Nursing Faculty Informatics Competency

by

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Abstract

The integration of technology in nursing education is essential for preparing future nurses to navigate the increasingly digital world of healthcare. This study explores the nursing informatics competency among faculty members at a large College of Nursing, aiming to assess proficiency levels and identify areas for improvement. Drawing on established frameworks such as the AACN essentials and NLN recommendations, the study employs a cross-sectional design to evaluate faculty competencies using the revised Self-Assessment of Nursing Informatics Competencies Scale (SANICS). Findings from the survey of 66 faculty members indicate a strong understanding of theoretical aspects but reveal a notable gap in practical computer skills, particularly in applied informatics tools. Recommendations include tailored training programs to address these deficiencies, ensuring faculty can effectively integrate informatics into nursing curricula and equip students with essential skills for modern healthcare practice. Closing this gap is vital for enhancing the quality of nursing education and preparing students to meet the evolving demands of patient care in the digital age.

Background

In 2022, the integration of technology into hospitals and nursing programs nationwide has become increasingly prevalent. The AACN's 2021 release of updated essentials for nursing education emphasizes the importance of faculty proficiency in technology and informatics for effective teaching (AACN, 2024). Similarly, the National League of Nursing (NLN) advocates for the integration of nursing informatics into curricula, recognizing its pivotal role in nursing education (National League of Nursing, 2015). However, there is a notable gap between the envisioned role and the current competency levels of nursing faculty (Chung et al., 2017). Barriers interrupting the integration of informatics include the need for faculty education in this

domain, limited classroom technology, and insufficient funding. Given technology's integral role in patient care, it is imperative that faculty adequately equip students with informatics skills. Failure to do so jeopardizes the preparedness of future nurses for patient-nurse interactions (Bove et al., 2020). This study seeks to evaluate the proficiency of faculty in nursing informatics at a large College of Nursing, a critical endeavor for shaping a strong educational framework that meets the demands of modern nursing practice.

Purpose

This study evaluates the nursing informatics competency of faculty at a large university, including both pre-licensure and graduate-level educators. Employing a cross-sectional design, the study utilizes the revised Self-Assessment of Nursing Informatics Competencies Scale (SANICS), which is structured into three key areas: basic computer proficiency, the significance of nursing informatics, and practical computer skills. Alongside SANICS, open-ended questions are incorporated to explore areas where faculty may lack crucial knowledge in nursing informatics, as pinpointing these knowledge gaps is essential for effectively integrating nursing informatics into the curriculum. Simultaneously, the purpose of the integrative review is to combine evidence regarding nursing faculty's knowledge, competency, and attitudes concerning the utilization and advantages of nursing informatics within baccalaureate programs. By providing a baseline assessment of nursing faculty competency in nursing faculty competency in nursing faculty and future baccalaureate students in comprehending and integrating this material effectively, thus aligning with the broader goal of enhancing nursing education.

Methodology

This research utilized a cross-sectional design and administered the revised Self-Assessment of Nursing Informatics Competencies Scale (SANICS) questionnaire to gauge the informatics competency of full-time nursing faculty in a large university. The questionnaire,

consisting of 18 items, evaluated competency levels on a scale spanning from 1 (Not Competent) to 5 (Expert). A cross-sectional design, utilizing the revised Self-Assessment of Nursing Informatics Competencies Scale (SANICS) questionnaire specifically developed and validated to assess the competencies in nursing informatics among full-time faculty at a large university. Participants were selected based on inclusive criteria that targeted full-time faculty involved in both undergraduate and graduate programs, ensuring a diverse representation of teaching experience and specializations. The questionnaire, administered by a Qualtrics survey electronically to enhance participation, evaluated competencies across basic and applied informatics skills on a scale from 1 (Not Competent) to 5 (Expert).

Data was collected over ten weeks, with participants' confidentiality preserved through anonymous submissions. Responses were analyzed using SPSS statistical software, with mean scores calculated for each competency area and standard deviations to assess variability. The study's methodology was approved by the Institutional Review Board, ensuring adherence to ethical standards of research involving human subjects. Despite rigorous data collection methods, potential limitations such as non-response bias and the self-reported nature of the questionnaire could influence the findings.

Findings

A total of 66 out of 84 faculty members participated in the survey, yielding a robust participation rate of 79%. Most responses were contributed by faculty from two key programs: 38% from the Pre-Licensure Registered Nurse program and 21% from the Doctor of Nursing Practice program. Faculty teaching experience displayed a broad spectrum, with the most common range being 0 to 5 years, accounting for 27% of participants. Regarding instructional methods, online teaching was the predominant mode, representing 51% of responses, followed by traditional lecture-based instruction at 38% and a hybrid approach at 11%.

The SANIC questionnaire revealed insights across three distinct categories: Basic Computer Knowledge, with a mean score of 4.12 (SD = 0.59), suggesting proficiency; Nursing Informatics' Role, achieving a higher mean of 4.44 (SD = 0.77), indicating a strong grasp among participants; and Applied Computer Skills, where the mean was notably lower at 3.23 (SD = 0.82), reflecting a moderate level of competence. Competency was assessed on a scale from 1 (Not Competent) to 5 (Expert). Notably, out of the 18 questions, five scores fell below the competent threshold of 3, indicating areas of weaker proficiency. Specifically, one question related to Basic Computer Knowledge and the remaining four pertained to Applied Computer Skills, highlighting significant opportunities for development in practical computing abilities. Discussion: Assessing faculty competencies is essential for successfully integrating informatics into the nursing curriculum. The results of this study indicate that faculty members reported feeling proficient in understanding the nurse's role within informatics and possessing basic computer skills. However, they identified a deficiency in their applied computer skills, particularly in utilizing applications such as Excel, databases, and statistical software to manage aggregated data. This gap shows the need for targeted initiatives to elevate their proficiency in these critical areas.

Recommendations

Recommendations to address this shortfall include developing tailored training programs, providing access to specialized workshops, and offering continuous learning opportunities focused on the application of informatics tools and data management strategies. These steps are vital for ensuring faculty can effectively impart the necessary informatics competencies to nursing students, aligning with the evolving demands of healthcare technology. The integration of nursing informatics into the curriculum will equip nursing students with the skills necessary to provide safe, effective, and high-quality patient care.

Conclusion

This study highlights a significant gap in the practical computer skills among nursing faculty, despite a general proficiency in basic informatics and understanding of its theoretical aspects. To address these deficiencies, it is imperative to implement targeted training programs that focus specifically on advanced technological applications such as Excel, databases, and statistical software. By enhancing faculty competencies in these critical areas, we can ensure that nursing education keeps pace with the technological advancements in healthcare. Empowering faculty with these skills will enhance the quality of nursing education, thereby better-preparing students to meet the complex demands of modern patient care.

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