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REVIEW

Assessing Perceived Nursing Competence of Final Year Students of Selected Nursing Colleges

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ABSTRACT

Lack of clinical competence remains a significant concern in impacting the quality of nursing care. In today's complex healthcare environment, the delivery of high-quality nursing care increasingly depends on the competence of nursing professionals. Recognizing this, the present study aimed to assess the perceived nursing competence of final-year undergraduate nursing students from selected nursing colleges, with the goal of identifying potential gaps and informing educational strategies to better prepare graduates for professional practice. A non-experimental descriptive research design was employed. A total of 200 final-year undergraduate nursing students were selected through convenience sampling. Data were collected using a structured rating scale to assess students' perceived nursing competence. In this study, 36.5% of nursing students perceived their overall competence as excellent, 59% as good, 4% as average, and 0.5% as poor. No students rated their competence as very poor. In specific areas, 60.5% perceived excellent competence in basic nursing skills, while 42% reported average competence in advanced skills. Additionally, 59.5% perceived good competence in core nursing competencies, and 59% rated their professional nursing behaviors as excellent. Competence is essential for safe

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and effective nursing practice. Strengthening educational preparation is crucial to ensure students gain the confidence and skills needed for clinical practice.

Keywords: Assess; Perceived Nursing Competence; Undergraduate Nursing Students; Nursing Colleges

1. Introduction

Nursing is an integral and vital part of the healthcare delivery system[1]. The healthcare sector faces diverse challenges, including technological advancements, the rise of information technology, the increasing prevalence of chronic illnesses, and rapid progress in medical science. This dynamic and often unpredictable environment demands experienced and competent professional nurses who can effectively adapt to and manage these continuous changes[2].

Patient safety remains a cornerstone of quality healthcare delivery. Ensuring patient safety not only reduces the risk of harm but also enhances clinical outcomes, patient satisfaction, and trust in the healthcare system. As healthcare systems become increasingly complex, fostering a culture of safety and continuous vigilance becomes essential for delivering effective and ethical care[3, 4].

The global shortage of competent nurses remains a pressing concern, with the World Health Organization's State of the World's Nursing reporting a workforce of 27.9 million but projecting a deficit of 5.9 million in 2020. Nearly 17% of nurses are expected to retire within the next decade, and about 89% of the shortfall is concentrated in low- and lower-middle-income countries, underscoring inequities in workforce distribution and health system capacity[5]. This scarcity often compels healthcare administrators to rely on newly graduated nurses to work independently, reinforcing the need for undergraduates to achieve a high level of clinical competence before entering practice[6].

The transition from student to professional nurse is a critical period, and inadequate preparedness during this phase can lead to adverse outcomes for both the individual and the healthcare system. A lack of clinical competence may compromise patient safety, reduce care quality, and increase the burden on healthcare teams[7].

Competence refers to the essential skills required for effective job performance. In the context of nursing, competence is defined as the ability developed through both experience and learning, enabling nurses to deliver safe and effective care[2, 7–9]. It involves the integration of knowledge, technical skills, values, beliefs, and clinical experience to guide professional actions[10]. Nursing competency represents the complex integration of knowledge, professional judgment, skills, values, and attitudes. A clear definition of nursing competency is essential to provide a foundation for developing and structuring nursing education curricula[9].

Nursing students begin clinical care early, making competency development challenging[11]. Nursing faculty members generally expect students to attain a high level of competency by the time they graduate. However, existing evidence indicates that students often perceive themselves as not having achieved the expected level of clinical competence[12]. This discrepancy highlights a concerning gap between the competencies expected by educators and those actually perceived or demonstrated by students in clinical settings. Addressing this gap is essential, and nursing education programs must adopt improved pedagogical strategies to enhance competence development and better prepare students for independent practice[7, 13].

Nurses are required to apply their acquired knowledge, clinical skills, and personal attributes effectively in diverse and often complex clinical situations. To ensure this, nursing education must emphasize the integration of these competencies through a holistic curriculum. Embedding both in-depth theoretical knowledge and broad practical skills into the learning process is considered one of the most effective strategies for developing comprehensive professional competence among nursing students[14].

Objective of the study was to:

- Find the perceived nursing competence of final year undergraduate students of selected nursing colleges.

In Ethiopia, several studies highlight a persistent gap between expected and perceived nursing competence. A cross-sectional institutional study reported that more than half of undergraduate students rated their clinical competence as low, with factors such as social support, academic

year, institutional type, and the quality of the clinical learning environment influencing outcomes [2]. Likewise, a study of 307 final-year students from six public universities in the Amhara Region found that nearly two-thirds were not clinically competent [15]. This competence gap has been a key driver for revising the national nursing curriculum from a three-year to a four-year program [16], underscoring the need to strengthen the integration of theory and practice to ensure graduates are practice-ready and capable of supporting quality healthcare delivery.

An online survey among 200 final-year nursing students in Karnataka assessed clinical practice readiness using the Comprehensive Nursing Competencies Questionnaire (CNCQ), revealing higher proficiency in basic skills compared to advanced care, underscoring the importance of clinical postings [17]. Similarly, a cross-sectional study in Shiraz, Iran, found that while nursing students' communication skills improved with higher semesters, many required further development in clinical, behavioral, and treatment-related communication [18]. A mixed-method study in Cambodia further demonstrated that student satisfaction with classroom teaching correlated with higher competency levels, and faculty guidance during clinical practicums significantly enhanced nursing competencies [19].

The healthcare sector is in a constant state of change, requiring nursing education to adapt so that graduates are adequately prepared for today's complex clinical challenges [20]. Consequently, updating and restructuring undergraduate nursing programs has become essential to equip future nurses with the competencies needed for modern practice [21]. This need is further reinforced by the persistent gap between classroom learning and the actual demands of clinical practice [22]. Indeed, for many years, experts have expressed concern that conventional nursing education—characterized by instructor-led teaching, compartmentalized subject areas, and rigid curricular frameworks—has not sufficiently prepared graduates to function in the increasingly complex, collaborative, and technology-driven healthcare environments they are expected to navigate [23].

