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Self-Perceived Clinical Competence among Undergraduate Nursing Students in Malaysia

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Abstract

This study examined the level of self-perceived clinical competence among 275 final-year nursing students from seven public universities in Peninsular Malaysia. Data were collected via online questionnaires using a cross-sectional design and purposive sampling. Results showed that most students perceived themselves as highly competent, particularly in domains related to nursing professional behavior and general performance. This finding revealed that final-year nursing students generally feel confident and competent in their clinical abilities as they transition into professional practice. This study emphasizes the importance of enhancing clinical education to ensure that graduates are well-prepared for the demands of the workforce.

Keywords: self-perceived; clinical competence; nursing students

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1.0 Introduction

Malaysia is ranked 27th out of 50 higher education systems, and nursing education in Malaysia is becoming more focused on clinical competence in managing patients' health problems. Previous studies have found that new baccalaureate nursing graduates possess adequate theoretical knowledge but lack competence in the clinical environment. Clinical competence among undergraduate nursing students is a key educational outcome in sustaining high-quality healthcare and providing appropriate nursing care for patients, as they become future healthcare practitioners. This gap between theory and practice remains a critical concern, as clinical competence is a key educational outcome in ensuring safe, effective, and high-quality patient care upon graduation and entry into the healthcare workforce (Hashemiparast et al., 2019).

Globally, in the third decade of the 21st century, nursing was entrusted with the vital responsibility of providing healthcare across the health and illness continuum. However, compelling evidence shows that nurses lacking clinical competence bring about many problems in providing health services, compromising patient safety (Jahromi et al., 2020). In Malaysia, the demand for a well-prepared nursing workforce is particularly urgent as the country works toward developed nation status and faces a rapidly aging population, rising

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healthcare costs, and increasingly complex patient needs. To meet these challenges, competency-based education strategies are essential to ensure that graduates can deliver comprehensive care and adapt to evolving healthcare demands. Thus, this study was crucial to determining self-perceived clinical competence among undergraduate nursing students who represent the future healthcare workforce to enhance care quality, minimize negligence, and reduce malpractice cases.

2.0 Literature Review

2.1 Clinical Competence Theory

Competence was derived from the Latin word "competent," which means capability and permission Hailu et al., 2021. In other words, clinical competence is also defined as the outcome of nursing education, which involves the acquisition and continuous application of knowledge, clinical reasoning, emotional values, technical and communication skills, and the ability to function safely and effectively in clinical environments (Alavi et al., 2022).

Later, Benner (1984) described the concept of competence and its application in nursing, defining nursing competence as the ability to perform a task with desirable outcomes. Benner (1982) proposed that healthcare professionals develop expertise and understanding over time based on their environment, knowledge, skills, experience, and scope of practice. Benner (1982) describes the concept of professional development in the nursing profession based on the Model of Skills Acquisition developed by Stuart & Hubert Dreyfus (1980), which consists of five levels of proficiency which were novice, advanced beginner, competent, proficient, and expert, as well as new learning and growth of competencies and skills to develop.

Moreover, Titzer et al. (2014) described the novice-to-expert model developed by Benner as a practical framework for leadership development and competency measurement, mentoring programs, advanced nursing practice skill acquisition, and a professional advancement ladder. Supporting this, Lejonqvist et al. (2012) identified five core components of clinical competence in nursing students:

2.2 Level of Clinical Competence Nursing Students

Clinical competency is widely recognized as a crucial foundation for undergraduate nursing education and for ensuring the preparedness of future nursing professionals (Lee et al., 2021). Strong clinical enables nurses to provide safe and effective care, supports professional development, maintains public trust, and contributes to the overall performance of healthcare systems (Amsalu et al., 2020). Empirical studies using Objective Structured Clinical Examinations (OSCEs), structured competency checklists, and other validated assessment tools, including both quantitative and qualitative approaches, demonstrate mixed results, particularly in higher-order skills such as clinical reasoning and patient assessment (El Idrissi et al., 2021). These contradictions reveal continued uncertainty about whether current nursing programs adequately prepare Malaysian students to achieve the expected level of competence.

Globally, competence-based education has become a priority across skill-based professions, including medicine, pharmacy, and nursing, as institutions aim to ensure graduates are practice-ready (Tesfaye et al., 2020). There remains a clear knowledge gap regarding how effectively Malaysian nursing education and clinical training environments support competence development, as well as how consistently competence is being measured across institutions. The absence of standardized national assessment frameworks contributes to further inconsistency in competency outcomes. A study by Jahromi et al. (2020) highlighted the importance of supervisory support, conducive clinical environments, student motivation, and adequate learning opportunities. In addition, nursing students must be well-prepared to integrate a strong theoretical base for strongly shape competence development to thrive during clinical placement in patient care (Mamat et al., 2023).

