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2011-06-10

## Librarians as Partners of the Nursing Faculty in Teaching Scholarly Inquiry in Nursing to Undergraduates at Brigham Young University

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### Original Publication Citation

Science and Technology Libraries, 3: 267-276, 211. <http://www.tandfonline.com.erl.lib.byu.edu/doi/abs/1.18/194262X.211.593416>

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### BYU ScholarsArchive Citation

Lassetter, Jane; Mandleco, Barbara L.; Callister, Lynn C.; Hopkins, Elizabeth S.; and Astill, Meagan, "Librarians as Partners of the Nursing Faculty in Teaching Scholarly Inquiry in Nursing to Undergraduates at Brigham Young University" (2011). *Faculty Publications*. 84.  
<https://scholarsarchive.byu.edu/facpub/84>

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**Librarians as Partners of the Nursing  
Faculty in Teaching Scholarly Inquiry in  
Nursing to Undergraduates at Brigham Young  
University**

*This paper describes collaboration between the nursing librarian and faculty members teaching Scholarly Inquiry in Nursing (Nursing Research), a course for baccalaureate nursing students. Workshops presented by the librarian enhanced nursing students' information literacy skills, particularly related to accessing evidence-based sources. Student perceptions of the library integration with Scholarly Inquiry in Nursing are presented, and suggest that librarians empower them with knowledge and skills that enhance their ability to integrate evidence into their nursing practice.*

RUNNING HEAD: *Nursing Librarians Co-Teaching Scholarly Inquiry*

KEYWORDS: *Scholarly Inquiry in Nursing, Evidence-Based Nursing, Nursing Librarians, Information Literacy in Nursing, Brigham Young University*

## BARRIERS TO INCORPORATING INFORMATION LITERACY INTO CLINICAL PRACTICE

There are a number of barriers to nurses accessing professional information resources in clinical settings. First, despite professional guidelines that focus on the importance of evidence-based clinical practice, many clinicians lack information literacy skills, especially if they are over 40 years of age (Pravikoff et al. 2005). Nurses in their 40s may not have received instruction on information literacy as students. Lack of time is another reason the literature is not accessed as much as it should be (Forsman et al. 2008; Pravikoff et al.; Sitzia 2002). Finally, nurses may rely on inaccurate information because information on a particular topic is limited (Verhoeven et al. 2010).

## PREVIOUS APPROACHES TO NURSING LITERACY

Information literacy was first conceptualized and proposed more than three decades ago (Zurkowski 1974). It is defined as having the skills to access and use evidence to support clinical decision making (Barnard et al. 2005). In classic nursing literature, Walser (1977) described a nursing course on library resource utilization. Other early nursing information literacy programs were found two decades later in library literature (Fox et al. 1996; Layton & Hahn 1995) with descriptions similar to those of Walser (1977). More recently Sherwill-Navarro (2004) discussed the science librarian as a nursing faculty member who provides information on multiple databases and effective searching methods. A 2009 study

and supporting literature found nurse educators highly valued but did not fully implement collaboration with librarians to foster information literacy (Klem & Weiss 2005; Schulte & Sherwill-Navarro 2009).

Other information literacy programs in nursing and presentation methods are highlighted in the literature. For example, one method involves online library tutorials for nursing students (Johnson et al. 2010), and another uses a partnership with the library to strengthen nursing research in a distance nursing program (Hallyburton & St John 2010).

Tiered approaches are also described in the literature, with information literacy skills taught across the nursing curriculum (Barnard et al. 2005; Carlock & Anderson 2007; Dorner & Taylor 2001; Fetter 2009; Flood et al. 2010; Guillot et al. 2005; Innes 2008; Morrison & Krishnamurthy 2008; Schutt & Hightower 2009). Interdisciplinary initiatives are also explicated (Morgan et al. 2007).

Finally, a unique collaborative project has also been described in the literature (Krom et al. 2010). Here, a clinical nurse specialist, health science librarian, and a staff nurse working together to translate evidence into clinical practice has proven successful.

#### NEW MANDATES CALL FOR A NEW COURSE

A new course at Brigham Young University (Scholarly Inquiry in Nursing) expanded the role of the subject librarian assigned to nursing in order to meet a variety of guidelines related to evidence based practice and

communication. These include standards of the American Association of Colleges of Nursing (AACN) *Essentials of Baccalaureate Nursing Education* (2008), which states that “professional nursing practice is grounded in the analysis and application of evidence for practice” (p.10) and further suggest end of program competencies include “use of written, oral, and emerging technology methods to communicate effectively” (p. 3). Likewise, the Institute of Medicine (Greiner & Knebel 2003) stated, “[Health care providers] must be able to communicate, manage knowledge, and support decision making using information technology” (p. 4). In the same publication, the IOM Committee on Health Professions Summit called for core competencies, including information literacy, for education in all health care disciplines.

Some professional guidelines relate specifically to informatics. In fact, the National League for Nursing (2009) has an informatics agenda position statement which emphasizes the essential role of informatics in promoting patient safety and quality. Finally, the Technology Informatics Guiding Education Reform Initiative (2007) recommends that nursing programs focus on competencies in informatics at all levels of nursing education. In summary, it is imperative nurses acquire, “21<sup>st</sup> century knowledge and skills for practice in a complex, emerging technologically sophisticated, consumer-centric, global environment” (Warren & Connors 2007, p. 58).