Regulatory bodies emphasize competency-based education in nursing to ensure deliberate learning experiences that prepare graduates, enhance clinical judgment, and incorporate simulation-based training [24]. In line with this, the revised curriculum of the Indian Nursing Council highlights competency-based, outcome-driven education, defining essential competencies such as quality and safety, communication technologies, teamwork, interprofessional collaboration, evidence-based practice, and ethical standards [25]. This model fosters the integration of knowledge, skills, and professional attitudes as the foundation of clinical competence [10].

Competency-based nursing education emphasizes the integration of knowledge into practice and the achievement of measurable outcomes, requiring learners to demonstrate mastery of essential skills through self-assessment and guided performance standards. The Core Competencies for Professional Nursing Education provide the framework, highlighting clinical judgment, communication, professionalism, population health, person-centered care, and systems thinking as vital expectations. Unlike traditional models, this approach mandates demonstrated proficiency in clearly defined competencies prior to progression, using varied instructional strategies and assessments to evaluate knowledge, skills, attitudes, values, and behaviors. By fostering active engagement, real-world application, and authentic learning, it creates a learner-centered experience that better equips graduates to meet the demands of contemporary healthcare [26–28].

Effective curriculum design requires systematic planning with clearly defined outcomes such as clinical reasoning, evidence-based practice, ethical and culturally sensitive care, patient assessment, teamwork, and quality improvement. Implementation relies on authentic assessments—OSCEs, case-based exams, simulation, and preceptor feedback—supported by technology like electronic health record simulations, high-fidelity labs, mobile learning, and virtual reality to ensure safe skill acquisition. Modular design, active learning strategies, and competency-based assessments enable individualized progression while aligning with accreditation standards and fostering lifelong learning. Successful adoption further depends on student motivation, collaboration, and continuous assessment-driven improvement, with structured programs, realistic case scenarios, and adaptive digital resources preparing graduates to be work-ready for modern healthcare demands [29–31].

Nursing educators shifts the focus from content delivery to the attainment of practice-ready competencies by integrating knowledge, technical skills, and professional be-

haviors within clearly defined, measurable outcomes. Continuous assessment ensures progression, while collaboration between academia and clinical practice aligns education with evolving healthcare needs to produce confident, competent professionals[32]. Nurse educators support the students through active learning strategies across classroom, laboratory, and clinical settings, with particular emphasis on strengthening clinical judgment[33]. Robust evaluation tools are essential for monitoring student performance, guiding competency development, and providing timely, individualized feedback. Addressing challenges such as inconsistent assessments, limited faculty availability, and unclear expectations is critical to ensuring accurate evaluation, fostering student growth, and maintaining professional standards in nursing education[34].

The Kerala University of Health Sciences structures its Bachelor of Science in Nursing is built on a competency-based, outcome-oriented framework emphasizing ten core competencies. Integrating sciences, humanities, and professional values, the curriculum develops clinical proficiency, critical thinking, communication, cultural competence, professionalism, and lifelong learning. Through classroom, simulation, and clinical experiences, supported by faculty mentorship, students acquire essential competencies and are prepared for careers in clinical practice, education, administration, and research at national and international levels[35].

This study seeks to evaluate the clinical competence of final-year nursing students, with the aim of providing valuable insights for nurse educators. The findings are expected to highlight areas where students require additional support, thereby guiding the development of effective educational strategies that enhance clinical preparedness and uphold standards of care within nursing practice.

2. Materials and Methods

This study used a quantitative research approach with a non-experimental descriptive research design. The study was conducted in Kerala, India. Sample consisted of 200 final-year B.Sc. Nursing students in the age range of 20–25 years with an average age of 22.2 years. The eligibility criteria for the Kerala B.Sc. Nursing admission specify that both male and female applicants must be between the ages of 17 and 35 years[36, 37]. Participants who fulfil the inclusion criteria were recruited through a convenience sampling technique from four private nursing colleges in Ernakulam. In Kerala, nursing education is predominantly pursued by female students, with male representation remaining minimal across Colleges of Nursing. Studies in India consistently highlight the predominance of women in nursing. Nursing is widely recognized as a highly feminized profession, with women constituting the vast majority of the workforce. In India, nearly 90% of registered nurses are women, a pattern shaped by cultural norms and long-standing beliefs that caregiving and emotional labour are naturally feminine roles. This predominance reflects global trends, particularly in low- and middle-income countries, where the health sector is increasingly characterized by the feminization of care work. In addition, women's position within the health workforce is influenced by intersecting factors such as caste, class, and socioeconomic status[38, 39].

2.1. Instrument

The instrument used in the present study was a demographic questionnaire and Likert scale to assess perceived nursing competence of nursing students. Demographic questionnaire includes gender, age in years, type of scholar, number of beds, type of teaching system, 80% attendance in theoretical class, demonstration class prior to practical experience and interest in co- curricular activities. The Likert scale consisted of 83 items. It was rated under not competent, less competent, moderately competent, competent and highly competent and graded as excellent, good, average, poor and very poor. For each item a score of four for highly competent, three for competent, two for moderately competent, one for less competent and zero for not competent. There were four areas in perceived nursing competence Likert scale. It included basic nursing skills, advanced nursing skills, core nursing competencies and professional nursing behaviors. It is presented in the **Table 1**. Area wise mean perceived competence score was also graded as excellent, good, average, poor and very poor. There were 18 items included in the basic nursing skills, 12 items in advanced nursing skills, 45 items in core nursing competencies and eight items in professional nursing behaviors. There were six subareas in core nursing competencies.

It included patient centered care, communication and team work, leadership and patient teaching, critical thinking and problem solving, professionalism, evidence-based practice and research.

