
Information-seeking behavior of nursing students and clinical nurses: implications for health sciences librarians*

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Objectives: This research was conducted to provide new insights on clinical nurses' and nursing students' current use of health resources and libraries and deterrents to their retrieval of electronic clinical information, exploring implications from these findings for health sciences librarians.

Methods: Questionnaires, interviews, and observations were used to collect data from twenty-five nursing students and twenty-five clinical nurses.

Results: Nursing students and clinical nurses were most likely to rely on colleagues and books for medical information, while other resources they frequently cited included personal digital assistants, electronic journals and books, and drug representatives. Significantly more nursing students than clinical nurses used online databases, including CINAHL and PubMed, to locate health information, and nursing students were more likely than clinical nurses to report performing a database search at least one to five times a week.

Conclusions and Recommendations: Nursing students made more use of all available resources and were better trained than clinical nurses, but both groups lacked database-searching skills. Participants were eager for more patient care information, more database training, and better computer skills; therefore, health sciences librarians have the opportunity to meet the nurses' information needs and improve nurses' clinical information-seeking behavior.

INTRODUCTION

Nursing professionals need a wide variety of health information to meet their clinical and educational needs.

* This research was supported by National Institutes of Health grant number NIH 1 G07 LM0667-01.



This article has been approved for the Medical Library Association's Independent Reading Program (IRP).

Due to time constraints, many health care professionals prefer to obtain information from resources that are convenient, easy to use, and reliable [1, 2]. Professional superiors, colleagues, and other health care providers, especially physicians, are favorite resources for nursing information [3, 4]. Print materials are another group of preferred resources of information, including nursing textbooks [4-7] and journals [8]. Other reports, however, indicate an underutilization of the available nursing literature with a reduction in textbook use [9] and minimal reliance on print journals [10].

Research reported in the mid-1990s found that electronic sources of information, CINAHL and MEDLINE, for example, were increasing in popularity, but usage reports differed from study to study [9, 11, 12]. The literature further reported that database searching as a source of nursing information was underutilized and listed several factors that impeded nurses' successful information gathering, including lack of access to a computer [13] and lack of time to search large volumes of health literature [9]. Some nurses were reluctant to utilize digital information resources [1] and exhibited a lack of knowledge about computers [14, 15]. As a result, not all information needs were pursued [7]. Another study found that database searching was a critical skill for new nurses [16]; however, nurses might not have the necessary skills to pursue their information needs [1], because their insufficient training precluded addressing those information needs adequately [13]. Research also showed, however, that, with training, individuals did use more online health information resources and that the use of online databases also increased with training [13, 17].

Several studies have reported that libraries were widely used resources for health information by students and health professionals [9, 11, 12]. However, other studies have shown that many health professionals were reluctant to use libraries, or they did not have access [1, 2, 18]. The literature demonstrated that health sciences librarians provide valuable services to assist nurses with information retrieval. University librarians offer mediated computer search services [19], and some medical school librarians also offer live digital reference service [20–24].

This study reports on the information resources that were used for patient care by clinical nurses and nursing students, the frequency that the resources were used, the reasons that resources were not used, and the participants' use of the library. Recommendations are made for ways in which librarians can help meet the information needs of nurses.

METHODS

This study was a collaborative effort between a library school, a college of nursing, and 3 not-for-profit health care facilities. The sample population included 50 nurses who received 2 hours of introductory instruction in effectively searching National Library of Medicine (NLM) databases, as part of the training component of a grant funded by the National Institutes of Health (NIH). The participants were equally divided between nursing students and clinical nurses. Specifically, 25 nursing students, all of whom also worked in health care facilities, were drawn from an elective graduate class in nursing informatics in the nursing school, while 25 clinical nurses were drawn from a population of nurses working in 3 not-for-profit medical facilities without libraries, located in 3 communities that ranged in size from 15,340 to 303,477 residents. Participants had a wide variety of nursing degrees with many different areas of specialization in-

cluding nursing administration, nursing education, medical surgery, emergency room, critical care, licensed practical nursing, oncology, pediatrics, psychiatry, family practice, family health, and adult primary care.

The graduate nursing students took classes and worked in a variety of health care settings, including large urban hospitals, small rural hospitals, specialized treatment hospitals, and home health care programs. Some work facilities had a health sciences library and library staff, and some had no library. All of the students had on-campus and remote access to print and electronic health sciences information resources in addition to the access provided in their workplaces.

