

Perceived Impact of in-Service Training on the Quality Nursing Care Outcome on the Clinical Competence of Staff Nurses

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ABSTRACT

To develop clinical competence, in-service trainings are essential to help nurses stay current, use evidence-based practices, and ensure patient safety. There is a scarcity of studies on the interrelationship among profile, perceived impact of in-service training on quality nursing care outcomes, and clinical competence among nurses. This quantitative study utilizes the descriptive correlational design to assess the interrelationship among profile, perceived impact of in-service training on quality nursing care outcomes, and clinical competence among 90 nurses in a private hospital in Cebu. Findings of the study revealed that majority of the respondents were aged 18 to 35 years old, female, and with a bachelor's degree. Majority had served for one to three years and were assigned to the wards. Majority of the nurses had a high perception about the impact of in-service training programs on quality nursing care outcomes. Also, majority of them had a high level of clinical competence. The profile of age, sex, educational attainment, years of service, and area of assignment did not correlate with perceived impact on in-service training programs on the quality of nursing care outcomes and clinical competence. However, the perceived impact on service training programs on quality nursing care outcomes was significantly correlated with clinical competence. As a result, a clinical competence sustenance plan was proposed.

Keywords: Clinical Competence; Correlational Design; Staff Nurses; Perceived Impact of In-Service Training; Quality of Nursing Care Outcomes.

INTRODUCTION

Healthcare systems continue to experience increasing demands due to rapid technological advancements, an aging population, workforce shortages, and the growing complexity of patient care. These challenges require nurses to continuously update their knowledge and clinical skills while delivering safe, evidence-based, and high-quality care. Consequently, healthcare organizations have placed greater emphasis on strengthening workforce capability through continuous professional development to improve patient outcomes, staff retention, and organizational performance. Among these strategies, in-service training (IST) remains an essential approach for maintaining nurses' competence by providing structured learning opportunities that address current clinical practices, institutional policies, and emerging healthcare technologies (Reddy, 2026).

Clinical competence is a fundamental requirement for professional nursing practice, encompassing the knowledge, skills, attitudes, and professional judgment necessary to deliver safe and effective patient care. Evidence suggests that nurses generally demonstrate moderate levels of clinical competence, highlighting the need for continuous education, supportive practice environments, and regular coaching to strengthen clinical performance (Shibiru et al., 2023). Likewise, previous studies have shown that participation in in-service training improves nursing performance by enhancing professional knowledge, technical skills, and confidence in clinical practice (Asiamah et al., 2019). Other factors, including work experience, educational preparation, participation in continuing education, and workplace support, have also been identified as important contributors to nursing

competence (Hoshino et al., 2024).

In the hospital where the study was conducted, the researcher observed that some nurses perceived existing in-service training programs as inadequately aligned with their clinical responsibilities and learning needs. Several training activities were viewed as overly theoretical, with limited opportunities for practical skill development. Heavy workloads, high patient-to-nurse ratios, staffing shortages, and frequent nurse turnover also limited participation in training activities and reduced opportunities to apply newly acquired knowledge in practice. These workplace realities may affect the effectiveness of in-service training and ultimately influence nurses' clinical competence, highlighting the need to evaluate whether current training programs achieve their intended outcomes.

Although previous studies have established the importance of in-service training and identified factors associated with nursing competence, limited evidence has specifically examined the relationship between the perceived impact of in-service training on nursing quality care outcomes and the clinical competence of staff nurses using a correlational design. Addressing this gap is important to determine whether nurses' perceptions of in-service training are associated with their clinical competence and to provide evidence that can guide improvements in staff development programs. This study, therefore, aims to assess the relationship between the perceived impact of in-service training on nursing quality care outcomes and the clinical competence of staff nurses. The findings are expected to contribute to improving nursing education, professional development, healthcare management, and patient care while supporting Sustainable Development Goal 3 (Good Health and Well-being), Sustainable Development Goal 4 (Quality Education), and Sustainable Development Goal 8 (Decent Work and Economic Growth).

Research Questions

This study was to assess the relationship between the perceived impact of in-service training quality nursing care outcome on the clinical competence of staff nurses in a level 2 hospital in Lapu-Lapu City for the second quarter of 2026.

The study specifically answered the following queries:

1. What was the profile of the staff nurses in terms of:
 - 1.1 age
 - 1.2 sex
 - 1.3 educational attainment
 - 1.4 years as nurse; and
 - 1.5 area of assignment?
2. What was the perceived impact of in-service training quality nursing care outcome of staff nurses in terms of:
 - 2.1 knowledge and application;
 - 2.2 clinical skills and performance;
 - 2.3 evidence-based practice and decision-making;
 - 2.4 communication and teamwork;
 - 2.5 professionalism and ethics; and

2.6 continuous learning and quality improvement?

