

Integrative Framework on Clinical Readiness of Nursing Students and Its Predictors in Safe Patient Care

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ABSTRACT

This study developed and statistically validated an evidence-based integrative framework on clinical readiness and determined its significant predictors in promoting safe patient care. A quantitative descriptive-comparative-correlational design was utilized among 329 nursing students in Biñan City, Laguna, selected through stratified random sampling. Data were collected using a researcher-developed and content-validated questionnaire (Cronbach's $\alpha = 0.95$). Descriptive and inferential statistics, and PLS-SEM using a Reflective-Formative HOC model were employed to analyze the data. The findings consistently demonstrated high levels of perceived clinical readiness across all competency domains, with Professional Accountability and Ethics obtaining the highest mean score. The measurement model confirmed that all competency domains collectively define clinical readiness, identifying Patient Safety and Quality of Care as its most influential formative construct. Furthermore, the structural model determined year level as the strongest predictor, followed by related learning experience (RLE) grade, lecture grade, age, and sex, explaining 50.3% of the variance in perceived clinical readiness. Despite limitations related to the respondents' self-reported data, geographical scope, and institutional variations, the study provides a locally contextualized integrative framework that advances evidence-based assessment of clinical readiness and guides nursing educators, curriculum developers, and academic institutions in strengthening competency-based clinical education for nursing students.

Keywords: Clinical readiness, nursing students, integrative framework, nursing education, safe patient care.

INTRODUCTION

Clinical readiness is a fundamental outcome of nursing education that prepares nursing students to deliver safe and quality nursing care. It was fostered through the integration of theoretical knowledge, practical skills, critical thinking, interpersonal skills, and ethical judgment (Swift et al., 2025; Konlan et al., 2024). Although previous studies have established clinical readiness as a multidimensional construct (Konlan et al., 2024; Lee et al., 2023), its predictors vary significantly within academic and clinical contexts (Jalon et al., 2026), demonstrating the need for an in-depth investigation to tailor various predicting factors in the Philippine nursing curriculum. Addressing this gap, the present study developed and statistically validated an evidence-based integrative framework using PLS-SEM analysis to determine key predictors and provide a framework for evidence-informed nursing education.

Statement of the Problem

The study was conducted to develop and validate an evidence-based integrative framework on clinical readiness and determine its key predictors to improve safe patient care. Specifically, it intended to: (1) describe the demographic profiles (age, sex, and year level) and determine the academic performance (lecture grade and RLE grade) of nursing students, (2) evaluate the level of perceived clinical readiness of nursing students through its five competency domains: clinical judgment and psychosocial competence, psychomotor and technical competence, communication and interpersonal skills, patient safety and quality of care, and professional accountability and ethics, (3) identify the significant differences between the respondents' perceived level of clinical readiness and their demographic profiles, as well as between respondents' academic performance and their demographic characteristics, (4) determine the significant relationship between the respondents' perceived level of clinical readiness and their academic performance, and (5) identify significant predictors of clinical readiness and develop an evidence-based integrative framework on clinical readiness.

Scope and Delimitations

The study consisted solely of 329 second-, third-, and fourth-year nursing students who are 18 years old and above, currently enrolled in nursing institutions in Biñan City, Laguna, and attended lecture discussions and clinical placements during the first semester of the academic year 2025-2026 in the following nursing professional courses: NCM 107 (second-year), NCM 112 (third-year) and NCM 118 (fourth-year). First-year nursing students were excluded from the study as they had not yet undergone clinical exposure.

Review of Related Literature

Clinical readiness is a multidimensional construct, encompassing communication, self-governance, perceived competence, and professional proficiency, which influences the acquisition of high-quality patient care (Konlan et al., 2024). Studies indicate that clinical placement experiences (Reagor, 2022) and strong academic performance (Olabiyi et al., 2024) contribute to high levels of clinical readiness among nursing students. These findings offer empirical support for investigating multiple predictors of clinical readiness and developing an integrative framework that can strengthen nursing education and clinical practice.