In contrast, the clinical nurses worked in not-for-profit clinical health care facilities that included a community mental health center, an indigent facility with a medical clinic, and a hospice. These not-for-profit health care settings did not provide access to any organized health care resources in a library and did not have a health sciences librarian. No clinical nurse had recent database training. Each of the three work locations, however, provided nurses with some printed patient care reference resources in the clinical work areas on patient floors.

The nursing students enrolled in an elective nursing informatics course presumably had greater computer interest than those nursing students who did not choose an informatics class. The clinical nurses' work facilities had limited information resources and thus limited development of their information retrieval skills. These selection criteria limit the ability to generalize the findings of this study to the whole field of nursing.

This study used three methods of data collection:

1. Questionnaire: The participants completed an anonymous questionnaire prior to database training to ascertain demographics, current use of health care resources, and frequency of use of resources, with particular emphasis on electronic resources for retrieval of health care information and deterrents to electronic clinical information retrieval (Appendix). A few participants did not answer some of the questions on the questionnaire; therefore, the reported percentages are based on actual responses.
2. Interview: The interviews provided in-depth information that helped to further explain and describe the nurses' responses on the questionnaire.
3. Observation: The trainers observed the searching behavior of participants by one-on-one viewing of their database searching during the NLM database training exercises to determine the participants' abilities to search databases and to compare the nurses' actual database searching skills with their perceived computer skills as reported on the questionnaires.

RESULTS

Use of specific information resources

Participants identified health information resources that they used from nine types of health care resources

Table 1
Clinical nurses' and nursing students' frequency of use of health information sources

Information source	Nursing students (n = 25)			Clinical nurses (n = 25)		
	Daily	At least weekly	Monthly	Daily	At least weekly	Monthly
Humans	37.5%	62.5%	—	60.0%	40.0%	—
Books	25.0%	58.3%	16.6%	64.0%	36.0%	—
Internet	12.0%	64.0%	24.0%	33.3%	66.6%	—
Databases	9.0%	58.0%	33.0%	16.0%	31.0%	53.0%
Journals	16.6%	54.2%	29.2%	16.6%	58.3%	25.0%
Personal digital assistants (PDAs)	25.0%	12.5%	62.5%	—	—	100.0%
E-books/e-journals	13.0%	34.8%	52.2%	5.0%	10.0%	85.0%
Drug representatives	—	29.5%	70.5%	13.1%	21.7%	65.2%
Teleconferences	—	16.0%	84.0%	8.0%	21.0%	71.0%

including human resources, books, journals, databases, handheld computers, Internet sites, electronic books and journals, teleconferences or meetings, and drug representatives. Table 1 provides the reported frequency of use.

Both groups reported that they were most likely to use human resources and books on a daily basis; however, the third group of resources most likely to be used differed between the groups. Approximately 25% of nursing students reported using personal digital assistants (PDAs) daily, and around 33% of clinical nurses reported using Internet search engines daily.

Differences and similarities were also seen in resources reportedly used least often. For both groups, these included teleconferences, e-books and e-journals, and drug representatives, while, for clinical nurses, PDAs and databases were also seldom used.

Electronic resources

All of the nursing students in the study had computers at home, and 76% had use of computers at their place of work; on the other hand, only 80% of the clinical nurses had computers at home and only 40% had convenient access to computers at work. These percentages were an increase over a 2001 study [13] that found that 56% of the nurses had computers at home and 38% had work access to electronic resources.

Considerably more nursing students used electronic databases and the Internet for health information than clinical nurses (Figure 1). Specifically, 96% of nursing students used CINAHL, but only 4% of clinical nurses, none of whom had access to CINAHL at work. MEDLINE (whether through NLM's PubMed system or a commercial provider such as Ovid) was used by 40%

Figure 1
Comparisons of use of databases for health information by nursing students and clinical nurses