The content validity index (CVI) was calculated. The CVI of the instrument was 0.9. It had achieved a satisfactory level of content validity. The stability was the method used to measure the reliability of tool and the stability of instrument was established by test re-test method and coefficient of correlation was calculated by using the formula of Karl Pearson's correlation coefficient. A score above 0.80 indicates desirable level of correlation of instrument [40]. In the present study reliability of rating scale was 0.81. Hence instrument in the study was found to be reliable.

Table 1. Grading of Likert scale to assess perceived nursing competence of nursing students.

Areas	Excellent	Good	Average	Poor	Very Poor
Mean nursing competence	266–332	199–265	132–198	65–131	0–64
Basic nursing skills	60–72	45–59	30–44	15–29	0–14
Advanced nursing skills	40–48	30–39	20–29	10–19	0–9
Core nursing competencies	148–180	111–147	74–110	37–73	0–36
Professional nursing behaviors	25–32	19–24	13–18	7–12	0–6

2.2. Data Collection Process

Self-reporting and self-rating were the data collecting techniques. The study was conducted in four selected nursing colleges of Ernakulum, district. After obtaining written permission from Principals of selected nursing colleges, the investigators collected the data. An informed consent was obtained from each participant and the instrument was administered. The purpose of this study was explained to the participants, and they were assured that the information obtained from them will be confidential and used only for the research's purpose and Their identification will not be published anywhere. Data collection was done in the classrooms of the respective colleges. Investigators gave necessary instructions regarding data collection and remained in the setting till subjects completed the tools. The time spend for the completion of tools were around 20–25 min. All participants were very cooperative during the data collection period.

3. Results

3.1. Demographic Characteristics of the Participants

Most (83%) of nursing students were in the age group of 22 to 23 years, 16% were in the age group of 20 to 21 years, and 1% were more than 23 years old. The majority (97.5%) of nursing students was females and 2.5% were males. Based on the type of scholar, most (85.5%) of nursing students were hostlers, 14.5% were day scholars. About the number of beds in the parental hospital, 36.5% of students reported the bed strength between 501 to 1000 beds, 26.55% reported the bed strength of more than 1000 beds, 22.5% reported the bed strength between 301 to 500 beds and 14.5% reported as 101 to 300 beds. Regarding type of teaching system followed in the college, majority (99.5%) of students reported as completion of theory class followed by clinical posting. Only few (0.5%) students reported as theory classes conducted regularly each day. All students had minimum of 80% attendance. Based on their attendance in demonstration class prior to practical experience, all (100%) of students had attended demonstration class prior to practical experience. With regards to co-curricular activities, majority (93%) of students were interested and only 7% of them were not interested.

3.2. Perceived Nursing Competence of Final Year Undergraduate Students

The data regarding perceived nursing competence of nursing students was analyzed using descriptive statistics in terms of percentage based on grading of mean perceived nursing competence score, and is presented in **Figure 1**.

Figure 1 shows that 36.5% of nursing students perceived to have excellent nursing competence, 59% perceived as having good competence, 4% perceived as having average competence but 0.5% perceived as having poor competence and none of them perceived as having very poor competence.

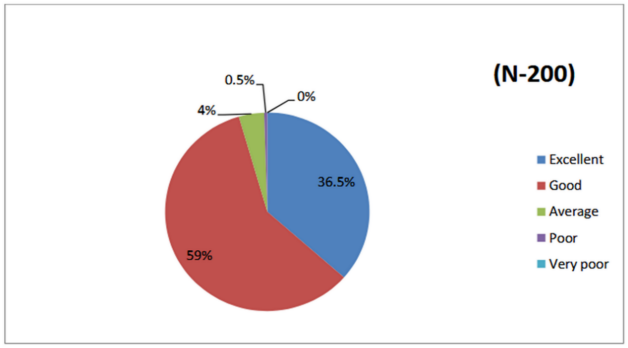

Figure 1. Pie diagram showing percentage distribution based on the grading of mean perceived nursing competence scores of nursing students.

3.3. The Area Wise Percentage Distribution of Perceived Nursing Competence

Each area in the perceived competence Likert scale was analyzed and presented in the **Table 2**.

Table 2 shows the perceived nursing competence of students in basic nursing skills were excellent for 60.5%, good for 37%, average for 2% and poor for 0.5% of students. Regarding the perceived nursing competence in advanced nursing skills, 11.5% perceived as having excellent competence, 31.5% perceived as having good competence, 42% perceived as having average competence but 13.5% perceived as having poor competence and 1.5% perceived as having very poor competence. Based on the core nursing competencies 33% of nursing students perceived to have excellent competence, 59.5% as having good competence, 7.5% as having average competence and none were perceived as having poor competence and very poor competence respectively. In the area of professional nursing behaviors, 59% of nursing students perceived to have excellent competence, 37.5% perceived as having good competence and 3% perceived as having average competence but 0.5% perceived as having poor competence and none of them perceived as having very poor competence.

Table 2. Frequency and percentage distribution based on grading of selected areas of perceived nursing competence scores of nursing students (N-200).

Grading of Competence Scores	Frequency	Percentage
Basic nursing skills		
Excellent	121	60.5
Good	74	37
Average	4	2
Poor	1	0.5
Very poor	0	0
Advanced nursing skills		
Excellent	23	11.5
Good	63	31.5
Average	84	42
Poor	27	13.5
Very poor	3	1.5
Core nursing competencies		
Excellent	66	33
Good	119	59.5
Average	15	7.5
Poor	0	0
Very poor	0	0
Professional nursing behaviors		
Excellent	118	59
Good	75	37.5
Average	6	3
Poor	1	0.5
Very poor	0	0

3.4. The Area Wise Item Analysis of Perceived Competence Among Final Year Nursing Students

Each item in the area of basic nursing skills was analyzed in terms of percentage of responses and is depicted in the **Tables 3** and **4**.