3. What was the clinical competence of staff nurses in terms of:

3.1 clinical care;

3.2 leadership;

3.3 interpersonal relations;

3.4 legal/ethical;

3.5 professional development;

3.6 teaching/coaching and

3.7 research/critical thinking?

4. Was there a significant relationship between:

4.1 profile and perceived impact;

4.2 profile and clinical competence; and

4.3 perceived impact and clinical competence?

5. What clinical competence sustenance plan was proposed based on the findings of the study?

Statement of Null Hypothesis

H₀₁: There was no significant relationship between profile and perceived impact.

H₀₂: There was no significant relationship between profile and clinical competence.

H₀₃: There was no significant relationship between perceived impact and clinical competence.

REVIEW OF RELATED LITERATURE AND STUDIES

Perceived Impact of In-Service Training on Nursing Quality Care Outcome. In-service training is widely recognized as a fundamental strategy for enhancing nursing quality care by strengthening nurses' knowledge, clinical skills, and professional competence. Healthcare organizations increasingly rely on structured in-service education to ensure that nurses remain competent in delivering safe, evidence-based, and patient-centered care despite the continuously evolving healthcare environment. Effective training programs are designed to address nurses' learning needs through relevant content, competent facilitators, practical learning experiences, flexible schedules, and comprehensive evaluation methods that promote continuous professional development (Liu et al., 2026; Tan et al., 2024). Likewise, organizations that provide continuous education and strong management support create an environment that encourages lifelong learning and professional growth among nurses. Continuous training also enables nurses to adapt to new technologies, clinical guidelines, and organizational policies while improving confidence and work performance. Aquino (2024) emphasized that investment in continuing education is essential for maintaining nurses' competency, motivation, and readiness to respond effectively to the increasing demands of healthcare practice. Collectively, these findings demonstrate that well-planned in-service training serves as a cornerstone for improving nursing performance and sustaining high-quality patient care.

Previous studies consistently demonstrate that in-service training contributes significantly to improving nursing practice and healthcare outcomes. Structured educational interventions have been shown to enhance nurses'

clinical knowledge, communication skills, evidence-based practice, teamwork, and collaborative decision-making, resulting in safer and more effective patient care (Nakamura et al., 2022; Sayed et al., 2023). Beyond improving individual competencies, in-service training strengthens interdisciplinary collaboration, promotes consistency in clinical practice, and enhances nurses' confidence in managing increasingly complex patient conditions. Studies further suggest that healthcare institutions that regularly monitor, evaluate, and refine their training programs achieve better staff performance and organizational outcomes than those with limited educational support (Awad & Jouda, 2021). Furthermore, quality nursing care has been associated with effective leadership, communication, teamwork, and organizational commitment, all of which are reinforced through continuous professional development (Al-Hammouri et al., 2024; Stavropoulou et al., 2022). These findings collectively support the view that in-service training extends beyond knowledge acquisition by strengthening professional behaviors that ultimately improve patient satisfaction, nursing quality care outcomes, and organizational performance.

Clinical Competence of Nurses. Clinical competence is widely recognized as a multidimensional concept that encompasses the knowledge, clinical skills, professional attitudes, ethical values, critical thinking, and sound judgment required to deliver safe, effective, and patient-centered nursing care. Rather than being acquired at a single point in time, clinical competence develops progressively through education, clinical exposure, continuous learning, and professional experience (Nabizadeh-Gharghozar et al., 2021). Despite continuous efforts to improve nursing education and practice, several studies consistently report that nurses demonstrate moderate levels of clinical competence, indicating that there remains considerable opportunity for professional growth (Tura et al., 2024; Shibiru et al., 2023; Mohamed et al., 2024). Tura et al. (2024) found that nurses performed better in professional development than in leadership competencies, while Mohamed et al. (2024) similarly reported higher competence in professional behaviors than in advanced nursing skills. These findings suggest that although nurses possess the fundamental competencies required for practice, more focused interventions are needed to strengthen higher-level clinical reasoning, leadership, and advanced clinical skills. Consequently, healthcare institutions should continuously invest in competency development initiatives that enable nurses to respond effectively to the increasing complexity of healthcare delivery.

