

Evaluating Undergraduate Students Awareness and Use of Medical Library Resources: A study of Nnamdi Azikiwe University, Nigeria

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Abstract There is need for a continual assessment of services and resource use in the library. This is to determine the extent the library is achieving its aims. The research is a survey of undergraduate students' awareness and use of medical library resources in the College of Health Sciences, Nnamdi Azikiwe University, Nigeria. Sample was 295 students from the three faculties of the College: Faculty of Medicine, Faculty of Health Sciences & Technology and Faculty of Basic Medical Sciences. Results show that 84.8% of the students use the library. Regular users constitute 44.1% while occasional users are 40.7%. There is high awareness of availability of print based information resources. However, about 60% of the respondents are not aware or sure of the existence of electronic information resources in the library. Respondents' major activities in the Medical library are reading personal textbooks (83.9%), newspapers (67.1%), sourcing information for research or project work (65.8%) and class assignments (65.3%). Major barriers reported by the student on the effective use of the medical library are lack of computer / Internet (75.6%) and lack of current materials (60.7%). Improved facilities and resources may motivate the students to fully exploit the tool that is meant to provide information support for their studies and for practice of evidence based medicine upon graduation.

Keywords Library Use, Information seeking behaviour, Medical Library, Medical Information, Medical education, medical students

1. Introduction

Information and communication technologies have provided opportunities for medical libraries to meet the needs of their users in a much better way. Various online resources such as e-journals, e-books, subject databases, such as HINARI, PubMed and evidence based tools are now available to increase and ease access to health information. Medical libraries have expanded their collections through acquisition of these electronic resources to build hybrid libraries that are expected to meet the information needs of the digital age users.

It is important to note that the value of a library's collection lies in its effective utilization by the user community. Library use involves the consulting, reading and borrowing of library resources. It also involves obtaining information from library staff. Library use can be in form of visit to library to consult the collections or remote access to library digital collections. Various variables used to define library usage pattern include number of items borrowed,

number of library visits, hours logged into library PC, hours logged into e-resources, number of PDF downloads, and total number of e-resources accessed [1].

Assessing library usage is important in determining the value of the collection and also to improve services. User study help the library authority determine the extent of use of the collections and measure users' satisfaction with the collections. However as noted by Braude [2], it is incorrect to measure library services on the size of the collections. The library should be evaluated based on its programs and services, its ability to access and manage information for its clients.

Medical Library usage pattern in the electronic environment

Medical libraries serve both health professionals and students of health sciences. They are involved in the twin purpose of providing learning resources for students and evidence based practice resources to help health professional make good decisions in their clinical practice.

Medical libraries of today are operating in the age of electronic and remote access to information. Technology has fundamentally altered library usage pattern. These changes are seen in the notable preference and propensity for electronic resources and remote access to these collections.

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Franklin and Plum [3] pointed out that the fact that more literature in the medical sciences is available electronically may help to account for why medical library users, and especially faculty, staff, and fellows, choose to use electronic services remotely. Tao, Demiris, Graves, and Sievert [4], noted that desk-top access to online resources is changing library use patterns, which challenges libraries to adjust to this transformed information access environment. As pointed out by Basu and Das [5] other factors are also affecting library use pattern. They include inadequacy of learning materials, non-availability of modern facilities like photocopy, Internet and e-mail services and problem of accessibility might have negative influence on the students in library visit.

There is need to help medical students imbibe good library use culture which involve resource use. This is because there are many benefits in the use of medical library resources which has institutionalized access to health information. Libraries have quality collections and also librarians impart the skills needed to access information in the new environment. This can empower students in the ability to identify, locate and use information effectively. In medical education and health care, this is very important because of the emphasis on evidence base practice which requires information skills to harness evidence. The present research is a user study to determine the use of the Medical library by undergraduate students of the College of Health Sciences, Nnamdi Azikiwe University.

The setting

The College of Health Sciences is situated in Nnewi Anambra State. It is the second campus of Nnamdi Azikiwe University, Anambra State. Structurally, The College is made up of three faculties namely: Faculty of Medicine, Faculty of Basic Medical Sciences, and Faculty of Health Sciences and Technology. The Medical library serves the College and Nnamdi Azikiwe University Teaching Hospital, Nnewi. The Library perform the dual function of providing information, literature and other material support for the training of undergraduate and post graduate students of the College. It also provides information support for professional practice of health practitioners in the Teaching Hospital.

Objectives of study:

1. To find out the perceptions and awareness of students on Medical library resources
2. To determine the extent of use of the Medical library by the students
3. To explore the training needs of the students.
4. To find the barriers to effective use of the medical library

Research Questions:

1. What are the perceptions and level of awareness of students on Medical library resources?
2. What is the extent of use of the Medical library by the students?

3. What are the training needs of the students?
4. What are the barriers to effective use of the Medical library?

2. Method

This is a survey research. The survey covered the three faculties of the College: Faculty of Medicine, Faculty of Basic Medical Sciences, and Faculty of Health Sciences and Technology. The research focused on clinical students of the three faculties on 400 level to 600 level. Data was collected using the questionnaire instrument. The Questionnaires ($\alpha = .721$) were distributed to the students in their various classrooms and in the library. A total of 295 usable questionnaires were collected. Results were analyzed using simple percent and mean score. Analysis was done using SPSS version 17.