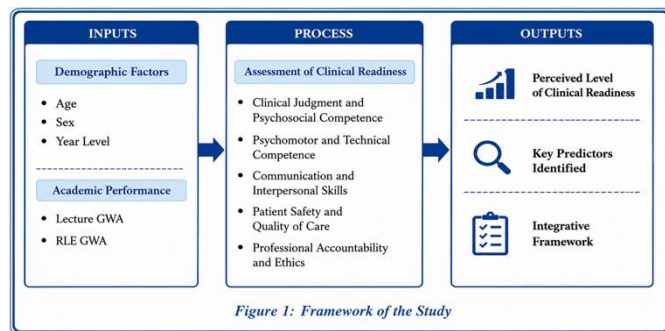
Theoretical Framework

The study was grounded in three nursing theories. Firstly, *Benner's Novice to Expert Theory* explains the progressive competency development of nursing students through educational growth. Furthermore, *Roy's Adaptation Model* explains how nursing students adapt to the demands of the high-pressure clinical environment. Lastly, *Watson's Theory of Human Caring* conceptualizes clinical readiness as humanistic and ethical dimensions of professional preparedness.

Conceptual Framework

This framework proposes that demographic characteristics and academic performance predict perceived clinical readiness among nursing students, which was measured through its

five competency domains, forming the basis for developing an evidence-based integrative framework on clinical readiness.



METHODOLOGY

This research employed a quantitative approach to investigate the demographic and academic predictors of clinical readiness and develop an integrative framework on readiness to foster safe patient care.

Research Design

A descriptive-comparative-correlational design was utilized to investigate the respondents' demographic characteristics, academic performance and perceived clinical readiness and to determine the significant differences and relationships among these research variables. This study also sought to identify predictors of clinical readiness that would assist in developing and validating an evidence-based integrative framework using PLS-SEM and Reflective-Formative HOC model.

Research Steps

This study involved literature review, instrument development, ethical approval from Research Ethics Board (ERB) of St Bernadette of Lourdes College (SBLC), instrument validation, pilot testing, and institutional permission. The data collected were coded, analyzed, and interpreted using appropriate statistical procedures.

Data Collection and Sample Selection

The total number of research samples used in the study was 329, calculated using G*Power software (version 3.1). The study employed stratified random sampling. The data were collected online using Google Forms following institutional approval.

Data Analysis Methods

Data were analyzed using R version 4.4.2. Frequency, percentage, weighted mean, and standard deviation summarized the respondents' demographic characteristics, academic performance, and perceived level of clinical readiness, while one-way ANOVA, Pearson's r correlation, and PLS-SEM using a Reflective-Formative HOC model were performed to test hypotheses, identify predictors of clinical readiness, and develop and statistically validate an evidence-based integrative framework.

Research Hypotheses and Validation

The Cronbach's alpha yielded a coefficient of $\alpha = 0.95$, indicating excellent internal consistency among the 43 questionnaire items. On the other hand, hypothesis testing revealed

mixed results. The findings showed that null hypotheses on the significant differences between lecture grade and perceived clinical readiness, the relationship between academic performance and perceived clinical readiness, and the significant predictors of clinical readiness were rejected ($p < .05$). Meanwhile, the null hypothesis on the significant difference between RLE grade and demographic characteristics was failed to be rejected ($p > .05$).

Study Limitations and Ethical Considerations

Limitations related to the respondents' self-reported data, geographical scope, and institutional variations were observed in the study. These limitations may have introduced recall bias, restricted generalizability of the findings, and limited the specificity of the results. The study was conducted in accordance with the established nursing research ethical principles to respect the dignity, rights, welfare, and confidentiality of the respondents.

RESULTS AND DISCUSSION

The respondents were primarily composed of 21- to 23-year-old female nursing students who were enrolled in the BSN program. Findings revealed that nursing students demonstrated favorable academic and clinical performance, indicating adequate clinical preparation. However, results showed that despite strong academic performance, nursing students acquired a slightly lower RLE performance than lecture, highlighting that clinical learning remains more demanding than the facilitated classroom discussions.

Nursing students consistently demonstrated high levels of perceived clinical readiness across the five competency domains, suggesting perceived preparedness in clinical practice. Statistics showed that clinical readiness significantly varied according to year level and age with sex exhibiting significant difference in Patient Safety and Quality of Care and Professional Accountability and Ethics domains, suggesting that clinical readiness develops differently across demographic groups. Furthermore, lecture performance differed significantly across demographic characteristics, while RLE performance did not exhibit significant differences. This implied that respondents achieved the same RLE grades regardless of demographic characteristics.

