

# Information Needs and Seeking Behaviour of Nurses at the University College Hospital, Ibadan, Nigeria

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*liaise with the library of the adjacent College of Medicine of the University of Ibadan to design appropriate information literacy and information and communication technology training programmes to improve the nurses' information seeking behaviour and use.*

## Keywords

Information sources, information needs, information seeking behaviour; nurses, Nigeria

## Abstract

*The study investigated the information needs and seeking behaviour of nurses at the University College Hospital, Ibadan, Nigeria's first and largest teaching hospital. Using a questionnaire, data were collected from 240 nurses selected randomly from a population of 1,046. The questionnaire assessed the types of information needed by the nurses, how they met these needs, and the perceived relevance, availability and accessibility of the information sources. Almost all the nurses (94.0%) searched for information in order to improve their knowledge, while only 28.5% reported searching for information for patient care purposes. Colleagues topped the list of information sources most regularly used (88.1%), although only 59.3% reported finding the source adequate. The nurses reported lack of access as a major inhibitor of their use of the sources, and suggested that establishing information centres/libraries and enhancing their computer literacy skills would ameliorate their information-seeking problems. The study recommends that the hospital management should*

## Introduction

The assessment of the information needs and seeking behaviour of various professionals, such as nurses, is essential for assisting them to access and use information resources required for optimal work performance (Oyewo, 2006). Nurses constitute the majority of a hospital's clinical employees, and they are also the most frequently consulted resource persons in the health care system. Nurses are responsible for not only implementing physicians and surgeons' clinical orders or prescriptions, but also for maintaining a constant surveillance over their patients' health. Nurses care for the sick and provide them assistance with physical and psychosocial needs, until they achieve stability, regain their previous state of wellness, or achieve a new level of functioning. Nurses also gather and transmit information from patients and the patients' families to other health care providers, and sometimes serve as liaison resource persons between the patients and the patients' families. In addition, hospital nurses are responsible for coordinating all care activities for patients in their care. Information is therefore a very crucial tool for

nurses, and how they acquire and use the information are key determinants of their performance. This recognition underpins nurses' need for access to useful information and the necessary skills for using such information. Like most other professions, the information needs and seeking behaviour of nurses have been in a constant state of flux over the years, due to both rapid developments in the field, as well as the emergence of new information technologies (Corcoran-Perry and Graves, 1990).

Formal training of nurses started in Nigeria in 1957 at the University College Ibadan before its transformation to University of Ibadan in 1962. By the turn of the century, the institution had trained over 6000 nurses (Imomon, 2001). Akinyemi (2006) observed, however, that most of what is known about nurses' information practices comes from developed countries, and that most of the identifiable studies on information access and seeking practices of medical professionals in Nigeria focus on medical doctors. On the basis of this observation, the objective of this study was to understand the information needs and seeking behaviour of nurses at the University College Hospital, Ibadan, as well as identify the information sources available to them and the factors that facilitate or hinder access and use of the sources. Carrying out this study at the University College Hospital (UCH) Ibadan was considered most appropriate for gaining significant insight into the general information needs of nurses in Nigerian teaching hospitals, because UCH is both the largest and the oldest medical training institution in Nigeria, as well as the major supplier of nursing professionals to other similar institutions in Nigeria (Osuntokun, 1992).

Nursing-related information behaviour includes all the behaviours nurses manifest in relation to identifying, gathering, processing and managing information for optimal work performance (Pajarillo, 2001). Two important elements describe such information behaviour, namely: nurses' information needs and the sources of information that they prefer and use (Dorsch, 2000; Pajarillo, 2001). Accordingly, the questions that were addressed in this study are: Are nurses adequately aware of their information needs for the effective performance in their jobs? How do nurses seek for needed information? What are the information sources available? What is the pattern of use of the various sources of information

available to the nurses? What are the factors which influence nurses' use of the information sources? Answering these questions is important for designing appropriate strategies for meeting the information needs of nurses at the UCH, and for promoting adequate information seeking behaviour among them.