From the results of **Tables 3** and **4** regarding perceived nursing competence of nursing students in basic nursing skills, 66.5% of nursing students perceived as highly competent in checking the vital signs and 59% perceived as highly competent in performing Nasogastric (NG) tube feeding. Majority (88.5%) of students perceived as highly competent in measuring SpO2 level, 88% of students perceived as highly competent in performing nebulization, 86% of students perceived as highly competent in monitoring blood glucose level and 84% perceived themselves as highly competent in administering oral medications.

Table 3. Percentage of perceived nursing competence of nursing students in basic nursing skills, Part 1 (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
History of new admissions	1	0.5	13.6	44.5	41
Physical examination	0	6.5	22	42	29.5
Care plans	10.5	2.5	18.5	43	36
Vital signs	0.5	0.5	6.5	26.5	66.5
Basic hygiene	0.5	0.5	9	43.5	46.5
NG tube insertion	6	21	28.5	29	15.5
NG tube feeding	1.5	1	6.5	32.5	59
NG tube removal	3.5	4.5	17	35.5	39.5

Table 4. Percentage of perceived nursing competence of nursing students in basic nursing skills, Part 2 (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Catheter insertion and care	4	10	22	38.5	25.5
Enema	2	4	16.5	32	45.5
Blood glucose monitoring	0.5	0.5	3.5	9.5	86
SpO2 monitoring	0.5	0.5	3.5	9.5	88.5
Nebulization	0.5	0.5	2	9	88
Oxygen administration	0.5	1	3	17.5	78
Oral medications	0.5	0	3	12.5	84
ID Injection	1	0	8.5	21.5	69
S/C Injection	0.5	0	5	23	71.5
IV Injection	0.5	2.5	8	25	64

But 10.5% of students perceived as not competent in writing care plan, 6% of them perceived as not competent in performing NG tube insertion and, 1.5% perceived as not competent in NG tube feeding and 3.5% of them perceived as not competent even to remove NG tube, 4% perceived as not competent in performing catheter insertion and care, and 2% of students perceived as not competent in giving enema.

Each item in the area of advanced nursing skills was analyzed in terms of percentage of responses and depicted in the **Tables 5** and **6**.

Table 5. Percentage of perceived nursing competence of nursing students in advanced nursing skills, Part 1 (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Dressing	2.5	2.5	18.5	36.5	40
Drain removal	4.5	16	29	32	19
Suture removal	8.5	22.5	20.5	28	20.5
Oral suctioning	3.5	10	21.5	32	33
Tracheal suctioning	4	26.5	26.5	32.5	18
Tracheostomy care	4.5	16.5	34.5	32	12.5

Table 6. Percentage of perceived nursing competence of nursing students in advanced nursing skills, Part 2 (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Ventilator care	7	22	40.5	24.5	6
Pre and post operative care	3	6.5	33.5	30.5	26.5
Blood transfusion	7.5	22.5	36	24.5	9.5
CPR	9	28.5	34.5	20	8
Triaging	4.5	18	33	25.5	19
Chest tube care	17	36	25	14	8

The result from **Tables 5** and **6** shows 40% perceived as highly competent in performing dressing, 20.5% perceived as highly competent in suture removal, 33% rated themselves as highly competent in performing oral suctioning, and in performing preoperative and postoperative care, 26.5% perceived as highly competent.

But 8.5% perceived as not competent in suture removal, 7.5% perceived as not competent in administering blood transfusion, 0.9% perceived as not competent to perform CPR, 17% perceived as not competent in care of chest drainage tube.

Each item in the area of core nursing competencies was analyzed in terms of percentage of responses and depicted in the **Tables 7–11**.

Table 7. Percentage of perceived nursing competence of nursing students in patient centered care (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Comprehensive care	0.5	3	21.5	41.5	33.5
Listening to values	0.5	3	9.5	34.5	52.5
Documenting nursing care	0.5	2.5	13	35	49
Analyzing the nursing care	1	3	16.5	41.5	38
Reducing medical errors	0.5	1.5	16	41.5	40
Maintaining appropriate sterility	0.5	1	16	40.5	42
Ensuring safety of clients	0	1	12.5	36.5	50
Ensuring good skin integrity	1	2	12.5	44.5	40
Acting as a nurse advocate	1	8	24.5	36	30.5

Table 8. Percentage of perceived nursing competence of nursing students in communication and teamwork (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Respecting clients	1.5	1	9	27.5	61
Instructions about procedures	0.5	1	10.5	27.5	60.5
Displaying empathy and compassion	0.5	3.5	6	30	59.5
Building trust among clients	0.5	2	7	29	61.5
Appreciating clients	1	1	11.5	30.5	55.5
Dealing with grief of bereaved family	1.5	4	19.5	37	38
Providing emotional and spiritual support	0	1	12.5	34.5	52
Involving junior students in patient care	1	1.5	16	33.5	48
Delegating tasks to students	0	2.5	20	39.5	38
Handling situation in staff shortage	1.5	4	26	33.5	35

Table 9. Percentage of perceived nursing competence of nursing students in leadership and patient teaching (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Performing new procedure confidently	1	8.5	28	37	25.5
Making decision Easily	0	4.5	25	41	29.5

Table 9. *Cont.*

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Being a role model	0	5.5	25	43.9	26
Staying positive and enthusiastic	0	6	21.5	37	35.5
Communicates in excellent manner	0.5	4.5	20	39	36
Motivates the peers	1.5	15.5	19	41.5	37
Patient and family education	0	0.5	15	41.5	43
Able to care various patients	0.5	3	28.5	45.5	22.5
Ability to modify patients	0	4	26	48	22
Using good judgment	1.5	4.5	23	45.5	25.5
Identifying complications	0	5	24.5	43.5	27

