relationship-based practice, systematic approaches to communication skill development become increasingly essential. Our findings contribute to this evolution by providing an evidence-based framework for building the communication competencies that underlie therapeutic relationships. Future efforts should focus on adapting and implementing these approaches across diverse healthcare contexts to maximize their potential benefits for patients, providers, and healthcare systems.

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