## Literature Review

### Information Needs, Uses and Sources

Information could be defined in terms of tools, processes or knowledge (Bates, 2002). According to Krikelas (1983), information need is the recognition of the existence of uncertainty in decision making. Information need also refers to the extent to which information is required to solve problems, as well as the degree of expressed satisfaction or dissatisfaction with the information (Ehikhamenor, 1990). Ehikhamenor defined information seeking behaviour as any activity of an individual that is undertaken to identify a message that satisfies a perceived need. Information use occurs when information acquired by a person to satisfy an information need is actually put into use. Information is usually obtained from information sources, which are the carriers of information.

According to Wilson (2000), information needs are influenced by a variety of factors such as the range of information sources available; the uses to which the information will be put; the background, motivation, professional orientation and individual characteristics of the user. Other factors are the socio-political, economic, legal and regulatory systems surrounding the user, as well as the consequences of information use. The quality of sources of information available to the user is also important because relevant sources are most likely to beget useful information. Information sources are efficient if they provide relevant, useful, specific and accurate information that could help users solve their problems.

### Nurses' Information Needs and Sources

Nurses need a wide variety of information to meet their clinical and educational needs (Cherly and Ellen, 2005). Generally, nurses need information to solve problems like supporting life long learning and

improving their knowledge on the practice of the profession. Furthermore, nurses in administrative positions in health care institutions need disciplinary, professional and administrative information for decision making. Nurses meet these needs through various sources, including:

- Human sources, including professional superiors, clinical supervisors, colleagues, physicians or other health care providers, clinical nurse specialists (Gorman, 1995);
- Local protocols and guidelines (Cherly, 2005);
- Print sources that include journals, textbooks, drug reference manuals, articles, nursing journals, electronic books, etc. (Lathey and Hodge, 2001);
- Electronic sources such as electronic databases, teleconferences, personal digital assistants, and computer access, etc. (Verhey 1999; McCannon and Neal, 2003; Cherly and Ellen, 2005), and,
- Other sources, including meetings, seminars, conferences, library facilities, and drug representatives (Urquhart and Davis, 1997; Verhey, 1999).

Of all the sources listed above, there is a general observation that health care professionals prefer to obtain information from sources that are convenient and easy to use, and reliable (Lathey and Hodge, 2001). Lathey and Hodge further showed that nursing professionals prefer superiors, colleagues, and other health care providers, especially physicians, as favourite sources of information. Conversely, print materials such as nursing textbooks, journals and other valuable forms of nursing literature have been reported to be under-utilized (Urquhart and Davis, 1997; Verhey, 1999). Lathey and Hodge (2001), Cherly (2005) and McCannon and Neal (2003) found in their studies that database searching was a critical skill for new nurses, but that nurses might not have the necessary skills to utilize such resources.

### **Why do Nurses Seek for Information?**

Corcoran-Perry and Graves (1990) studied cardiovascular unit nurses and found that over three-quarters (76%) of the nurses' reasons for seeking information was patient care-related such as general nursing care, medication administration, nursing care planning, care management, doctor's orders, policies, and patient education. According to them, only 22%

of the nurses sought information that pertained to unit and personnel management such as tracking people and equipment, conveying information, transferring data, admission, discharge or transfer, while the rest 2% searched for information for other reasons, such as a personal need to expand one's knowledge.

Lange (1992) advanced that, in addition to patient care, other reasons for seeking information pertained to agency or institution-specific factors, such as procedures and protocols relevant and applicable to the particular health care organization or setting. The study of Guise et al. (1994) on HIV clients in a clinic produced the same results in which patient care and treatment-related needs were found to be the major information-seeking drivers. They summarised the information drivers as follows: (1) treatment protocols/regimen, (2) diagnosis/etiology, (3) disease complication, (4) description of disease, and (5) adverse effects of drug therapy. Cheng and Lam (1996) found keeping oneself up-to-date, preparing for coursework, solving some work-related problems, explaining clinical problems, writing papers for conferences, preparing for lectures, undertaking research, and preparing talks or seminars as additional motivators. Spath and Buttlar (1996) also reported personal interest on a particular subject matter as an additional important motivator for nurses to seek for information.

