

# Perceived Clinical Competence in Healthcare Settings Among Graduating Nursing Students

## ABSTRACT

**Background:** Clinical competence is essential in preparing nursing students for safe and effective practice. Differences in clinical exposure across healthcare settings may influence the development of these competencies.

**Aims:** To assess the perceived clinical competence of graduating nursing students across private and public healthcare settings.

**Study Design:** Descriptive-Comparative design.

**Place and Duration of Study:** College of Nursing of a private institution in Iloilo City, Philippines, between September 2025 and March 2026.

**Methodology:** A total of 221 graduating Bachelor of Science in Nursing students were selected from a population of 517 using simple random sampling. Data were collected using the adopted Clinical Competence Questionnaire. Descriptive statistics were used to summarize the data, while the Kolmogorov-Smirnov test assessed normality. The Wilcoxon Signed-Rank Test was applied to determine differences between settings. Ethical clearance was obtained prior to the conduct of the study.

**Results:** Findings revealed that among the 221 graduating nursing student respondents, clinical exposure varied across healthcare areas, with greater exposure to specialized units in private healthcare facilities and surgical wards in public settings. Students demonstrated a positive level of perceived clinical competence in both private (mean = 4.02) and public (mean = 3.97) healthcare settings, indicating adequate theoretical knowledge and practical skills but still requiring supervision. Inferential analysis showed a significant difference was found in overall clinical competence ( $P = .005$ ), particularly in nursing professional behaviors and general performance, favoring private healthcare settings. No significant differences were observed in core and advanced nursing skills.

**Conclusion:** Graduating nursing students exhibited adequate competence in both settings; however, advanced skills remain underdeveloped. Enhanced clinical exposure and supervision are recommended to improve readiness for independent practice.

**Keywords:** Clinical competence, nursing education, healthcare settings, graduating students, professional readiness.

## 1. INTRODUCTION

Nursing competency, which includes knowledge, technical skills, attitudes, and clinical judgment necessary for safe and effective patient care, is often developed through clinical competence (Zaitoun et al., 2023). The World Health Organization (WHO, 2021)

emphasizes the importance of preparing competent nursing graduates, as they are essential to providing quality healthcare and achieving Sustainable Development Goal (SDG) 3, which focuses on promoting health and well-being for all. However, several studies have reported inconsistencies in perceived clinical competencies among nursing students, which appear to be influenced by factors such as the scope, type, and context of clinical exposure, supervision, and training (Ahmedin et al., 2024; Valizadeh et al., 2025). These variations may be attributed to differences in the clinical learning environments.

For instance, a study conducted in Saudi Arabia demonstrated that the extent of clinical exposure and the quality of mentorship significantly impacted nursing students' confidence and skill acquisition (Albloushi et al., 2023). Similarly, research conducted in several African countries indicated that hospital resources, feedback from clinical instructors, and the diversity of clinical cases encountered within healthcare settings markedly contributed to variations in the levels of competence demonstrated by nursing students (Shibiru et al., 2022).

Recently, a similar trend has been observed in Asian settings regarding whether students' clinical learning experiences are influenced by the choice of training in private versus public institutions. Specifically, public hospitals tend to offer broader exposure to a diverse range of cases, while private hospitals often provide more structured supervision within a technology-driven care environment (Motsaanaka et al., 2022). In the Philippines, the Commission on Higher Education mandated that all nursing programs incorporate clinical practice in both public and private healthcare institutions to expose students to diverse patient populations and markedly different service delivery models. However, disparities in institutional resources, faculty support, and case availability may have contributed to varying perceptions of clinical competence among nursing students (Moralista & Oducado, 2020).

Therefore, there is a strong rationale for further investigation in this area. The existing literature provides limited evidence regarding the perceptions of Filipino nursing students concerning their clinical competence in relation to their experiences in private and public healthcare institutions. Addressing this gap is essential to enhance clinical training programs, ensuring they offer balanced learning opportunities that can improve the overall quality of nursing education nationwide. Consequently, this study aimed to assess the level of clinical competence among graduating nursing students in both private and public healthcare settings, with the objective of understanding how institutional environments influence their preparation for entry into professional practice.

## **2. METHODOLOGY**

### **2.1 Research Design**

This study utilized a descriptive-comparative research design to describe and compare the clinical competence of graduating nursing students in private and public healthcare settings (Siedlecki, 2020; Mohajan, 2023). This design allowed the researchers to examine the differences in clinical competence, professional behavior, and skill competencies among students from different academic environments without manipulating the variables.