A growing body of literature demonstrates that clinical competence is influenced by multiple individual and organizational factors rather than demographic characteristics alone. Studies have identified work experience, continuing professional development, supportive supervision, workplace environment, critical thinking, emotional intelligence, professional satisfaction, and organizational support as important contributors to competency development (Shibiru et al., 2023; Mofdy Almarwani & Alzahrani, 2023). Likewise, Rahman et al. (2021) emphasized that continuing professional development, competency-based credentialing, and effective supervision are essential strategies for maintaining competence and reducing missed nursing care. Although some studies have reported inconsistent relationships between demographic characteristics and clinical competence, there is consistent evidence that supportive learning environments and opportunities for continuous education contribute more substantially to competency development than personal characteristics alone (Abbaspour et al., 2021). Furthermore, continuous learning enables nurses to enhance clinical decision-making, improve patient safety, and adapt to rapidly changing healthcare practices. Collectively, these findings reinforce that clinical competence should be viewed as a dynamic professional capability that requires continuous education, organizational support, and lifelong learning to sustain high-quality nursing care.

Profile and Perceived Impact of In-Service Training on Nursing Quality Care Outcomes. Previous studies suggest that nurses' demographic characteristics have minimal influence on how they perceive the impact of in-service training on nursing quality care outcomes. Variables such as age, sex, marital status, and educational attainment do not significantly alter nurses' perceptions of the value and effectiveness of professional development activities. Instead, organizational factors, including institutional support, workplace culture, availability of learning opportunities, and commitment to continuous professional development, play a greater role in shaping nurses' perceptions of in-service training (Gassas & Salem, 2022). These findings indicate that nurses generally recognize the importance of training regardless of their demographic background because maintaining competence is a universal professional responsibility. Consequently, healthcare organizations should focus on designing accessible, relevant, and competency-based training programs that address organizational and clinical needs rather than tailoring programs solely according to demographic characteristics.

This evidence suggests that improving the quality and relevance of training may have a greater influence on perceived outcomes than differences in nurses' personal profiles.

The changing demographic composition of the nursing workforce further emphasizes the need for inclusive professional development opportunities. Recent workforce initiatives have focused on promoting gender diversity and inclusion to address nursing shortages and strengthen healthcare delivery systems (Agege, 2024). Increasing the participation of underrepresented groups broadens workforce diversity, promotes innovation, and enhances the provision of culturally responsive patient care. Despite these demographic changes, previous evidence indicates that the perceived value of in-service training remains largely consistent across different groups of nurses because professional development is regarded as an essential component of competent nursing practice. Therefore, healthcare organizations should ensure that training programs remain equitable, inclusive, and responsive to the learning needs of a diverse nursing workforce. Such an approach can maximize participation, promote lifelong learning, and contribute to improved quality nursing care regardless of nurses' demographic characteristics.

Profile and Clinical Competence. Previous studies indicate that demographic characteristics alone are not strong determinants of nurses' clinical competence. Although variables such as age, gender, marital status, and income have traditionally been examined in competency studies, recent evidence suggests that these factors have limited influence on nurses' ability to deliver competent clinical care. Instead, educational experiences, self-efficacy, workplace support, quality of clinical instruction, and learning behaviors have consistently emerged as stronger predictors of competency development (Yoeum et al., 2026). These findings emphasize that clinical competence is primarily shaped through continuous learning and professional development rather than fixed personal characteristics. Consequently, healthcare institutions should prioritize interventions that strengthen nurses' educational preparation and clinical learning environments instead of relying on demographic factors when developing competency enhancement strategies. This evidence supports the view that competence can be improved through organizational investment in education, mentorship, and supportive clinical practice.

The changing demographic profile of the nursing workforce also reinforces the importance of providing equitable opportunities for competency development. The increasing participation of male nurses reflects ongoing efforts to address workforce shortages and strengthen healthcare systems through greater diversity (Agege, 2024; Munday, 2024). While workforce demographics continue to evolve, previous studies consistently demonstrate that competence is developed through clinical experience, continuous education, and supportive workplace environments rather than gender or other demographic characteristics. This suggests that healthcare organizations should provide competency development programs that are equally accessible to all nurses regardless of their personal background. Promoting inclusive professional development not only enhances individual competence but also strengthens workforce capacity and improves the quality of patient care. Overall, current evidence reinforces that clinical competence is best supported by continuous learning opportunities and organizational commitment to professional growth rather than demographic differences.

Perceived Impact of In-Service Training on Nursing Quality Care Outcome and Clinical Competence. The literature consistently demonstrates that in-service training is a significant contributor to the development of nurses' clinical competence. Training programs developed through systematic needs assessment enable nurses to strengthen essential clinical knowledge, technical skills, and professional behaviors required in contemporary healthcare practice. Nababan and Saragih (2018) reported that competency-based training modules covering key nursing competency domains effectively improved the clinical competence of nursing graduates, as demonstrated through simulation-based assessments. Similarly, Hoshino et al. (2023) found that nurses who actively engaged in in-service learning achieved higher levels of nursing competence, particularly in acquiring professional autonomy and developing nursing practice competencies. These findings suggest that continuous in-service education facilitates lifelong learning by enabling nurses to update their competencies and apply newly acquired knowledge in clinical settings. Consequently, healthcare organizations should view in-service training as an essential investment for maintaining competent nursing professionals capable of delivering safe, effective, and high-quality patient care.

