

**LIBRARY USE SKILL AS DETERMINANT OF INFORMATION
LITERACY COMPETENCIES AMONG NURSING STUDENTS IN
SOUTH SOUTH NIGERIA**

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Abstract

The main objective of the study was to investigate library use skills as determinant of information literacy competencies among undergraduate nursing students in South South, Nigeria. Two research questions were raised and a hypothesis tested. The sample size of the study was 476 nursing students. The results revealed that undergraduate nursing students in South South zone of Nigeria have a high information literacy competency profile. Library use skills of undergraduate nursing students moderately determined their information literacy competencies, while, library use skill were found to determine information literacy competencies of undergraduate nursing students in South South Nigeria. The study recommended that management of academic libraries should ensure the constant provision of current and relevant information sources to further satisfy the needs of the nursing students.

Keywords: Information, Information Literacy, Library Use, Nursing Students, South South, Nigeria.

Introduction

A few decades ago, being "literate" meant that one could read and write. The 21st Century has witnessed remarkable evolution of information as evidenced by the considerable large increase of technology ranging from bibliography to full database (Ajayi, 2004). The abundance of information has led many people to depend on it for important decisions.

While it is available in different forms which include graphic, aural and textual, having access and being able to make sense of it all poses new challenges to individuals especially students. Hence, the importance of the acquisition of a set of skills known as information literacy competencies.

Information literacy competency, according to Parang, Raine and Stevenson (2000), is library literacy, computer literacy, media literacy, technological literacy, critical thinking, ethics and communication combined, which after it has been acquired, assists users to become information independent. With regards to this study, the definition provided by UNESCO in its Information for All Programme (IFAP) as cited by Catts and Lau (2008), is adopted. This definition states that information literacy competencies is the capacity of people to know when they have information needs; locate and evaluate the quality of information; store and recall information; make effective and ethical use of information, simultaneously using the retrieved information to create knowledge. The important aspect of this definition of information literacy is that it is a broader term encompassing information need, information search/seeking behaviour, information retrieval, and information use.

The premise that students must be information literate to be successful in their work and personal lives is one that has become accepted by many people. For nursing students, there is an overwhelming amount of clinical information available, hence, Majid, Foo, Xue, Luyt, Yun-Ke, Leng and Mokhtaq (2011) stated that the search for the information to meet a required information need has become more important for nurses' clinical decision making. A review of nursing students and library literature indicates that few studies have examined library use skills of nursing students. A common finding reported by many prior studies is nurses' preference for print, ready reference, and interpersonal sources such as colleagues (Salamonson & Andrews, 2006). The aim of this study was to explore if library use skills determined information literacy competencies among undergraduate nursing students in South South, Nigeria.

Research Questions

1. What library use skills do the undergraduate nursing students have in South-

South, Nigeria?

2. What are the information literacy competencies of the undergraduate nursing students in South-South, Nigeria?

Research Hypothesis

Library use skill is not a significant determinant of information literacy competencies among undergraduate nursing students in South South zone of Nigeria.

Review of Related Literature

Information Literacy Competency of Nursing Students

Since the healthcare sector worldwide experienced major transformations as a result of information technology (IT) and information proliferation, information literacy has become one of the most essential skills that are a major requirement to work in the hospital environment. For students, being information literates would lead to independent learning, rather than dependence on the instructors to provide information needed to solve problems. This helps to create a responsibility towards their own learning, which in turn helps them become dynamic learners and thinkers who are innovative and analytical as well as efficient instead of mere regurgitations of facts (Sasikala & Dhanraju, 2011). The importance of information literacy for all categories of students is further heightened by the fact that the contemporary information world offers abundant information choices in different formats.

Nkosi, Asah and Pillay (2011) observed that the challenges posed to the users of information include too much of information in various formats and all not of equal value. Information explosion of both print and electronic sources are complicating access to and retrieval of information by the end users. Without the necessary skills to navigate these information, people may experience various information-related problems, such as using low quality information, being overwhelmed with information and lack of skills to filter available information (Miller & Bartlett, 2012).

