

The Extent of Cross-Training Exposure and Relationship With Job Satisfaction and Perceived Clinical Competency Among Nurses In Multidisciplinary Units of an Independent Public Health Care Institution in the Northern Mariana Islands, USA

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ABSTRACT

Hospitals in remote settings often lacked sufficient qualified personnel and faced complex patient cases that prompted adoption of cross-training. This study determined the extent of cross-training exposure and its relationship with job satisfaction and perceived clinical competence among nurses in multidisciplinary units of an independent public healthcare institution in the Northern Mariana Islands, USA. A total enumeration of 68 registered nurses who had completed at least one institutionally recognized cross-training program participated. Data were collected via a validated self-administered Likert-scale questionnaire and analyzed using descriptive statistics and Spearman's rank-order correlations. Results showed that Frequency (M = 4.16, SD = 0.57) and Breadth (M = 4.14, SD = 0.64) were the predominant cross-training dimensions. Nurses reported high job satisfaction (M = 4.09, SD = 0.73) and very high self-assessed clinical competence (M = 4.24, SD = 0.71). Significant positive associations were observed between Breadth and job satisfaction ($\rho = 0.272$, $p = 0.025$) and between Breadth and perceived competence ($\rho = 0.241$, $p = 0.048$). Training Frequency correlated most strongly with perceived competence ($\rho = 0.329$, $p = 0.006$). Training duration did not show significant relationships with either job satisfaction or perceived competence. The findings suggested that repeated exposure across diverse clinical areas, rather than longer single-duration training, was more strongly associated with improved self-perceived competence and higher job satisfaction. Recommendations included prioritizing frequent, multi-unit cross-training and regular refresher sessions, implementing competency-based training plans, and incorporating supervised hands-on practice to sustain clinical expertise and staff motivation in remote healthcare settings.

Keywords: Cross-Training, Job Satisfaction, Perceived Clinical Competence

INTRODUCTION

Nurses form the foundation of patient-centered care, yet healthcare institutions face ongoing shortages, workforce mismatches, and shifting demand despite a growing global nursing workforce (World Health Organization, 2025). This crisis is magnified in remote, resource-limited areas like the Commonwealth Healthcare Corporation (CHCC), which serves as the sole hospital provider across Saipan, Tinian, and Rota (CHCC, n.d.; Health Resources and Services Administration, n.d.). To address these shortages, hospitals use cross-training to build flexible, skill-based teams that, when organized with clear expectations, boost nurse morale (Winasti et al., 2022; Alshammari & Alenezi, 2023). However, successful cross-training requires more than simple ward exposure; it demands specialized expertise, clear decision-making, and structural support, as inadequate preparation increases role ambiguity, anxiety, and patient safety risks (Almarwani & Alzahrani, 2023; Zatko et al., 2021). Therefore, this study examines these critical dynamics, focusing on how cross-training serves as a vital workforce strategy within geographically isolated hospitalization services.

This introduction provides a comprehensive overview of the research context and highlights the importance of proper cross-training in healthcare.

Statement of the Problem

This study aimed to determine the extent of cross-training exposure and its relationship with job satisfaction and perceived clinical competence among registered nurses in a public healthcare institution in the Northern Mariana Islands. Specifically, it sought to:

- Describe the nurses' profile in terms of age, gender, length of nursing experience, primary clinical unit, time since completion of the most recent cross-training, and deployment outside their assigned unit.
- Determine the extent of cross-training exposure based on its frequency, breadth of clinical units covered, and duration.
- Assess the level of job satisfaction among nurses who completed cross-training.
- Assess the level of perceived clinical competence among nurses who completed cross-training.
- Determine whether significant relationships exist between the dimensions of cross-training exposure (frequency, breadth, and duration) and nurses' job satisfaction.
- Determine whether significant relationships exist between the dimensions of cross-training exposure (frequency, breadth, and duration) and nurses' perceived clinical competence.

Scope and Delimitation

This study employs a quantitative, nonexperimental, cross-sectional descriptive-correlational design conducted in a public healthcare institution in the Northern Mariana Islands. It examines the relationship between registered nurses' formal cross-training exposure, job satisfaction, and self-perceived clinical competence. Cross-training exposure includes frequency, duration, and the variety of clinical units completed, such as pediatric, medical-surgical, labor and delivery, psychiatric, and intensive care units. Total enumeration will be used, including only nurses who have completed at least one institution-recognized cross-training program. Data will be collected through a paper-based, self-administered Likert-scale questionnaire. The study identifies associations but does not establish causality or generalize beyond the institution.

Review of Related Literature

Introduction: The reviewed literature examines nursing practice, workforce management, cross-training, job satisfaction, and clinical competency. It highlights how these factors influence nurse performance, patient safety, and healthcare quality in both global and local settings.

Challenges and Deficiencies in Nursing Practice: Studies identify staffing shortages, burnout, and inadequate organizational support as major contributors to poor patient outcomes, increased clinical errors, and high nurse turnover. Supportive work environments and continuous learning are essential to sustaining quality nursing care.

Cross-Training in Nursing: Cross-training improves workforce flexibility by preparing nurses to work across different units. Effective programs with structured orientation, competency assessment, and supervision enhance adaptability and resilience, while poorly implemented training may increase workload, role confusion, and dissatisfaction.

Job Satisfaction in Isolated Areas: Job satisfaction depends on leadership, staffing, workplace relationships, and professional development. Rural nurses experience greater autonomy but

also face resource limitations and isolation, making mentorship and organizational support crucial.

