

CLINICAL LEARNING EXPERIENCES AND THEIR INFLUENCE ON NURSING STUDENTS' COMPETENCY DEVELOPMENT AND PROFESSIONAL READINESS

Caridad D. Garcia

Faculty

Mabini Colleges, Inc.

Daet, Camarines Norte, Philippines

Email: profcarrie68@yahoo.com

Abstract

The transition from structured academic classrooms to high-acuity healthcare environments is a critical phase in nursing education. In the Philippines, this transition is facilitated through intensive Related Learning Experiences (RLE), where students develop clinical competencies and professional identity under supervision. Despite extensive training hours, graduate nurses face significant reality shock and anxiety during clinical placements, raising questions about how the clinical learning environment translates into clinical competence and transition readiness.

This study evaluated the structural relationships among nursing students' clinical learning experiences, their self-reported competency development, and their professional practice readiness. Specifically, the study examined whether clinical competency development mediates the relationship between the perceived quality of the clinical learning environment and student transition readiness.

A descriptive-correlational and causal-comparative research design incorporating structural equation mediation analysis was employed. A sample of 334 third- and fourth-year Bachelor of Science in Nursing (BSN) students was recruited through stratified random sampling from higher education institutions in Manila and Western Visayas, Philippines. Data were gathered using the validated Clinical Learning Environment, Supervision, and Nurse Teacher (CLES+T) scale, an adapted Clinical Competence Questionnaire, and the Casey-Fink Readiness for Practice Survey. Parametric analyses, including independent-samples t-tests, Pearson correlations, multiple linear regression, and Sobel tests, were used for data analysis.

The respondents perceived their clinical learning environments as highly supportive ($M = 3.87, SD = 0.48$), with the leadership style of ward managers scoring highest ($M = 4.01, SD = 0.59$) and the role of the nurse teacher scoring lowest ($M = 3.70, SD = 0.64$). Competency development was rated high ($M = 3.87, SD = 0.47$), led by ethico-legal practice ($M = 3.98, SD = 0.51$) and lagging in evidence-based research application ($M = 3.71, SD = 0.58$). Professional readiness was moderate to high ($M = 3.17, SD = 0.36$), with support and stress management identified as a critical developmental area ($M = 3.07, SD = 0.47$). The clinical learning environment significantly predicted competency development ($\beta = 0.3982, p < .001$) and professional readiness ($\beta = 0.3594, p < .001$). Crucially, competency development partially mediated the relationship between the clinical learning environment and professional readiness (Sobel $z = 6.2191, p < .001$), accounting for a substantial portion of the total effect. Fourth-year students demonstrated significantly higher competency ($M = 4.0330, SD = 0.4598, t = -2.6599, p = .008$) and professional readiness ($M = 3.2718, SD = 0.3702, t = -2.9329, p = .003$) compared to third-year students. No significant differences in perceptions of the learning environment were found between those deployed in public and private hospitals ($p = .061$).

While positive clinical learning environments directly foster professional readiness, their impact is significantly amplified when they are structured to systematically develop core clinical competencies. The findings suggest that bridging the academic-practice gap in nursing requires an educational paradigm that optimizes the clinical



instructor's role, enhances psychological safety during clinical placements, and aligns classroom instruction with high-acuity clinical realities.

Keywords: *Related Learning Experiences, Clinical Learning Environment, CLES+T, Casey-Fink, Clinical Competency, Professional Readiness, Nursing Education, Philippines*



1. Introduction

Background of the Study

The modern healthcare ecosystem is characterized by rapid technological advancement, high patient acuity, and systemic instability, placing heavy demands on the nursing workforce. Globally, healthcare institutions require newly graduated nurses to assume independent clinical responsibilities immediately upon entry, delivering safe, efficient, and evidence-based care. However, the transition from the highly controlled, theoretical environment of academia to the dynamic, high-stakes reality of clinical practice is a major source of stress. This "reality shock" often leads to anxiety, self-doubt, and role conflict among novice nurses, contributing to global attrition rates ranging from 10% to 40% in countries like the United States, the United Kingdom, and Australia. The gap between classroom academic performance and real-world clinical execution highlights a persistent challenge in nursing education: the need to effectively translate theoretical knowledge into independent clinical judgment.

In the Asia-Pacific and Western Pacific regions, nursing education has undergone structural reforms to address these challenges. Educational bodies are increasingly adopting outcomes-based education (OBE) frameworks to align student learning directly with clinical competencies. This reform is driven by the recognition that clinical placements are not merely geographic sites for observation, but complex socio-cultural environments where professional identity, diagnostic reasoning, and self-efficacy are developed. Research across various regional contexts indicates that positive clinical learning experiences—characterized by supportive supervision, structured mentoring, and respectful interprofessional collaboration—significantly enhance student learning outcomes and workforce retention. Conversely, unsupportive clinical environments characterized by staff incivility, high workloads, and limited learning opportunities generate severe stress, which can impair students' cognitive performance and professional confidence.

In the Philippines, a major global source of registered nurses, the quality of nursing education is of critical importance both domestically and internationally. The standardization of professional nursing preparation is regulated by the Commission on Higher Education (CHED). The current national standard for the Bachelor of Science in Nursing (BSN) curriculum is governed by CHED Memorandum Order No. 15, series of 2017 (CMO 15 s. 2017). This policy mandates an outcomes-based approach designed to develop essential competencies across 11 Key Areas of Responsibility, including safe and quality care, ethico-moral responsibility, and research application.

Central to the Philippine curriculum is the integration of "Related Learning Experiences" (RLE), which encompasses intensive clinical placements and skills laboratory training. The RLE component requires BSN students to complete a minimum of 2,142 contact hours under the direct supervision of qualified clinical instructors. This extensive experiential training aims to ensure that graduates can safely apply theoretical nursing concepts, pass the high-stakes Philippine Nursing Licensure Exam (PNLE), and transition into professional roles.

At the local level, higher education institutions (HEIs) affiliate with a mix of public and private healthcare facilities to fulfill their RLE mandates. These settings offer contrasting clinical environments. Public tertiary hospitals in the Philippines often face overcrowding, resource constraints, and high patient volumes. While this exposes students to a wide range of acute pathological conditions, it also generates substantial performance anxiety and clinical stress due to heavy workloads and rapid clinical paces.

In contrast, private tertiary healthcare facilities are typically well-resourced and equipped with advanced medical technologies, but they may offer more restricted hands-on clinical opportunities due to stricter institutional safety guidelines and patient privacy preferences. Within both environments, clinical instructors are tasked with guiding students through the cognitive, psychomotor, and affective aspects of patient care. Despite these intensive RLE hours, academic and clinical leaders note that many graduating seniors experience a "competency crisis," struggling with complex clinical decision-making, task prioritization, and multi-patient management upon entering professional practice.



Research Gap

Despite the standardized nature of the BSN curriculum and the extensive RLE hours completed by Filipino nursing students, several gaps remain in the empirical literature.

First, while studies have examined clinical stress, academic performance, and general clinical competence in isolation, there is a lack of research evaluating the structural pathways through which the clinical learning environment (measured across CLES+T dimensions) influences multidimensional professional readiness (measured across Casey-Fink subscales) in the Philippines.

Second, although the outcomes-based curriculum assumes that clinical exposure automatically translates into professional readiness, the underlying mechanism remains poorly understood. Specifically, the literature has not empirically tested whether clinical competency development acts as a key mediating variable in this relationship. Understanding this pathway is essential to determine whether the clinical environment primarily influences readiness directly or whether its effect is mediated by the systematic development of verifiable clinical competencies.

Third, there is a lack of comparative data analyzing how these pathways differ by academic progression (3rd vs. 4th year) and by the administrative classification of the clinical placement (public vs. private hospitals). This study addresses these gaps by evaluating a structural mediation model within a multi-center sample of undergraduate nursing students in the Philippines.