To accomplish safe and effective health care, nurses require the skills to access, appreciate and apply pertinent research findings to their practice (Crookes & Davies, 1998), hence the need for future nursing workforce to be information

literate. Nurses are constantly being exposed to the changing demands in technology as they execute their patient-related duties in the workplace. Integration of Information Technology (IT) in healthcare systems improves the quality of care provided. Nursing students with prior exposure to such gadgets tend to have a positive attitude towards their use. Health care delivery increasingly requires timely information for effective decision making. Cole and Kelsey (2004) distributed a self-assessment questionnaire to a group of post-registered nurses' to determine their information literacy competencies. The results indicated that these students assessed themselves as having deficits in information literacy. Aggrey (2009) in his studies of information literacy among second and third year Medical student of the University of Ghana, discovered that information literacy among students was generally low, however, they were more familiar with word processing and less familiar with presentation applications, spread sheet and electronic mail, use of databases and search engines. The study by Anafo (2009) further revealed that the undergraduate students experiences difficulties in the use of the Boolean operators and evaluation of information from websites.

One of the most accepted definitions of information literacy that guides academic librarianship is provided by the Association of College and Research Libraries (ACRL, 2014). This body believes that an information literate student have a mastery of a set of abilities requiring individuals to recognize when they need information and have the ability to locate, evaluate, and use effectively the needed information. According to Gross and Latham (2009), this definition is further specified by a set of competency standards that emphasize five key skills. A person who is information literate: knows the type of the information needed, access information needed efficiently, evaluates information and its sources critically, personally or collectively use information effectively to accomplish a specific purpose, ascertain most of the ethical, and social issues involving the use of information.

Library Use Skills and Information Literacy Competency of Students

The library is the major traditional custodian of information; however, with the advent of information technology, information is now available in a variety of

sources and formats that are not necessarily restricted to the four walls of library building. For effective teaching and learning to take place, staff and students must have access to information resources in any format (Adeoye & Popoola, 2011). Making use of library resources by students is necessary to help them meet their research requirements (Nishat & Naved, 2008).

In a study of the used of the library catalogue by undergraduate students' by Islam (2010), it was reported that 8.97% of them use the catalogue as access materials, 15% of the respondents found books on the shelves, while 6.55% asked staff for assistance. In their work Fabunmi and Asubiojo (2013) investigated a study on awareness and use of online public access catalogue by students and the study revealed that 52% of the respondents had access to the OPAC and make use of it in the library, while 10.44% and 9.34% accessed it through the Internet and on the network of the college campus, respectively. This is a plus for the library, in the sense that the students make use of the university library facilities and the management of the library made the source available for them. On the use of online public access catalogue, 39.7% of the students used the card catalogue to access library materials, 11.8% consulted from friends and colleagues, 10.4% consulted with librarians. Klomsri and Tedre (2016) pointed out that one of the implications from their study was that students made low use of the library's e-resources and scholarly databases due to perceived inconvenience and inaccessibility.

Regarding information resources of preference, print resources were highly used by nursing students with over 70% using print journals at least once a week, a good majority of the nursing students (73%) of nursing students found revealed that journals were most useful to them (Cogdil, 2003). Dee and Stanley (2005) stressed that the choice of print journals was related to the fact that they were readily available, were easy to access, and information in them were found to be more reliable, compared to electronic journals which were not readily available. Research has revealed that medical professionals' use of electronic information increased exponentially. In agreement with the above assertion, McCulley and Jones (2014) also found that there was a 27% increase in use of electronic resources by respondents who used PubMed, but the most frequently used sources for health information were Google and Wikipedia.

Dee and Stanley's (2005) work affirmed that most nursing students used medical research articles from quality and reliable databases for their academic assignments. The authors further observed that lack of awareness among the nursing students about librarians' capabilities hinders them, and that nursing students felt medical libraries were for doctors only, expressing that the information available may be too technical and incomprehensible to meet nursing students information needs. In a similar study, the work of McCulley and Jones (2014) showed that one of the students interviewed commented that they felt more at ease about accessing information and knowing that there was always someone (a librarian) that can answer their questions at any time.