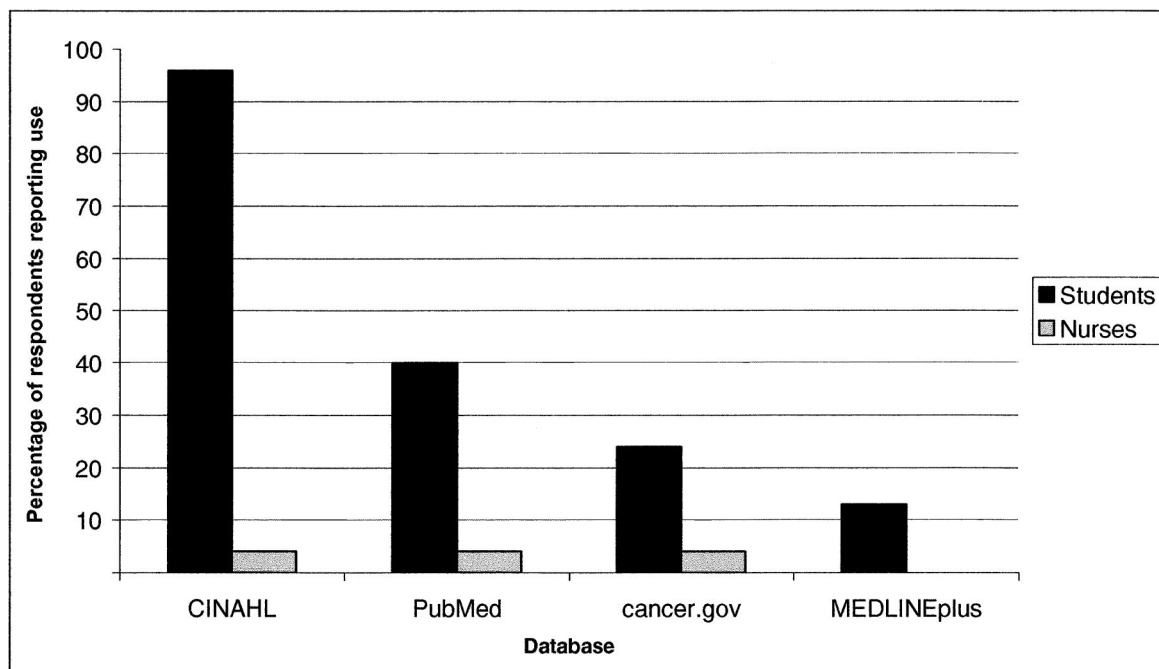
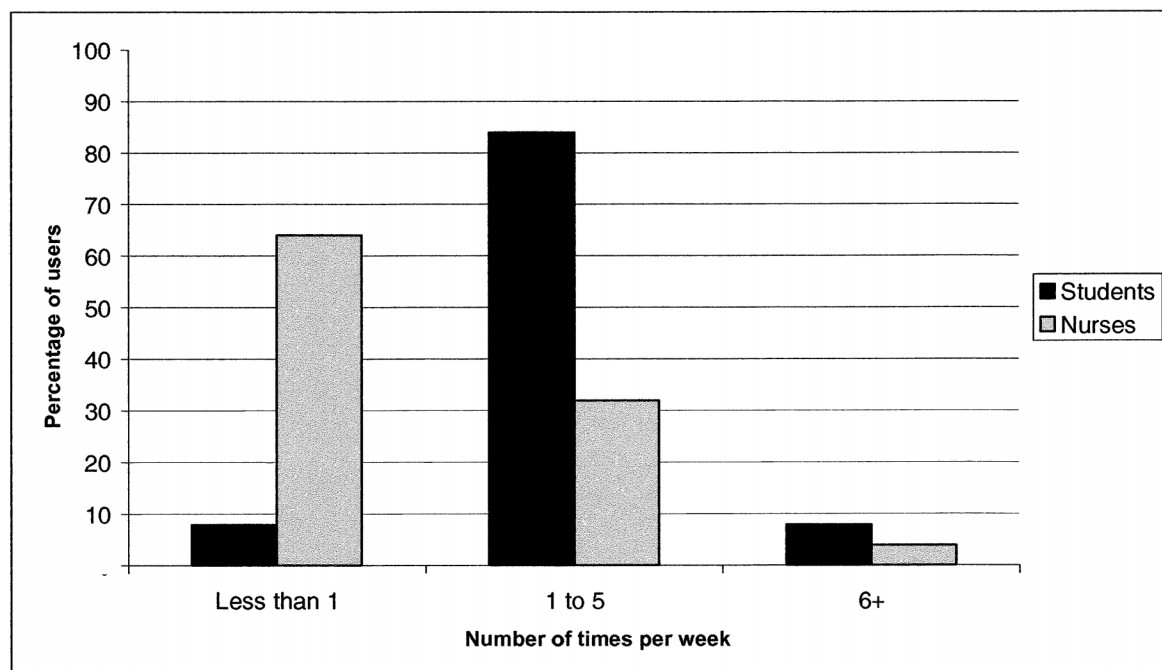


