INTRODUCTION

Nurses must be adept at navigating vast amounts of information in today’s technology-rich care environment. As hospitals seek to improve quality of care and information sharing among patients and care providers, information and communication technologies (ICTs) dominate the healthcare landscape. Despite efficiencies in delivering patient care afforded by ICTs, the threat of overlooking vital information due to an overload of digitized data is now a reality for nurses. The rapid proliferation of information sources available to healthcare professionals has led to the identification of information literacy (IL) as essential to the provision of safe, quality patient care. In turn, scholars are calling for the restructuring of nursing education to incorporate IL skills necessary for utilization of research associated with evidence-based care.

The assimilation of IL into the nursing curriculum provides students with the basic knowledge to apply skills for evidence-based practice (EBP) that are required to improve the quality of care in complex nursing. The American Library Association (ALA) defines IL as “the ability to recognize when information is needed and have the ability to locate, evaluate, and effectively use the needed information” (ALA, 1989, para 3). According to the ALA’s (2000) Information Literacy Competency Standards for Higher Education, an information literate individual demonstrates competency in a five-step process: (1) determine the extent of information needed; (2) access information effectively and efficiently; (3) evaluate information and its sources critically; (4) use information effectively to accomplish a specific purpose; and (5) understand the economic, legal, and social issues surrounding information use. Fundamental to engagement in EBP, IL competencies ensure nurses have proper skills in the collection, analysis, evaluation, and utilization of data, information, and resources. As the keystone of EBP, IL encompasses skills necessary for the discovery, analysis, and use of the best research evidence.

BACKGROUND/SIGNIFICANCE

IL skills are threaded throughout the nursing process as the nurse must be able to determine what information is needed, find information based on the resources available, appraise the information while determining the validity of the source, apply the information to practice, and evaluate improvements from the application of information. Thus, IL competencies are fundamental to nursing and EBP. The components of IL also directly align with those of the literature review process, as research utilization requires the ability to retrieve and evaluate scholarly articles from a variety of sources. Both processes involve the ability to identify when information is needed, formulate a question or problem based on evidence from research or data collected, critique the validity and reliability of information sources, and synthesize information to generate knowledge or answers addressing the identified question(s) or problem(s).

Despite the link between IL skills and EBP, a report from the National League for Nursing ([NLN], 2008) indicated that only 40% of nursing programs surveyed had specific IL requirements for graduation. Although competency standards provide direction for the development of information literate graduates, higher education continues to lag in incorporating IL competencies into nursing curricula. However, it is imperative that nursing students demonstrate the ability to apply published research effectively in their practice to assure the provision of quality, safe, patient-centered care as they transition into practice. Therefore, IL education in nursing programs must focus on the ability to identify pertinent publications.
from multiple sources of information, analyze the validity of the information, synthesize information from various sources to develop new knowledge, and transfer this knowledge into practice.

A limited number of empirical studies have examined IL educational strategies but with small sample sizes, other health disciplines, associate-degree students, or with a focus on EBP as a whole rather than IL competency. In addition studies specific to pre-licensure nursing students focus on measures of computer literacy or technological competence. Recent studies published on IL skills of nursing students failed to incorporate the accepted ALA standards and competencies and were limited to researcher-developed instruments without reported reliability and validity measures. As no specific theories, competencies, or frameworks were used to guide these research studies, their findings may not have helped to build on a broader understanding of IL within the context of nursing education. Therefore an important research opportunity exists to enhance IL skills of nursing students to help them develop a repertoire of IL skills, enhance the quality of teaching and learning, and foster the needed skills for clinical practice and lifelong learning.

The science of nursing education needs empirical research to assess IL skills of students and inform the development of evidence-based strategies to promote IL competency development (NLN, 2008). Today’s millennial students, skillful at navigating technologies with high levels of computer self-efficacy, may use technology daily in a social context but be unfamiliar with sources of information and/or how to use information sources for professional nursing practice. Knowledge of demographic and educational factors associated with higher IL levels would enable faculty to identify students at risk for having low IL skills and to direct resources toward curricular improvements. Moreover, describing the development of IL competency is imperative to its wider acceptance of importance in nursing education and insurance of student success and readiness for practice.