### **2.2 Study Setting**

The study was conducted in Iloilo City, Philippines, specifically at a private college that provides nursing education and clinical training. The institution offers structured clinical rotations in both private and public healthcare facilities, allowing student nurses to gain

diverse clinical experiences and enabling the comparison of their perceived clinical competence.

### **2.3 Population and Sampling**

The sample size was calculated using the Raosoft sample size calculator, an online tool that determines the required sample with a 95% confidence level and a 5% margin of error (Sharif et al., 2025). From the 517 graduating Bachelor of Science in Nursing (BSN) students enrolled in a selected private college in Iloilo City during the second semester of Academic Year 2025–2026, a minimum of 221 respondents was obtained. Graduating students were selected because they had extensive clinical exposure in both private and public healthcare settings, making them appropriate respondents for assessing perceived clinical competence. Simple random sampling using a spin-the-wheel method was applied to ensure that all eligible students had an equal chance of selection and to minimize sampling bias (Kamil et al., 2025). An additional 30 students were included in the pilot study to test the reliability of the instrument using Cronbach's alpha (Bujang et al., 2024).

### **2.4 Instrument**

This study utilized an adopted questionnaire to gather the necessary data. The instrument consisted of two parts: (1) demographic profile of the graduating nursing students, including the type of healthcare facility exposure (private, public, both, or no exposure) during their second to fourth year level; and (2) the Clinical Competence Questionnaire developed by Liou and Cheng (2013), a 47-item instrument measured on a five-point Likert scale ranging from 1 (Do not have a clue) to 5 (Know in theory, competent in practice without supervision). The questionnaire covered four subdomains: nursing professional behaviors (16 items), general performance (12 items), core nursing skills (12 items), and advanced nursing skills (6 items), assessing students' attitudes, performance, and clinical competencies. The established validity criteria were reviewed and evaluated by three experts with master's or doctoral degrees, yielding a mean score of 4.20. A pilot study was conducted through online forms, and the reliability testing resulted in a Cronbach's alpha value of 0.990.

### **2.5 Data Gathering Procedure**

Approval was obtained from the Dean of the College of Nursing prior to data collection. Participants received the survey link and informed consent online, which explained the study's purpose, risks, benefits, confidentiality, and rights. Only those who consented completed the questionnaire on their clinical experiences, taking about 30 minutes. All data were securely stored and accessible only to the researchers and adviser.

### **2.6 Data Analysis Procedure**

The data were encoded in Microsoft Excel and analyzed using Statistical Package for the Social Sciences (SPSS). Variables were numerically coded, and clinical competence subdomains were measured using a five-point Likert scale (1 = Do not have a clue to 5 = Know in theory, competent in practice without supervision). Descriptive statistics including mean, standard deviation, frequency, and percentage were used to summarize the data. The Kolmogorov-Smirnov Test assessed normality, and since data were not normally distributed, thus, the Wilcoxon Signed-Rank Test determined differences between public and private healthcare settings. The test was appropriate for this study as it analyzes two related samples measured at the ordinal or continuous level when the assumption of normality is violated (Pallant, 2020). All analyses were conducted at a 0.05 level of significance, where a p-value less than 0.05 indicated a statistically significant result.

### 3. RESULTS AND DISCUSSION

The clinical training placements profile of the 221 graduating nursing student respondents during their second to fourth year levels are presented in Table 1. Overall, clinical exposure varied across healthcare settings, with private hospitals providing greater opportunities in maternal and child health, specialty, and critical care units, while public hospitals offered more exposure in selected surgical rotations. During the second year, training in maternal and child health units including the Lying-In Clinic, Outpatient Department, Pediatric Ward, and Obstetrics Ward was primarily conducted in private hospitals, with limited exposure in public facilities. The Delivery Room was the only unit with relatively balanced exposure between both settings. In the third year, clinical exposure expanded across various units. Private hospitals continued to dominate specialty areas such as the Nursing Home and Psychiatric Ward, while both private and public settings provided exposure in hospital-based units, including the Medical Surgical Ward, Delivery Room, and Operating Room. Public hospitals contributed more to selected surgical rotations. Notably, Emergency Room exposure was almost nonexistent. During the fourth year, specialized and critical care training was largely conducted in private hospitals, particularly in the ICU, Dialysis Unit, PCU, and Endoscopy Unit. Public hospitals offered greater exposure in the Surgical Ward, while Delivery Room and Operating Room rotations were relatively balanced. Emergency Room exposure remained almost nonexistent across both settings. Overall, clinical placements indicate that private hospitals predominantly supported specialty and critical care training, whereas public hospitals contributed to surgical exposure. These patterns form the basis for comparing clinical competence across healthcare settings.