Evidence further indicates that structured educational interventions improve not only nurses' clinical competence but also their ability to implement evidence-based practice in patient care. Yeh et al. (2025) demonstrated that nurses who completed a comprehensive evidence-based practice training program showed significantly higher competencies in scientific inquiry, professional practice, and clinical decision-making compared with those who did not receive the intervention. These improvements were particularly evident in nurses' ability to interpret research findings, evaluate clinical outcomes, and integrate evidence into everyday nursing practice. Such findings reinforce the importance of continuous professional education in strengthening critical thinking, clinical judgment, and evidence-informed decision-making among nurses. Overall, the literature consistently supports the positive relationship between in-service training and clinical competence, indicating that continuous educational opportunities enhance nurses' professional capabilities and ultimately contribute to improved nursing quality care outcomes. These findings provide a strong theoretical basis for examining whether the perceived impact of in-service training is associated with nurses' clinical competence in the present study.

RESEARCH METHODOLOGY

Design. This study employed a quantitative descriptive-correlational research design. The descriptive design was used to determine the perceived impact of in-service training quality nursing care outcome and the clinical competency of the nurses. The correlational design was used to assess the relationship between perceived impact of in-service training programs on nursing quality care outcome on the clinical competency of the nurses (McCombes, 2023; Bhandari, 2023).

Environment. The study was conducted in a Level II private hospital in Mactan, Cebu.

Respondents. The respondents of the study consisted of 90 registered nurses employed at the selected Level 2 hospital).

Sampling Design. The study employed complete enumeration, wherein all nurses who met the inclusion criteria were invited to participate.

Inclusion Criteria and Exclusion Criteria. Eligible participants were staff nurses directly involved in bedside patient care who had completed at least one in-service training program and had accumulated sufficient clinical experience to establish baseline competency. Nurses occupying purely managerial or administrative positions, those on extended leave during the data collection period, and newly hired nurses who had not yet met the minimum experience requirement were excluded from the study.

Instrument. Data were collected using a two-part adopted questionnaire. The first instrument was the Impact of In-Service Training Programs on Quality Nursing Care Outcomes Questionnaire (ISTPQ), adapted from the works of Fukada (2018), Hinds et al. (2017), Melnyk et al. (2018), Christiansen and Bell (2016), and Henderson and Dewar (2019). The questionnaire consists of 18 items distributed across six dimensions: knowledge and application, clinical skills and performance, evidence-based practice and decision-making, communication and teamwork, professionalism and ethics, and continuous learning and quality improvement. Responses were measured using a 4-point Likert scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree). Total scores ranged from 18 to 72, with higher scores indicating a greater perceived impact of in-service training. Previous studies reported excellent internal consistency, with Cronbach's alpha coefficients ranging from 0.80 to 0.98.

The second instrument was the Competency Inventory for Registered Nurses (CIRN) developed by Liu et al. (2007) and utilized by Liu et al. (2009). The CIRN is a validated 55-item instrument that measures nurses' clinical competence across seven domains: clinical care, leadership, interpersonal relationships, legal and ethical practice, professional development, teaching and coaching, and research and critical thinking. The instrument uses a 5-point Likert scale ranging from 0 (Never) to 4 (Always), with total scores ranging from 0 to 220. Higher scores indicate greater clinical competence and are interpreted as low (<110), moderate (110–164), and high (165–220) levels of competence. The instrument has demonstrated excellent reliability, with reported Cronbach's alpha coefficients ranging from 0.87 to 0.97.

Data Gathering Procedures. The study followed three phases: pre-data gathering, actual data gathering, and

post-data gathering. Prior to data collection, approval to conduct the study was obtained from the university and hospital authorities. The research proposal underwent technical review, after which ethical clearance was secured from the Institutional Ethics Review Committees of both institutions. Following the approval of the research protocol, a Notice to Proceed was issued before respondent recruitment commenced.

Eligible nurses were recruited through a face-to-face approach using the predetermined inclusion and exclusion criteria. Data collection was conducted before duty, during scheduled breaks, or after work hours to minimize disruption to hospital operations. Participants completed the questionnaires in a private setting to ensure confidentiality and reduce response bias. Completed questionnaires were immediately reviewed for completeness before encoding into Microsoft Excel and endorsement to the statistician for analysis. After statistical treatment, physical questionnaires were securely destroyed, and electronic data were permanently deleted in accordance with institutional data privacy policies.