Table 10. Percentage of perceived nursing competence of nursing students in critical thinking and problem solving (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Handling emergencies	1	9.5	32.5	40.5	16.5
Work with minimum guidance	0.5	6.5	26	40.5	26.5
Identifying the problem	0	3	25	45	27
Developing and analyzing interventions	0	6.5	23	48.5	22
Implementing solutions	0	2	26	46.5	25.5
Taking up responsibilities	0	4	24.5	43.5	28
Motivating others	1	2	16.5	45.5	35

Table 11. Percentage of perceived nursing competence of nursing students in professionalism, evidence-based practice and research (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Following code of ethics	0.5	3	17.5	47.5	29.5
Respecting individuals right	0	2	14.5	44.5	39
Maintaining confidentiality of clients	0	2	9.5	40	47.5
Delivering standard nursing care	0	3	14	42	41
Updating knowledge and skills	0	3	15	46	36
Conducting research studies	3	12.5	28.5	30	26
Disseminating the research findings	2.5	13.5	25	36.6	22.5
Developing evidence-based practice	3	8.5	22.5	41.5	24.5

Table 7 shows the perceived nursing competence in patient centered care. The results shows that 52.5% of nursing students perceived as highly competent in listening to values, problems and preferences of the patient, 50% of them rated as highly competent in ensuring safety of clients and maintaining appropriate precautions and 49% of nursing students rated as highly competent in documenting all nursing care. But 1% of students perceived as not competent in analyzing care, in ensuring good skin integrity and acting as nurse advocate in protecting patient's rights.

Table 8 depicts the perceived core competence in communication and team work. Result shows that only 61.5% of nursing students perceived as highly competent in building trust among clients, 61% perceived as highly competent in respecting patients, 60.5% of nursing students perceived as highly competent in instructing the clients prior to procedure and 59.5% of them rated as highly competent in displaying empathy and compassion.

But 1.5% of students perceived as not competent in respecting clients, dealing with grief of bereaved family and possessing ability to handling situation in staff shortage.

Table 9 shows the perceived nursing competence in

leadership and patient teaching. Result shows that 43% of nursing students perceived as highly competent in patient and family education, 36% rated as highly competent to communicate in an excellent manner 37% of them perceived as highly competent in motivating the peers.

But 1.5% perceived as not competent in motivating the peers and using good judgment for appropriate and right decisions for care.

Table 10 depicts the perceived nursing competence in critical thinking and problem solving. Result shows that 27% of them perceived as highly competent in identifying the problem, 28% rated as highly competent in taking up responsibilities and 35% perceived as highly competent in motivating others. But and 1% of students perceived as not competent in handling emergencies and motivating others.

Table 11 shows the perceived nursing competence in professionalism, evidence-based practice and research. The result shows that 47.5% of them perceived as highly competent in maintaining confidentiality of client 41% rated as competent in delivering standard nursing care 39% respecting individuals rights and 36% perceived as competent in updating knowledge and skills for professional advancement, 26% rated as highly competent in conducting research studies and 24.5% in developing evidence-based practice.

However, 3% rated as not competent in conducting research studies and developing evidence-based practice in clinical settings and 2.5% of them rated as not competent in disseminating the research findings for improving patient care outcomes.

Each item in the area of professional nursing behavior was analyzed in terms of percentage of responses and depicted in the **Table 12**.

Table 12. Percentage of perceived nursing competence of nursing students in professional nursing behavior (N-200).

Item	Not Competent (%)	Less Competent (%)	Moderately Competent (%)	Competent (%)	Highly Competent (%)
Showing commitment	0.5	2	14.5	46	37
Demonstrating a sympathetic behavior	0	1.5	17.5	41	40
Being self-disciplined	0	2.3	14.5	48	34
Maintaining interpersonal relationship	1.5	8	18	33.5	39
Seeking advice	1.5	7	16	35	40
Maintaining appropriate appearance	0	0.5	14.5	46.5	38.5
Adhering to policies	0	3	17	45.5	34.5
Showing loyalty to authority	0	1	15	41	43

Table 12 shows the perceived nursing competence in professional nursing behavior. 40% of nursing students perceived as highly competent in demonstrating a sympathetic behavior and seeking advice from co-workers and superiors respectively, 43% rated as highly competent in showing loyalty to authority and 39% were perceived as highly competent in maintaining interpersonal relationship with team members.

But 1.5% of students rated as not competent in maintaining an effective interpersonal working relationship and seeking advice from co-workers and superiors respectively.

4. Discussion

4.1. Demographic Characteristics

In the present study, the vast majority of participants were female (97.5%) and 2.5% were males, reflecting the gender distribution commonly observed in nursing education across Kerala, where male enrollment remains low. Nearly all students (99.5%) reported completing theoretical instruction prior to clinical placement, while only a small fraction (0.5%) followed a daily integrated teaching model. All participants maintained at least 80% attendance in theory sessions and had attended demonstration classes prior to clinical practice. These findings are consistent with a similar cross-sectional study conducted at the University of Gondar and Bahir Dar University in Ethiopia, which also assessed perceived clinical competence among nursing students. However, a key demographic difference was noted, as the Ethiopian study included a predominantly male sample (75.2%). Despite this, similarities were observed in student engagement, with high rates of attendance in theory (93.2%), demonstration (80.3%), and clinical sessions (92.3%) in both studies[2].

4.2. Overall Perceived Nursing Competence

In the present study, 36.5% of final-year nursing students perceived their level of competence as excellent, while 59% rated it as good. A smaller proportion (4%) reported average competence, and only 0.5% perceived themselves as having poor competence.

These findings are in line with previous researches [2, 17]. The present study results are comparable to findings from a study in the Czech Republic assessing self-perceived competence among final-year nursing students found that the majority (80.3%) rated their competence as good or very good, suggesting a generally positive self-assessment of clinical readiness among undergraduate nursing students across different settings [41].