**TABLE 1. Distribution of Clinical Exposure Profile of the Respondents (n=221)**

Variables	<i>f</i>	%
<b>Second Year Level Clinical Exposure</b>		
Outpatient Department		
Private	88	39.8
Public	72	32.6
Both	50	22.6
No Exposure	11	5.0
Pedia Ward		
Private	82	37.1
Public	78	35.3
Both	48	21.7
No Exposure	13	5.9
Obstetrics Ward		
Private	73	33.0
Public	59	26.7
Both	85	38.5
No Exposure	4	1.8
Lying-In Clinic		
Private	90	40.7
Public	65	29.4
Both	44	19.9
No Exposure	22	10.0
Delivery Room		

Private	41	18.6
Public	59	26.7
Both	116	52.5
No Exposure	5	2.3
<b>Total</b>	<b>221</b>	<b>100%</b>
<b>Third Year Level Clinical Exposure</b>		
Medical Surgical Ward		
Private	87	39.4
Public	38	17.2
Both	95	43.0
No Exposure	1	.5
Psychiatric Ward		
Private	106	48.0
Public	82	37.1
Both	23	10.4
No Exposure	10	4.5
Surgical Ward		
Private	36	16.3
Public	58	26.2
Both	63	28.5
No Exposure	64	29.0
Nursing Home		
Private	173	78.3
Public	22	10.0
Both	16	7.2
No Exposure	10	4.5
Delivery Room		
Private	15	6.8
Public	76	34.4
Both	123	55.7
No Exposure	7	3.2
Operating Room		
Private	30	13.6
Public	53	24.0
Both	137	62.0
No Exposure	1	.5
Emergency Room		
Private	7	3.2
No Exposure	214	96.8
<b>Total</b>	<b>221</b>	<b>100%</b>
<b>Fourth Year Level Clinical Exposure</b>		
Medical Surgical Ward		
Private	84	38.0
Public	37	16.7
Both	91	41.2
No Exposure	9	4.1
Dialysis		
Private	169	76.5
Public	15	6.8
Both	18	8.1

No Exposure	19	8.6
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Surgical Ward		
Private	42	19.0
Public	64	29.0
Both	63	28.5
No Exposure	52	23.5
<hr/>		
Endoscopy Unit		
Private	91	41.2
Public	7	3.2
Both	13	5.9
No Exposure	110	49.8
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Intensive Care Unit		
Private	173	78.3
Public	5	2.3
Both	15	6.8
No Exposure	28	12.7
<hr/>		
Progressive Care Unit		
Private	113	51.1
Public	7	3.2
Both	25	11.3
No Exposure	76	34.4
<hr/>		
Delivery Room		
Private	14	6.3
Public	92	41.6
Both	114	51.6
No Exposure	1	.5
<hr/>		
Operating Room		
Private	34	15.4
Public	61	27.6
Both	123	55.7
No Exposure	3	1.4
<hr/>		
Emergency Room		
Private	5	2.3
No Exposure	216	97.7
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Total	221	100%

The level of clinical competence in private healthcare settings, as reflected in Table 2., indicates a generally positive level of competence, suggesting that respondents are knowledgeable in theory and competent in practice but need a contactable source of supervision. Nursing Professional Behaviors demonstrate strong competence in professional conduct, patient rights, and ethical responsibilities. General Performance also reflects a favorable level, indicating the ability to perform routine nursing tasks effectively. Core Nursing Skills show a positive level of competence, particularly in fundamental procedures such as sterile technique and medication administration. However, more technically demanding procedures, such as upper airway suctioning and urinary catheter insertion, indicate the need for further practice. Advanced Nursing Skills suggest the need for additional exposure and supervision, particularly in procedures such as blood transfusion and chest tube care. Overall, competence appears stronger in professional behaviors and routine skills, while more complex procedures require further development. These findings are consistent with literature emphasizing that competence develops through education and clinical experience (Benner, 1984; Fukada, 2018).