Research also showed that nursing students first consult human resources before turning to the library. For instance, Lathey and Hodge (2001) found that time constraint was one of the reasons why many health care professionals prefer to get information from information resources. Connaway, Dickey and Radford (2011) also attested to the fact that that convenience, with regards to access and ease of use of resources, has a significant influence on where nurses seek information. Professional superiors, colleagues, and other health care providers, especially physicians, are favorite sources for nursing information (Fakhoury & Wright, 2000; Cogdill, 2003). Fakhoury and Wright (2000) also found that practicing nurses frequently made use of consultations with their primary supervising doctors, drug reference manuals and textbooks.

In the results presented by Olajide and Otunla (2015), it was evident that most frequently used materials by nursing students were books, journals encyclopedias, dictionaries and directories in the library. These primarily print materials are highly used because in all three libraries surveyed there was inadequate service for use in the library; this is reflected in the 76.5% of respondents who ranked access as one of the key factors when choosing which information resource to use. Frequent use of the 42.8% and online databases 42.0% was found to be low. CD-ROM databases are the least frequently used because the format is becoming unpopular and because of an absence of adequate computers in two out of the three institutions. Biographies followed the least used because they may have little or no relevance to their work except for leisure or personal information. The response on frequency of

use of the library showed that 69.7% of respondents were active users of the library, visiting at least two times a week this probably indicate the importance of library to nursing students. The level of relationship with the library staff was also quite high at 71.2%, indicating that the student nurses recognize the benefit of seeking assistance from the library staff (Olajide & Otunla, 2015).

On the contrary, the findings of Dee and Stanley (2005) were that student nurses did not know that librarians could help them. Also, Grefshein and Ranklin (2007) with regard to seeking information from nursing students ranked colleagues as the most important source of information rather than visit the library. On the issue of source for finding information, the use of human resources (asking from their colleagues) was the highest with 73%. They revealed that there is a fundamental difference between using colleagues as sources of information and using them as where information can be found. This was discovered in this work since they may ask their colleagues where and how they locate a material in the library or does not mean that they are depending on them for the information or taking the information in its entirety from them.

Concerning the use of OPAC, undergraduates can perform several functions such as: locating library materials by searching by author/title/subject/keyword, identifying whether or not library materials have been checked out, make requests/loans, check overdue fines, etc (Fati & Adetimirin, 2017). Oyadonghan and Eke (2011) reported that 63% of the student users in FUTO had library access to OPAC which makes it easy to locate reading materials. Ndinoshiho (2010) also investigated the use of electronic information services (EIS) by undergraduate nursing students at the University of Namibia. With regards to OPAC use, the nursing students used it moderately, while e-databases were mainly under-utilized. Students used electronic information resources for a variety of purposes including obtaining academic information and current awareness. The researcher further queried the respondents on their use of EBSCO Host, an online collection of indexes and databases on various subjects. Of the few respondents who reported to have used e-databases, all used Health Source (100 percent), and only 50 percent used Academic Search Premier. The result also revealed that the respondent did not use MEDLINE, despite it being one of the most prestigious medical databases. The

main reason put forward for their lack of use was that they were unfamiliar with e-databases, the shortage of computers, unreliable connection, and lack of skills.

Methodology

The study adopted the survey research design using the ex-post facto method. The target population of the study was 2,326. As at the time of the study, there are twenty-three (23) federal, state and private universities in South South Nigeria. Of these, six (6) universities are offering degrees in nursing science. The institutions are: Delta State University, Abraka, Delta State, University of Port-Harcourt, Port-Harcourt, Rivers State, Niger-Delta University, Wilberforce Island, Bayelsa State, Igbinedion University, Okada, Edo State, University of Calabar, Calabar, Cross River State and University of Benin, Benin City, Edo State.