Statistical Treatment of Data. Descriptive and inferential statistics were used to analyze the data. Mean and standard deviation were computed to determine nurses' perceived impact of in-service training on nursing quality care outcomes and their level of clinical competence. Chi-square test of independence was used to determine whether significant associations existed between selected profile variables and categorical competency outcomes. When significant associations were identified, Cramer's V was computed to determine the strength of the relationship. Finally, Pearson's product-moment correlation coefficient (Pearson's r) was used to examine the relationship between nurses' perceived impact of in-service training on nursing quality care outcomes and their clinical competence. Statistical significance was set at $p < .05$.

Ethical Considerations. Ethical approval was obtained from the ethics review boards of both the university and the participating hospital before data collection. Participation was voluntary, informed consent was obtained from all participants, and confidentiality and anonymity were maintained throughout the study in accordance with institutional ethical guidelines.

Presentation, Analysis, And Interpretation Of Data

Table 1 Profile of Respondent

Profile	f	%
Age		
18 to 35 years old	67	74.40
36 and above	23	25.60
Sex		
Male	10	11.10
Female	80	88.90
Education		
Bachelor's Degree	80	88.90
With Masteral Units	10	11.10
Years as nurse		
<1 year	27	30.00

1-3 years	55	61.10
4-6 years	8	8.90
Area of Assignment		
Ward	48	53.30
Special Area	42	46.70

Note. $n=90$.

The findings in table 1 shows that majority of nurses are aged 18 to 35 years old while the remaining nurses were aged 36 years old and above. Further, majority of them are females and the few of them were males. Furthermore, majority of the nurses had a bachelor's degree and a few had master's units. Also, majority of the respondents had a length of service as a nurse of one to three years followed by those having served for less than a year. Lastly, few had served for more than four years. Over half of the respondents were assigned in the wards while almost half were assigned to the special area. Majority of the respondents were aged 18 to 35 years old, female, and with a bachelor's degree. Majority had served for one to three years and were assigned in the wards. A diverse nursing workforce combines individuals with varied background characteristics to improve patient outcomes and team performance.

This specific operational matrix integrates differences in age, sex, educational attainment, and years of service to build a highly adaptable and resilient healthcare environment. The breakdown of these four dimensions highlights how they shape clinical practice and organizational success. The modern nursing workforce is extremely diverse, across many generations, more women and ethnic minorities, higher educational standards and varied clinical experience. The variety is a significant contributor to patient-centered care as it brings in varied perspectives in the delivery of healthcare. According to Maryville University (2023), the growing diversity of the population brings immense opportunity to enhance many aspects of society, and healthcare is no exception. Ensuring equity in healthcare is tremendously important in promoting positive health outcomes. Diversity in nursing is particularly critical because of the close relationships that nurses build with their patients and the sensitive nature of the healthcare that nurses provide. A nursing workforce that reflects the population it serves can only strengthen healthcare.

Table 2 Perceived Impact of In-service Training Programs on the Nursing Quality Care Outcomes

Knowledge and application	Average Score	f	%
Low	3.00	2	2.22
Moderate	9.00	17	18.89
High	11.66	71	78.89
Overall Score	10.97	High	
Clinical skills and performance			
Low	3.00	1	1.11
Moderate	9.00	12	13.33
High	11.44	77	85.56

Overall Score	11.02	High	
EBP and decision-making			
Low	3.00	1	1.11
Moderate	9.00	23	25.56
High	11.27	66	73.33
Overall Score	10.60	High	
Communication and teamwork			
Low	3.00	1	1.11
Moderate	9.00	13	14.44
High	11.58	76	84.44
Overall Score	11.11	High	
Professionalism and ethics			
Low	3.00	1	1.11
Moderate	9.00	7	7.78
High	11.84	82	91.11
Overall Score	11.52	High	
Continuous learning and quality improvement			
Low	3.00	1	1.11
Moderate	9.00	11	12.22
High	11.75	78	86.67
Overall Score	11.34	High	
Overall Impact			
Low	18.00	1	1.11
Moderate	0.00	0	-
High	67.11	89	98.89
Overall Score	66.56	High	

Note. $n = 90$.

Legend: A score of 18 to 35 (3 to 6) is low, 36 to 52 (7 to 9) is moderate, and 53 to 72 (10 to 12) is high.