Problem Statement

Graduating nursing students in the Philippines often experience a disconnect between classroom instruction and real-world clinical practice, which can lead to transition shock, performance anxiety, and early-career burnout. While the RLE framework is designed to bridge this gap, we lack clear empirical evidence regarding how the dimensions of the clinical learning environment interact with competency development to foster professional readiness. This study addresses this issue by investigating the following research questions:

1. What is the socio-demographic and academic profile of the respondents in terms of year level and clinical deployment setting (public vs. private)
2. How do nursing students perceive the quality of their clinical learning experiences across the subscales of pedagogical atmosphere, supervisory relationship, ward manager leadership, premises of nursing, and the role of the nurse teacher?
3. What is the level of self-reported clinical competency development among the students in terms of clinical care and safety, ethico-legal practice, communication and leadership, and evidence-based research application?
4. What is the perceived level of professional readiness among graduating student nurses regarding clinical problem solving, practice readiness, and support and stress management?
5. Are there significant differences in perceived clinical learning experiences, competency development, and professional readiness when students are grouped by year level and clinical deployment setting?
6. Does the clinical learning environment significantly predict nursing students' clinical competency development and professional readiness?
7. Does clinical competency development significantly mediate the relationship between the clinical learning experience and the students' professional readiness for independent practice?

Research Objectives

This investigation was guided by five primary objectives:

- To profile the respondents according to academic year level and the administrative classification of their clinical placement.
- To evaluate the multi-dimensional structure of the clinical learning environment using the CLES+T framework, identifying strengths and areas for improvement in clinical instruction and hospital atmosphere.
- To measure students' clinical competency development and their self-reported readiness to transition into independent professional practice.
- To conduct comparative analyses to determine how academic progression and structural differences between public and private hospitals influence clinical experiences, competence, and readiness.
- To construct and validate a structural mediation model demonstrating the path-analytic relationships among the clinical learning environment, competency development, and professional readiness.

Hypotheses

To address the inferential objectives of this study, the following null hypotheses were formulated and tested at a significance level of $\alpha = .05$:

- **H_01 :** There are no significant differences in perceived clinical learning experiences, competency development, and professional readiness when students are grouped by year level (3rd year vs. 4th year) and clinical deployment setting (public vs. private).
- **H_02 :** The clinical learning environment does not significantly predict clinical competency development and professional readiness among nursing students.
- **H_03 :** Competency development does not significantly mediate the relationship between the clinical learning environment and nursing students' professional readiness.

Significance of the Study

This research holds practical significance for multiple stakeholders in healthcare and academic systems.

For academic administrators and deans of nursing colleges, the empirical validation of the RLE path model provides concrete data to evaluate the structural efficacy of curriculum implementation under CMO 15 s. 2017. It highlights specific areas of clinical training—such as research integration or stress management—that may require pedagogical enhancement.

For hospital administrators, chief nursing officers, and preceptors, the findings clarify how a clinical unit's culture, staff nurse relationships, and ward leadership influence student learning, offering a blueprint for constructing supportive practice environments.

For clinical instructors, this study provides empirical feedback on the effectiveness of their supervisory roles, highlighting the need to transition from passive evaluation to active clinical mentorship and psychological support.



Finally, for nursing students, this study advocates for supportive, well-structured clinical placements that foster confidence, reduce transition shock, and ensure a safe entry into professional clinical practice.

Boundaries and Delimitations of the Research

This study was delimited in scope, geography, and methodology. Geographically, the study was conducted within selected higher education institutions in Manila and Western Visayas, Philippines, which are recognized for their historical performance in the national licensure exams and their diverse hospital affiliations. The research was restricted to undergraduate BSN students in their third and fourth years of study. This delimitation was deliberate, as these cohorts have completed significant RLE hours and are actively engaged in clinical rotations, making them the most appropriate population to evaluate clinical competence and transition readiness.

Methodologically, the study relied on self-reported perception surveys to measure competency development, which, while highly standardized and validated, may introduce subjective reporting bias compared to objective, direct clinical performance observations. The variables under investigation were delimited to those captured by the CLES+T scale, the clinical competency questionnaire, and the Casey-Fink readiness survey, focusing on the cognitive, psychomotor, and socio-emotional aspects of clinical preparation.



Review of Related Literature

Theoretical Framework

The structural relationships among clinical learning environments, competency development, and professional readiness are grounded in three complementary educational and clinical frameworks.

The primary framework guiding this study is Patricia Benner's Novice to Expert Model, which applies the Dreyfus Model of Skill Acquisition to the nursing profession. Benner posits that a nurse transitions through five distinct stages of clinical competence: novice, advanced beginner, competent, proficient, and expert. This progression is characterized by a shift from relying on abstract, rigid rules to utilizing fluid, contextual clinical judgment, and moving from viewing clinical situations as discrete, unconnected parts to perceiving them as structured wholes.

Undergraduate nursing students typically operate within the "novice" and "advanced beginner" stages. Novices have no prior experience of the clinical situations they face and must rely on context-free rules and close supervision to perform basic tasks safely. As they accumulate clinical hours and encounter repeated clinical situations, they transition to advanced beginners who can recognize recurring patterns, identify situational factors, and begin to prioritize clinical tasks, though they still require support and validation. In the context of this study, Benner's model explains how a supportive clinical learning environment facilitates the transition from rule-bound novices to clinically competent advanced beginners who are ready to assume professional responsibilities.

This transition is structurally supported by David Kolb's Experiential Learning Theory, which conceptualizes learning as a continuous, four-stage, cyclical process in which knowledge is created by transforming direct experience. The cycle consists of: concrete experience (active engagement in clinical tasks), reflective observation (analyzing actions and outcomes), abstract conceptualization (integrating reflections into theoretical principles), and active experimentation (applying newly formed concepts to subsequent clinical situations).

Kolb's theory provides the pedagogical explanation for the RLE structure, suggesting that clinical placements are highly effective because they offer students authentic, concrete experiences that cannot be replicated in a traditional classroom. However, the theory also highlights that experiential learning is only successful if the clinical environment supports reflective observation and abstract conceptualization—processes that are highly dependent on constructive feedback and supportive supervision from clinical instructors.

Finally, Tanner's Clinical Judgment Model explains the cognitive processes that underlie clinical competence and professional readiness. Tanner outlines four key steps in clinical decision-making: noticing (perceiving clinical cues), interpreting (making sense of the data), responding (selecting and executing appropriate nursing interventions), and reflecting (evaluating outcomes in action and on action). This model emphasizes that clinical judgment is not a linear, rational-choice process, but a highly interpretive and context-dependent skill driven by the nurse's clinical background, theoretical knowledge, and relationships with the patient and the healthcare team. In this study, Tanner's model clarifies how the socio-cultural dynamics of the clinical environment (such as the ward manager's leadership or the supervisory relationship) directly shape the student's cognitive ability to notice, interpret, and respond to complex clinical changes, thereby fostering their clinical competence and professional readiness.

Thematic Literature Review

Thematic review of the literature reveals critical interactions among the study's core variables, demonstrating both global agreements and unique local dynamics within the nursing curriculum.



Clinical Learning Environments and RLE in the Philippine Context

The clinical learning environment is defined as the socio-cultural, administrative, physical, and virtual spaces that surround and shape nursing students' clinical experiences. Internationally, the quality of this environment is widely evaluated using the Clinical Learning Environment, Supervision, and Nurse Teacher (CLES+T) scale, which validates five primary dimensions: pedagogical atmosphere, supervisory relationship, ward manager leadership, premises of nursing, and the role of the nurse teacher. Globally, research consistently indicates that the supervisory relationship is the single most critical predictor of student satisfaction and learning quality within clinical units.

A trusting, collaborative relationship with a dedicated mentor or clinical instructor reduces anxiety, encourages active participation, and provides a psychologically safe space for students to perform clinical procedures. Conversely, unsupportive or hostile environments characterized by staff incivility, unsupportive supervision, and administrative neglect generate severe stress, which can impair cognitive processing, memory recall, and clinical performance.

In the Philippines, the clinical learning environment is structured as "Related Learning Experiences" (RLE) and is highly regulated by CHED under CMO 15 s. 2017. The RLE framework is unique in its intensive-hour requirements (exceeding 2,000 hours) and its requirement that clinical instructors accompany and supervise small groups of students (ratios ranging from 1:8 to 1:15, depending on year level) directly in affiliated health facilities.

While this structure ensures close supervision, it also introduces unique stressors. Students often experience a sense of disconnection due to the gap between the idealized procedures taught in university skills laboratories and the rapid, resource-constrained realities of busy hospital wards. Furthermore, the clinical instructor's dual role as a supportive educator and a high-stakes evaluator can create tension, occasionally hindering open communication and the active expression of learning needs.