According to the landmark Institute of Medicine (2010) report on the future of nursing, “Nurses are being called upon to master...informatics management systems while collaborating and coordinating across teams of health care professionals,” with skills needed to synthesis and analyze data in order to have the competencies to make critical decisions in multiple clinical situations and care settings. Additionally, quality and patient safety education highlight the need for nurses to be able to “describe reliable sources for locating evidence reports and clinical practice guidelines” (Cronenwett et al. 2007 p. 125). Performance indicators related to information literacy competency standards are summarized in Figure 1.

#### NURSING INFORMATION LITERACY INFORMATION INSTRUCTION AT BRIGHAM YOUNG UNIVERSITY

The BYU College of Nursing has a long tradition of fostering evidence-based clinical practice (Callister et al. 2005) by including information literacy instruction in the curriculum. In fact, since 2005, undergraduate students enrolled in the traditional research course have attended one two-hour workshop on accessing the literature.

In creating the new course, Scholarly Inquiry in Nursing, the library experience was expanded to include two two-hour workshops, both taught by the nursing librarian. Nursing professors and teaching assistants participate in both workshops, assisting the students as needed, demonstrating the importance of the

library sessions. The nursing librarian is also available for appointments with students for one-on-one help after the sessions. Projected student outcomes are described in Figure 2.

The first workshop, taught within the first three weeks of the semester, helps students develop the ability to search the primary nursing literature via the *Cumulative Index of Nursing and Allied Health Literature (CINAHL)*, *Medline* and *PsycINFO*. The students come to the library workshop with a self-generated clinical question or topic for their writing assignment, which is an integrated literature review further described in Figure 3. During this session, the nursing librarian provides information and teaches techniques for a basic library search, including relevant databases and use of keywords, subject headings, Boolean operators, truncation, and limiters.

In addition, this session includes instruction on database and library logistics, such as how to manage search results and how to use the library's journal finder. Formal instruction takes approximately 40 minutes. During the remaining time, students search for articles on their clinical question. Sample topics are listed in Figure 4.

The second workshop focuses on two specific types of evidence-based sources: systematic reviews and clinical practice guidelines. The librarian begins with a discussion of evidence, the role it plays in clinical decision-making, and the hierarchy of evidence-based sources. Students are instructed specifically about

systematic reviews and clinical guidelines and taught how to find sources using the *Cochrane Database of Systematic Reviews* and the National Guidelines Clearinghouse.

Following the didactic portion of the second workshop (approximately 40 minutes), students work on a writing assignment that helps them understand what information is provided in systematic reviews and clinical guidelines. After finding one systematic review and one clinical guideline related to a clinical question, they are required complete a short written paper which course faculty and the nursing librarian evaluate. The assignment description is found in Figure 5.

Librarians, nursing professors, and teaching assistants again participate in the workshop by assisting students to search for relevant sources and determine the level of evidence used to support conclusions. The process of identifying appropriate sources is part of the assignment and helps students understand and evaluate the information provided by these evidence-based resources.

#### STUDENT EVALUATIONS OF THEIR EXPERIENCE

Student feedback on the workshops was initially gathered from three anonymous sources. The first was a formative midterm evaluation that occurred after the initial library session but before the second library session. The second was the standard summative course evaluation given every semester, with qualitative comments from some students about the library workshops. The third

was a separate survey specifically focused on the library workshops, which following institutional review board approval, was sent electronically to the students who had completed the course. Completion of the survey was considered consent to participate.

Student comments demonstrated improvements in their knowledge, skills, and attitudes toward information literacy and evidence based practice. In the midterm evaluation, a student said,

*I think the most helpful part of this class for me so far has been when we went to the library and learned how to search the databases. I'm sure that I [am] interested in keeping up on research and implementing it into my practice as a nurse, so it was helpful for me to learn how to look for good, credible research.*

Another student wrote, *"I liked learning how to use the databases to search for topics. It's helpful to learn the little tricks that make finding appropriate sources easier."* Similarly, a student said, *"It was especially helpful when [the nursing librarian] walked us through different kinds of advanced searches."*

Students found individualized help useful, *"I appreciated the opportunity of hands-on searching with one-on-one guidance."* Students also reported enhanced skills in accessing electronic sources including the *Cochrane Database of Systematic Reviews* and the National Guidelines Clearinghouse,

*I feel like I know how to access up-to-date articles for evidence based practice to implement in nursing. Accessing clinical guidelines helped me prepare a presentation for my medical-surgical clinical group on oxygen therapy for COPD [chronic obstructive pulmonary disease] patients. Accessing systematic reviews is helpful for doing research. That along with electronic searches will help me with my papers in [the Nursing Ethics course].*

One student noted, *“Being walked through the process of finding relevant research articles using the library resources was so helpful.”* Students also found the experiences helpful and relevant to clinical practice, *“I really enjoyed researching my topic for the literature review this semester. I learned a lot about how to read journals and about integrating research into my nursing practice.”*

Another student commented,

*The library workshop was very helpful in giving me an understanding of the wide variety of resources at my disposal for research purposes. Before taking this class I was unaware that the College of Nursing had access to a collection of databases specific to health-related issues and I found these databases useful.*

Suggestions were also made to improve the learning experiences, including creating an informational handout and several small assignments to allow students to reinforce and practice their searching skills. An additional

workshop on searching the web with a game format was also recommended.