A significant positive relationship between perceived clinical readiness and academic performance was observed. This finding revealed that academic variables significantly influence perceived clinical readiness, emphasizing the importance of academic progression and educational preparation in preparing students for clinical practice.

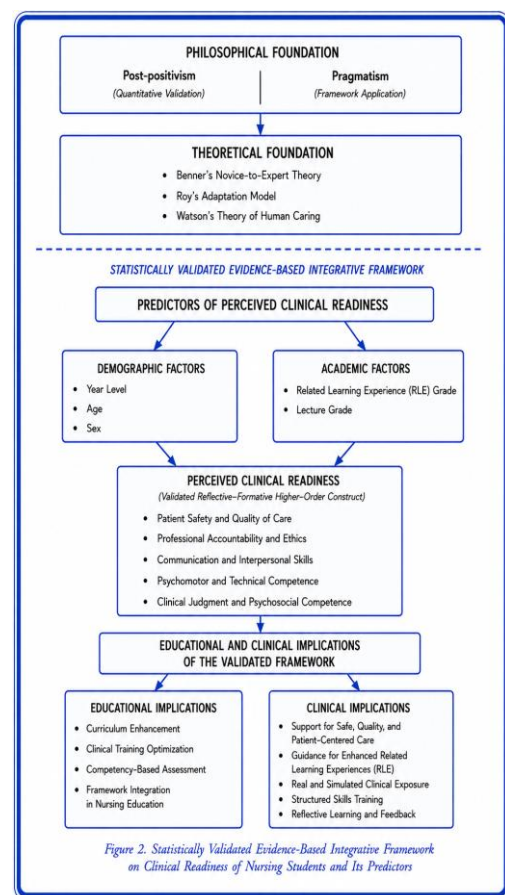


Figure 2. Statistically Validated Evidence-Based Integrative Framework on Clinical Readiness of Nursing Students and Its Predictors

The PLS-SEM analysis revealed that year level, RLE grade, lecture grade, age, and sex are significant predictors of clinical readiness, explaining 50.3% of its variance ($R^2 = 0.503$). The measurement model supported that the five competency domains collectively define clinical readiness, identifying Patient Safety and Quality of Care as its most influential formative construct. PLS-SEM analysis statistically validated the proposed evidence-based integrative framework, supporting that clinical readiness is a multidimensional construct influenced by demographic and academic factors.

Figure 2 presents the statistically validated integrative framework on clinical readiness developed from philosophical, theoretical, and empirical foundations.

SUMMARY

Nursing students demonstrated favorable academic performance and showed a high level of perceived clinical readiness in five competency domains, with demographic and academic variables significantly influencing clinical readiness. Significant differences were determined between demographic characteristics and perceived clinical readiness, as well as between academic performance and demographic characteristics. Similarly, positive relationships were identified between academic performance and perceived clinical readiness. The statistically validated framework showed that the five competency domains can define clinical readiness. The PLS-SEM structural model confirmed that year level, RLE grade, lecture grade, age and sex can predict clinical readiness, thereby strengthening the development of the statistically validated integrative framework on clinical readiness.

CONCLUSIONS

Clinical readiness is a multidimensional construct which can be influenced by demographic characteristics, academic preparation, and experiential learning. Demonstrating a high level of perceived clinical readiness across all competency domains indicates that nursing students perceive themselves as prepared to integrate theoretical knowledge, clinical skills, professional attributes, and ethical decision-making in clinical practice. The development of the integrative framework can strengthen nursing education strategies to improve students' ability to deliver safe and quality patient care.

RECOMMENDATION

Nursing institutions and educators are encouraged to adopt the statistically validated framework to strengthen competency-based education, optimize clinical training, guide curriculum enhancement, and promote alignment of competency-based learning. The proposed framework may support safe patient care, improve clinical placement experiences, and serve as the basis for structured and reflective clinical training. Future researchers are recommended to validate and refine the proposed framework as new empirical evidence emerges and to explore additional predictors that may explain the remaining 49.7% of the variance in clinical readiness. This statistically validated integrative framework should be evaluated in different educational contexts before its utilization.

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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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