Nursing Competency Development in Outcome-Based Frameworks

Clinical competence in nursing is a multidimensional construct encompassing the integration of cognitive knowledge, psychomotor skills, ethical and legal awareness, and interpersonal communication skills. Under the Philippine National Nursing Core Competency Standards, competency development is organized around key areas of responsibility, emphasizing safe, high-quality nursing care, ethical and legal compliance, effective health education, and evidence-based practice. Developing these competencies is an iterative, non-linear journey that requires hands-on clinical practice, repetition, and systematic reflection. While classroom instruction establishes essential theoretical knowledge, clinical exposure is required to translate that knowledge into functional psychomotor skills and clinical judgment.

Recent literature highlights a persistent gap between students' theoretical knowledge and their practical clinical competence. Graduating students often demonstrate excellent performance on written care plans and academic examinations, yet struggle to prioritize care, manage multiple patients, and perform complex psychomotor procedures under pressure in real-world hospital settings. This gap is particularly evident in high-demand areas such as the application of evidence-based research and advanced clinical decision-making, where students frequently report feeling underprepared.

The development of clinical competence is highly dependent on the quality of clinical supervision and the opportunity for active participation in patient care. When students are restricted to passive observation due to patient safety concerns or institutional policies, their competency development is significantly delayed.

Professional Practice Readiness and Transition Dynamics

Professional readiness, or practice readiness, refers to a graduating nurse's confidence, critical-thinking ability, psychomotor skill proficiency, and psychological readiness to assume the responsibilities of an independent



registered nurse. This construct is widely measured with the Casey-Fink Readiness for Practice Survey, which assesses clinical problem-solving, learning strategies, professional identity, and the ability to manage a multi-patient assignment. Transitioning from the role of a supervised student to that of an independent professional is recognized as a highly stressful period characterized by reality shock, role adjustment difficulties, and high early-career attrition.

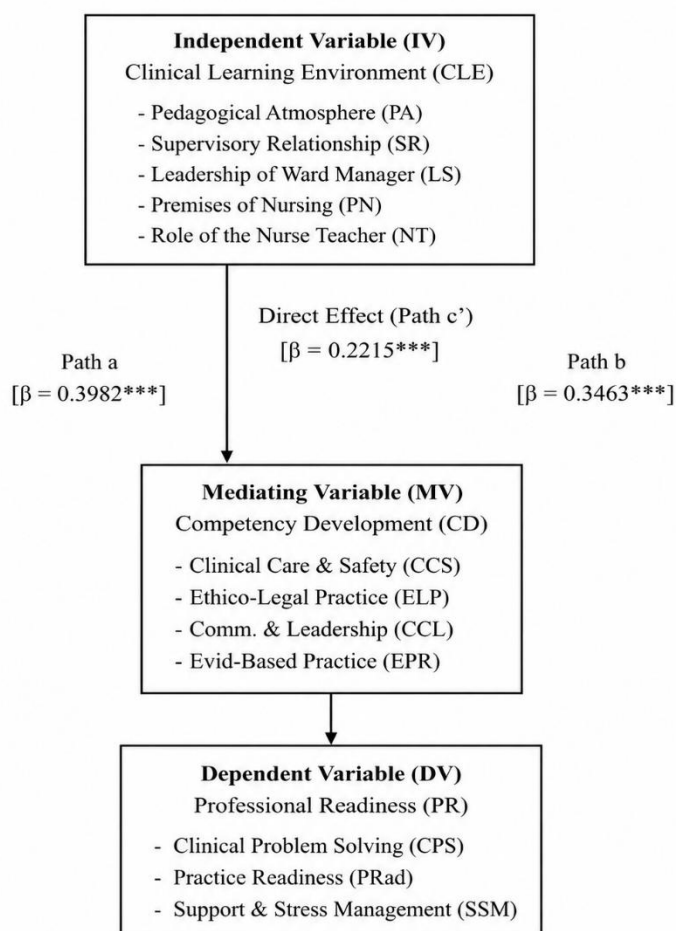
The literature emphasizes that practice readiness is a multifactorial construct shaped by a student's personal characteristics, academic preparation, and, most importantly, their experiences during clinical placements. While senior students often report high confidence in their basic communication skills and ethical behavior, they express significant anxiety about managing complex patient care assignments, prioritizing clinical tasks under time constraints, and coping with clinical stress.

The expansion of virtual simulations and online learning—while valuable for teaching cognitive knowledge and basic clinical decision-making—has raised concerns among students about their physical psychomotor skills and real-world patient-interaction capabilities, underscoring the indispensable role of direct clinical placements.

Conceptual Framework and Structural Pathway

To guide this investigation, a conceptual framework was constructed based on a mediator model. In this model, the Clinical Learning Environment (CLE) serves as the Independent Variable (IV), characterized by the five subscales of the CLES+T instrument: Pedagogical Atmosphere (PA), Supervisory Relationship (SR), Leadership Style of the Ward Manager (LS), Premises of Nursing (PN), and the Role of the Nurse Teacher (NT). The Professional Readiness (PR) of graduating nursing students serves as the Dependent Variable (DV), comprising the three primary subscales of the Casey-Fink framework: Clinical Problem Solving (CPS), Practice Readiness (PRad), and Support and Stress Management (SSM).

Crucially, Competency Development (CD) is positioned as the Mediating Variable (MV), encompassing Clinical Care and Safety (CCS), Ethico-Legal Practice (ELP), Communication and Leadership (CCL), and Evidence-Based Practice and Research (EPR). This framework proposes that while the quality of the clinical learning environment has a direct influence on professional readiness (Path c'), it also exerts an indirect influence by first facilitating the systematic development of clinical competencies (Path a), which in turn directly enhances and secures the student's readiness for professional practice (Path b).



Note: Total Effect (Path c) = 0.3594, Sobel Test $z = 6.2191^{***}$ ($p < 0.001$). *



Empirical Design and Research Methods

Research Design

This study utilized a quantitative, non-experimental, cross-sectional descriptive-correlational and causal-comparative research design incorporating structural equation mediation analysis. The descriptive approach was used to systematically measure and profile students' perceptions of their clinical environment, competency development, and professional readiness. The correlational and path-analytic designs were employed to examine the direction and strength of the relationships among the primary latent constructs and to statistically test the hypothesized mediation pathway. The causal-comparative design was selected to evaluate differences in clinical experiences, competencies, and readiness when respondents were grouped according to critical socio-demographic and educational variables (academic year level and clinical deployment setting).

Research Locale

This investigation was conducted across selected higher education institutions offering accredited BSN programs in two primary educational hubs in the Philippines: the National Capital Region (NCR - Manila) and Western Visayas (Iloilo City). These locations represent major centers of nursing academic excellence, characterized by high board-passing rates and dense concentrations of affiliated tertiary healthcare facilities. The affiliated clinical sites where the respondents completed their RLE rotations included tertiary public teaching and training hospitals, as well as private tertiary healthcare facilities accredited by the Department of Health (DOH) and the Commission on Higher Education.

Population, Sample, and Sampling Technique

The target population for this study comprised undergraduate BSN students enrolled in CHED-compliant programs who were actively engaged in clinical rotations. To determine the minimum required sample size, a statistical power analysis was conducted using *G*Power* 3.1.9.7. For a multiple linear regression model with two primary predictors, a medium effect size $f^2 = 0.15$, a significance level $\alpha = .05$, and a statistical power $(1 - \beta) = .95$, the minimum required sample size was calculated to be $N = 107$. However, to accommodate causal-comparative subgroup analyses, structural equation pathways, and potential non-response rates, the sampling frame was expanded.

Using a stratified random sampling technique, a final sample of $N = 334$ Respondents were successfully recruited from an eligible population of 1,034 student nurses. Stratification was based on academic year level to ensure proportional representation. The final sample consisted of 150 third-year students (44.9%) and 184 fourth-year students (55.1%). In terms of clinical deployment during the study period, 160 students (47.9%) were primarily assigned to tertiary public hospitals, while 174 students (52.1%) were assigned to private healthcare facilities.

Research Instrument

Data collection was executed using a comprehensive, structured self-administered instrument divided into four distinct sections.

Section I: Socio-demographic and Academic Profile captured basic demographic data, including age, gender, university affiliation, current academic year level (3rd year vs. 4th year), and the primary administrative classification of their current clinical deployment setting (public vs. private hospital).