Based on student feedback, a nursing guide (<http://guides.lib.byu.edu/nursing>) with key points on information literacy was generated and placed on the college of nursing website.

#### CONCLUSION AND IMPLICATIONS FOR NURSING EDUCATION

Brigham Young University's collaborative model demonstrates the essential link between librarians and nurse educators in enhancing students' knowledge and skills in information literacy. The first session taught students how to access evidence-based literature so they could complete the literature review assignment. The second session and short written assignment helped students find evidence-based sources and evaluate levels of evidence so they would be more likely to integrate evidence into their clinical practice. This learning experience was received positively. However, to be successful, several strategies are recommended in order to strengthen information literacy in nursing students and enhance collaborative work between the nursing librarian and nurse educators (Schutt & Hightower 2009). Recommendations for effective collaboration are summarized in Figure 6.

In conclusion, this paper should serve to highlight to nursing faculty and librarians, new and seasoned, the importance of partnering together to programmatically meet the increased information literacy guidelines required

nationally for students to wholeheartedly adopt evidence-based nursing throughout their careers (Forbes & Hickey 2009).

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Figure 1

Performance Indicators Related to  
Information Literacy Competency Standards

- Determines the nature and extent of information needed
- Accesses needed information effectively and efficiently
- Evaluates information and its sources critically and incorporates selected information into his/her knowledge base

(Association of College and Research Libraries 2000)

Figure 2

Projected Student Outcomes

- Increase understanding of the importance of fostering partnerships between nurses and librarians
- Empower with information literacy knowledge and skills through active learning activities in database searching and citation skills
- Enhance ability to transition into evidence-based nursing practice as new graduates
- Develop knowledge and skills to enable students to create change in the clinical care environment

Figure 3

Integrated Literature Review Assignment, Winter 2010 Syllabus

One of the major assignments for this course is an eight to ten page literature review on a topic of interest. A literature review is a comparative analysis of several studies directly related to a specific research question.

Because of the importance of evidence-based practice, nurses need to know what investigators are discovering about various nursing issues. Changes in practice should be based on findings from multiple studies, or a “body of research.” In your literature review, you will provide evidence from a body of research that could influence changes in clinical practice.

Your audience for this assignment consists of nursing professionals who want to know more about your topic. Consider this audience educated but uninformed about your topic and provide concise definitions of important concepts, understandable comparisons of research findings, and clear implications for nursing practice.

You will include five primary research articles published no earlier than 2005. However, one of these can be a systematic review, literature review, or state of the science paper instead of a primary research article. Two class days will be spent with the research librarian in the Harold B. Lee Library to help you effectively conduct computerized searches – see course calendar for dates, times, and location. In addition, you might want to conduct searches via the ancestry

approach, which involves locating a published meta-analysis or literature review and selecting some of the articles used therein.

There is a ten page limit, including the title page, the abstract, the main body of the paper, and the reference list.

Figure 4

Sample Literature Review Topics

- Management of hypertension in young African American males
- Effective interventions for childhood obesity
- Care of people with Down Syndrome who also have Alzheimer's disease
- Effective pain management in laboring women
- Treatment of mood disorders with micronutrient supplementation
- Increasing culturally and linguistically competent care of patients with limited English proficiency
- Palliative care of pediatric patients and their families

Figure 5

Library Assignment Description

Two types of resources will be useful when you are a practicing nurse: systematic reviews and clinical practice guidelines. Both resources provide evidence-based information about specific interventions and treatments. This exercise will help you become familiar with both systematic reviews and clinical practice guidelines.

- Find a systematic review and clinical practice guideline related to the clinical question addressed in your literature review. Use the Cochrane Library to find a systematic review and use the National Guidelines Clearinghouse (<http://www.guideline.gov>) to find a relevant guideline
- Compare the clinical information and recommendations from each source and write a one-page paper detailing your analysis of the following:
 

What is the clinical question you seek to answer?

Do the two sources recommend the same treatment or standard? If not, how do you differ?

If you were caring for a patient, how would these documents help you?

What is the evidence to support the guideline or review? How does this affect your assessment of their conclusions?

- On the second page, include a reference list with the systematic review and clinical practice guideline cited. Include the web address

Figure 6

Suggestions for Science Librarians and Nursing Faculty

- Educate faculty about the role of the science librarian
- Look for opportunities to provide support for faculty and staff related to information literacy and library services
- Develop links between the nursing and library website
- Provide library workshops on information literacy
- Collaborate on projects, presentations, and publications
- Generate ideas to incorporate information literacy learning strategies across the curriculum
- Evaluate outcomes of information literacy learning strategies

(Sherwill-Navarro 2004; Schutt & Hightower 2009)