### **Information Sources Preferred by Nurses**

Perry and Graves (1990) reported that, 45% of the time, nurses used verbal sources from fellow nurses and other healthcare personnel, and another 45% relied on written media such as patient records and references. They, just like Lange (1992), found a small number of nurses (10%) who used technical sources such as information coming from computer terminals and monitors. In another study by Spath and Buttlar (1996), acute care nurses prioritized their choices for information sources in the following order: professional journals, "other nurses," card catalog, films or videos, conferences and CD-ROM databases. In their own study, Bunyan and Lutz (1991) showed that traditional sources of information, such as libraries, librarians and other information services, were not popular choices among nurses. Stephens et al. (1992) found that more than 50% of

nurses have not been to the library in six months, and were less confident in their library skills. Spath and Buttlar (1996) showed that, when nurses use the library, it was mainly to pursue personal interests on a subject matter.

Some of the reasons nurses use human sources were described by Blythe and Royle (1993) as “needing quick and precise directions from experienced authorities without having to leave their patients who need them physically nearby”. Preference for human sources is not only true for nurses, but also for other health professionals, including physicians and allied medical professionals (Perley 2001). Health professionals frequently call on human sources of information because of a need for higher-order information, help-seeking to gain confirmation, and guidance or supervision (Gorman 1995).

In Nigeria, Ajayi (2005) recently studied the information-seeking behaviour and information needs of professional nurses at the Obafemi Awolowo University Teaching Hospital (OAUTH), Ile-Ife, Nigeria. The study found that nurses were aware of their need for current information for effective professional practice and that the sources the nurses considered capable of supplying most of their information needs were meetings, seminars, conferences and colleagues, whilst the library was not highly rated by the respondents. Electronic resources were not reported by the nurses as available and accessible, and were therefore not used. Although OAUTH and UCH are first generation tertiary-level health institutions in Nigeria, the relative older age of UCH, as well as its much larger size in terms of manpower and infrastructure, may dispose nurses in the institution to different patterns of information seeking behaviour than was found at OAUTH. This was an additional motivation for this study.

## Methodology

The University College Hospital (UCH), Ibadan, was established in 1957, and this means that it is the oldest federal institution for tertiary health care, teaching and research in Nigeria. The hospital has 45 medical specialties and sub-specialties/disciplines and runs 75

consultative clinics weekly with 805 beds for admission (University of Ibadan Diary 2002). Apart from providing care, UCH is also a major training institution for diverse categories of health workers in the country. UCH has trained over 5,000 physicians and dentists and has produced approximately an equal number of scholarly publications of health-related researches as at 2002. During the same period, the hospital itself had trained more than 6,000 nurses and midwives and several hundreds other health professionals including medical laboratory scientists, teachers of community health, environmental health, medical records and radiography (University of Ibadan Diary 2002). The UCH is equipped with the oldest medical library in Nigeria that has Internet access, and that also has links with many international electronic databases. Internet access is available to senior and academic staff in the college, in addition to many cybercafés that exist in the community.

The target population for this study comprised nurses in the three major departments of nursing at the UCH, namely: Clinical Nursing, Public Health Nursing and Nursing Education. Using a questionnaire, data on the respondents' demographic characteristics, information needs, access to and use of information sources, motivators for choice of information and sources, and information-seeking problems were collected from the subjects.

To ensure that the study fulfilled ethical requirements, permission was sought from the authority of the Hospital after details of the objectives and methodology of the study were disclosed. A list of nurses was collected from the authorities and was further edited to construct the sampling frame, yielding a total of 1046 subjects. From this frame, a systematic sampling scheme that selected every fourth subject was used to draw 262 subjects, which is 25% of the population. The questionnaire was administered to these subjects and in the end, a total of 201 completed copies were retrieved, a response rate of 77%. The retrieved copies of the questionnaire were sorted and cleaned up, and the data were analysed using EPI-INFO software package. The main problem encountered in carrying out this study was the difficulty in securing participation of the sampled nurses, most of who reported being too busy at the time of the survey.

**Results**

**Demographic Characteristics of the Respondents**

The demographic characteristics of the respondents are shown in Table 1, indicating that the overall mean age of the respondents is 37.63 years, while the overall mean number of years of experience is 11. As is the common case with nursing profession, there were a few males, about one in ten, and majority of the nurses (65.2%) reported that they were married. Table 1 shows further that some of the respondents reported possessing master’s (8.0%) and doctorate (3.0%) degrees, and these were probably very senior nursing officers performing mainly administrative roles.