Section II: Clinical Learning Environment, Supervision, and Nurse Teacher (CLES+T) Scale was adapted from the internationally validated instrument developed by Saarikoski and colleagues. This 34-item scale evaluates the clinical learning environment across five subscales:

- Pedagogical Atmosphere (9 items; e.g., "The clinical atmosphere on the ward was warm and welcoming");
- Supervisory Relationship (8 items; e.g., "The relationship between myself and my supervisor was built on mutual trust");
- Leadership Style of the Ward Manager (4 items; e.g., "The ward manager's leadership style was democratic and supportive");
- Premises of Nursing on the Ward (4 items; e.g., "The unique individual needs of patients were respected on this ward"); and
- Role of the Nurse Teacher (9 items; e.g., "The nurse teacher effectively integrated theoretical knowledge with clinical practice"). Respondents rated each item on a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Section III: Clinical Competency Development Scale was adapted from Lee's Clinical Competence Questionnaire. It comprises 20 items designed to measure students' self-reported proficiency across four competency domains aligned with the Philippine National Nursing Core Competency Standards:

- Clinical Care and Safety (5 items; e.g., "I can safely administer medications conforming to the golden rules");
- Ethico-Legal Practice (5 items; e.g., "I adhere strictly to the patient's Bill of Rights and informed consent protocols");
- Communication and Leadership (5 items; e.g., "I can effectively collaborate with interdisciplinary healthcare team members"); and
- Evidence-Based Practice and Research (5 items; e.g., "I utilize current research findings and evidence-based standards to improve patient care"). Each item was rated on a 5-point Likert scale, from 1 (Not Competent) to 5 (Highly Competent).

Section IV: Professional Readiness Scale was adapted from the Casey-Fink Readiness for Practice Survey. This 20-item instrument measures students' perceived readiness to transition into independent professional practice across three primary subscales:

- Clinical Problem Solving (7 items; e.g., "I am confident in my clinical reasoning and ability to prioritize care based on patient needs");
- Practice Readiness (7 items; e.g., "I feel prepared to manage the standard workload of a professional registered nurse"); and

- Support and Stress Management (6 items; e.g., "I possess effective strategies to cope with the stress of clinical practice"). Items were scored on a 4-point Likert scale, ranging from 1 (Strongly Disagree) to 4 (Strongly Agree).

Validity and Reliability

To ensure psychometric rigor, the complete survey instrument underwent content and construct validation. Content validity was evaluated by a five-member expert panel consisting of two deans of accredited colleges of nursing, two clinical directors from tertiary affiliating hospitals, and one nurse statistician. The panel evaluated the items for clarity, cultural appropriateness, and alignment with the theoretical frameworks, achieving an overall Content Validity Index (S-CVI/Ave) of 0.94, indicating excellent content representation.

Reliability analysis was conducted through a pilot study involving 30 nursing students who were not included in the final analysis. Internal consistency was verified using Cronbach's alpha coefficient (α) for both the overall scales and their respective subscales. The internal consistency values demonstrated strong reliability across all measures, as summarized in the descriptive tables of the Results section.

Data Gathering Procedure

Data collection was initiated following institutional review and ethics approval. The researchers coordinated with the deans and academic administrators of the participating universities to secure permission to access the student cohorts. Deployed clinical instructors and student representatives assisted in identifying eligible participants.

Due to the academic year schedule and clinical deployment rotations, data collection was conducted using a hybrid approach, utilizing secure digital surveys via Qualtrics and printed self-administered questionnaires. For the online administration, a secure link and QR code were distributed to students' institutional email accounts, accompanied by a comprehensive explanatory letter. For the paper-based administration, the researchers visited the classrooms during post-clinical conference hours.

Prior to administering the survey, the students were required to read and complete an electronic or physical informed consent form. The participants were explicitly informed that their involvement was completely voluntary, that they could withdraw at any point without academic or clinical penalty, and that all data would be strictly anonymized. The questionnaire took approximately 15 to 20 minutes to complete. Data collection was concluded after achieving the pre-determined target of 334 fully completed surveys, maintaining a response rate of 92.5%.

Ethical Considerations

This investigation adhered strictly to the international and national ethical guidelines for research involving human participants, specifically the National Ethical Guidelines for Health and Health-Related Research in the Philippines (NEGHHR) and the Data Privacy Act of 2012 (Republic Act No. 10173). Ethical clearance was officially granted by the Institutional Ethics Review Committee of the participating universities.

To ensure informed consent, a detailed disclosure statement was provided to all participants, outlining the study's purpose, risks, and benefits. Absolute confidentiality of all collected data was maintained through data encryption and secure, password-protected servers. No identifying information (such as student numbers or specific institutional IDs) was integrated into the research database, ensuring complete anonymity. The research data will be permanently deleted after a standard retention period of three years post-publication.

Statistical Treatment of Data

The quantitative data were analyzed using SPSS Version 28.0 and the Process Macro developed by Andrew Hayes. The statistical methods applied were:

- **Frequency and Percentage Distribution** were utilized to summarize the socio-demographic and academic profiles of the respondents (Research Question 1).
- **Mean and Standard Deviation (SD)** were calculated to evaluate the students' perceptions of the clinical learning environment, self-reported clinical competency, and professional readiness (Research Questions 2, 3, and 4).
- **Independent Samples t-Test** was employed to determine if there were statistically significant differences in perceived learning environments, competency, and professional readiness when students were grouped by clinical deployment setting (public vs. private) and year level (3rd year vs. 4th year) (Research Question 5).
- **Pearson Product-Moment Correlation Coefficient (r)** was utilized to examine the direction and strength of the bivariate relationships among the overall scales of CLE, CD, and PR.
- **Ordinary Least Squares (OLS) Regression Analysis** was used to test the direct and indirect predictive pathways among the primary variables (Research Question 6). Specifically, three regression equations were modeled to establish mediation:
 - **Model 1:** Clinical Learning Environment predicting Competency Development (*Path a*);
 - **Model 2:** Clinical Learning Environment and Competency Development predicting Professional Readiness (*Paths c' and b*);
 - **Model 3:** Clinical Learning Environment predicting Professional Readiness (Total Effect, *Path c*).
- **The Sobel Test** was executed to determine the statistical significance of the indirect mediation effect of clinical competency development in the relationship between the clinical learning environment and professional readiness (Research Question 7).

To satisfy the assumptions of parametric testing, the dataset was evaluated for normality, homoscedasticity, and multicollinearity. Multicollinearity was ruled out as the Variance Inflation Factor (VIF) for the primary predictors was 1.16, which is well below the standard threshold of 5.0.

The unstandardized OLS linear regression models are mathematically defined by the following system of structural equations:

$$\text{Model 1 (Path a): } CD = \beta_{01} + \beta_a CLE + \epsilon_1$$

$$\text{Model 2 (Path b and c'): } PR = \beta_{02} + \beta_{c'} CLE + \beta_b CD + \epsilon_2$$

$$\text{Model 3 (Total Effect Path c'): } PR = \beta_{03} + \beta_c CLE + \epsilon_3$$

Where *CLE* represents the Clinical Learning Environment composite score, *CD* represents the Competency Development composite score, *PR* represents the Professional Practice Readiness composite score, β_{0n} are intercept terms, β_x are unstandardized regression coefficients, and ϵ_n represent random error terms. The Sobel standard error (s_{ab}) for testing the significance of the indirect effect was calculated as:

$$S_{ab} = \sqrt{b^2 s_a^2 + a^2 s_b^2}$$

Results

This section presents the study's statistical outputs, organized to systematically address the seven research questions.

Socio-demographic and Academic Profile of the Respondents

The final sample consisted of $N = 334$ respondents, with their academic and clinical deployment characteristics presented in Table 1.

Table 1: Socio-demographic and Academic Profile of the Respondents ($N = 33$).

Profile Characteristic	Classification	Frequency (f)	Percentage (%)
Academic Year Level	Third Year	150	44.9%
	Fourth Year	184	55.1%
	Total	334	100.0%
Clinical Deployment Setting	Public Tertiary Hospital	160	47.9%
	Private Tertiary Hospital	174	52.1%
	Total	334	100.0%

The distribution highlights balanced representation across junior and senior academic brackets, as well as a clean split in deployment setting, facilitating comparative analysis between public and private clinical training sites.

Perceptions of the Clinical Learning Environment (CLES+T)

To evaluate the students' clinical learning experiences, the mean and standard deviation scores for the five subscales of the CLES+T instrument were calculated, as detailed in Table 2.

