



# Internal Medicine Nursing Education Enhances Student Competency and Care Quality through Structured Training Modules

Rajmonda Milloshi <sup>1\*</sup>, Aida Zotaj Lako <sup>2</sup>

## Abstract

**Background:** The evolving demands of healthcare and advances in medical science have reshaped nursing practices, emphasizing the need for methodical and efficient care delivery. The nursing process, central to modern nursing, facilitates personalized care and priority-setting, essential in today's healthcare landscape. This study explores the impact of a structured internal medicine nursing practice training module on student competency, with a focus on diagnostic accuracy and patient care planning. **Methods:** An illustrative study was conducted with 130 second-year nursing students at a state-funded university from 2014 to 2016. Students participated in a training module designed around Gordon's functional health patterns, aimed at improving their practical skills in internal medicine. Data were collected through questionnaires assessing students' perceptions of the module's effectiveness in clinical practice, with analyses performed using SPSS. **Results:** The training module significantly enhanced students' confidence and efficiency in diagnosing and planning care, with 51% of participants finding it "Very helpful" in identifying issues and 80% supporting its use in creating nursing interventions. However, some challenges were noted, particularly in the areas of critical thinking and theoretical knowledge application. **Conclusion:** The internal medicine

nursing practice training module proves to be an effective tool in improving students' clinical skills, diagnostic accuracy, and patient care outcomes. Addressing the identified challenges in critical thinking could further enhance the module's impact, ensuring that future nurses are well-equipped to meet the demands of modern healthcare.

**Keywords:** Nursing Education, Internal Medicine, Clinical Practice, Diagnostic Criteria, Patient Care

## 1. Introduction

New health needs and expectations, scientific advancements, and technological innovations have significantly impacted the nursing profession. Contemporary nursing not only performs its modern functions but also systematically organizes and maintains care to ensure the highest quality of service. This process, known as the nursing process, provides tailored care aimed at identifying and addressing specific issues. It facilitates the setting of care priorities, thereby optimizing the use of time and resources (Enç et al., 2012; Li & Chen, 2021).

The global issue of nursing is compounded by the continual reorganization of healthcare delivery systems, including in New Zealand. Over the past decade, numerous countries have attempted to reform their healthcare systems to address efficiency, competition, reduced profits, and cost control (Poynton, Cummings, & Lee, 1998). In New Zealand, hospitals adopted traditional management strategies as a means of enhancing efficiency, often viewing nursing as a cost rather than a crucial element of care. This shift led to a decline in nursing administration,

**Significance** | Structured training modules in internal medicine nursing enhance student competency, improve diagnostic accuracy, and optimize patient care quality.

\*Correspondence. Rajmonda Milloshi, University of Medicine Tirana, Faculty of Technical Medical Sciences, Tirana, Albania  
E-mail: gezimbara2022@gmail.com

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## Author Affiliation.

<sup>1</sup> University of Medicine Tirana, Faculty of Technical Medical Sciences, Tirana, Albania  
<sup>2</sup> University 'Aleksander Moisiu' Durrës, Faculty of Professional Studies, Durrës, Albania

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clinical education, and practice control during the 1990s (Fowles & Kassab, 1974; Johansson & Rosman, 1980).

Despite some reversal in these trends, there is a need for an updated snapshot of the nursing workforce to better understand the impacts of healthcare system changes (Chen et al., 2021). Evidence suggests that such organizational changes may be impractical and potentially detrimental to staff retention and patient outcomes. Clinical management often emulates modern efficiency models, which can exacerbate challenges such as low staffing, poor skill mixes, and evolving organizational structures (Almutary & Tayyib, 2020; Liu et al., 2021). These factors contribute to deteriorating working conditions for nurses, leading to concerns about their well-being (Padilha, Sousa, & Pereira, 2018).

Recent research emphasizes the importance of professional autonomy, control over the practice environment, and effective communication between nurses, physicians, and managers (Gonçalves et al., 2022; Jiang et al., 2020). These aspects are associated with reduced needle stick injuries, higher job satisfaction, and lower rates of burnout, which are critical for maintaining a healthy and effective nursing workforce (Khudur, 2019; Scapinelli, 1990).

