

Assessing the Effects of Mentorship on Leadership Development Among Nursing Professionals in Hospitals

Riley Thompson, Daphne Wells, Marcus Vance

Abstract

This comprehensive study investigates the multifaceted effects of structured mentorship programs on leadership development among nursing professionals within hospital settings. While mentorship has long been recognized as beneficial in nursing education, its specific impact on cultivating leadership competencies across different career stages remains underexplored. Our research employs a novel mixed-methods approach that combines quantitative leadership competency assessments with qualitative phenomenological analysis of mentorship experiences. We developed and validated the Nursing Leadership Mentorship Impact Scale (NLMIS), a specialized instrument measuring leadership growth across eight dimensions including clinical decision-making authority, interdisciplinary collaboration, resource allocation proficiency, and ethical leadership. The study followed 347 nursing professionals across three hospital systems over 24 months, tracking leadership development through multiple assessment points. Our findings reveal that structured mentorship programs significantly accelerate leadership competency development, particularly in mid-career nurses (5-10 years experience), with a 42

1 Introduction

The contemporary healthcare landscape presents unprecedented challenges that demand sophisticated leadership capabilities from nursing professionals. As the largest segment of the healthcare workforce, nurses occupy critical positions where leadership decisions directly impact patient outcomes, organizational efficiency, and team dynamics. Despite the recognized importance of nursing leadership, systematic approaches to developing these competencies remain inconsistent across healthcare institutions. Mentorship has emerged as a promising strategy for leadership development, yet the specific mechanisms through which mentorship influences leadership growth in nursing contexts remain inadequately understood.

Traditional approaches to nursing leadership development have often emphasized formal education and administrative training, overlooking the powerful role of relational learning and guided experience. This study addresses this gap by examining how structured mentorship programs specifically contribute to the development of leadership competencies across different career stages of nursing professionals. Our research questions were formulated to explore both the quantitative improvements in leadership capabilities and the qualitative experiences that characterize effective mentorship relationships.

We posited three primary research questions: First, to what extent do structured mentorship programs enhance measurable leadership competencies among nursing professionals compared to traditional development approaches? Second, what specific elements of the mentorship relationship most significantly contribute to leadership growth? Third, how do the effects of mentorship vary across different career stages and specialty areas within nursing?

The significance of this research lies in its potential to transform how healthcare organizations approach leadership development. By identifying the specific mechanisms through which mentorship fosters leadership growth, our findings provide evidence-based guidance for designing more effective development programs. Furthermore, this study contributes to theoretical understanding of professional identity formation and the role of guided experience in competency development within complex organizational environments.

2 Methodology

2.1 Research Design

This study employed an explanatory sequential mixed-methods design, beginning with quantitative assessment of leadership competencies followed by qualitative exploration of mentorship experiences. This approach allowed for comprehensive understanding of both the outcomes and processes of leadership development through mentorship. The quantitative phase provided measurable evidence of leadership growth, while the qualitative phase illuminated the lived experiences and relational dynamics that characterized effective mentorship relationships.

2.2 Participants and Setting

The study involved 347 nursing professionals from three distinct hospital systems representing academic medical centers, community hospitals, and specialized care facilities. Participants were stratified by career stage: early-career (0-4 years experience, $n=118$), mid-career (5-10 years, $n=145$), and late-career (11+ years, $n=84$). Within each stratum, participants were randomly assigned to either the mentorship intervention group or a control group receiving standard leadership development opportunities. The mentorship program involved structured pairing with experienced nurse leaders who underwent specialized training in mentorship techniques.

2.3 Instrument Development

We developed and validated the Nursing Leadership Mentorship Impact Scale (NLMIS) specifically for this study. The instrument underwent rigorous validation including expert review, cognitive interviewing, and pilot testing. The final 32-item scale measured eight leadership dimensions: clinical decision-making authority, interdisciplinary collaboration, resource allocation proficiency, ethical leadership, team development, change management, strategic thinking, and self-awareness. Reliability analysis demonstrated strong internal consistency (Cronbach's $\alpha = 0.92$) and test-retest reliability ($r = 0.87$).

2.4 Data Collection

Quantitative data collection occurred at baseline, 12 months, and 24 months using the NLMIS instrument along with demographic and professional background questionnaires. Qualitative data were collected through semi-structured interviews with a purposively selected subset of 45 participants from the intervention group, representing diverse career stages and specialty areas. Interviews explored participants' experiences with mentorship, perceived leadership growth, and the specific aspects of the mentorship relationship that influenced their development.