Figure 2
Frequency nursing students and clinical nurses consult databases



of nursing students and only 4% of clinical nurses. The National Cancer Institute's (NCI's) cancer.gov Website was used by 24% of nursing students, compared to only 4% of clinical nurses. Some nursing students used NLM's MedlinePlus (13%), but no clinical nurses did. In fact, of those not using the NLM or NCI databases, almost no nurse or nursing student was even aware of the NCI cancer.gov or MedlinePlus databases until the training classes.

The PDA, the newest electronic means for downloading nursing and health care information, especially free prescription drug information, had little use as a medical information source, however. While 68% of clinical nurses had access to PDAs, they seldom used them. A smaller percentage (64%) of nursing students overall had access to PDAs, but, of those, 25% reported frequent use of PDAs, 34.8% used them occasionally, and 52.2% used them only seldom for patient care questions.

Respondents were also asked to indicate the number of online health information searches performed per week. As shown in Figure 2, 8% of the nursing students reported using online databases more than 6 times a week, 84% of nursing students used them from 1 to 5 times a week, and 8% of the nursing students indicated usage of less frequently than once a week. On the other hand, for the clinical nurse sample, 4% used databases more than 6 times a week, 32% used them from 1 to 5 times a week, and 64% did not perform searches even on a weekly basis.

The usage figures clearly reflected the different access to databases and the previous training for each group. Additional comparisons of factors that influ-

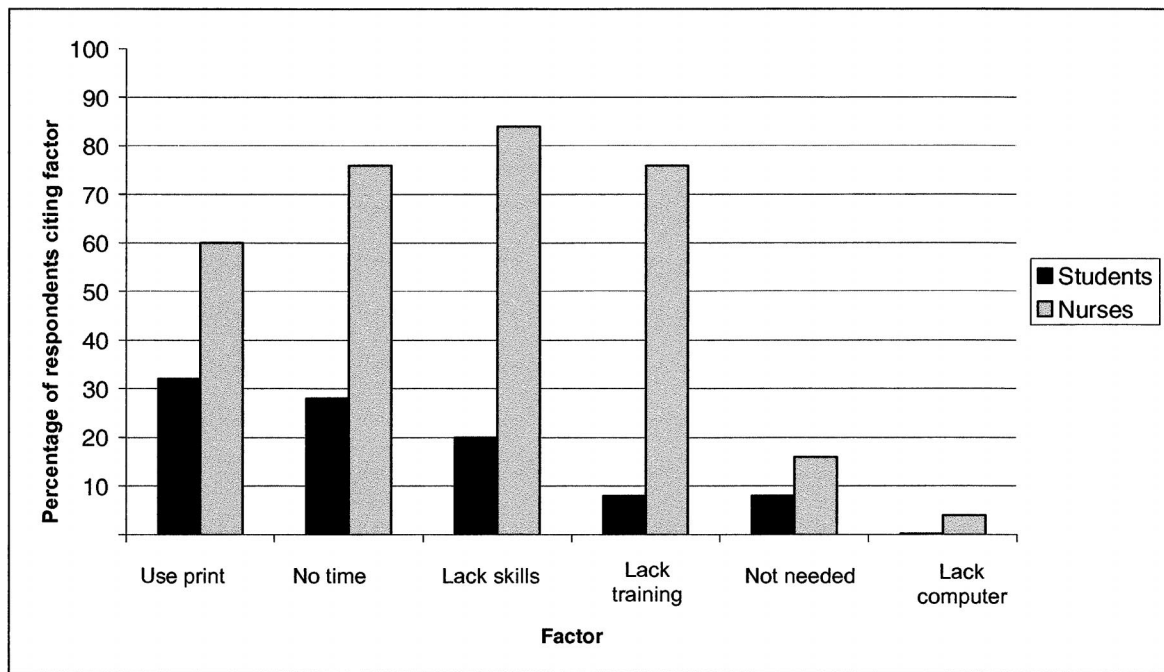
enced database searching by nursing students and clinical nurses found that insufficient time for electronic database searching was a deterrent indicated by 28% of the nursing students, compared to 76% of clinical nurses. The lack of overall computer skills was a bigger deterrent for clinical nurses, reported by 84% of respondents from that group and 20% of the nursing students. Only 8% of the nursing students considered the lack of database training to be a barrier, while 76% of the clinical nurses felt they needed more database training. Eight percent of nursing students and 16% of clinical nurses indicated that they felt no additional health information was needed for patient care or schoolwork. For this small group, electronic resources were considered unnecessary and were not pursued (Figure 3).