A descriptive study conducted in a nursing college in Kolkata assessed self-efficacy related to nursing competency among final-year B.Sc. Nursing students. The results showed that 64.89% of the students rated themselves as highly competent, while 9.58% reported low levels of competence. These findings further support the variability in perceived competence among nursing students nearing graduation [42]. However, the results of present study and the comparable studies revealing the presence of students with only average or low perceived competence remains a concern, as it may have implications for patient safety and the overall quality of care provided in clinical settings.

A descriptive study conducted at Eastern University, Sri Lanka, assessed the perceived level of clinical competency among graduate nursing students using the Clinical Competency Questionnaire (CCQ). The study reported an overall mean CCQ score of 4.10, suggesting that students had a high level of confidence in their clinical abilities. This finding contrasts with the present study, where a comparatively lower proportion of students rated their competence as excellent. The discrepancy may, in part, be attributed to potential overestimation in self-assessments, a known limitation of self-evaluation methods that can influence the accuracy of perceived competency levels [43].

4.3. Basic Nursing Skills and Advanced Nursing Skills

In the present study, the perceived nursing competence of nursing students regarding basic nursing skills was excellent for 60.5%, good for 37%, average for 2%, and poor for 0.5% of students. Regarding the perceived nursing competence in advanced nursing skills, 11.5% perceived as having excellent competence, 31.5% perceived as having good competence, 42% perceived as having average competence, but 13.5% perceived as having poor competence and 1.5% perceived as having very poor competence. The present study is congruent with other studies.

The findings of the present study are consistent with previous research conducted in various parts of India. A 2017 survey among 173 final-year nursing students from randomly selected public and private institutions in Uttarakhand reported a relatively high mean competency score in basic nursing skills (236.5 ± 25.0), whereas scores for advanced nursing skills were significantly lower (148.7 ± 25.6) [44]. Similarly, an institutional cross-sectional study conducted in Karnataka revealed higher mean scores in basic nursing care (39.08 ± 13.27) compared to advanced skills (13.03 ± 5.28) [17]. These studies collectively suggest that while students demonstrate confidence in performing basic procedures, their self-perceived competence in advanced clinical skills remains limited—a finding that aligns with the present study's observations. These findings highlight the need for improved clinical training in nursing education. Ensuring sufficient exposure to both basic and advanced skills through extended clinical placements is essential. Regulatory bodies must also ensure that institutions are adequately equipped to provide quality clinical learning, ultimately preparing graduates for safe and effective patient care.

4.4. Core Nursing Competence

The areas that come under core nursing competence are critical thinking and problem solving, patient-centered care, communication, professionalism, evidence-based practice, and research.

4.5. Patient-Centered Care

In the present study, nursing students' self-perceived competence in patient-centered care varied across different domains. A majority (52.5%) rated themselves as highly competent in listening to patients' values, concerns, and preferences. Half of the participants reported high competence in ensuring client safety and maintaining appropriate precautions,

while 49% expressed high confidence in documenting nursing care accurately. However, a small proportion (1%) perceived themselves as not competent in critical areas such as care analysis, maintaining skin integrity, and advocating for patients' rights—skills essential for holistic, ethical nursing practice.

These findings are comparable to those of a descriptive cross-sectional study involving professional nurses caring for older adults, where the mean score on the Patient-Centered Care Competency (PCC) scale was 3.80 (SD = 0.45)[45], indicating a generally good level of perceived competence. Additionally, an exploratory qualitative study involving 15 nursing students highlighted the conceptual understanding of patient-centered care. Three key themes emerged: the inevitability of patient-centered care, the integration of comprehensive care, and the significance of the nursing process in achieving patient-centered outcomes[46]. These findings reinforce the importance of embedding both theoretical and practical elements of patient-centered care within nursing education to strengthen students' competence in diverse care settings.

4.6. Communication

In the present study, students demonstrated varying levels of perceived competence in communication and emotional support. A majority (61%) rated themselves as highly competent in respecting patients, and 60.5% felt highly competent in providing instructions to clients prior to procedures. Additionally, 59.5% reported high competence in demonstrating empathy and compassion, while 52% felt confident in offering emotional, psychological, and spiritual support. However, a small proportion (1.5%) perceived themselves as not competent in respecting patients and in managing grief-related situations, indicating areas that may require further emphasis in the curriculum.

These findings align partially with a cross-sectional study conducted at the Fatemeh School of Nursing and Midwifery in Shiraz, Iran, where nursing students were found to need improvement in communication skills, particularly in clinical interactions and professional behavior. Interestingly, communication competence was higher among students in advanced semesters[18]. In contrast, another study assessing communication using the Communication Skills Inventory among 77 nursing students reported a high overall level of communication skills (mean score: 163 ± 13.0), suggesting variability in outcomes based on context and assessment methods[47]. These differences highlight the importance of structured communication training integrated throughout nursing education to ensure consistent development of these essential competencies.

4.7. Critical Thinking and Problem Solving

In the present study, students demonstrated moderate levels of perceived competence in leadership and critical thinking domains. Specifically, 28% of participants rated themselves as highly competent in assuming responsibilities, 35% in motivating others, and 27% in identifying clinical problems. However, a small proportion (1%) reported low competence in managing emergencies and providing motivation to peers, indicating gaps in preparedness for high-pressure situations and team leadership.

Comparable findings were observed in a cross-sectional descriptive study conducted at a university in Spain, which evaluated critical thinking skills among undergraduate nursing students using the Critical Thinking Questionnaire. The results revealed higher competency in the substantive dimension (mean score: 3.81 ± 0.53) compared to the dialogic dimension (mean score: 3.48 ± 0.51), with students performing better in listening and speaking skills than in writing and reading[48].

Similarly, another study involving 192 nursing students beyond their second year reported a mean problem-solving ability score of 3.63 out of 5, with influencing factors including age, communication competence, and metacognitive skills. These findings suggest that the development of leadership and problem-solving abilities in nursing education requires a multifaceted approach, integrating both academic instruction and experiential learning to foster competence in clinical judgment and emergency responsiveness[49].