**How Often and Why do Nurses Seek for Information?**

The nurses were asked the question ‘*How often do you seek for information?*’ All the nurses (100%) indicated that they seek information very often. In view of Wilson’s (2000) study which investigated the possible reasons for which nurses search for information, this study asked the nurses to select which of the following reasons motivated them to search for information: curiosity, keeping up to date, research purposes, acquire more information, better job performance, new ideas, better patients care, and academic purpose. Acquiring more information was the reason most indicated (94.0%), followed by better job performance (52.3%), keeping up to date (46.2%),

**Table 1: Demographic characteristics of the respondents**

new ideas (41.7%), academic purposes (37.2%), research purpose (34.7%) and better patient care (28.5%).

### **Types of Information Needed by the Nurses**

The nurses were asked the extent to which they perceived their need for different types of information. Table 2 shows that each of the listed information types listed was reportedly needed by at least 90% of the nurses. But information related to new discovery in nursing (99.5%), outbreak of diseases (99.5%) and happenings around the world (99.5%) topped the list. The other types of

AIDS from patients (98.0%) appeared to be of higher priority to nurses than economic/business information (97.5%), how to avoid contracting diseases from patients (97.0%) and information about patient care generally (97.5%), while Information about social activities come (94.5%) last in nurses' information priorities.

### **Frequency of Searching for Information**

Also, the nurses were asked how often they searched for each of the information types. Table 3 shows that among the information types needed always, the three that topped the list included

**Table 2: Extent of nurses' need for different types of information**

information needed included new remedies (99.0%), nursing processes (99.0%) and results of scientific research (98.5%). General information (98.5) and information about how to avoid contracting HIV/

information related to patient care generally (91.5%), new discovery in the field (91.0%), and nursing process (88.6%), while social activities topped the information types that were sought only occasionally.

**Table 3: Frequency of search for different types information**

#### **Nurses' Awareness of Information Sources in the Hospital Environment**

Nurses were asked whether they were aware of the following information sources that existed in the hospital environment: library, information centres, Internet services, workshops/seminars/conferences, nursing journals, and television. A total of 96.0% of the nurses indicated awareness of the library, whilst 94% and 85.5% indicated awareness of information centres and the Internet, respectively. Only three per cent indicated awareness of workshops/seminars/conferences, whilst less than one per cent indicated awareness of television and nursing journals.

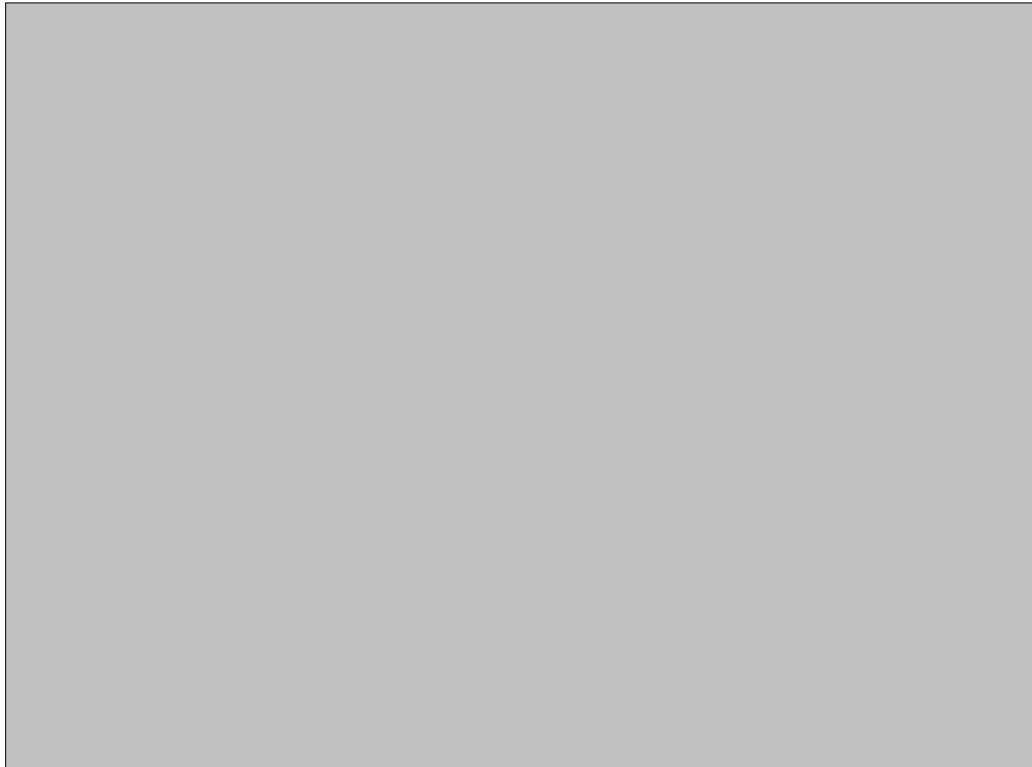
#### **Nurses' Assessment of the Relevance of Information Sources to Nursing Practice**