DISCUSSION

Human resources

This study found that nursing students and clinical nurses preferred human resources such as professional superiors, clinical supervisors, nurse colleagues, physicians, or other health care providers. In fact, 100% of both groups reported consulting a human resource at least once a week. While 60% of the clinical nurses reported consulting a human resource daily, only 37.5% of nursing students did the same. Fakhoury and Wright [3] reported that psychiatric nurses preferred psychiatrists (71%) and other community psychiatric nurses (52%). Cogdill [4] found that 63% of the nurse practitioners preferred weekly consultations with physicians rather than non-human resources.

Figure 3
Factors reported as inhibiting use of electronic databases for health information



In interviews, the participants in this study expanded on the information in the questionnaire and explained that time was an important consideration in their retrieval of information. Participants said they consulted a human source, because they believed that the human resources were the fastest way to obtain reliable and concise information.

Print resources

Print resource usage was reported as heavy for both clinical nurses and nursing students, though the pattern of use differed slightly. While more than 70% of both groups reported using print journals at least once a week, only 83% of nursing students reported using books at least once a week, as compared to clinical nurses. In fact, 64% of the clinical nurse sample reported using books daily, as compared to only 25% of nursing students. These data were consistent with similar results reported in the literature [4–6, 8]. Cogdill found that 51% of nurse practitioners utilized textbooks and 61% utilized drug reference manuals a few times a week or more. Barta found that 73% of nursing students found nursing journals to be most useful and 33% selected nursing texts as most useful. Interviewees in this study explained their preference for printed books by stating that textbooks, like human resources, provided easy and convenient access to concise, reliable information. Interviews also revealed that journal subscriptions were used to stay current in the field but were not useful for specific patient care questions. Participants explained that locating a specific article for a specific patient care question from a journal without a comprehensive index was not a reasonable task.

It must be noted that although this questionnaire and the interviews indicated that human and print resources were preferred resources, this was not always through choice but often from necessity, because human and print resources were readily available and other resources were not available. For example, the nurses at the clinical sites did not have access to journals other than their personal subscriptions and had no access to electronic databases.

Electronic resources

Electronic resources provide up-to-date, quality nursing information. In this study, the use of databases was fairly low (most often reported as 1–5 searches per week) and was higher for nursing students (84%) than for clinical nurses (32%) at that frequency of use. This use is perhaps predictable, because nursing students had more recent training in the subscription databases from the academic health sciences librarians and because nursing students were assigned papers and projects for class that encouraged and even required the nursing students to use the databases.

The interviews and observation of all participants indicated that electronic databases were much more popular sources of information for those who were skilled in and comfortable using computers. The less skilled tended to favor easy and familiar Internet resources such as popular search engines and keyword searching, rather than health information databases that they found were harder to access and required more skill to use.

Computer access

Fewer than 50% of the clinical nurses reported that they had computers in a convenient central location at their worksites prior to the NIH grant. Nurses reported that this lack of computer access in a central location was one cause of their low level of database searching for patient care questions. In addition, clinical nurses did not have access to subscription databases such as Ovid or CINAHL on the limited number of computers that were available, and they had not been trained to use the freely available NLM databases. This lack of prior training also clearly contributed to their infrequent database searching.

In contrast, 75% of the nursing students had access to a computer at work. The nursing students worked in health care facilities affiliated with the nursing school that were more likely to have advanced technology and libraries with access to databases than the clinical nurses' not-for-profit work sites. Nursing students reported that they also had remote access to databases through the health sciences center library. It is interesting to note, however, that many nursing students reported that they chose not to use electronic resources sometimes and selected other resources for information retrieval.