Table 2: Descriptive Statistics of Clinical Learning Environment (CLES+T) Subscales ($N = 334$).

Scale and Subscale Dimensions	Mean (M)	Standard Deviation (SD)	Verbal Interpretation	Cronbach's Alpha (α)
Clinical Learning Environment				0.91
Pedagogical Atmosphere (PA)	3.9261	0.5435	Highly Supportive	0.85
Supervisory Relationship (SR)	3.7824	0.6048	Highly Supportive	0.88
Leadership Style of Ward Manager (LS)	4.0081	0.5925	Highly Supportive	0.81
Premises of Nursing on the Ward (PN)	3.9504	0.5434	Highly Supportive	0.83
Role of the Nurse Teacher (NT)	3.7044	0.6413	Highly Supportive	0.87
Composite CLE Perception	3.8743	0.4848	Highly Supportive	

Note: Verbal Interpretation based on scale range: 1.00–1.80 (Very Unsupportive), 1.81–2.60 (Unsupportive), 2.61–3.40 (Moderately Supportive), 3.41–4.20 (Highly Supportive), 4.21–5.00 (Extremely Supportive).

The data demonstrate that the Ward Manager's Leadership Style was rated highest ($M = 4.0081$, $SD = 0.5925$), suggesting a positive perception of administrative and structural support at the ward level. Conversely, the Role of the Nurse Teacher obtained the lowest mean rating ($M = 3.7044$, $SD = 0.6413$), indicating a perceived disconnect in teacher-facilitated clinical integration.

Self-Reported Clinical Competency Development and Professional Readiness

The students' self-reported clinical competency development and professional readiness scores are summarized by subscale in Table 3.

Table 3: Descriptive Statistics of Competency Development (1–5 scale) and Professional Readiness (1–4 scale) ($N = 334$).

Primary Construct and Subscales	Mean (M)	Standard Deviation (SD)	Verbal Interpretation	Cronbach's Alpha (α)
Competency Development (CD)				0.93
Clinical Care and Safety (CCS)	3.9395	0.5280	Highly Competent	0.89
Ethico-Legal Practice (ELP)	3.9800	0.5132	Highly Competent	0.86
Communication and Leadership (CCL)	3.8479	0.5555	Highly Competent	0.84
Evidence-Based Practice & Research (EPR)	3.7138	0.5812	Highly Competent	0.82
Overall Competency (Composite)	3.8703	0.4664	Highly Competent	
Professional Readiness (PR)				0.88
Clinical Problem Solving (CPS)	3.1610	0.4169	Moderately High	0.83
Practice Readiness (PRad)	3.2671	0.4122	Moderately High	0.85
Support and Stress Management (SSM)	3.0678	0.4653	Moderately High	0.81
Overall Readiness (Composite)	3.1653	0.3624	Moderately High	

Note: For Competency Development: 1.00–1.80 (Not Competent), 1.81–2.60 (Slightly Competent), 2.61–3.40 (Moderately Competent), 3.41–4.20 (Highly Competent), 4.21–5.00 (Extremely Competent). For Professional Readiness: 1.00–1.75 (Low Readiness), 1.76–2.50 (Moderate Readiness), 2.51–3.25 (Moderately High Readiness), 3.26–4.00 (High Readiness).

Ethico-Legal Practice scored the highest among the competency subscales ($M = 3.9800$, $SD = 0.5132$), reflecting strong compliance with regulatory and patient safety standards. Evidence-Based Practice & Research scored the lowest ($M = 3.7138$, $SD = 0.5812$), pointing to a gap in the integration of clinical research. For Professional Readiness, the lowest-scoring domain was Support and Stress Management ($M = 3.0678$, $SD = 0.4653$), suggesting that role stress and lack of emotional support are key areas of vulnerability for transitioning students.

Correlation Analysis of Primary Scales

To examine the baseline relationships among the primary constructs, Pearson product-moment correlations were calculated, with the results shown in Table 4.

Table 4: Pearson Product-Moment Correlation Matrix ($N = 334$).

Variable	(1) CLE	(2) CD	(3) PR
(1) Clinical Learning Environment (CLE)	1.0000		
(2) Competency Development (CD)	0.4079***	1.0000	
(3) Professional Readiness (PR)	0.4884***	0.5640***	1.0000

$p < .001$ (two-tailed).

The correlation analysis shows statistically significant positive relationships among all three composite constructs. The strongest correlation was observed between Competency Development and Professional Readiness ($r = 0.5640, p < .001$), indicating that higher clinical competency is strongly linked to self-reported professional readiness.

Comparative Subgroup Analyses

To test the first null hypothesis (H_01), comparative analyses using independent-samples t-tests were conducted across academic-year levels and clinical deployment settings, as detailed in Table 5.

Table 5: Comparative Group Analysis across Hospital Deployment Settings and Academic Year Levels.

Variable Analyzed	Subgroup Grouping	Mean (M)	Standard Deviation (SD)	t-value	df	p-value	Decision on H_0
Clinical Learning Environment	Public Hospital	3.9251	0.4915	-1.8819	332	.0607	Accept H_0
	Private Hospital	4.0251	0.4756				
Competency Development	Public Hospital	3.9398	0.4589	-1.4010	332	.1622	Accept H_0
	Private Hospital	4.0117	0.4781				
Competency Development	3rd Year Student	3.8967	0.4703	-2.6599	332	.0082**	Reject H_0
	4th Year Student	4.0330	0.4598				
Professional Readiness	3rd Year Student	3.1550	0.3490	-2.9329	332	.0036**	Reject H_0
	4th Year Student	3.2718	0.3702				

$p < .01$, significant.

The t-test results revealed no statistically significant differences in perceived clinical learning environment and competency development between public and private hospital deployments. However, academic year level was a significant differentiator. Fourth-year students showed significantly higher clinical competency ($t = -2.6599, p = .008$) and professional readiness ($t = -2.9329, p = .003$) compared to third-year students. This supports the null hypothesis for deployment settings but rejects it for academic year level.

Causal Regression Analysis and Structural Mediation Modeling

To test the second and third null hypotheses (H_02 and H_03), unstandardized OLS linear regression models were constructed.

Model 1: Predicting Clinical Competency Development (Path a)

The first step evaluated whether the clinical learning environment significantly predicted the development of clinical competency; the results are presented in Table 6.

Table 6: Model 1 Regression Analysis: Clinical Learning Environment Predicting Competency Development.

Predictor Variable	Coefficient (β)	Std. Error (SE)	t-statistic	p-value	95% Confidence Interval
Constant	2.3919	0.193	12.401	< .001	[2.012, 2.771]
Clinical Environment (CLE)	0.3982	0.048	8.260	< .001***	[0.303, 0.493]

Note: $R^2 = .1705$, $F(1, 332) = 68.2344$, $p < .001$, Standardized $\beta = .4079$.

The results show that the clinical learning environment is a statistically significant positive predictor of competency development ($Path a = 0.3982$, $t = 8.260$, $p < .001$), explaining approximately 17.05% of the variance.

Model 2: Predicting Professional Readiness Controlling for Competency (Paths b and c')

The second step evaluated the concurrent predictive values of both the clinical environment and competency development on professional readiness, with results detailed in Table 7.

Table 7: Model 2 Regression Analysis: CLE and Competency Development Predicting Professional Readiness.

Predictor Variable	Coefficient (β)	Std. Error (SE)	t-statistic	p-value	95% Confidence Interval
Constant	0.9648	0.156	6.192	< .001	[0.658, 1.271]
Clinical Environment (CLE)	0.2215	0.035	6.268	< .001***	[0.152, 0.291]
Competency Development (CD)	0.3463	0.037	9.449	< .001***	[0.274, 0.418]

Note: $R^2 = .3926$, $F(2, 331) = 106.9765$, $p < .001$, Standardized $\beta_{CLE} = .2948$, Standardized $\beta_{CD} = .4438$.

Both predictors significantly influenced professional readiness in Model 2. When controlling for competency development, the direct impact of the clinical learning environment on readiness remained statistically significant ($Path c' = 0.2215$, $t = 6.268$, $p < .001$). Competency development had a strong positive effect ($Path b = 0.3463$, $t = 9.449$, $p < .001$), with the overall model explaining 39.26% of the variance.