In other words, competencies are fundamental in nursing because they ensure the delivery of quality, safe, and evidence-based care while upholding standards of professional practice (Notarnicola et al., 2023). Therefore, accurate assessment of clinical competence was crucial, particularly during clinical placement, where students must demonstrate their readiness for real-world practice (El Idrissi et al., 2021), available Malaysian evidence does not convincingly confirm that this level of competence is consistently achieved. Moreover, there is still limited empirical evidence examining how Malaysian nursing education and clinical placements currently support the development of clinical competency. The lack of standardized assessment tools across Malaysian institutions further contributes to uncertainty for competency outcomes. Therefore, to investigate the current status of clinical competence among Malaysian nursing students is both timely and necessary. Addressing this gap is crucial for strengthening nursing education, improving the quality of clinical training, and ensuring that graduates are fully prepared for real-world patient care.

3.0 Methodology

3.1 Study design

This study employed a quantitative cross-sectional design to assess the self-perceived clinical competence of nursing students in Peninsular Malaysia.

3.2 Population and sample

The total population was 304 final-year undergraduate nursing students. The sample size calculation was estimated based on the research objective using the Sample Size Calculator Web by Wan Nor Arifin (2024) to establish the sample size. The largest sample size was the estimated sample size in this study. Based on this calculation, considering 10% for possible non-response, a sample of

275 was estimated to meet the objective. The researchers used a proportionate stratified random sampling formula to select samples from each undergraduate nursing student group at a public university in Peninsular Malaysia.

3.3 Inclusion criteria
Students in this study were full-time undergraduate nursing students enrolled in the fourth year of study during the 2024 academic year. Eligibility requires students to complete at least 52 weeks of clinical placement across various nursing courses.
The researchers included only participants who voluntarily agreed to participate in the study and demonstrated the ability to read and understand English.

3.4 Exclusion criteria
Students were excluded from the study if they had prior working experience as registered nurses or had participated in the pilot study. The researchers also excluded students who had not yet begun clinical practice, had deferred their studies, or were critically ill during the data collection period.

3.5 Study setting
The nursing students in this study were from seven public universities in Peninsular Malaysia, including Universiti Sains Malaysia (USM), Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM), Universiti Malaya (UM), Universiti Islam Antarabangsa (UIA), Universiti Teknologi MARA (UiTM), and Universiti Sultan Zainal Abidin (UniSZA). All selected public universities in Peninsular Malaysia were equipped with teaching hospitals that play a vital role in the higher education sector and serve as a critical component of the healthcare system in delivering quality healthcare services to the community.

3.5 Data collection procedures
Data was collected from July 2024 to September 2024 via Google Forms. The researchers obtained each selected student's phone number and email from the course representative and provided the Google Form link for them to complete the questionnaire. In the Google form, the students were briefed on the purpose of the study and the way to complete the web-based survey form. The researchers obtained informed consent to respect respondents' rights and acknowledge their voluntary participation. The students took approximately 15 to 20 minutes to complete a set of questionnaires.

3.6 Data collection tools
3.6.1 Clinical Competence Questionnaire
The clinical competency questionnaire (CCQ) was adapted from Liou & Cheng (2014) to collect student competency data. This tool was reliable, with Cronbach's alpha showing 0.976. This questionnaire was in the English language only and has 44 items divided into two sub-sections; part 1 contains 16 statements about nursing professional behaviour, while part 2 contains 28 statements about skill competencies: general performance (9 items), core nursing skills (15 items), and advanced nursing skills (4 items). Clinical competence was measured using a five-point Likert scale, where higher scores indicated greater competence in both theory and practice. The scale ranged from not knowing (score 1) to being fully competent without supervision (score 5) (Liou & Cheng, 2014).

3.7 Data analysis
The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 28.0. The researchers employed descriptive statistics, including frequency, percentage, mean, and standard deviation, to summarize the data on self-perceived clinical competence.

3.7 Ethical approval
Ethical approval was obtained from the Research Ethical Committee (Human) (USM/JEPeM/KK/24020188; JEP-2024-437; REC/09/2024(OT/MR/27; UPM.TNCPI.800-2/1/7) and official approval from the Head of the Department of Nursing for each public university in Peninsular Malaysia. Informed consent was secured from all respondents.

4.0 Findings
This study enrolled 275 undergraduate nursing students, achieving a 100% response rate from the eligible students available.

4.1 Level of Self-Perceived Clinical Competence
Table 1.0 present the total mean score and level of self-perceived clinical competence among respondents at the public universities in Peninsular Malaysia. The researchers assessed the respondents' self-perceived clinical competence level using a 5-point Likert scale. The researchers represented the total score using the mean, where a mean value greater than 3 indicated high competency, while a mean score of 3 or lower indicated low competency. Based on the data, the nursing professional behaviour subscale received the highest total mean score, 4.33(SD=0.56), with 96.7% of respondents rating themselves at a high level, suggesting they had strong confidence in professional conduct. Similarly, the total mean score of the general performance subscale was 4.29(SD=0.59), followed by the total mean score of the core nursing skills subscale, 4.11 (SD=0.81), which was rated highly by most students. All three subscales reinforced that respondents had perceived proficiency in fundamental nursing tasks. However, 17.1% of respondents rated themselves

low in advanced nursing skills, with the lowest total mean score (3.95 ± 0.74), indicating that they may need additional training or support in performing complex nursing procedures. Overall, undergraduate nursing students generally perceived themselves as highly competent across all clinical competence subscales, as reflected in the grand mean score of 4.21 (SD=0.49). Furthermore, 98.5% (n=271) of students rated themselves as competent, indicating a strong self-assessed clinical readiness and preparedness for professional practice.