The respondents' level of perceived clinical competence in public healthcare settings is shown in Table 3. The overall positive mean indicates that the respondents are knowledgeable in theory and competent in practice but need a contactable source of supervision. Nursing Professional Behaviors and General Performance acquired the most positive scores between the subdomains, specifically understanding patient rights and performing hygiene routines, suggesting competence in respecting patient autonomy and delivering basic patient care. Core Nursing Skills also obtained a positive overall mean, among the top positively scored indicators are performing sterile techniques and administering oral medication. However, performing enema and urinary catheter insertion were among the least scored in the subdomain, signifying that the respondents felt a stronger need for supervision in performing the skills. In regard to the Advanced Nursing Skills subdomain, the overall mean indicates that the respondents felt they needed additional exposure, training, and supervision in performing more complex skills, namely, chest tube management and blood transfusion. The results denote that the respondents felt competent in professional behavior and general nursing skills, however, in more technical and complex procedures, they required more frequent supervision and skill training. These results align with a similar study by Oliveira et al. (2026) wherein nursing students in public healthcare facilities in Portugal scored higher means in subdomains that entail the basics of nursing care, in contrast to lower means in more technical procedures.

**TABLE 2. Level of Clinical Competence in Private Healthcare Setting (n=221)**

<b>Clinical Competence Indicators</b>	<i>m</i>	<i>sd</i>
<b>Nursing Professional Behaviors</b>		
Understanding patient rights	4.60	0.65
Maintaining appropriate appearance, attire, and conduct	4.52	0.70
Adhering to the regulation of patients' and families' confidentiality	4.45	0.69
Understanding and supporting group goals	4.39	0.70
Adhering to ethical and legal standards of practice	4.36	0.75
Recognizing and maximizing opportunity for learning	4.33	0.77
Applying or accepting constructive criticism	4.30	0.75
Applying critical thinking to patient care	4.29	0.73
Taking appropriate measures to prevent or minimize risk of injury to self	4.28	0.75
Demonstrating cultural competence	4.28	0.75
Taking appropriate measures to prevent or minimize risk of injury to patients	4.26	0.78
Communicating verbally with precise and appropriate terminology in a timely manner with patients and families	4.26	0.76
Following health and safety precautions	4.24	0.77
Applying appropriate measures and resources to solve problems	4.20	0.77
Communicating verbally with precise and appropriate terminology in a timely manner with healthcare professionals.	4.17	0.83
Preventing patients from problem occurrence	4.12	0.78
<b>Nursing Professional Behaviors overall</b>	<b>4.32</b>	<b>0.60</b>
<b>General Performance</b>		
Performing hygiene and daily care routines	4.54	0.64
Performing and documenting patient health assessment	4.25	0.74
Taking a history for new admissions	4.23	0.76
Charting and documentation	4.19	0.76
Providing emotional and psychosocial support	4.19	0.79
Assessing elimination	4.17	0.79
Developing care plan for patients	4.16	0.77

Assessing nutrition and fluid balance	4.16	0.74
Assisting activities and mobility, and changing position	4.15	0.76
Answering questions for patients or families	4.03	0.86
Educating patients or families with disease-related care knowledge	4.01	0.81
Performing shift report	3.88	0.90
General Performance overall	4.16	0.65
<b>Core Nursing Skills</b>		
Performing sterile techniques	4.44	0.72
Administering oral medications	4.30	0.82
Administering intramuscular medications	4.18	0.79
Performing subcutaneous (or intracutaneous) injection.	4.17	0.83
Performing nasogastric tube feeding and care	4.15	0.82
Changing intravenous fluid bottle or bag	4.14	0.84
Performing wound dressing care	4.11	0.84
Administering intravenous medications (or into intravenous bags)	4.09	0.79
Performing tracheotomy care	3.72	1.01
Performing upper airway suction	3.67	1.04
Performing urinary catheter insertion and care	3.56	1.12
Performing enema	3.33	1.23
Core Nursing Skills overall	3.99	0.71
<b>Advanced Nursing Skills</b>		
Performing preoperation/postoperation care	4.00	0.87
Performing postural drainage and percussion, and oxygen therapy	3.81	0.99
Starting intravenous injections	3.71	1.11
Performing venipuncture	3.41	1.17
Administering blood transfusion	3.36	1.25
Performing chest tube care with underwater seal management	3.32	1.20
Advanced Nursing Skills overall	3.60	0.91
<b>Clinical Competence Overall</b>	<b>4.02</b>	<b>0.65</b>