It is from these institutions offering nursing science that the population for the study was drawn. The sample was 20% of the total population. Furthermore, 20% was also used to determine the sample size for students in each university across the various levels of study. Hence, 20% of the total number of students in each of the levels of study was used. The purposive sampling technique was used to select the students for the study. This was done because nursing science is highly populated by females hence, to be able to adequately cover the male students; the researcher had to purposely select the students. A total of 476 copies of the questionnaire were distributed and 449 (94.2%) copies were returned.

The instrument used for data collection was the questionnaire titled "Library Use Skills as Determinants of Information Literacy Competencies Questionnaire (LUSDILCQ)". The instrument was adapted from the Information Literacy Test Manual (ILT, 2014). The responses to the items on the questionnaire were structured based on a four point scale of measurement of 'Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1)'.

Results

Demographic Data of the Nursing Students

Table 1: Age Distribution of the Nursing Students

Age Range	Frequency	Percentage (%)
16-20 years	183	40.8
21-25 years	236	52.5
26-30 years	17	3.8
31 years and above	13	2.9
Total	449	100

Table 1 reveals the frequency distribution of the undergraduate nursing students by their age. Undergraduate nursing students between the age range of 21-25 years had the highest frequency of 236 (52.6%). Next to this were those between the age range of 16-20 years 183 (40.8%). Ages 26-30 and 31 years and above 17 (3.8%) and 13 (2.9%) respectively. This means that there is a higher percentage of nursing students who were between the age range of 21-25 years in the South South zone of Nigeria.

Table 2: Sex Distribution of the Nursing Students

Sex	Frequency	Percentage (%)
Male	131	29.2
Female	318	70.8
Total	449	100

Table 2 represents the questionnaire response rate by sex. The table shows that male nursing students were fewer with a frequency score of 131 (29.2%), than the female nursing students with a frequency score of 318 (70.8%).

Research Question 1: What library use skills do the undergraduate nursing students have in South-South, Nigeria?

Table 3: Library Use Skills of the Nursing Students

I have the following Library use skills	Agreed	%	Disagreed	%
I know where the library building is situated	314	70	135	30
Use the library card catalogue	181	40.4	268	59.6
Use the Electronic catalogues (OPAC)	116	26	333	74
Use of reference sources to increase familiarity with topics	138	30.7	311	69.2
Understanding terminologies used in databases.	170	37.8	279	62.1
Find books/media in the stacks	250	55.6	199	44.4
Access on-line databases.	146	32.5	303	67.5
Download files from on-line databases.	112	25	337	75
Loan a library material	273	60	176	40
I am familiar with subject-specific databases	107	24	342	76
Use an Electronic Book	212	47.3	237	52.7
Using E-databases	109	24.3	340	75.7
Using E-abstracts	146	32.5	303	67.5
Use of Boolean operators (OR, AND, NOT).	99	22	350	78
Combining two terms to retrieve information.	187	41.6	262	58.4
Use of truncation search techniques (\$, *, +) to retrieve	158	35	291	65
Shelf search for library books.	233	52	216	48

Data in Table 3 shows the library use skills the nursing students had. Three hundred and fourteen 314 (70%) of the students agreed that they had the ability to locate the library. Two hundred and seventy-three (60%) students agreed that they have the skills required to take library materials on loan, while, 250 (55.6%) of the nursing students which is 60% agreed that they had the skill required of them to find books/media in the library stacks. Table 3 further shows that the nursing students did not have the skills required to use Boolean operators 99 (22%), use subject-specific databases 107 (24%) and to use electronic catalogues (OPAC) 181 (26%).

Research Question 2: What are the information literacy competencies of the undergraduate nursing students in South-South, Nigeria?

To answer the research question, a descriptive statistics was conducted. Using a benchmark of 2.50 to accept or reject the information literacy competency of the students.