The results in Table 2 showed that the Overall, most nurses perceived the impact of in-service training on nursing quality care outcomes as high, indicating that continuous professional education is relevant, applicable, and beneficial to clinical practice. Nurses consistently reported high perceptions across all dimensions, including knowledge and application, clinical skills and performance, evidence-based practice and decision-making, communication and teamwork, professionalism and ethics, and continuous learning and quality improvement. These findings suggest that in-service training enhances nurses' confidence in applying current knowledge, performing clinical procedures safely, communicating effectively with patients and healthcare teams, practicing ethically, and engaging in continuous quality improvement. A high perception of training also reflects nurses' recognition that continuous education strengthens their clinical competence and supports the delivery of safe, effective, and patient-centered care. These findings underscore the value of investing in continuing professional development as an essential component of quality nursing practice.

The findings are consistent with previous studies demonstrating that well-structured in-service training enhances nurses' knowledge, clinical performance, motivation, and ability to respond to evolving healthcare demands (Aquino, 2024). Likewise, Liu et al. (2026) emphasized that effective training programs should address nurses' learning needs through relevant content, appropriate training methods, and comprehensive evaluation to maximize learning outcomes. Conversely, inadequate training opportunities and limited organizational support may hinder nurses' professional growth and the implementation of quality nursing care (Mutshatshi et al., 2022). Collectively, these findings support the importance of continuous, well-designed in-service training programs in strengthening nurses' competencies and improving nursing quality care outcomes.

Table 3 Clinical Competence of the Nurses

Clinical Care	Average Score	<i>f</i>	%
Low	0.00	0	-
Moderate	0.00	0	-
High	37.27	90	100.00
Dimension Score	37.27	High	
Leadership			
Low	0.00	0	-
Moderate	21.00	2	2.22
High	33.44	88	97.78
Dimension Score	33.17	High	
Interpersonal Relation			
Low	0.00	0	-
Moderate	16.00	1	1.11
High	29.70	89	98.89
Dimension Score	29.54	High	
Legal/Ethical practice			

Low	0.00	0	-
Moderate	0.00	0	-
High	30.24	90	100.00
Dimension Score	30.24	High	
Professional development			
Low	0.00	0	-
Moderate	0.00	0	-
High	22.71	90	100.00
Dimension Score	22.71	High	
Teaching-Coaching			
Low	0.00	0	-
Moderate	13.75	4	4.44
High	22.48	86	95.56
Dimension Score	22.09	High	
Critical Thinking/Research aptitude			
Low	0.00	0	-
Moderate	16.33	3	3.33
High	29.05	87	96.67
Dimension Score	28.62	High	
Overall Competence			
Low	0.00	0	-
Moderate	154.33	3	3.33
High	205.34	87	96.67
Overall Score	203.64	High	

Note: $n=90$.

Legend: High Competency: 165–220 (17-28, 21-32, 25-36, 27-40), Moderate Competency: 110–164)9-16, 11-20, 13-24, 14-26_ and Low Competency: <110)0-8, 0-10, 0-12, 0-13).

Overall, nurses rated their clinical competence as high, suggesting that they perceived themselves to possess the knowledge, skills, professional judgment, and ethical values necessary to deliver safe and effective patient care. Although self-reported measures may be influenced by social desirability bias, the researcher's observations

support these findings, as nurses consistently participated in continuing professional development activities and maintained a strong record of clinical performance with no documented nursing errors. High ratings were consistently observed across all competency domains, including clinical care, leadership, interpersonal relations, legal and ethical practice, professional development, teaching and coaching, and research and critical thinking. These findings indicate that nurses are confident in providing comprehensive patient care, collaborating effectively with the healthcare team, practicing ethically, engaging in lifelong learning, and applying evidence to clinical decision-making. Overall, the findings suggest that continuous professional development contributes to sustaining high levels of clinical competence among nurses.

The findings are supported by previous studies recognizing clinical competence as a multidimensional capability that develops through continuous education, clinical experience, and organizational support (Nabizadeh-Gharghozar et al., 2021). Although Tura et al. (2024) and Shibiru et al. (2023) reported moderate levels of clinical competence among nurses, both studies identified continuing education, previous training, work experience, supportive work environments, and professional development as important factors influencing competency. These findings suggest that regular participation in training and competency development programs strengthens nurses' clinical knowledge, critical thinking, leadership, and professional practice. Collectively, the evidence reinforces that maintaining continuous learning opportunities is essential for sustaining high clinical competence and ensuring the delivery of quality nursing care.

Table 4 Relationship between Profile and Perceived Impact of In-service Training Programs on the Nursing Quality Care Outcomes

Variables	chi value	<i>p</i> value	Cramer's V	Decision	Interpretation
Age	17.264 ^a	.796	--	Failed to reject Ho	Not significant
Sex	14.074 ^a	.925	--	Failed to reject Ho	Not significant
Education	22.342 ^a	.500	--	Failed to reject Ho	Not significant
Years as nurse	55.026 ^a	.170	--	Failed to reject Ho	Not significant
Area of Assignment	26.607 ^a	.273	--	Failed to reject Ho	Not significant

Legend: Significant if *p* value is $\leq .05$.