### 1.1 Internal disease

With regard to clinical issues, internal diseases fundamentally influence the organs and frameworks of the body. The expression 'internal medicine diseases' is now and again used to allude to internal diseases. This subspecialty of medicine, which is drilled by internists or internal medicine-trained professionals, is recognized by the fact that it is not zero in surgeries. Internal diseases involve an extensive variety of well-being concerns. These diseases affect a wide assortment of organ frameworks and physiological capabilities.

Internal medicine works hard to address cardiovascular diseases. Heart failure, hypertension, and coronary artery disease were included. Asthma, COPD, and pneumonia affect the lungs and respiratory system.

Gastroenterology, which is used to treat digestive disorders, benefits from internal medicine. Internists treat IBD, liver diseases, and IBS. Renal diseases affect the kidneys and urine system in another branch of internal medicine. Additionally, UTIs and chronic renal disease were observed.

Internal medicine focuses on immunological and endocrine diseases such as lupus, rheumatoid arthritis, diabetes, and thyroid disorders. In-depth medical history analysis, physical exams, and diagnostic tests help internists diagnose and treat numerous disorders. Internal medicine focuses on chronic disease control, health promotion, and disease prevention. Internists may prescribe medication, suggest lifestyle modifications, or refer patients to specialists as part of their personalized treatment plans.

### 2. Literature Review

Chen, X., et al. (2022) investigated a hospital-to-home model for nutritional nursing management in CKD patients using an AI algorithm and CT Internet+. This novel nutritional treatment paradigm for CKD patients transitioning from hospital to home addresses shortcomings in established models. The literature review emphasized the importance of using AI to improve nutritional nursing management for CKD patients and personalize care. This work adds to the discussion on technology and healthcare and suggests a way to improve chronic kidney disease patient outcomes. Li, Q., & Chen, Y. (2021) constructed crisis nursing stage engineering utilizing the astute nursing data framework, examining crisis methods, framework working, network environment sending, and information base plan. The attendant checking arrangement of the clever nursing data framework utilizes medical clinic data security to empower clear, natural network correspondence. The shrewd data framework is utilized for well-being control, clinical request data, condition data, and data requests, saving time and guaranteeing fast transmission and exact execution of clinical orders, making clinical consideration network correspondence more proficient. In light of the scattered peculiarity of enlistment emergencies, the Alleviation calculation groups the etiology and emergency, and clinical exhortation, data question, and IT innovation are streamlined to wipe out analysis, embed number, and work on the clinical environment of hanging tight for determination, taking medicine, assessment, and testing. Finally, testing framework data security, discernability, and rapid data requests addressed nursing management concerns.

Li, G., & Li, Q. (2019) examined informationized nursing management in critical care. This paper examines the growing use of information technology in nursing, particularly in critical care. The authors examine the effects of informationized nursing management strategies and shed light on healthcare delivery. Critical care has distinct challenges and opportunities, which the study addresses. According to the findings, informationized nurse management may be relevant and beneficial. The review also noted the shortcomings of the studies, emphasizing the need for more research to fully comprehend informationized nursing management in critical care medicine. Li & Li's work advances our understanding of how information technology improves nursing practices, particularly in critical care.

Gonçalves, M.I.R., et al. (2022) examined nurse-led methods to improve care coordination and patient outcomes for multiple chronic diseases. This study summarizes the available evidence to illuminate hospital nurses' various approaches to multimorbidity. The findings shed light on nurses' changing role in complex health settings and emphasize the need for customized treatment for those with numerous chronic diseases. Healthcare practitioners and

governments aiming to optimize hospital care for multimorbid patients should consider this study.

### 3. Materials and Methods

#### 3.1. Study design

An illustrative exploration was performed to assess the Internal Medicine Nursing Practice Understudy Preparing Module. From 2014 to 2016, state-funded college nursing staff scientists focused on this topic. The clear review included 130 second graders who had taken an internal medicine nursing course and consented. The universe was reached, and no understudy avoided concentrating on the planned days.