Computer and database skills: perception versus reality

Nursing students. Twenty percent of the nursing students in this study reported that they felt they lacked the technological skills to search electronic databases. The questionnaire showed that most of the nursing students used the Internet, particularly Google and Yahoo, for medical information and were familiar and adept with Internet keyword searching and Internet subject directories. This finding confirmed the searching skills data reported by McDaniel et al. [25] and Curtis and Weller [11], which indicated that nursing professionals had a wide range of computer and searching proficiencies

Our observations of the nursing students' technology skills and use of the NLM databases' search features during database training revealed that most nursing students did indeed have a high level of computer expertise and Internet-searching skills. However, it was important to note that while the nursing students' database searching skills clearly reflected their current Internet-searching skills, their skills required significant enhancement to adapt them to NLM databases, and further NLM database training was required to teach the students to implement more sophisticated database-searching features. Several features were germane only to database searching, such as the options to narrow the search with the use of limiters and to focus the search with the use of medical subject headings.

Clinical nurses. In sharp contrast to the 20% of the nursing students who perceived that they lacked database searching skills, the questionnaire showed that

more than 75% of the clinical nurses perceived that they lacked these skills. Observation of the clinical nurses' database searching skills confirmed that the clinical nurses had a very clear perception of their own skills. However, we also observed that some clinical nurses had more computer expertise and searching skills than they initially identified. Like the nursing students, the observed searching skills for clinical nurses were definitely limited to those associated with Internet searching and, again, these skills did not lend themselves to database-specific features.

Both the clinical nurses and the nursing students revealed in interviews that when they answered the questions on the questionnaire about their database searching skills, they did not know that many advanced search features existed, such as limiting searches by date or language, and they were not aware of subject headings or any kind of thesaurus for database searching. This fact accounts for some of the disparity between the nursing students' high self-perception of their database-searching skills and their actual searching skills.

Training needed

Participants were initially reluctant to move away from simple Internet search techniques to use more sophisticated features. Following the introductory training, the participants dutifully worked to narrow their searches during the training exercises and focused their topics using limits such as language, human, and journal subsets while adding subheadings. However, when participants were given time to search a personal topic, the trainers observed that about 33% did not narrow their searches. We observed that the participants were at first satisfied with retrieving huge lists of articles, similar to those lists so frequently obtained with Internet searches.

Interviews revealed reasons for this reluctance to narrow initial searches. The first was the strong influence of Internet search engines. Both groups admitted in the interviews that they usually obtained large retrieval lists from Internet search engines and they often scanned the first few retrieved articles. Participants expressed frustration at the huge search retrieval and enthusiasm for the fact that PubMed had search features that allowed them to limit by date, language, journal subsets, and other limiters.

Both groups admitted in interviews following the database searching exercise that they remembered that a way to narrow the search existed, but many could not quickly remember where to find the limits and the subheadings and simply settled for the large retrieval. Additional training helped them to locate the limits, but our observations pointed out the difficulty less-sophisticated users had with locating specific database features on PubMed. In fact, participants unanimously agreed during interviews that advanced training was essential in effectively using PubMed. In addition, many expressed an interest in one-on-one database training assistance to assist with more complicated search features.

The interviews also pointed out that the clinical nurses and the nursing students had different reasons for their desire for database training. The clinical nurses pointed out that they would benefit from additional training, because they would be able to access the NLM and NCI databases on the new centrally located NIH grant-provided computers in their facilities. On the other hand, the nursing students said that the real value of PubMed was not apparent to them, until they realized that they might not have access to subscription databases after completing nursing school. They stated that they would definitely use the NLM databases now that they were trained to use them. These statements fit with Wozar's [17] findings that database use by clinical nurses increased after training.

Both groups were eager to learn that the NLM and NCI databases offered free access to such a variety of high-quality clinical information, with a growing number of full-text articles, as an alternative to the often unreliable health Websites they found on the Internet. They said that they would use these databases for patient care, as well as recommend them to patients.

Time factor

Through the interviews, we found that clinical nurses did not have the time to access the databases on computers located away from the patient floors. Some nurses working in clinical settings would consider using the databases if they were available to them on the patient floors and if they were not too busy, but, they admitted, they usually were busy. This reinforced the earlier findings of Lathey and Hodge [1] that convenience was the motivational factor in nurses' selection of a health information resource. Verhey [9] also found lack of time to be a significant factor in searching for information for half of his nursing students.