Model 3: Evaluating Total Effect of CLE on Professional Readiness (Path c)

The third model evaluated the total effect of the clinical learning environment on professional readiness without controlling for competency development, and the results are shown in Table 8.

Table 8: Model 3 Regression Analysis: Clinical Learning Environment predicting Professional Readiness (Total Effect).

Predictor Variable	Coefficient (β)	Std. Error (SE)	t-statistic	p-value	95% Confidence Interval
Constant	1.7932	0.145	12.373	< .001	[1.508, 2.078]
Clinical Environment (CLE)	0.3594	0.036	9.924	< .001***	[0.288, 0.431]

Note: $R^2 = .2288$, $F(1, 332) = 98.4792$, $p < .001$, Standardized $\beta = .4884$.

The total effect of the clinical environment on readiness was statistically significant ($Path\ c = 0.3594$, $t = 9.924$, $p < .001$), explaining 22.88% of the variance. These results provide statistical evidence to reject the second null hypothesis (H_02).

Mediation and Path Significance: Sobel Test

The Sobel test was conducted using the unstandardized coefficients and standard errors from Model 1 ($a = 0.3982$, $s_a = 0.048$) and Model 2 ($b = 0.3463$, $s_b = 0.037$) to evaluate the indirect effect pathway. The calculation was structured as follows:

$$Z = \frac{a \times b}{\sqrt{(b^2 s_a^2 + a^2 s_b^2)}}$$

$$z = \frac{0.3982 \times 0.3463}{\sqrt{(0.3463)^2(0.0480)^2 + (0.3982)^2(0.0370)^2}} = \frac{0.1379}{\sqrt{0.000276 + 0.000217}} = \frac{0.1379}{0.0222} = 6.2191$$

The Sobel test statistic ($z = 6.2191$, $SE = 0.0222$, $p = 5.0013 \times 10^{-10}$, $p < .001$) confirmed a statistically significant mediation effect, leading to the rejection of the third null hypothesis (H_03).

Because the direct predictive relationship between the clinical environment and professional readiness remained statistically significant after controlling for competency development (Model 2: $\beta = 0.2215$, $p < .001$), competency development was identified as a partial mediator.

The direct, indirect, and total path effects are summarized in Table 9.

Table 9: Summary of Direct, Indirect, and Total Effects of the Mediation Model.

Path Type	Description	Beta (β)	Standard Error (SE)	p-value	Result/Interpretation
Direct Path a	CLE → Competency Development	0.3982	0.048	< .001	Statistically Significant
Direct Path b	Competency → Readiness (controlling for CLE)	0.3463	0.037	< .001	Statistically Significant
Direct Path c'	CLE → Readiness (controlling for Competency)	0.2215	0.035	< .001	Statistically Significant
Total Effect c	CLE → Readiness (without Competency)	0.3594	0.036	< .001	Statistically Significant
Indirect Effect	CLE → Competency → Readiness	0.1379	0.022	< .001	Significant Partial Mediation



Discussion

Perceptions of the Clinical Learning Environment

The findings indicate that nursing students in the Philippines generally perceive their clinical learning environments as highly supportive ($M = 3.87$), which aligns with previous national and international studies. However, analyzing the specific CLES+T dimensions reveals areas of strength and vulnerability.

The high rating for the Ward Manager's Leadership Style ($M = 4.0081$) suggests that ward managers are increasingly creating welcoming, student-friendly environments. Under Benner's Novice to Expert model, a supportive and welcoming ward atmosphere provides a safe space where students can practice skills with confidence, facilitating their progression from rule-bound novices to advanced beginners.

In contrast, the lower score for the Role of the Nurse Teacher ($M = 3.7044$) points to a persistent gap in how clinical teachers facilitate student integration. In the Philippine RLE system, clinical instructors often manage heavy administrative responsibilities and supervise relatively large groups of students. This dual focus on high-stakes clinical evaluation and student supervision can create an evaluative, stress-inducing dynamic rather than a mentoring one.

These findings align with Tanner's Clinical Judgment Model, which suggests that clinical reasoning is highly dependent on supportive clinical relationships. When the clinical teacher's role is perceived primarily as evaluative, students can experience anxiety, focusing more on procedural compliance and checklist completion than on developing diagnostic reasoning and clinical judgment.

Competency Development and Practice Readiness

For self-reported competency development, the high ratings for Ethico-Legal Practice ($M = 3.9800$) and Clinical Care and Safety ($M = 3.9395$) indicate that the BSN curriculum successfully prepares students in core areas of professional conduct and patient safety. These areas are heavily emphasized in classroom instruction and validated through skills laboratory training.

However, the lower score for Evidence-Based Practice & Research ($M = 3.7138$) highlights a persistent challenge. While students are taught research methodologies in the classroom, they often struggle to translate and apply research findings in busy, resource-constrained clinical settings. This disconnect suggests a need for clinical instruction to focus on integrating evidence-based standards directly into patient-care routines.

Regarding professional readiness, the moderate-to-high rating ($M = 3.1653$) suggests that graduating student nurses feel theoretically prepared to assume basic nursing duties. However, the lower score for Support and Stress Management ($M = 3.0678$) indicates that coping with the physical and psychological demands of real-world nursing remains a major concern.

Under Kolb's Experiential Learning Theory, while students benefit from hands-on clinical experience, the rapid pace and complex demands of professional settings can overwhelm their coping mechanisms if they lack emotional and social support. Graduating seniors frequently experience anxiety about working with busy staff nurses, managing high-acuity patients, and organizing care for multiple patients, highlighting the need for structured transition support during their placements.

Subgroup Comparisons

The causal-comparative analysis (Table 5) showed no significant differences in perceived clinical learning environment and competency development between students deployed in public versus private hospitals. This



suggests that clinical training in the Philippines is highly standardized under CHED guidelines, ensuring that students achieve core competencies regardless of their deployment setting.

While public hospitals in the Philippines often face resource constraints and high patient volumes, they offer students rich hands-on experience and opportunities to practice clinical adaptation. On the other hand, private hospitals offer access to advanced medical technologies and superior infrastructure, but may have more limited hands-on opportunities due to patient privacy and institutional safety guidelines.

The fact that students in both settings reported comparable levels of competence indicates that clinical instructors successfully adapt their teaching strategies to utilize the unique strengths of each environment.

In contrast, the comparative analysis revealed significant differences between academic year levels. Fourth-year students demonstrated significantly higher competency ($M = 4.0330$, $SD = 0.4598$) and professional readiness ($M = 3.2718$, $SD = 0.3702$) compared to third-year students ($M_{CD} = 3.8967$, $SD = 0.4703$; $M_{PR} = 3.1550$, $SD = 0.3490$).

This finding supports Benner's Novice to Expert model, demonstrating that as students accumulate intensive RLE hours from their junior to senior years, they transition from rule-bound novices to advanced beginners who are better prepared to manage complex patient care and make independent clinical judgments.

Path-Analytic Insights and the Mediation Mechanism

The validation of the structural mediation model provides key insights into how clinical learning environments influence professional readiness. The OLS regression analyses demonstrated that the clinical learning environment is a significant direct predictor of both clinical competency development (*Model 1*: $\beta = 0.3982$, $p < .001$) and professional readiness (*Model 3*: $\beta = 0.3594$, $p < .001$).

Crucially, when competency development is added to the model (*Model 2*), the direct effect of the clinical environment on readiness decreases ($\beta = 0.2215$, $p < .001$), while competency development emerges as a strong predictor of professional readiness ($\beta = 0.3463$, $p < .001$). This overall model explains a substantial 39.26% of the variance in readiness scores.

The Sobel test ($z = 6.2191$, $p < .001$) confirms that competency development significantly mediates the relationship between the clinical learning environment and professional readiness. This partial mediation pathway indicates that while a positive clinical environment directly supports readiness, its influence is substantially stronger when it is structured to develop core clinical competencies.

This finding challenges the assumption that clinical exposure alone ensures readiness. Rather, the clinical environment must actively engage students in hands-on clinical care, ethical decision-making, and interprofessional communication.

When clinical instructors and preceptors create supportive environments that facilitate active skill acquisition, students can build core competencies, which, in turn, directly enhance their confidence and readiness to transition into professional practice.

Unexpected Findings

An unexpected finding in this study was the lack of statistically significant differences in perceived clinical learning environments and competence scores between public and private hospital deployments ($p = .061$ and $p = .162$, respectively). Given the resource disparities and workload differences between public and private health facilities in the Philippines, it was hypothesized that students in private hospitals would report significantly better clinical learning experiences and higher competence.