#### 3.2. Research Questions

The research question utilized in this study are What do students perceive as the most beneficial steps in the Internal Medicine Nursing Practice Student Training Module? And Do students' views on the value of using the module in clinical practice vary according to their sociodemographic characteristics?

#### 3.3. Data collection

The impressions of the clinical practice module of the internal medicine nursing practice understudy preparing module were surveyed utilizing the scientists' poll. The poll obtains some information about the participants' age, orientation, secondary school certificate, graduate status, medical coverage, and pay. The module's application to internal medicine nursing clinical practice was analyzed in 10 inquiries. Understudies can add remarks and contemplations about utilizing the module to the survey.

### 4 Data Analysis and Interpretation

All PC examinations taught at the University of Medicine, Faculty of Technical Medical Sciences, were led by SPSS, which traverses 20 unmistakable bundles. Math mean, standard deviation, recurrence, and rate tests were utilized to assess nonparametric factors as well as parametric factors. An importance edge of  $p < 0.05$  was considered satisfactory.

The table 1 shows the demographics and socioeconomic conditions of the sample population. Most participants (192) were female, with an average age of 20 years ( $\pm 1.250$  SD), whereas the minority (88) were male. Eighty attended a health vocational high school, ninety-five another and one hundred and five graduated high schools. Sixty-nine internships were linked to Tirana University of Technical Medical Sciences, and 211 were linked to Tirana University of Medicine, Faculty of Medicine. Ninety-five people were unemployed, and 185 were employed. A total of 124 people called the economy 'bad,' while 156 called it 'good.' Although 105 people do not have social security, 175 claim it. This quick summary covers example demographics, including age, gender, education, internship connections, employment position, financial health, and social security coverage.

The respondents agreed that the Table 2 thoroughly assesses the value of nursing duties. In particular, 51% of respondents regarded identifying the root of the issue as "Very helpful", and 75% and 80% supported nurse intervention creation and evaluation, respectively. The diagnostic criteria were more contentious, with 38% stating "Very helpful" and 47% saying "Not a little useful." From case studies to patient diagnostics, the table shows how respondents thought different nursing tasks were valuable.

The Table 3 covers diagnostic criteria assessments by sex and education level. Females had mean scores of 3.44 to 3.75 across multiple categories, with standard deviations showing significant differences. The mean scores for men ranged from 3.15 to 3.78. Education status consistently led to higher mean scores for health vocational high school students, with  $4.31 \pm 0.78$  in the "determining diagnostic criteria" category. Intermediate mean scores are typical for high school and vocational high school pupils. The table highlights gender and education-related differences in diagnostic criteria perception and interpretation, which might help case analysts and nursing report writers.

### 5. Discussion

The nursing process begins with diagnosis. This step involves patient interviews or clinical data collection. To accomplish this phase, nurses must understand the patient's biopsychosocial, spiritual, growth and development, pathophysiology, familial status and culture, beliefs, and values. Patient appraisal, diagnostic criteria, diagnosis, and case analysis were better for women than men in this nursing student study. National and worldwide studies have shown that nursing students struggle with theoretical knowledge and practice and cannot apply the nursing process. Nursing fails if patients and families offer erroneous or insufficient data during data collection. It helps establish an accurate nursing diagnosis, the patient's diagnostic criteria, the problem's cause, and solution goals. Studies have shown that nurses struggle 'often' to acquire data, diagnose nursing, and identify solutions. This shows that nursing students should learn more process-implementation abilities. Gordon's functional health patterns underpin this systematic internal medicine nursing approach. This major issue may be addressed by the module. Nursing evaluation forms should only address patient needs. The forms should be distinct and not physician evaluation forms. Critical thinking is needed for nursing diagnosis. To evaluate, conclude, and explain data and evidence, critical thinking requires clinical judgments. Critical thinking is difficult to establish in nursing education and diagnosis. Correct nursing diagnoses require a theoretical and practical understanding