Do the nurses consider the sources of information available to them relevant to their work? To address this question, the nurses were asked to indicate the extent to which the information sources are relevant to their work. Table 4 shows the perceived levels of relevance of the sources. Among the sources that were perceived to be very relevant by at least 80% of the nurses were: lectures (91.5%), nursing journals (91.5%), seminars, conferences and workshops (89.6%), other medical journals (85.1%), books (85.1%), case notes (82.6%) and libraries (82.1%).

Bibliographies topped the list of the sources that were just relevant (33.3%). Fewer than 60% of the nurses considered magazines, television, newspapers, bibliographies and CD-ROM to be relevant to nursing practice.

summarised in Table 5. The table shows that a majority of them (86.1%) mentioned accessibility, while slightly more than half indicated availability (53.7%), reliability or credibility (53.2%) and relevance (52.7%) of the information source.

**Table 4: Nurses' perception of the relevance of sources of information to nursing practice**



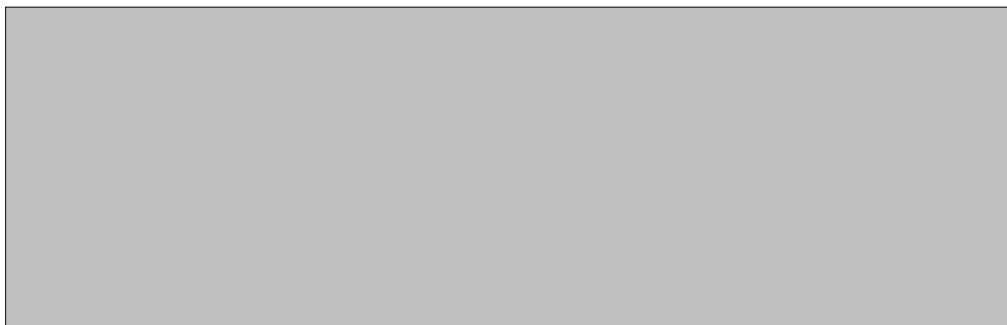
**Factors Influencing Preferences for Information Sources**

The data on the nurses' opinions regarding factors that influence their choice of information sources are

**Problems Encountered by Nurses when Seeking Information**

The nurses were asked to state whether they sometimes encounter problems when searching for

**Table 5: Factors nurses consider in choice of information sources**





information. A majority (61.2%) replied in the affirmative, and 79.1% of them mentioned difficulty in accessing foreign journals and materials (Table 6). Furthermore, 56.2% mentioned lack of awareness about the existence of relevant information sources, and 49.8% mentioned the problem of time.

establishment of information centres/libraries (90%), followed by making nurses to be computer literate (87.1%). The other suggestions offered by majority of the respondents were as follows: reduction of the cost of obtaining information (86.6%), educating nurses on how to get the type of information they

**Table 6: Problems encountered when seeking for information**

**Nurses' Suggestions for Improving their Access to Information**

The study synthesized issues that could be addressed by the hospital authority to enhance access by nurses to required information and asked the opinions of the nurses regarding them. Table 7 shows that the suggestion that the nurses liked the most was the

need (86.6%), making information sources readily available (85.6%), assisting nurses to access foreign journals and books (85.6%), and providing of computers with Internet facilities in each clinic or ward (83.6%). Provision of computers and continuing education programmes were not considered as priorities.