**TABLE 3. Level of Clinical Competence in Public Healthcare Setting (n=221)**

<b>Clinical Competence Indicators</b>	<i>m</i>	<i>sd</i>
<b>Nursing Professional Behaviors</b>		
Understanding patient rights	4.50	0.74
Recognizing and maximizing opportunity for learning	4.40	0.71
Adhering to the regulation of patients' and families' confidentiality	4.38	0.73
Understanding and supporting group goals	4.36	0.72
Maintaining appropriate appearance, attire, and conduct	4.33	0.79
Applying or accepting constructive criticism	4.31	0.77
Applying critical thinking to patient cares	4.26	0.76
Adhering to ethical and legal standards of practice	4.24	0.81
Demonstrating cultural competence	4.19	0.78
Communicating verbally with precise and appropriate terminology in a timely manner with patients and families	4.18	0.77
Taking appropriate measures to prevent or minimize risk of injury to self	4.16	0.79
Taking appropriate measures to prevent or minimize risk of injury to patients	4.12	0.78
Applying appropriate measures and resources to solve problems	4.13	0.77
Communicating verbally with precise and appropriate terminology in timely manner with healthcare professionals	4.13	0.78
Preventing patients from problem occurrence	4.07	0.79

Following health and safety precautions	4.06	0.78
<b>Nursing Professional Behaviors overall</b>	<b>4.24</b>	<b>0.60</b>
<b>General Performance</b>		
Performing hygiene and daily care routines	4.45	0.70
Taking a history for new admission	4.21	0.76
Performing and documenting patient health assessment	4.21	0.78
Charting and documentation	4.15	0.76
Providing emotional and psychosocial support	4.13	0.79
Assessing elimination	4.10	0.81
Assisting activities and mobility, and changing position	4.09	0.76
Assessing nutrition and fluid balance	4.08	0.77
Developing care plan for patients	4.08	0.79
Educating patients or families with disease-related care knowledge	4.02	0.81
Answering questions for patients or families	4.00	0.84
Performing shift report	3.91	0.84
<b>General Performance overall</b>	<b>4.12</b>	<b>0.64</b>
<b>Core Nursing Skills</b>		
Performing sterile techniques	4.37	0.75
Administering oral medications	4.29	0.79
Administering intramuscular medications	4.21	0.78
Performing subcutaneous (or intracutaneous) injection	4.19	0.82
Changing intravenous fluid bottle or bag	4.12	0.82
Administering intravenous medications (or into intravenous bag)	4.12	0.80
Performing nasogastric tube feeding and care	4.11	0.82
Performing wound dressing care	4.10	0.84
Performing tracheotomy care	3.69	0.98
Performing upper airway suction	3.61	1.00
Performing urinary catheter insertion and care	3.56	1.09
Performing enema	3.29	1.20
<b>Core Nursing Skills overall</b>	<b>3.97</b>	<b>0.67</b>
<b>Advanced Nursing Skills</b>		
Performing preoperation/postoperation care	3.98	0.92
Performing postural drainage and percussion, and oxygen therapy	3.78	0.98
Starting intravenous injections	3.70	1.08
Performing venipuncture	3.37	1.16
Administering blood transfusion	3.30	1.22
Performing chest tube care with underwater seal management	3.28	1.17
<b>Advanced Nursing Skills overall</b>	<b>3.57</b>	<b>0.88</b>
<b>Clinical Competence Overall</b>	<b>3.97</b>	<b>0.62</b>

Data normality was assessed using the Kolmogorov-Smirnov test, which showed that all variables significantly deviated from a normal distribution. Thus, the Wilcoxon Signed-Rank test was applied as the appropriate nonparametric method. As shown in Table 4., a significant difference in overall perceived clinical competence was found between private and public healthcare settings ( $P = .005$ ), with higher competence in private settings than in public settings. This supports Strandell-Laine et al. (2022), who emphasized the influence of clinical environments and supervision on students' self-assessed competencies and learning satisfaction. A highly significant difference was also observed in Nursing Professional Behaviors ( $P = .000$ ), favoring private settings over public settings, consistent with Al-Haroon and Al-Qahtani (2020), who highlighted that private healthcare institutions often emphasize professional conduct and service excellence, while public hospitals may face challenges due to high patient loads. Similarly, General Performance differed significantly ( $P = .003$ ), with higher mean ranks in private settings (44.86) than in public settings (39.41), possibly due to

more manageable patient-to-nurse ratios. In contrast, no significant differences were found in Core Nursing Skills ( $P = .342$ ) and Advanced Nursing Skills ( $P = .090$ ), with comparable mean ranks across settings. This may be due to advanced procedures being highly supervised or restricted for students in both environments (Arkan et al., 2018). Overall, these findings support the rejection of the null hypothesis, indicating significant differences in clinical competence between settings, particularly in professional behaviors, general performance, and overall competence.