Cramer's V value for the strength of correlation: Effect size ≤ 0.2 - The result is weak. Although the result is statistically significant, the fields are only weakly associated. $0.2 < ES \leq 0.6$ - The result is moderate. The fields are moderately associated. $ES > 0.6$ - The result is strong. The fields are strongly associated.

Based on the table, the findings revealed that the different profiles did not significantly correlate with the perceived impact of in-service training programs on quality nursing care outcomes. This led to the decision of failing to reject the null hypothesis and thus, there was no significant relationship between profile and the perceived impact of in-service training on quality nursing care outcomes. As a nurse, one driving force is to always provide quality nursing care. This is something that they should always be driven. No matter what profile of the nurse, they always see that these trainings will greatly contribute toward quality care and this is their primary goal.

Demographic and professional variables do not influence a high perception of training impact because the intrinsic value of clinical upskilling universally transcends individual background differences. When an in-service training program is highly effective, its perceived value on quality nursing care outcomes remains consistently high across all groups. Demographic profiles do not significantly influence how nurses perceive the impact of in-service training on quality care outcomes. Quantitative research consistently demonstrates that variables such as age, sex, marital status, and educational background do not alter the value nurses place on professional development. Instead, the universal baseline need for competence, standard organizational

practices, and structural healthcare environments are the primary drivers of training perception (Gassas & Salem, 2022). This finding could be brought about by the fact that there are only a small number of respondents. Evaluating how in-service training impacts nursing care quality without letting demographic profiles bias the results is essential for building an objective, high-performing healthcare workforce.

Table 5 Relationship between Profile and Clinical Competence

Variables	chi value	<i>p</i> value	Cramer's V	Decision	Interpretation
Age	44.904 ^a	.205	--	Failed to reject Ho	Not significant
Sex	35.583 ^a	.582	--	Failed to reject Ho	Not significant
Education	46.214 ^a	.169	--	Failed to reject Ho	Not significant
Years as nurse	85.569 ^a	.212	--	Failed to reject Ho	Not significant
Area of Assignment	40.844 ^a	.347	--	Failed to reject Ho	Not significant

Legend: Significant if *p* value is $\leq .05$.

Cramer's V value for the strength of correlation: Effect size ≤ 0.2 - The result is weak. Although the result is statistically significant, the fields are only weakly associated. $0.2 < ES \leq 0.6$ - The result is moderate. The fields are moderately associated. $ES > 0.6$ –

Based on the table, the findings reveal that none of the demographic profile correlates with clinical competence. This is supported by the findings where all the *p* values of the profile were greater than the significant value of .05 and thus, there is no significant relationship between the profile and clinical competence. Clinical competence is not influenced by profile considering that clinical competence is highly achieved through attending trainings, seminar, and other continuing professional development activities. The more the nurse attends continuing professional development activities, the more competent the nurse becomes.

Clinical competence among nurses is not inherently dictated by demographic factors because it relies on standardized training, continuous education, and cognitive adaptability rather than personal traits. While demographics like age or years of service describe who a nurse is, competence is an active measure of what a nurse can safely and effectively execute in a clinical setting. This finding could be brought about by the fact that there are only a small number of respondents. Clinical competence must remain entirely uninfluenced by demographic profiles to guarantee equitable, safe, and objective healthcare delivery. When a provider's clinical skills, judgments, or evaluations are swayed by demographic factors either on their own or their patients' it compromises systemic meritocracy, violates ethical obligations, and directly jeopardizes patient safety.

Table 6 Relationship between Perceived Impact of In-service Training Programs on the Nursing Quality Care Outcomes and Clinical Competence

Variables	<i>r</i> value	<i>p</i> value	Decision	Interpretation
Perceived Impact of In-service Training on quality Nursing Care Outcomes and Clinical Competence	.489	.000	Reject Ho	Significant

Legend: Significant if *p* value is $< .05$. Dependent Variable: Clinical Competence⁷. Pearson *r* interpretation: A value greater than .5 is strong (positive), between .3 and .5 is moderate (positive), between 0 and .3 is weak (positive), 0 is none, between 0 and $-.3$ is weak (negative), between $-.3$ and $-.5$ is moderate (negative), and less than $-.5$ is strong (negative).