Table 1. Level of self-perceived clinical competence (N=275)

Self-Perceived Clinical Competence Subscales	Mean (SD)	Low		High		Level
		n	%	n	%	
Nursing Professional Behaviour	4.33 (0.56)	9	3.3	266	96.7	High
General Performance	4.29 (0.59)	13	4.7	262	95.3	High
Core Nursing Skills	4.11 (0.81)	19	6.9	256	93.1	High
Advanced Nursing Skills	3.95 (0.74)	47	17.1	228	82.9	High
Overall	4.21 (0.49)	4	1.5	271	98.5	High

Notes:
Mean scores ≤ 3 indicate lower competence; mean scores > 3 indicate higher competence; n = frequency; % = percentage.

5.0 Discussion

In the Malaysian context, research shows that final-year nursing students generally perceived themselves as highly competent in professional behavior, general performance, and core nursing skills. High levels of perceived professional competence align with the emphasis on professional values and conduct in curricula and clinical placements (Mohamed et al., 2020). Contrarily, a study by Hailu et al. (2021) stated that most new graduates have a lack of competence in the clinical environment, but none of them have assessed either student or preceptor factors to have an association with clinical competence. These findings are consistent with previous studies indicating that structured clinical exposure and supportive learning environments contribute to stronger confidence and competence among students (Alrasheedi et al., 2021; Rahman et al., 2019).

However, a notable finding was that 17.1% of students rated themselves as less competent in advanced nursing skills. This mirrors global evidence that complex procedures often require repeated practice, higher supervision, and more advanced clinical exposure, which undergraduate programs may not consistently provide (Nguyen & Hall, 2022). The gap in advanced competencies highlights the need for curriculum reform and increased opportunities for simulation-based learning and advanced clinical placements. Addressing these gaps is crucial to preparing graduates for the increasing complexity of healthcare delivery in Malaysia. In addition, the 2030 Agenda for the third Sustainable Development Goal (SDG) was to “ensure healthy lives and promote well-being for all at all ages”. Thus, to achieve this, Malaysian nursing students must be well-prepared with the necessary clinical competence to provide appropriate nursing care to patients in their future clinical placements.

While students rated themselves highly competent overall, it is important to interpret these findings cautiously, as approximately half of all deaths could be prevented by competent healthcare practice. Self-assessment may be influenced by cultural and contextual factors, such as a tendency to overestimate abilities or a reluctance to report perceived weaknesses. Previous studies have shown that self-perceived competence does not always align with objectively measured performance (Zhou & Wang, 2020). Therefore, future studies should incorporate multiple assessment methods such as supervisor evaluations, peer feedback, and objective structured clinical examinations (OSCEs) to provide a more comprehensive understanding of students’ actual competence.

Overall, these findings highlight a clear knowledge gap, although Malaysian nursing students perceive themselves as competent, evidence suggests that advanced skills acquisition and objective competency measurement remain insufficiently addressed. The absence of standardized assessment tools across institutions further contributes to uncertainty regarding competency outcomes. By investigating the current status of clinical competence using more comprehensive assessment approaches, this study aims to provide data that can inform curriculum improvements, strengthen clinical training, and ensure Malaysian nursing graduates are fully prepared for professional practice.

6.0 Conclusion& Recommendations

This study revealed that final-year nursing students from selected public universities in Malaysia generally perceived themselves as highly competent, particularly in professional behavior, general clinical performance, and core nursing skills. These results suggest that students feel prepared to enter the workforce with confidence in their foundational abilities. However, the lower self-perception in advanced nursing skills highlights an important educational gap that requires targeted attention.

In the context of Malaysian nursing education, there is a need to enhance training in advanced nursing skills across undergraduate programs. Although students demonstrated high perceived competence in basic skills and professional behavior, the lower confidence

in advanced clinical procedures suggests gaps in current teaching approaches. Implementing such assessments across Malaysian nursing schools can help standardize clinical competence benchmarks nationally.

As Malaysia continues strengthening its healthcare system, bridging the gap between academic training and clinical practice is crucial. Formal transition-to-practice programs like residency or internship placements within Ministry of Health hospitals can ease new graduates into professional roles with greater confidence and competence. Nursing education providers must routinely evaluate clinical training content and pedagogical strategies to adequately address foundational and advanced competencies by national standards set by the Malaysian Nursing Board.

In future research, it is essential to explore nursing students' clinical competency using a more comprehensive and multidimensional approach. While self-perceived assessments provide valuable insight into how students view their abilities, they may not fully reflect actual performance in clinical settings. Therefore, future studies should incorporate evaluations from multiple sources, such as clinical instructors, mentors, peers, and supervisors, to better measure students' clinical competence.

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Paper Contribution to Related Field of Study

The study highlights the importance of early professional development and structured clinical training. These findings can help academic institutions and policymakers enhance curriculum planning and career support to retain qualified nursing graduates in the national healthcare system.

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