**TABLE 4. Difference in the Clinical Competence of the Graduating Nursing Students in Private and Public Healthcare Settings (n=221)**

Profile	Mean Rank	Z value (p-value)
Nursing Professional Behaviors		
Private	63.38	-5.109
Public	43.68	(.000**)
General Performance		
Private	44.86	-3.013
Public	39.41	(.003*)
Core Nursing Skills		
Private	38.46	-.950
Public	40.92	(.342)
Advanced Nursing Skills		
Private	29.53	-1.694
Public	26.91	(.090)
Overall Perceived Clinical Competence		
Private	76.93	-2.804
Public	64.78	(.005*)

\*Significant at  $\alpha = 0.05$

#### 4. LIMITATIONS OF THE STUDY

This study is limited by its reliance on self-reported data, which may be subject to response bias. Additionally, the study was conducted in a single private institution, which may limit the generalizability of the findings to other settings. Future studies may include multiple institutions and utilize objective measures of clinical competence.

#### 5. CONCLUSION

Graduating nursing students demonstrated a positive level of perceived clinical competence in both private and public healthcare settings. While foundational skills and professional behaviors were well developed, advanced nursing skills remain an area requiring further improvement. Significant differences between healthcare settings suggest that the clinical environment influences competence development. Strengthening clinical exposure and supervision is essential to enhance readiness for independent practice.

#### 6. RECOMMENDATIONS

The findings revealed that respondents demonstrated a prominent level of clinical competence in both private and public healthcare settings. However, several recommendations are proposed to further sustain and enhance the quality of nursing

practice. Student nurses are encouraged to continuously develop professional behaviors, strengthen clinical performance, and refine both fundamental and advanced nursing skills during clinical rotations through active participation in return demonstrations and increased clinical exposure. The Dean of the College of Nursing may utilize the findings to sustain competency based education and periodically review the curriculum to ensure alignment with required clinical competencies, while also considering the provision of additional skills laboratory equipment and simulation resources to support the practice of advanced procedures such as venipuncture, blood transfusion, and chest tube care. Nursing educators are encouraged to continuously evaluate teaching strategies, provide close clinical supervision, and offer more opportunities for return demonstrations and simulation based learning to further strengthen students' competence and confidence. School administrators may continue supporting clinical placement programs that provide adequate exposure to different healthcare units, including outpatient departments, specialized wards, and high acuity areas, to further enhance students' clinical experience and technical skills. Lastly, future researchers are encouraged to replicate the study in other institutions and include additional variables such as clinical exposure, student confidence, and clinical supervision, as well as consider qualitative approaches to gain deeper insights into students' experiences in developing clinical competence.

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#### **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

#### **AUTHORS' CONTRIBUTIONS**

Author A supervised and led the entire study, directed the co-authors, wrote all the preliminary pages and appendices, and determined the statement of the problem, the hypothesis, the synthesis, and conducted the statistical analysis with the statistician. Author B managed the background of the study and the significance of the study, helped search for related studies, and handled the ethical considerations, inferential analysis, and summary. Author C formulated the abstract, assisted with the preliminary pages, prepared the scope and limitations, searched for related concepts and studies, and worked on the instrumentation, validity and reliability, and the conclusions. Author D prepared the definition of terms, helped search for related studies, handled the data gathering and data analysis, interpreted the results, wrote the recommendations, and assisted with the conduct of statistical analysis. Author E developed the framework, helped search related studies, and worked on the population, sampling, interpreted the results, and major findings. Author F also developed the framework, helped search the related studies, and worked on the research design, study setting, and descriptive analysis. Lastly, Author G served as the study's advisor. All authors reviewed and approved the final manuscript.

## CONSENT

All authors declare that online informed consent was obtained from the respondents for the publication of this research paper. A copy of the online consent is available for review by the Editorial office/Chief Editor/Editorial Board members of this journal.

## ETHICAL APPROVAL

All authors hereby declare that the study was submitted to the Iloilo Doctors' Institutional Research Ethics Committee (IDIREC) before data collection and was granted ethical clearance (IDIREC-2025.OI\_223)

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

All authors hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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