The findings revealed a significant positive relationship between the perceived impact of in-service training on

nursing quality care outcomes and nurses' clinical competence, leading to the rejection of the null hypothesis. This indicates that nurses who perceive in-service training as beneficial to improving quality nursing care also tend to demonstrate higher levels of clinical competence. The findings suggest that positive perceptions of training encourage nurses to apply newly acquired knowledge and skills in clinical practice, thereby strengthening their competence in delivering safe, evidence-based, and patient-centered care. As an essential component of continuing professional development, in-service training provides opportunities for nurses to enhance their clinical knowledge, refine technical skills, and maintain professional competence throughout their careers. These findings underscore the importance of sustaining well-designed in-service training programs as part of organizational efforts to promote continuous competency development among nurses.

The present findings are consistent with previous studies demonstrating the positive influence of in-service education on nurses' competency development. Nababan and Saragih (2018) reported that competency-based training modules effectively improved nursing clinical competence by addressing essential competency domains identified through needs assessment. Similarly, Hoshino et al. (2023) found that higher levels of learning during in-service education were significantly associated with higher nursing competence, while Yeh et al. (2025) demonstrated that structured evidence-based practice training significantly enhanced nurses' professional practice, scientific inquiry, and clinical decision-making competencies. Collectively, these findings support the view that continuous in-service training strengthens clinical competence by promoting lifelong learning, evidence-based practice, and professional growth, ultimately contributing to improved quality nursing care outcomes.

CONCLUSION AND RECOMMENDATIONS

Conclusion. In conclusion, clinical competence is influenced by the perception of the impact of in-service training on the quality nursing care outcomes. The better the perception on the impact of in-service training on the quality nursing care, the higher the clinical competence. Further, the perceived impact on in-service training, on quality nursing care outcomes and clinical competence are not influenced by age, sex, education, years of service, and area of assignment. There is a better perception on the impact of in-service training programs on nursing quality care outcomes and high levels of clinical competence, no matter what the profile of the nurses.

Recommendations. The findings suggest that healthcare institutions should strengthen and sustain in-service training programs as part of their continuing professional development initiatives to enhance nurses' clinical competence and improve nursing quality care outcomes. Nursing administrators are encouraged to implement competency-based training programs that emphasize evidence-based practice, communication, leadership, patient safety, teamwork, and ethical practice while providing regular competency assessment and constructive feedback. Organizational policies should also support protected learning opportunities and establish structured systems for monitoring competency development following training. Furthermore, educational strategies should incorporate simulation-based learning, case-based discussions, and other active learning approaches to facilitate the application of knowledge in clinical practice. Future studies may employ mixed-methods, qualitative, or longitudinal designs to further examine how in-service training influences clinical competence and quality nursing care outcomes across different healthcare settings.

Clinical Competence Sustenance Plan

Rationale

Throughout their careers, nurses are required to maintain the knowledge, skills, and behaviors necessary to provide safe and effective patient care. This is accomplished through the implementation of a Clinical Competence Sustenance Plan. When a nursing workforce demonstrates a high perceived clinical competence in addition to a high perception of the impact of in-service training on quality nursing care outcomes, it is essential to have a formalized sustenance plan in order to safeguard, capitalize on, and keep these optimal conditions in place. This plan serves as a guide to nurses and healthcare institutions to make sure and guarantee that patient care is of top notch and unparalleled through the introduction of specific activities that are geared towards sustaining the high levels of perceived impact of in-service training programs as well as clinical competence of nurses.

General Objective

The main objective of this plan is to primarily sustain the high levels of perceived impact on the in-service training programs on the quality nursing care outcomes as well as the clinical competence of nurses.

Concern	Objective	Key Activities	Responsible Persons	Time Frame	Expected Outcome
Sustain the high perceived impact of in-service training on nursing quality care outcomes	Maintain nurses' positive perception of in-service training.	Conduct regular in-service training, learning needs assessment, simulation-based training, clinical audits, and periodic evaluation.	Nursing Administrators, Hospital Administration, Human Resource Department, Nurses	Last Quarter of 2026	Sustained high perception of the impact of in-service training on nursing quality care outcomes.
Sustain the high level of clinical competence	Maintain and strengthen nurses' clinical competence.	Conduct continuing professional development, simulation exercises, mentoring, competency assessment, clinical audits, and case reviews.	Nursing Administrators, Hospital Administration, Human Resource Department, Nurses	Last Quarter of 2026	Sustained high level of clinical competence among nurses.
Strengthen the relationship between in-service training and clinical competence	Continuously reinforce the positive effect of in-service training on clinical competence.	Integrate competency-based in-service training with regular monitoring, evaluation, and feedback.	Nursing Administrators, Hospital Administration, Human Resource Department, Nurses	Last Quarter of 2026	Sustained positive relationship between in-service training and clinical competence.

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