**Table 7: Nurses' suggestions for improving their access to information**

## Discussion

All the nurses reported that they searched for information very often in the course of performing their jobs. In terms of motivators or reasons for information-seeking, the main factors were personal needs followed by improved job performance. Patient care as a motivator was mentioned least frequently by the nurses. However, in terms of frequency of searching for information, the order was: patient care generally; new discovery in the field, and nursing process. The apparent contradiction here can be explained as follows: the primary work engagement of a nurse is to care for patients – a task for which the nurse is therefore compelled to search for information. However, in terms of personal preferences, the nurses might be inclined to searching for personal information more than they would other types of information.

Corcoran-Perry and Graves (1990) reported that over 76% of the nurses that they studied searched for information primarily for the purpose of patient care, while only 2% did so for other reasons, such as a personal need to expand one's knowledge. Cogdill (2003) has suggested that patients' needs and how to address them should be a priority in nurses' search for information. The findings of this study are clearly at variance with Corcoran-Perry and Graves' findings, as well as with Cogdill's recommendations. It does appear that nurses at UCH sought for information mainly to improve their personal knowledge and skills for their personal and work lives generally, and not necessarily for appropriate patient care. Possibly also, nurses might not trust the quality, or have adequate interpretation or application of the information they acquired from the information sources compared with those from hospital sources such as patient care protocols, colleagues, supervisors or doctors. Nurses are responsible and accountable for ensuring that only certified safe procedures are employed in patient care, and would therefore not seek for patient care information from sources they are not sure about.

In contrast to the finding by Corcoran-Perry and Graves (1990) that the nurses' information needs focused on patients, the nurses at the UCH were more interested in information regarding outbreaks of diseases. This need may be explained by the consciousness of the nurses about infectious diseases,

and the need to take precautions to safeguard their own health while taking care of patients. Spath and Buttlar (1996) have noted that personal interest is usually a strong motivator for nurses' information seeking. This explanation is underscored by the nurses reporting that they are usually very conscious of the danger of contracting HIV/AIDS and other diseases. In addition, the nurses surveyed in this study also wanted to improve their personal awareness and skill about the profession, a desire that might be driven by personal motives. Beyond these, the nurses wanted to have knowledge about new remedies for diseases, as well as nursing processes and results of scientific research. The nurses reported least need for social, political and business information.

Nurses use information from various sources, the most consulted sources being colleagues, seminars/workshops/conferences, case notes, lectures, nursing journals, medical journals, charts, patients, the Internet and television. This study therefore revealed a slightly different pattern of information seeking from that observed by Ajayi (2005) in which meetings, seminars/conferences and colleagues topped the list. In the studies of Cogdill (2003) and Cherly and Ellen (2005), personal digital assistants, electronic journals and books were among the top factors listed while Michelynn's (2006) study showed that nurses' sources of information were mainly from patients, colleagues and notice boards but rarely from published sources of information. Most of the studies reviewed for this study, however, support the view that interpersonal information sources dominate the sources of information used by the nurses because the sources are often easily accessible and sometimes very reliable.

Nurses generally frequently call on human sources of information because of a need for higher-order information, help-seeking to gain confirmation, guidance or supervision, as well as because colleagues and superiors are believed to understand what is best in the practice. Blythe and Royle (1993) reported that medical practitioners require quick and precise directions from experienced authorities without having to leave their patients who need them physically nearby. Moreover, medical practitioners are gregarious, and are interdependent in professional experiences and practices. They also observe hierarchical apprenticeship/leadership style in which superiors command more authority in clinical

decisions than the juniors; they require information sources that are prompt, current and selective, and can produce immediate feedback. The finding of this study confirms that informal information sources are explored first by nurses before formal sources, a result supported by Wilson (1995). This study also found that the nurses consulted, in order of frequency, interpersonal sources, illustrative documentary materials (graphical or handwritten) and human expert sources. Those sources that are much less often consulted are primary information sources, libraries and information centres, electronic sources, newspapers and magazines, the Internet, books, and indexes.