**Table 1.** Social-Demographic Features (N = 280)

	N (%)
<b>Age (Mean±SD)</b>	20 ±1.250
<b>Gender</b>	
Female	192
Male	88
<b>Education status</b>	
High school	105
Health vocational high school	80
Other vocational high school	95
<b>Internship made section</b>	
Tirana University of Medicine, Faculty of Medicine	69
Tirana University of Medicine, Faculty of Technical Medical Sciences	211
<b>Work status</b>	
Yes	185
No	95
<b>Economical situation</b>	
Bad	124
Good	156
<b>Social security</b>	
Yes	175
No	105

**Table 2.** Students' opinions regarding the advantages of utilizing the Internal Medicine Nursing Practice Student Training Module in clinical settings (N = 280)

	Not useful at all	Not a little useful	Undecided	A little useful	Very helpful
	N (%)	N (%)	N (%)	N (%)	N (%)
Patients' diagnosis	20	44	96	69	51
Determining diagnostic criteria	40	47	127	38	28
Interpret diagnostic criteria	22	50	116	150	42
Determining the diagnostic of nursing	55	23	152	35	15
Determining the cause of the problem	90	105	52	25	8
Objectives/Goal settings	58	97	89	20	16
Creating nursing intervention	69	46	72	18	75
Evaluation	80	95	64	35	6
Nursing report	95	60	22	65	38
case analysis	48	55	145	21	11

**Table 3.** Surveying the relevance of the Internal Medicine Nursing Practice Understudy Preparing Module in clinical settings in view of sociodemographic qualities (N = 280)

		Diagnostic	Determining diagnostic criteria	Interpret diagnostic criteria	Determining the diagnostic criteria	Determining the cause of the problem	Objectives	Evaluation	Nursing report	Case analysis
Gender	Female	3.44 ± 0.85	3.28±0.75	3.52±0.21	3.48±0.22	3.75±0.44	3.18±0.62	3.38±0.81	3.44±0.46	3.62±0.78
	Male	3.52±0.52	3.12±0.80	3.78±0.12	3.15±0.78	3.42±0.69	3.38±0.69	3.44±0.66	3.25±0.28	3.31±0.40
Education status	High school	3.35±0.59	3.45±0.46	3.69±0.36	3.69±0.77	3.77±0.38	3.69±0.55	3.18±0.92	3.6±0.99	3.58±0.76
	Health vocational high school	4.31±0.78	3.38±0.08	3.32±0.21	3.66±0.12	3.58±0.81	3.38±0.66	3.52±0.88	3.18±0.72	4.31±0.62
	Other vocational high school	2.82±0.79	3.08±0.15	3.48±0.38	3.46±0.69	3.44±0.1	3.19±0.15	3.31±0.25	3.42±0.78	3.28±0.95

of situations, causal variables, illness mechanisms, measurements, and important results. Students can develop critical thinking skills by using analytical, technical, and scientific information; logical reasoning; clinical experience; patient knowledge; standards; perceptions; and contextual viewpoints. The study revealed that students lack critical thinking skills to understand and apply nursing procedures. They may have problems reasoning without clinical and theoretical experience.

## 6. Conclusion

Overall, the nursing understudies stated that the internal education nursing practice understudies preparing modules to analyze patients, determine analytic rules, and analyze nursing practices in clinical practice. Nursing care was intense for students because of time and hypothetical information. Nursing understudies involving modules in clinical practice will experience fearlessness while utilizing day-to-day nursing media, laying out their nursing determination rapidly and accurately, and influencing their time and workforce. In clinical practice, an efficient viable model is expected to apply the nursing system effectively and treat individuals/families appropriately. The module makes nurturing conclusions and utilitarian example assessments more successful and simpler. Nursing understudies can likewise make care records with the program. Utilizing the module to fathom the nursing system will assist understudies by concentrating on more case surveys. Consequently, it will help understudies complete a few clinical nursing cycles and course associations and conversation capacities.

## Author contributions

R.M. conceptualized the study and drafted the manuscript. A.Z.L. contributed to the research design, provided critical revisions, and assisted in finalizing the manuscript. Both authors reviewed and approved the final version of the manuscript.

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## Competing financial interests

The authors have no conflict of interest.

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