Our interviews revealed that, because time was such a limiting factor, the nurses wanted answers to patient care questions that could be located quickly and easily and that the quality of the information could be compromised by the need for rapid retrieval. Colleagues and books were consulted frequently, because both were on the patient floors and were easy to access. Participants reported that journal citations without full text were of little use for patient care. Nursing students reported that they used medical research articles from quality databases for school assignments, but that they needed more concise, factual information resources that were immediately available to them for clinical patient care questions.

Need for information

On questionnaires and in interviews, many nurses expressed that, in the clinical setting, they usually did not feel compelled to pursue more clinical information, and they did not perceive that this information was usually needed for patient care. Most participants said their supervisors did not require or encourage them to retrieve information from the literature, some of

which was located on the patient floor, for use in patient care or to follow up on patient care questions. In addition, students observed that their supervisors did not appear to pursue patient care information from literature resources on complicated cases. Participants stressed that the lack of time in a hectic clinical atmosphere on the patient floors did not permit discussion of patient care questions with their supervisors and that they often turned to their colleagues for additional patient care information if they felt it was needed.

The nursing students suggested that hospitals' participation in the Magnet Recognition Program might provide new encouragement for nursing supervisors to use the published literature for evidence-based patient care. The Magnet Recognition Program, developed by the American Nurses Credentialing Center, recognizes health care organizations that provide excellence in nursing. Nurses reported that nursing supervisors were often strongly encouraged by hospital administration to publish articles, and this idea was passed down to the nurses. The impact of the Magnet Recognition Program on libraries will be important for health sciences librarians to monitor.

Library use

Questionnaire results indicated that clinical nurses with no access to health-related libraries at work did not seek out other health sciences libraries for research. Surprisingly, nursing students made minimal use of the health sciences library (4%) and only limited use of the library in the hospital where they worked (28%). In contrast, two nursing students reported in an interview that one particular hospital librarian offered mediated database searching and textbook and journal retrieval to nursing students. Library usage by students was high in this hospital library, and they reported that they gratefully relied on the librarian as a time saver for quality information retrieval. Other participants explained in the interviews that the library was too far away, if at all available, or was inaccessible because of parking challenges. Wakeham [18] found that nurses in the United Kingdom were also reluctant to use libraries due to lack of time (67%) and poor access (40%). Various other studies confirmed this lack of library use by nurses [1, 2].

Many nursing students and clinical nurses explained that they did not feel confident in their abilities to use the academic health sciences library, the hospital library, or even the public library, and many admitted that they did not even know what health information resources were available to them. Similarly, Verhey [9] reported that more than 33% of the respondents felt unfamiliar with libraries. In the interviews, many participants expressed that they did not know that librarians in academic health sciences libraries or hospital libraries would teach them to search for information related to their patient care or school-related information needs. They also believed that the information in the academic health sciences library and the hospital library would be too technical and incompre-

hensible for their nursing needs. Some still believed that the hospital library was only for physicians.

The lack of knowledge about librarians' capabilities is troubling, because librarians are uniquely qualified to improve the information-seeking capabilities of nursing professionals. Health sciences librarians are eminently capable of providing reliable health care information to nursing professionals, whether by training them to search or by directly providing them with the needed information.

CONCLUSIONS

The results of this small-scale study revealed that human and print resources continued to be preferred over electronic resources for health information for patient care by both nursing students and clinical nurses. In interviews, nursing students and clinical nurses explained that they preferred the human and print resources, because they were easy to use and provided immediate access to trusted sources of health information.

Nursing students had access to many high-quality health information resources but tended to use resources based on accessibility and awareness of the resource and its content. Clinical nurses, on the other hand, usually had limited access to health information and relied on their own expertise, colleagues, and books on the patient floors.

Books continued to be popular resources for patient care for all participants, because books provided immediate access to concise information. However, books rapidly become out of date. Electronic books might meet this need, if they were very accessible and affordable for budgets with limited funds for health sciences library resources.

Both nursing students and clinical nurses needed enhancement of their information-seeking skills, particularly their database-searching skills. The nursing students in this study had advanced searching skills, but these skills were primarily derived from Internet searching and, as a result, they needed more training in the use of unique database features such as search limiters and subject headings.