4.8. Evidence-Based Practice and Research

In the present study, 26% of final-year nursing students perceived themselves as highly competent in conducting research, while 24.5% reported high competence in applying evidence-based practice (EBP) within clinical settings. However, a small proportion (3%) indicated a lack of competence in both areas, highlighting a need for strengthening research-related components in the curriculum.

Similar findings were reported in a mixed-method study conducted at Stikes Suaka Insan Banjarmasin, which as-

sessed EBP competencies—including knowledge, attitudes, and skills—among 35 nursing students. The results indicated that students generally possessed moderately high levels of competence in evidence-based practice [50]. These findings emphasize the importance of integrating research literacy and evidence translation skills into undergraduate nursing programs to enhance students' ability to apply scientific evidence effectively in clinical decision-making.

4.9. Professional Nursing Behavior

In the present study, 48% of final-year nursing students rated themselves as competent in self-discipline and emotional regulation, while 46.5% were confident in maintaining professional appearance, attire, and conduct. Additionally, 46% reported competence in demonstrating commitment and a genuine interest in patient care. However, 1.5% of students perceived themselves as not competent in areas such as fostering effective interpersonal relationships with team members and seeking guidance from colleagues or supervisors. These findings point to specific areas of professional behavior that require further emphasis in undergraduate training.

Comparable results were observed in a study conducted at the University of Namibia, which explored self-reported professional behaviors among 100 undergraduate nursing students. The study revealed high mean scores (>4.0 out of 5) in domains such as evidence-based practice (4.78 ± 0.58), clinical teaching (4.46 ± 0.94), and patient safety and rights protection (4.28 ± 0.55). However, lower scores were noted in projecting a professional image (2.22 ± 1.27) and applying evidence-based care (4.08 ± 0.44) [51]. Another study conducted at the University of Tabuk assessed the professional behaviors of undergraduate nursing students and found that a majority demonstrated adequate competence in presenting themselves appropriately through attire and conduct (71.2%), supporting team objectives (71.2%), and understanding patients' rights (69.9%) [52]. These findings reinforce the importance of strengthening professionalism and collaborative skills as core components of nursing education to ensure well-rounded, practice-ready graduates.

4.10. Strengths of the Study

This study provides valuable insights into the self-perceived nursing competence of final-year undergraduate nursing students, offering a comprehensive evaluation across multiple domains. Unlike prior research that primarily focused on isolated aspects such as clinical skills or professional behavior, this study adopts a broader perspective by examining basic nursing skills, advanced clinical competencies, core professional attributes, and behavioral dimensions. This multidimensional approach allows for a more holistic understanding of students' readiness for professional practice.

Additionally, the study contributes to the limited body of literature in the Indian context, particularly in Kerala, by capturing student perceptions from diverse private nursing colleges. The findings may inform curriculum planning, clinical training strategies, and institutional policies aimed at enhancing the quality and effectiveness of nursing education. By identifying both areas of strength and those requiring further development, the study provides a foundation for targeted interventions to improve competence among graduating nurses.

4.11. Limitations of the Study

While this study provides meaningful insights into the perceived nursing competence of final-year undergraduate students, several limitations must be acknowledged. Firstly, the study was conducted in only four nursing colleges located in Ernakulam district, Kerala. As such, the findings may not be generalizable to the broader population of nursing students across the state or country, especially given the diversity in institutional standards, teaching methodologies, and clinical exposure across different regions.

Secondly, the study employed a self-reported Likert scale to assess perceived competence, which introduces the possibility of response bias. Participants may have consciously or unconsciously overestimated or underestimated their actual abilities due to factors such as social desirability, lack of self-awareness, or misunderstanding of specific competency items. Self-assessment tools, while useful for capturing perceptions, do not always align with objectively measured clinical performance.

4.12. Implications in Nursing Education

Regulatory bodies are responsible for ensuring the competence of nursing graduates by strengthening accreditation

processes and monitoring systems. They play a vital role in enforcing competency-based curricula, promoting adherence to evidence-based standards, and conducting.

Regulatory bodies and educational institutions play a vital role in strengthening nursing education by implementing competency-based curricula which ensures that nursing graduates acquire the essential knowledge, skills, and professional values needed to deliver safe, effective, and evidence-based care.

Universities hold a significant responsibility in shaping nursing education to meet global standards and evolving healthcare needs. By fostering evidence-based teaching methods, strengthening faculty capacity, and encouraging innovative learning practices, they can ensure that nursing graduates develop the competencies essential for contemporary professional practice.

Educational institutions should implement evidence-based policies and guidelines that effectively bridge the gap between classroom learning and clinical application, ensuring graduates are well-prepared for real-world nursing practice and should integrate innovative strategies such as high-fidelity simulation which creates realistic practice opportunities, reinforce learning, and equip students with the confidence particularly in performing advanced clinical procedures.

Faculty members should transform the nursing education by fostering critical thinking, encouraging reflective practice, and inspiring lifelong learning. Through innovative teaching methods and mentorship, they should empower students to become adaptive, competent, and socially responsible nursing professionals. Also create supportive learning environments that foster trust, engagement, and this approach strengthens faculty–student collaboration, enhances professional values, and contributes to the preparation of competent and compassionate nursing graduates. They should actively involve in guiding, assessing, and mentoring students ensures the development of essential competencies, thereby preparing nursing graduates for safe and effective professional practice. Faculty play a central role in implementing competency-based curricula by aligning teaching strategies with required standards and learning outcomes.

Furthermore, nursing educators should employ teaching approaches that foster critical thinking and clinical reasoning in both theoretical and practical contexts. Strategies such as case-based discussions, simulation-based learning, reflective activities, and supervised clinical practice can enhance students' ability to apply knowledge, make sound judgments, and deliver safe, evidence-informed care.