Table 4: Information Literacy Competencies of the Nursing Students

States	Info Literacy	N	%	Mean \bar{x}	Remark
	Determining information need	449	100%	3.05	Accepted
	Accessing needed information			3.04	Accepted
	Evaluation of information Source			2.94	Accepted
	Ethical Issues surrounding information use			2.95	Accepted
	Have current information			3.14	Accepted
	Information Literacy			3.00	Accepted

Criterion Mean: 2.50, Aggregate Mean: 3.00

The result in Table 4 shows the information literacy of undergraduate nursing students in South South zone of Nigeria. It showed that there was high information literacy among the nursing students in South South zone of Nigeria. This is because the average mean of 3.00 is greater than the aggregate mean of 2.50. The finding implied that the undergraduate nursing students could know when they needed information, access needed information, evaluate information sources, understand ethical issues surrounding information use and have current information.

Research Hypothesis: Library use skill is not a significant determinant of information literacy competencies among undergraduate nursing students in South South zone of Nigeria.

Table 5: Library Use Skills as Determinant of Information Literacy Competencies among Undergraduate Nursing Students

Source	SS	Df	MS	F	B	Std. error	P
Regression	58602.87	1	58602.87	146.93	0.92	0.08	0.00**
Residual	178286.13	447	398.85				
Total	236889.00	448					

R=0.49, R²=.24

Table 5 shows the determining power that library use skills had on information literacy competencies among undergraduates nursing students in South South zone of Nigeria $F(1, 447) = 146.93$; $p < 0.05$; $R=0.49$, $R^2=.24$. The Hypothesis is therefore rejected. The result implied that library use skill is a significant determinant of information literacy competencies among undergraduate nursing students in South–South zone of Nigeria.

Discussion

Library Use Skills of the Nursing Students

Today, using the library as a major custodian of information requires much more than just going into the library building. The finding from this study showed that most of the students were familiar with the traditional library and how to go about using it. Most of them had the skills to locate the library building, use the books and other media from the library shelves and borrow them if they need to. However, their skills were seen to be limited to using physical library materials. Their skills were not very strong when it comes to using electronic library resources and services. This is a setback as it is a major requirement of the 21st century nursing students to have these skills. This is to ensure evidenced based practice on their part. This finding confirms the result presented by Olajide and Otunla (2015) that most nursing students used books, journals encyclopedias, dictionaries and directories in the library. On the contrary, this finding is not in agreement with Willinsky and Maggio (2011) that 27% of their respondents used PubMed, but the

most frequently used sources for health information were Google and Wikipedia. This finding also confirms Aggrey's (2009) result that only half of the students knew how to use the Boolean operators to access information sources.

This result does not agree with that of Lamptey (2008) who found out that few of the students knew how to use the card catalogue in the library to look for information. In a similar study by Adeoye and Popoola (2011) it was also observed that, library information resources in some of the medical libraries studied were not accessible to nursing students however, only the teaching staff were allowed access.

Information Literacy Competencies of Undergraduate Nursing Students

On information literacy competencies, the study revealed that the undergraduate nursing students in South South zone of Nigeria had high information literacy competency. For an individual to be said to have information literacy competencies, that individual must be able to determine his/her information need, access the needed information, evaluate the information source that was accessed, understand ethical issues surrounding the use of the information and have current information. Hence the nursing students could be said to have information literacy competencies. This result does not agree with earlier finding of some researchers. For instance, Cole and Kelsey (2004) found that the students assessed themselves as having deficits in information literacy. Aggrey (2009) also observed that information literacy among students was generally low, that they are more familiar with word processing, less familiar with presentation, spreadsheet and electronic mail and not familiar with databases and search engines. Anafo (2009) also found out that, most of the students' information literacy level was low.

On the first of the competency standards, the study found that the undergraduate nursing students in South South zone of Nigeria were able to determine their information need. This result is in agreement with that of Ajboye and Tella (2006) that university undergraduate students sought academic information. In a similar instance, Kalair, Ikoja-Odogo and Kigongo-Bukerya (2004) observed that majority of the students sought information for course works and assignments, for the preparation of examination, for general reading to enhance reading notes, for

class group discussions.