Neither the clinical nurses nor the nursing students made full use of the clinical information resources available to them. Most were unaware of the library resources available to them and did not know about the many free, reputable, health databases that they could access. Very few nursing students or clinical nurses made much use of PDAs or digital reference library services, both potentially valuable health sciences tools.

RECOMMENDATIONS

Health sciences librarians are trained to provide information about libraries and library services to meet many of the clinical and educational needs of students and clinical nurses. Librarians can offer classes on trusted, up-to-date health care information resources

(particularly NLM's PubMed, MedlinePlus, TOXNET, and NCI's cancer.gov database); information on print resources available in the health sciences libraries; and classes on basic computer skills to prepare nurses for database searching. NLM's MedlinePlus and NCI's TOXNET provide full-text, up-to-date information; however, health care facilities must make these resources conveniently available on the patient floors and nursing supervisors must encourage nurses to consult the health resources for patient care.

Both academic health sciences librarians and hospital librarians can assist with clinical nurses' time constraints by offering these training classes as a continuing education program during routine and pre-existing nursing meetings. Academic medical librarians might offer to serve as guest speakers in undergraduate and graduate nursing classes to either train nurses in a new health sciences database or provide a database refresher course and answer questions about a database's search features. An added benefit to the training would be the increased visibility of the librarian and a demonstration of the librarian's ability to meet the nurses' health information needs.

Hospital librarians can recommend reference books to be housed on the patient floors to nursing supervisors in person, because supervisors have little time to leave patient floors. Delivering the information in a newsletter is an alternative, but the personal touch often provides excellent additional library marketing opportunities. Interviews in this study revealed that the nurses perceived that their supervisors were not encouraging them to search the literature and their supervisors themselves did not engage in research using the available literature. Taking information to the patient floors and talking with supervisors can be the first step in heightening the supervisors' awareness of and interest in the library, and their new interest in the library would be passed down to their nurses.

This cooperative effort among the library and information science staff, the nursing school staff, and the nursing students and clinical nurses who participated has had a positive result for all. Further collaborative projects to study the information needs and the information-seeking behavior of a wide variety of nurses are recommended.

Participants in this study seemed eager for more access to patient care information, more database training, and better computer skills. Health sciences librarians have an opportunity to help meet nurses' information needs and to help improve their clinical information-seeking behavior. The challenge is to meet their information needs within their limited time frames; however, health sciences librarians seldom encounter a challenge that they cannot meet.

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Received April 2004; accepted December 2004

APPENDIX

Relevant questions from study questionnaire

Frequency you consult medical information resources:

Humans/colleagues	<input type="checkbox"/> Daily	<input type="checkbox"/> At least weekly	<input type="checkbox"/> Monthly
Print resources/books	<input type="checkbox"/> Daily	<input type="checkbox"/> At least weekly	<input type="checkbox"/> Monthly
Internet	<input type="checkbox"/> Daily	<input type="checkbox"/> At least weekly	<input type="checkbox"/> Monthly
Databases	<input type="checkbox"/> Daily	<input type="checkbox"/> At least weekly	<input type="checkbox"/> Monthly
Journals	<input type="checkbox"/> Daily	<input type="checkbox"/> At least weekly	<input type="checkbox"/> Monthly
Personal digital assistants (PDAs)	<input type="checkbox"/> Daily	<input type="checkbox"/> At least weekly	<input type="checkbox"/> Monthly
Electronic books/journals	<input type="checkbox"/> Daily	<input type="checkbox"/> At least weekly	<input type="checkbox"/> Monthly
Drug representatives	<input type="checkbox"/> Daily	<input type="checkbox"/> At least weekly	<input type="checkbox"/> Monthly
Teleconferences/meetings	<input type="checkbox"/> Daily	<input type="checkbox"/> At least weekly	<input type="checkbox"/> Monthly

Check each search interface you have used for medical information:

CINAHL
 PubMed
 cancer.gov
 MEDLINEPlus
 Internet

Number of online medical searches per week:

< once a week
 1 to 5
 6+

Check all applicable deterrents to electronic searching for medical information for patient care:

Additional medical information not needed
 No time
 Lack a computer
 Lack computer searching skills
 Lack computer training
 Use print references