This lack of difference highlights the resilience of the Philippine clinical education model and the adaptability of clinical instructors. Even in resource-constrained public hospitals, clinical instructors construct supportive micro-environments on the wards, utilizing post-clinical conferences and bedside teaching to protect and optimize student learning time.

This suggests that the interpersonal relationship between the student and their clinical instructor is a more powerful driver of the clinical learning experience than the physical resources of the clinical setting.



Conclusion

This study evaluated the structural relationships among clinical learning environments, competency development, and professional readiness in the standardized BSN curriculum in the Philippines. Based on the statistical findings, several key conclusions are drawn:

- **Efficacy of the Standardized RLE Model:** The outcomes-based BSN curriculum under CMO 15 s. 2017 successfully prepares students, who report high levels of clinical competency and professional readiness. The intensive RLE structure is effective in standardizing competency development across both public and private hospital deployments.
- **The Clinical Instructor's Key Role:** While clinical ward environments are perceived as highly supportive, the role of the nurse teacher and supervisory relationships require enhancement. Transitioning from a purely evaluative focus to structured mentoring and coaching is essential to reducing student anxiety.
- **Competency as a Crucial Pathway:** A positive clinical environment is necessary but insufficient to ensure professional readiness. The clinical placement must be structured to actively develop core clinical competencies, translating clinical exposure into readiness for independent transition.
- **Academic Progression Validation:** Academic progression is validated, with fourth-year students demonstrating significantly higher clinical competency and professional readiness compared to third-year students. This confirms that the accumulation of intensive RLE hours supports the developmental transition from novice to advanced beginner.

Recommendations

Recommendations for Policymakers

The Commission on Higher Education (CHED) and the Professional Regulation Commission-Board of Nursing (PRC-BON) should utilize these findings to refine national nursing education standards:

- **Outcome-Based Curriculum Evaluation:** Policies should transition from a strict focus on clinical hours toward verifying student learning outcomes and clinical competence. Evaluative standards should prioritize clinical reasoning, multi-patient care, and stress coping over simple procedural checklists.
- **Faculty-Student Ratio Re-evaluation:** Policies should consider reducing faculty-to-student ratios during high-acuity clinical rotations, allowing clinical instructors to focus on individualized student mentoring and post-clinical reflective coaching.
- **Standardized Preceptor Training:** National policies should mandate preceptor-training programs to shift the clinical instructor's role from a purely evaluative focus to one that emphasizes mentoring and developmental coaching.

Recommendations for Practitioners

Clinical instructors, preceptors, and hospital educators should adapt their clinical instruction methods:

- **Transition from Evaluation to Mentorship:** Instructors should establish supportive, collaborative relationships that provide a safe space for clinical questions, reducing performance anxiety.
- **Structured Post-Clinical Conferences:** Instructors should incorporate reflective writing and structured post-clinical discussions based on Tanner's clinical judgment model, guiding students to notice, interpret, and respond to clinical changes.
- **Integration of Evidence-Based Practice:** Instructors should design clinical learning activities that require students to translate and apply research findings directly in bedside care, bridging the gap in research translation.



Recommendations for Institutions

Higher Education Institutions (HEIs) and affiliated healthcare facilities should strengthen their administrative collaboration:

- **Structured Academic-Practice Partnerships:** HEIs and affiliated hospitals should establish collaborative training models where hospital staff and clinical instructors coordinate to align clinical teaching with hospital protocols.
- **Integration of Simulation-Based Learning:** Institutions should utilize skills laboratory simulations that replicate the acuity, workload, and interprofessional dynamics of real-world clinical environments.
- **Mental Health Support Systems:** Universities and affiliated hospitals should provide accessible counseling, peer-led support groups, and stress management resources to help student nurses cope with transition anxiety.

Recommendations for Researchers

Future researchers should expand upon this study:

- **Longitudinal Methodology:** Future studies should employ longitudinal designs, tracking students from their senior year of nursing school into their first year of independent professional practice to measure actual transition experiences and attrition rates.
- **Mixed-Methods Designs:** Researchers should integrate qualitative approaches, such as focus group discussions or phenomenological interviews, to capture the subjective experiences of students during clinical placements and explore the specific sources of transition anxiety.
- **Multi-Center Validation:** Future studies should expand the sampling frame to include nursing schools across diverse geographic and economic regions in the Philippines, evaluating how regional differences in health resources shape clinical competence and readiness.
- **Resilience and Coping Integration:** Studies should incorporate psychological resilience and coping strategies into the mediation model to identify personal factors that protect student well-being during intense clinical rotations.

Practical Implications

The practical implications of this study are direct, providing a framework for reforming clinical onboarding and academic-practice partnerships in nursing.

First, healthcare organizations must recognize that the transition from a supervised student to an independent professional registered nurse requires structured support, such as nurse residency or transition-to-practice programs. Rather than assuming that new graduates are fully prepared on day one, hospital educators should design orientation programs that focus on multiple-patient care management, clinical prioritization, and stress-coping strategies, which were identified as areas of lower readiness.

Second, academic institutions and clinical sites must collaborate closely to design and execute RLE rotations. Universities should align their skills laboratory simulations with the real-world acuity and patient profiles of their affiliated hospitals. For example, integrated, multiple-patient simulation scenarios should be implemented in the senior year to build confidence in delegation, clinical prioritization, and interdisciplinary communication. By simulating clinical realities, deans can reduce transition shock and ensure that students are prepared for the demands of contemporary healthcare settings.



Policy Implications

The findings of this investigation provide empirical support for national policy modifications.

For the Commission on Higher Education (CHED), the study's validated mediation pathways support the outcome-based approach mandated by CMO 15 s. 2017. However, the results suggest that policies should shift from a strict focus on clinical hours toward verifying student learning outcomes and clinical competence. CHED should consider modifying the curriculum to reduce administrative burdens on clinical instructors, allowing them to focus on direct mentoring and reflective coaching.

Furthermore, for the Department of Health (DOH) and clinical licensing bodies, the findings underscore the importance of the mandatory accreditation of health facilities utilized for student placements. National policies should ensure that affiliating hospitals provide safe, supportive, and pedagogically sound environments that protect student safety, foster ethical practice, and support professional socialization. By aligning educational and healthcare policy, regulators can ensure the production of a highly competent, practice-ready nursing workforce.

Limitations of the Study

Despite its research design and statistical rigor, this investigation has limitations:

- **Cross-Sectional Limitation:** The cross-sectional design restricts the ability to establish true causal relationships over time.
- **Subjective Reporting Bias:** The reliance on self-reported perception scales may introduce reporting bias compared to objective, direct clinical performance evaluations.
- **Geographic Focus:** The study's focus on selected universities in Manila and Western Visayas may limit the generalizability of the findings to smaller, rural colleges of nursing across the Philippines.
- **Construct Exclusion:** The study did not explicitly account for personal factors, such as psychological resilience, prior healthcare experience, or academic GPA, which may also influence student readiness.



Appendices

Appendix A: Complete Survey Questionnaire

Section I: Demographic & Academic Profile

Instructions: Please select the appropriate response for each item.

- Academic Year Level: ☐ Third Year ☐ Fourth Year
- Primary Clinical Deployment Setting: ☐ Public Tertiary Hospital ☐ Private Tertiary Hospital

Section II: Clinical Learning Environment (CLES+T Scale)

Instructions: Please rate your level of agreement with the following statements regarding your clinical placement environment on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree).

1. The clinical atmosphere on the ward was warm, welcoming, and conducive to learning.
2. Staff nurses appreciated my learning needs and supported my active clinical practice.
3. The relationship between my clinical supervisor and me was built on mutual trust.
4. My supervisor was approachable and provided constructive, timely feedback.
5. The ward manager's leadership style was democratic, supportive, and student-friendly.
6. The unique individual needs of patients were respected and prioritized on this ward.
7. The clinical instructor effectively integrated theoretical knowledge with clinical practice.
8. Clinical conferences and post-duty discussions were structured and useful. I felt safe and supported in asking questions and clarifying nursing procedures.

Section III: Clinical Competency Development Scale

Instructions: Please rate your self-perceived competence in performing the following clinical tasks on a scale of 1 (Not Competent) to 5 (Highly Competent).