Contrary to the finding from the present research, Boakye (1998) indicated in his study that most students lacked the skill for formulating keywords for their search. Batiencila (2006) presented results from a study which showed that students had a below average performance in their ability to determining the nature and extent of information needed. Similarly, Carlock and Anderson (2007) found that nursing students information searching skills only increased after they were taught and provided hands-on instruction to the students.

For the second competency standard which is accessing needed information, the study found that the nursing students were able to access needed information. This result concurs with the findings of Onyewusi and Oyeboade (2009) that their respondents had access to library resources, personal search, from reference services from their lecturers. In yet another study conducted by Fidzani (1998) the findings revealed that there was heavy reliance on the library books and journals as sources of information used for academic work; the students were found to be able to o through the shelves, scan through journals. In the same vein, Lippincott and Kyrillidou (2004) in the study on information seeking behaviour of undergraduate students found that majority of the students used search engines on a daily basis. An Online Computer Library Centre (OCLC) (2002) report on information seeking behaviour of students indicated that, more than half used the library's website for assignments, used library catalogue and database and indexes.

Another criterion for measuring the information literacy competency of students is how they evaluate the information they retrieve, which is the third competency standard. The result from the study showed the students' ability to evaluate information sources. In a world of information, one constantly needs to evaluate the sea of information with which we are inundated every moment in order to determine its truth, value and relevance. Not all information is created equal, some are authoritative, current, reliable, but some are biased, out of date and misleading. An undergraduate nursing student must evaluate information and its sources critically. To effectively evaluate an information source, it is important to determine exactly what the users are looking at. According to Rasmusan (2011),

evaluating sources is an important skill. It is called an art as well as work, much of which is detective work. The individual has to decide where to look, what to search for, and what to accept.

The ethical use of information is one of the major factors to be considered in information literacy. This is where an information literate person selects and uses an appropriate documentation style for citing sources; demonstrates awareness of plagiarism and of copyright, intellectual property and fair use laws (Campbell, 2004). This fifth competency standard is an important factor of measuring the information literacy of nursing students because most of the accessed information from different sources are works of individuals and require a need to acknowledge their handwork in the form of citation, referencing and copyright issues.

The finding of this study agreed with that of Lamptey (2008) that most of the students use information ethically. Contrary to this result, a study by Tarrant Dodgson and Law (2007), revealed that student have low knowledge in academic writing using the APA format (a style of referencing). In a similar survey, Dorvlo (2016) presented result which showed that some of the respondents knew how to cite a journal article.

Library Use Skills as Determinant of Information Literacy Competency of Undergraduate Nursing Students

Library use skill determines information literacy competencies among students. The study found that library use skills are a significant determinant of information literacy competencies among undergraduates nursing students in South South zone of Nigeria. The researcher is of the opinion that the high information literacy competencies of the nursing students could be linked to their library use skills. This is in line with the study by McCulley and Jones (2014), in an interview stated that one of the two students interviewed commented, "I feel more at ease about accessing information and knowing that there is always someone (a librarian) I can ask whenever there is some confusion.

Conclusion

Information literacy is a key concept in today's educational environment. The study concluded that undergraduate nursing students in South South zone of Nigeria are information literate. Also, library use skills play a significant role in determining information literacy competencies among nursing students undergraduate nursing students in South South zone of Nigeria. The place of library use skills cannot be ignored in the future of 21st century nursing practice. Within the information literacy standards, library use skills have shown that these are skills that undergraduate nursing students must acquire.

Recommendations

The following recommendations are made based on the findings of the study. University library management should ensure that proper library use instructions are given to all students not only for new students but also for old students, this will help them continue to be familiar with different aspects of the library and how to use the information resources available.

The management of universities should ensure that there is constant provision of current and relevant information sources to further satisfy the information needs of the nursing students, by making funds available for academic libraries.

The library management should prepare different access points for the nursing students to satisfy their needs.

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