The integration of research and evidence-based practice into the curriculum is imperative. Educators should not only emphasize its importance but also actively mentor students in conducting and applying research to enhance care quality and professional development.

Faculty members should use effective methods for clinical education and supervision that support the comprehensive preparation of nursing students. Emphasis must be placed on the cultivation of essential professional attributes such as communication skills, interpersonal effectiveness, and ethical professionalism to support patient-centered care. Regular evaluation of student competencies and the implementation of targeted training programs are necessary to strengthen clinical knowledge and skills.

Teachers should assess student the competencies and address the gaps in learning. This can be achieved by using structured assessment tools such as direct observation clinical examinations, Objective Structured Clinical Examinations (OSCEs), simulation-based evaluations, and reflective assignments to identify areas needing improvement and design focused training sessions, workshops, and mentoring opportunities. Through continuous feedback and guidance, teachers support the ongoing development of students' knowledge, skills, and professional competence.

4.13. Applications of the Study

The findings of this study have significant implications for nursing education, clinical training, and educational policy development. They provide valuable evidence for curriculum developers and educators to identify and address specific areas where final-year undergraduate nursing students perceive gaps in their clinical competence. These insights can inform the refinement of pedagogical strategies, promote the integration of enhanced clinical exposure, and support the adoption of high-fidelity simulation technologies to strengthen both cognitive and psychomotor skills, thereby improving graduate readiness for real-world practice.

The results also underscore the need for faculty development initiatives that emphasize innovative, learner-centered approaches to clinical teaching and mentorship. Institutions

can leverage the data to revise competency evaluation frameworks and implement more rigorous, practice-oriented assessment tools aligned with contemporary healthcare demands.

Furthermore, regulatory and accrediting bodies may utilize these findings to update national competency benchmarks for undergraduate nursing education. Healthcare organizations can also benefit by aligning induction and preceptorship programs with areas identified as needing reinforcement, thus facilitating a smoother transition from education to clinical practice.

Ultimately, this study contributes to the broader dialogue on nursing workforce preparedness and offers a foundation for future research focused on evaluating the long-term impact of pedagogical innovations and curricular reforms aimed at closing the theory–practice gap in nursing education.

4.14. Recommendation for Future Research

Future research in nursing education and practice should focus on several important directions. Replication studies with larger sample sizes across multiple institutions and clinical environments are recommended to verify findings and improve the generalizability of results.

Conducting nursing audit studies on routine procedures would help evaluate the extent to which evidence-based practices are followed, highlight areas requiring improvement, and promote quality assurance in clinical settings.

Qualitative investigations are needed to gain deeper insights into nursing students' knowledge, attitudes, and practice levels. Such studies would capture personal experiences and contextual challenges that may not be reflected in quantitative data.

In addition, quasi-experimental research could be employed to measure the effectiveness of competency-based education in enhancing clinical competence, thereby offering evidence to support or refine curriculum reforms.

Further, quantitative assessments of newly registered nurses are essential to determine their preparedness for professional roles. These studies can identify competence gaps and inform the development of structured orientation and mentorship programs.

Performance evaluations of students who undergo competency-based education would also provide valuable information regarding the alignment of learning outcomes with professional expectations.

Observational studies in clinical practice settings are recommended to assess how students demonstrate competence in real-world scenarios. Such studies would reveal not only technical skill application but also professional behaviors and adaptability to patient care demands.

Research exploring factors that influence learning in clinical environments—including supervision, workload, and organizational support—would be equally important in improving clinical training experiences.

Finally, studies examining the impact of critical thinking education on nursing students' problem-solving skills are encouraged. Evidence from such work could justify the integration of structured critical thinking modules into nursing curricula, thereby strengthening decision-making and preparing students for complex clinical situations.

5. Conclusions

This study highlights the perceived competence of final-year undergraduate nursing students, revealing variations in preparedness, with some demonstrating high levels of competence while others show comparatively lower proficiency. The findings reveal gaps where students feel insufficiently prepared, pointing to the necessity of strengthening educational preparation through experiential learning opportunities, structured skill-based training, and competency-driven assessment methods. By integrating these approaches, nursing curricula can bridge the persistent gap between theory and practice, ensuring that students not only acquire knowledge but also develop the clinical judgment, practical skills, and adaptability essential for modern healthcare practice. Preparing students through comprehensive educational strategies is vital for cultivating a competent nursing workforce capable of delivering safe, effective, and high-quality care in today's evolving healthcare systems.

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Institutional Review Board Statement

The study was conducted in accordance with the principles of the Declaration of Helsinki and received approval

from the Undergraduate Research Review Board of Lisie College of Nursing (Approval No. LCN/BSc/01/2023; Date of Approval: 06-06-2023). The Board affirms that the investigators are required to adhere to all ethical guidelines relevant to the conduct of the study. The Board also stipulates that the researchers must keep the committee informed about the study's progress, report any modifications to the approved protocol, and submit a copy of the final report upon completion.

Informed Consent Statement

Informed consent was obtained from all participants included in the study. The purpose of the study and the procedures involved were clearly explained to each participant. Individuals were informed that they would be asked to respond to items in a rating scale assessing levels of competency in various areas of nursing. They were requested to provide honest and accurate responses. Participants were assured that all information collected would remain confidential and would be used solely for research purposes. Personal identity and identifying details would not be disclosed or published at any stage. Participation was entirely voluntary, and individuals were encouraged to take part wholeheartedly. The researchers confirm that participants understood the nature of the study, the confidentiality of the data, and their voluntary involvement before providing consent.

Data Availability Statement

The authors encourage the sharing of research data in support of transparency and reproducibility. All data supporting the findings of this study are available as soft copy with the first author. The data are not publicly accessible due to privacy or ethical restrictions and they are available from the corresponding author upon reasonable request.

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Conflicts of Interest

The authors declare no conflict of interest.

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