Expanding Clinical Competency: Nursing competency develops through continuous education, supervised practice, and diverse clinical experiences. Ongoing professional development strengthens confidence, adaptability, and safe clinical decision-making.

Relationships Among Variables: The literature concludes that well-designed cross-training positively influences job satisfaction and clinical competency by promoting confidence, professional growth, and adaptability. Competency-based training with adequate supervision is essential for improving nurse retention, performance, and patient care quality.

Theoretical Framework

In order to support the claims of the study, it has been built upon two major theories of nursing, which includes Patricia Benner's "From Novice to Expert" Theory and Jean Watson's Human Caring Theory. These two models give a holistic and well-structured approach to the problem of structured cross-training's influence on nurse's satisfaction and ability to perceive their clinical skills in a fast-evolving setting of healthcare delivery.

Conceptual Framework

This study employs a cross-sectional, correlational design to examine how the extent of formal cross-training exposure in the independent public health hospital in Northern Mariana Islands, USA—defined by frequency, breadth, and duration—impacts the job satisfaction and perceived clinical competence of nurses who have completed at least one such program. It specifically distinguishes between formal training preparation and the act of cross-unit deployment, limiting the scope to identifying associations among already trained nursing staff.

METHODOLOGY

Research Design

This study used a quantitative, nonexperimental, cross-sectional descriptive-correlational design to examine the relationship between nurses' formal cross-training exposure, job satisfaction, and perceived clinical competence. Data were collected once using self-administered questionnaires, and the design identified relationships without establishing cause-and-effect.

Research Site

The study was conducted in a public healthcare institution in the Northern Mariana Islands that provides general and specialty healthcare services. The hospital's practice of cross-training nurses across multiple clinical units made it an appropriate setting to examine the relationship between cross-training, job satisfaction, and clinical competence.

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Data were gathered through face-to-face, paper-based surveys after obtaining ethical approval and institutional permission. Total enumeration was used, including all 68 eligible nurses who had completed at least one institution-recognized cross-training program. Participation was voluntary, anonymous, and based on informed consent.

Data Analysis Methods

Data were analyzed using IBM SPSS. Descriptive statistics summarized respondents' profiles and study variables, while Cronbach's alpha assessed questionnaire reliability.

Spearman's rank-order correlation determined the relationships between cross-training dimensions and nurses' job satisfaction and perceived clinical competence at a 0.05 significance level.

Research Hypotheses

The study tested two null hypotheses stating that no significant relationship exists between the dimensions of cross-training exposure (frequency, breadth, and duration) and nurses' job satisfaction or perceived clinical competence.

Study Limitations and Ethical Considerations

The study was limited to one institution and a single data collection period, preventing causal conclusions and broad generalization. Ethical standards were maintained through informed consent, voluntary participation, anonymity, confidentiality, secure data handling, and institutional ethics approval.

Results and Discussion

The findings showed that nurses had high levels of cross-training exposure, job satisfaction, and perceived clinical competence. Frequency and breadth of cross-training were significantly associated with higher clinical competence, whereas duration showed no significant relationship. The study recommends implementing regular, multi-unit cross-training programs to strengthen nurses' competence and maintain job satisfaction.

SUMMARY

This study examined the relationship between cross-training exposure, job satisfaction, and perceived clinical competence among 68 registered nurses in a public healthcare institution in the Northern Mariana Islands. Most respondents were female, aged 37–41 years, had 4–6 years of clinical experience, and were deployed outside their primary units after completing cross-training.

The findings showed that nurses experienced a high extent of cross-training in terms of frequency, breadth, and duration. They also reported high levels of job satisfaction and perceived themselves as highly clinically competent.

Correlation analysis revealed that the breadth of cross-training was significantly associated with higher job satisfaction. Likewise, both the frequency and breadth of cross-training showed significant positive relationships with perceived clinical competence. These results suggest that exposing nurses to a wider range of clinical areas and providing regular cross-training opportunities contribute to greater confidence, competence, and satisfaction in their professional roles.

CONCLUSIONS

This study demonstrates that a deliberate, interdisciplinary cross-training model is a vital operational strategy for optimizing healthcare delivery in remote, high-acuity environments, establishing that workforce adaptability is cultivated through repeated clinical rotations and diverse skill reinforcement. Such an approach fosters a resilient, proficient, and motivated workforce, enhancing staff competence and satisfaction while ensuring service continuity.

RECOMMENDATIONS

Based on the study, several recommendations are outlined for healthcare leadership, education, and research. Nurse managers must design structured rotation plans across diverse wards, as this exposure increases job satisfaction and proficiency. Managers should implement formal, face-to-face feedback sessions to support staff in high-acuity units and regularly review curricula to prevent role confusion.

Furthermore, human resources should transition to continuous training models. Specialized retention strategies must target nurses with 4–6 years of experience by honoring their need for autonomy and professional recognition. Institutions must also secure dedicated time for preceptors to provide one-on-one mentorship.

Nurse educators must create competency-based curricula that focus on crisis management and department expectations. Finally, future researchers should explore the long-term career impacts of cross-training to see if training fatigue occurs. Mixed-method approaches should investigate communication barriers, while objective clinical audits should be used to verify self-reported nurse efficacy.

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AI DECLARATION STATEMENT

AI-supported tools helped with grammar and structure in creating this article. No AI tools were used to collect, analyze, or interpret data; all authors are credited for their academic contributions.

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