2.5 Data Analysis

Quantitative data were analyzed using repeated measures ANOVA to examine changes in leadership scores over time, with post-hoc analyses examining differences between career stages and specialty areas. Qualitative data underwent phenomenological analysis using Colaizzi's seven-step method to identify essential themes and patterns in participants' experiences. Integration of quantitative and qualitative findings occurred during the interpretation phase, where statistical patterns were enriched and explained through participants' narrative accounts.

3 Results

3.1 Quantitative Findings

The quantitative analysis revealed significant improvements in leadership competencies among participants in the mentorship program compared to the control group. Overall, the intervention group demonstrated a 42

Analysis of specific leadership dimensions revealed varying patterns of growth. The largest improvements were observed in strategic thinking (52

Differences across specialty areas were also notable. Critical care and emergency department nurses showed the most pronounced leadership growth, potentially reflecting the high-stakes decision-making environments in these areas. Interestingly, the duration and frequency of mentorship interactions correlated positively with leadership development, with participants engaging in bi-weekly mentorship sessions demonstrating 28

3.2 Qualitative Findings

The phenomenological analysis of interview data revealed three central themes characterizing the mentorship experience and its impact on leadership development. The first theme, *vulnerability as a catalyst for growth*, emerged from participants' descriptions of how mentorship created spaces for acknowledging uncertainties and limitations. Nurses described how their mentors modeled appropriate vulnerability and created environments where questioning and learning were valued over perfection. This emotional dimension of mentorship appeared fundamental to developing the authentic leadership style that participants associated with their growth.

The second theme, *psychological safety in mentorship relationships*, highlighted how effective mentors established trust and confidentiality that enabled honest self-assessment and risk-taking. Participants described how this safety allowed them to experiment with new leadership approaches, make and learn from mistakes, and develop greater self-awareness. The quality of the mentor-mentee relationship, characterized by mutual respect and genuine investment, emerged as more significant than the mentor's formal position or expertise.

The third theme, *navigating the identity transition from clinician to leader*, captured the complex process through which nurses reconceptualized their professional role. Mentorship helped participants integrate their clinical expertise with broader organizational perspectives, developing what several described as a *systems consciousness*. This transition involved not only acquiring new skills but fundamentally rethinking their professional purpose and impact.

3.3 Integrated Findings

The integration of quantitative and qualitative findings revealed that the most significant leadership development occurred when structural mentorship opportunities (quantitatively measured) were coupled with high-quality relational experiences (qualitatively described). Participants who demonstrated the greatest quantitative improvements consistently described mentorship relationships characterized by the qualitative themes identified. This suggests that both the formal structure of mentorship programs and the qualitative nature of the mentoring relationship contribute uniquely to leadership development.

4 Conclusion

This study makes several original contributions to understanding leadership development in nursing through mentorship. First, we have demonstrated that structured mentorship programs produce significantly greater leadership growth compared to traditional development approaches, with particularly strong effects for mid-career nurses. This finding challenges the common assumption that leadership development should focus primarily on early-career professionals or those in formal leadership positions.

Second, our research identifies the specific mechanisms through which mentorship influences leadership development. The qualitative themes of vulnerability, psychological safety, and identity transition provide nuanced understanding of how mentorship relationships function as catalysts for growth. These findings suggest that effective mentorship involves not only knowledge transfer but also emotional support and identity development.

Third, the development and validation of the Nursing Leadership Mentorship Impact Scale provides a valuable tool for future research and program evaluation. The multidimensional nature of the instrument allows for targeted assessment of specific leadership competencies, enabling more precise evaluation of development initiatives.

The practical implications of this research are substantial. Healthcare organizations should consider implementing structured mentorship programs as core components of leadership development strategies, with particular attention to mid-career nurses who may benefit most significantly. Program design should emphasize the relational qualities identified

in our qualitative findings, recognizing that the emotional and psychological dimensions of mentorship are as important as the structural elements.

Several limitations warrant consideration. The study was conducted in three hospital systems, which may limit generalizability to other healthcare settings. The 24-month time-frame, while substantial, may not capture long-term leadership development trajectories. Future research should explore the sustainability of mentorship effects over longer periods and examine how mentorship approaches might be adapted for different organizational cultures and healthcare contexts.

In conclusion, this research demonstrates that mentorship represents a powerful approach to nursing leadership development that combines measurable competency growth with profound professional transformation. By illuminating both the outcomes and processes of leadership development through mentorship, our findings provide a foundation for more effective and humane approaches to cultivating the next generation of nursing leaders.

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