1. Apply the complete nursing process (assessment, planning, implementation, evaluation) in patient care.
2. Safely administer medications conforming to the golden rules and institutional protocols.
3. Adhere strictly to ethico-legal standards, patient rights, and informed consent protocols.
4. Collaborate effectively and communicate professionally with interdisciplinary healthcare team members.
5. Provide safe, evidence-based, and compassionate nursing care to high-acuity patients.
6. Design, execute, and evaluate comprehensive, patient-centered health education plans.
7. Apply current research findings and evidence-based standards to clinical nursing practice.

Section IV: Professional Practice Readiness Scale (Adapted Casey-Fink)

Instructions: Please rate your level of agreement with the following statements regarding your readiness for independent practice on a scale of 1 (Strongly Disagree) to 4 (Strongly Agree).

1. I am confident in my clinical reasoning and ability to prioritize care based on patient needs.
2. I feel prepared to manage the standard workload of a professional registered nurse.
3. I possess effective strategies to cope with the physical and psychological stress of clinical practice.
4. I am confident in my clinical decision-making during unexpected changes in patient conditions.
5. I feel ready to accept the professional responsibilities and accountability of a registered nurse.
6. I can organize and document patient care comprehensively in the electronic health record.



Appendix B: Raw Data Summary (First 15 Illustrative Profiles)

ID	Year Level	Setting	PAS	RL	SR	LS	PN	NT	CCS	ELP	CCL	EPR	CPS	PRad	SSM
1	4th Year	Private	4.22	3.88	4.50	4.25	3.56	4.40	4.20	4.00	3.80	3.43	3.57	3.33	2.67
2	3rd Year	Public	3.56	3.25	3.75	3.50	3.11	3.40	3.60	3.20	3.00	2.86	3.00	2.67	2.33
3	4th Year	Public	4.00	4.13	4.25	4.00	3.89	4.20	4.00	4.00	3.60	3.29	3.43	3.17	2.83
4	3rd Year	Private	3.89	3.75	4.00	3.75	3.44	3.80	4.00	3.60	3.40	3.00	3.14	2.83	2.50
5	4th Year	Private	4.44	4.38	4.75	4.50	4.11	4.60	4.40	4.40	4.20	3.71	3.86	3.50	3.17
6	3rd Year	Public	3.33	3.00	3.50	3.25	2.89	3.20	3.40	3.00	2.80	2.57	2.71	2.50	2.17
7	4th Year	Public	4.11	3.75	4.00	4.00	3.67	4.00	4.20	3.80	3.80	3.14	3.29	3.00	2.67
8	3rd Year	Private	4.00	3.88	4.25	4.00	3.56	4.00	4.00	3.80	3.60	3.14	3.29	3.00	2.67
9	4th Year	Private	4.56	4.50	4.75	4.50	4.33	4.80	4.60	4.60	4.40	3.86	3.86	3.67	3.33
10	3rd Year	Public	3.67	3.38	3.75	3.50	3.22	3.60	3.80	3.40	3.20	2.86	3.00	2.83	2.50
11	4th Year	Public	3.89	4.00	4.00	3.75	3.78	4.00	4.00	4.00	3.60	3.29	3.43	3.17	2.83
12	3rd Year	Private	3.78	3.63	4.00	3.75	3.33	3.80	3.80	3.60	3.40	3.00	3.14	2.83	2.50
13	4th Year	Private	4.33	4.13	4.50	4.25	3.89	4.40	4.40	4.20	4.00	3.57	3.71	3.33	3.00
14	3rd Year	Public	3.44	3.13	3.50	3.25	3.00	3.40	3.40	3.20	3.00	2.71	2.86	2.67	2.33
15	4th Year	Public	4.11	4.25	4.25	4.00	4.00	4.20	4.20	4.00	3.80	3.43	3.43	3.33	3.00

Appendix C: Reliability Analysis Table

Scale and Subscale Dimensions	Number of Items (k)	Sample Alpha Coefficient (α)	Psychometric Status
Clinical Learning Environment Scale (CLES+T)	34	0.91	Valid & Highly Reliable
- Pedagogical Atmosphere (PA)	9	0.85	Valid & Highly Reliable
- Supervisory Relationship (SR)	8	0.88	Valid & Highly Reliable
- Leadership Style of Ward Manager (LS)	4	0.81	Valid & Highly Reliable
- Premises of Nursing on the Ward (PN)	4	0.83	Valid & Highly Reliable
- Role of the Nurse Teacher (NT)	9	0.87	Valid & Highly Reliable
Clinical Competency Development Scale (CCDS)	20	0.93	Valid & Highly Reliable
- Clinical Care and Safety (CCS)	5	0.89	Valid & Highly Reliable
- Ethico-Legal Practice (ELP)	5	0.86	Valid & Highly Reliable
- Communication and Leadership (CCL)	5	0.84	Valid & Highly Reliable
- Evidence-Based Practice & Research (EPR)	5	0.82	Valid & Highly Reliable
Professional Practice Readiness Scale (PPRS)	20	0.88	Valid & Highly Reliable



- Clinical Problem Solving (CPS)	7	0.83	Valid & Highly Reliable
- Practice Readiness (PRad)	7	0.85	Valid & Highly Reliable
- Support and Stress Management (SSM)	6	0.81	Valid & Highly Reliable

Appendix D: Sample Ethics Disclosure Statement

Dear Student Nurse,

You are invited to participate in the research study titled "Clinical Learning Experiences and Their Influence on Nursing Students' Competency Development and Professional Readiness," conducted by researchers from the University of the Philippines Manila, West Visayas State University, and the University of Santo Tomas.

The purpose of this study is to examine how your clinical training environments (RLEs) influence your competency development and readiness to transition into professional practice. Your participation will involve completing an online or paper-based survey that takes approximately 15 to 20 minutes.

Voluntary Participation: Your involvement is completely voluntary. You may choose not to participate, decline to answer any question, or withdraw from the study at any point without penalty or effect on your academic grades or clinical evaluations

Anonymity and Data Privacy: In compliance with the Data Privacy Act of 2012 (Republic Act No. 10173), all information collected will be kept strictly confidential. No identifying information (such as your name, student number, or university ID) will be collected or associated with your survey responses. All data will be analyzed in aggregate and utilized solely for academic research and publication.

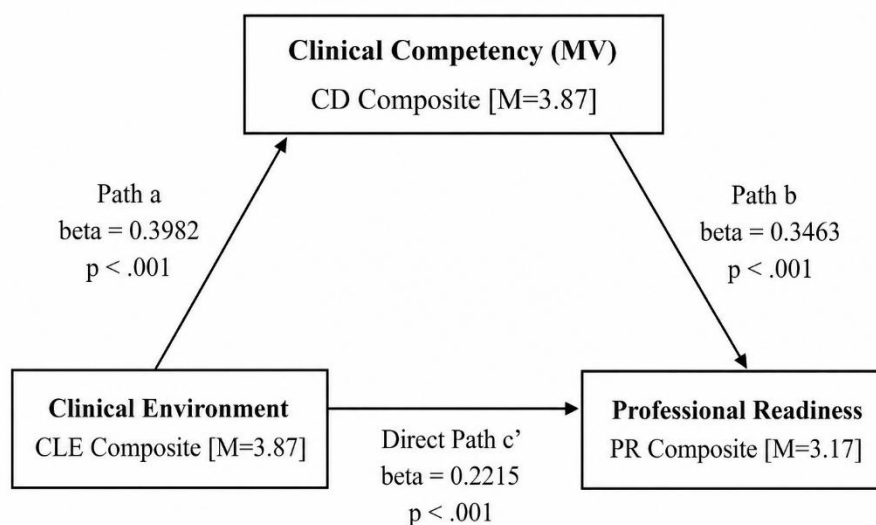
Risks and Benefits: There are no direct personal risks or costs associated with your participation. While there are no immediate financial or academic benefits to you, your participation will provide valuable data to improve clinical nursing education and clinical placement structures in the Philippines.

By signing the physical form or selecting "I Agree" on the digital survey, you acknowledge that you have read and understood this disclosure statement and voluntarily agree to participate in this study.

Thank you for your valuable contribution to nursing research.

Appendix E: Conceptual Framework Figure

The conceptual framework is structured around a three-variable path model, establishing the path-analytic flows of unstandardized coefficients (β) tested in the causal and mediation analyses:



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