The study revealed that most of the nurses knew that a medical library existed within the hospital environment. The library is also linked with the Health InterNetwork Access to Research Initiative (HINARI), an initiative of the World Health Organisation which provides "free or very low cost online access to the major journals in biomedical and related social sciences to local, not-for-profit institutions in developing countries" (Cutler and Kubiszewski, 2007) as well as with other similar infrastructures. But the library was reportedly not frequently used nor even considered very relevant to nursing practice by the nurses. These findings raise some vital questions: Do the nurses know that the library could meet their information needs? Are the library's services adequately accessible to the nurses? Although further studies might be required to answer these questions fully, Bunyan and Lutz (1991) and Stephens et al. (1992) showed that traditional sources of information, such as libraries, librarians and other information services, were not a popular choice among nurses. According to Thomson (2004), previous studies found that despite nurses comprising 31% of hospital employees, only about 6% visit the library to pursue their information needs in their clinical practice, education and research. He further reported that there should be more assistance to nurses to effectively use the library. The non-use of the library by the nurses in this study may relate to access, which was reported by the nurses as major determinant of choice of information sources. Access was also reported by the nurses as a major problem encountered in using the information they needed.

Inadequate access here involves such variables as inadequate awareness, lack of time, pressure of work, inadequate library use skills, among others.

## Summary and Conclusion

This study was designed to examine the information needs and seeking behaviour of nurses in Nigeria's premier tertiary health institution -- the University College Hospital, Ibadan. It focused on the following: information sources used by nurses; the adequacy of the sources; the frequency of use of the sources, use, seeking behaviour and the problems faced by nurses in the course of seeking for information as well as perceived ways of ameliorating the nurses' information related problems.

Nurses are aware of their need for information for improved performance, and they use more informal than formal sources. Nurses reported that they require information about patient care more than other aspects of their information need, but patient care does not dominate their information search activities. Colleagues are very handy sources to the nurses, and they actually resort to them whenever they need information. But the nurses considered information from lectures, medical journals, nursing journals, seminars, workshops and conferences, the Internet and even libraries as more relevant than colleagues.

Although the nurses were aware of the existence of an information centre, as well as a library in the hospital, they suggested the establishment of libraries/information centres and reduction of the cost of accessing information sources as key strategies for improving their access to information. Furthermore, the nurses reported difficulty in accessing journals, despite the availability of free access to some foreign databases in the library. These findings show that the availability of an information source in a place does not guarantee that the users for which the source is intended will be aware of, or use, it. The findings also question the level of awareness of the nurses regarding the availability of information resources in the hospital. Does the curriculum of the nursing training include information literacy? Are there periodic programmes aimed at improving the information literacy of the nurses?

## Recommendations

The findings of this study support the following recommendations for consideration by the UCH management, as well as health policy makers in Nigeria generally:

1. There is the need to promote the nurses' use of both formal and informal information sources to facilitate regular self-directed learning. Hospital authorities should formulate policies aimed at encouraging nurses to regularly access various sources of information needed to keep themselves abreast of relevant information required for adequate professional practice.
2. The authorities of the hospital should also liaise with library of the College of Medicine to mount appropriate library use and ICT training programmes for nurses. This will enable them use information resources available within the hospital effectively to improve their work performance.
3. Nurses themselves should consider information literacy as a prerequisite for meeting the expectation of adequate care by both their employers, the patients and the public. Use of libraries and other information centres should be part of the nurses learning chores. Also, as information technology literacy has become a critical requirement for effectiveness in today's technology-driven society, individual nurses should gear up to acquire basic skills required to extract information from electronic information sources.
4. The UCH should implement periodic information dissemination and training programmes aimed at educating its staff of the availability and accessibility of information sources within and outside the hospital environment. This is necessary to enable them develop or update staff skills in effective use of the sources, as well as motivating staff to use the sources regularly. This could be achieved through combined use of training, advocacy and institutional support from both the Hospital authorities and the Nurses and Midwifery Council of Nigeria.

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