PURPOSE

The purpose of this proposed study with pre-licensure baccalaureate nursing students is three-fold: 1) describe pre-licensure baccalaureate senior nursing students’ IL self-efficacy levels utilizing the valid and reliable Information Literacy Self-Efficacy (ILSES) tool; 2) analyze the relationship between demographic factors, educational strategies, and IL self-efficacy; 3) provide a rich description of educational strategies employed by nursing programs across the United States aimed at achieving IL competency. Roger’s Diffusion of Innovations provides the theoretical framework for this study. Mixed methodology is appropriate for the purpose of this study which aims to expand upon previous quantitative research studies regarding student factors influence IL self-efficacy while also exploring lesser known IL educational strategies employed by pre-licensure baccalaureate programs through qualitative analysis. The mixed method design will ensure that factors impacting the development of IL self-efficacy of nursing students are examined through a variety of lenses.

The Information Literacy Self-Efficacy Scale (ILSES), a valid and reliable 28-item measure, has been used in several studies in higher education outside of the nursing discipline to operationalize tasks of the ALA’s competency standards. The ILSES, developed by Kurbanoğlu, Akkoyunlu, and Umay (2006) is the only self-efficacy measure of IL competency to adopt the ALA’s definition and competency standards, as evidenced in the structure and content of the survey. Two scholarly works, a study by Stokes and Urquhart (2011) and dissertation by Wendekier (2015), utilize the ILSES with pre-licensure nursing students to operationalize tasks of the ALA’s competency standards. With an overall Cronbach’s alpha of 0.91, the ILSES contains 28-items requiring participants to rate confidence and competence in conducting IL tasks with higher scores indicating increased perception of IL self-efficacy. As ILSES has been utilized repeatedly in other disciplines of higher education and has established reliability and validity with nursing students, the survey tool will be utilized in this proposed study.

METHODS/DATA ANALYSIS
This study will use a sample of pre-licensure baccalaureate nursing programs across the United States. The researcher will recruit a stratified sample of senior nursing students from pre-licensure schools of nursing (SON) across the northeast, central, western, and southern geographical regions of the United States. The study population will be comprised of at least one pre-licensure baccalaureate SON from each of the four identified geographical regions. Criteria for SON participation include those programs in the U.S. offering a pre-licensure baccalaureate nursing degree accredited by either of the two national accreditation bodies, the Accreditation Commission for Education in Nursing (ACEN) and/or the Commission on Collegiate Nursing Education (CCNE). Students will be invited to participate in the study via an emailed Qualtrics link which will include the ILSES followed by demographic questions. As well one faculty member from each SON will be invited to participate in a taped interview using a data collection tool with open-ended qualitative interview questions developed by the researcher.

Quantitative data review will include univariate or descriptive analysis using frequency distributions, measures of central tendency, and calculated variability with data collected from the ILSES. The sample will be described using descriptive statistics and analysis of ILSES results will occur through mean scores and standard deviations on the overall scale and question items. A hierarchical multiple regression model will then be used to assess the ability of each independent variable to act as a predictor of IL self-efficacy scores using the ILSES tool. Qualitative data analysis will occur through directed content analysis strategies outlined by Hickey and Kipping (1996). Content analysis is a research method that has come into wide use in current health studies. Three distinct approaches to content analysis exist: conventional, summative, or directive; the latter will be used in this study to guide qualitative data analysis as it provides a method to validate or extend a theoretical framework or theory. The directed approach to content analysis will be used to support and extend existing research on IL educational interventions.

Title:
Factors Influencing Information Literacy Self-Efficacy of Prelicensure Baccalaureate Nursing Students

Keywords:
Information Literacy, Nursing Education Science and Prelicensure baccalaureate

References:


**Abstract Summary:**

Nurses must be adept at navigating information in today’s technology-rich environment; therefore, scholars have called for the restructuring of nursing education to incorporate information literacy (IL) skills essential in the provision of safe care. But what is the current state of nursing education science related to IL of prelicensure students?

**Content Outline:**

I. Introduction to Study

   A. Proliferation of information care technologies in practice

   B. Information literacy (IL) as vital competency in nursing education

   C. IL definition, relation to evidence-based practice, and IL competencies by American Library Association

II. Gaps in Literature

III. Study Proposal and Research Questions (3)

III. Study Methodology

   A. Mixed-methods, Multi-site design

   B. Quantitative data collection and analysis: Descriptive correlational analysis of student responses to Information Literacy Self-Efficacy Scale, Multiple regression model

   C. Qualitative data collection and analysis: Content analysis of faculty interview responses

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