3. Results

Respondents' demography

A higher percentage of the 295 respondents were male 187 (63.4%), as compared to female 108 (36.6%). Majority of the respondents 144 (48.9%) were in the 19 – 24 years age group. 106 (36%) were aged 25 – 29. 15(4.9%) 30 and above. Thirty respondents did not state their age. Distribution of respondents according to faculty show that 167 (56.6%) are students in the Faculty of Medicine, 66 (22.4%) are students of Faculty of Health Sciences and Technology and 62(21%) are students of Faculty of Basic Medical Sciences.

Perceptions and Awareness of the Medical Library Resources.

Respondents were asked to indicate their perceptions of the purpose of the Medical Library. Majority (85.1%) felt that the purpose of the Medical Library is to provide information. For 72.9%, the Medical Library is a research resource. 64.7% considers the Medical Library as a place for books. It is a reading space for 64.4% of the respondents and should be a place for Internet access by a small percentage of 29.5%.

Respondents were asked to indicate their awareness of availability of various information resources in the Medical Library. Results as shown in Table 1 indicate that there is high awareness for print resources. Almost all respondents (96.6%) are aware that books are available in the Medical Library. High percentages are aware that there are journals (86.8%), newspapers (86.8%) and encyclopaedias (69.8%). However, there is low awareness of availability of electronic resources in the medical library. Over on third (36.6% - 44.4%) are not sure that the library has all the listed electronic resources and over 20% percentages are not aware that they exist in the Medical Library. This means that on the average about 60% of the respondents are not aware or sure of the existence of electronic resources in the Library.

Table 1. Awareness of Medical Library Resources

	Yes	%	Not Aware	%	Not Sure	%
Books	285	96.6	4	1.4	5	1.7
Journals	256	86.8	11	3.7	18	6.1
Newspapers	256	86.8	11	3.7	22	7.5
Reference materials e.g. encyclopaedia	206	69.8	20	6.8	47	15.9
Reserved Book Section	138	46.8	56	19	92	31.2
Online Databases e.g. HINARI	94	31.9	60	20.3	102	34.6
Unizik Digital Library Website	81	27.5	61	20.7	108	36.6
Online Reference Materials	65	22	75	25.4	119	40.3
Electronic Books	52	17.6	79	26.8	125	42.4
CD-ROM resources	52	17.6	70	23.7	128	43.4
Electronic Journals	48	16.3	80	27.1	125	42.4

Table 2. Rate of Visit to the Medical Library

	Library Visits	Frequency	%	% Total
Regular users	Daily	18	6.1	44.1
	2 to 3 times in a week	69	23.4	
	Weekly	43	14.6	
Occasional users	Monthly	69	23.4	40.7
	At least once a year	51	17.3	
Total			84.8	84.8
Non users	Never	39	13.2	
	Missing	6	2.0	

Use of the Medical Library

Rate of visit to the Medical Library is shown in Table 2. Results indicate that large percentage (84.8) visits the Medical Library regularly or occasionally. Regular users who visit weekly to daily constitute 44.1%. Occasional users who visit monthly to at least once a year constitute 40.7%. Non-users constitute 13.2% of the respondents.

Reasons for non or irregular use of the Library

Table 3. Reasons for Irregular and non-use of the Medical library

	Frequency	%
The Internet is meeting my information needs	87	69.6
Not aware of library resources	26	20.8
Not aware of how to locate information resources in the library	12	9.6
Total	125	100

Non and irregular users were asked to indicate reasons for low use. One hundred and twenty-five respondents answered this question. Table 3 shows respondents' reasons for irregular and non-use of the Library. The Internet is meeting the information needs of over two third (69.6%) of non and irregular users. A small percentage (20.8) of this group is not aware of library resources and a smaller percentage (9.6) is not aware of where to locate information resources in the library.

Rate of Activities in the Medical Library

Ranking of respondents activities (Table 4) on a four point scale of Very often (4) to Never (1) shows that major activities respondents undertake in the Medical Library regularly and occasionally are: to read personal textbooks (83.9%), newspapers (67.1%), do research or project work (65.8%), and class assignments (65.3%). Over half the respondents have consulted library print books (58.3%), journals (52.2%) and asked assistance from librarians (53.8%). Close to half (45.4%) have borrowed library books.

There is low use of library catalogue (27.5%) and online databases (14.9%).

Table 4. Rate of Activities in the Medical Library

	Very Often/often (%)	Occasional (%)	Mean	S D
Read personal textbooks	183 (62)	64 (21.7)	2.85	1.08
Read newspapers and magazines	103 (34.9)	95 (32.2)	2.18	1.04
Do Class assignments	79 (26.7)	114 (38.6)	2.03	0.95
Consult library print books	77 (26.1)	95 (32.2)	2.00	1.01
Do research or project work	69 (23.4)	125 (42.4)	2.01	0.90
Consult journals	52 (17.6)	102 (34.6)	1.53	0.81
Ask assistance from librarians	45 (15.2)	114 (38.6)	1.76	0.85
Borrow library books	50 (16.9)	84 (28.5)	1.71	0.90
Use library catalogue	21 (7.5)	59 (20.0)	1.39	0.72
Use online databases e.g. HINARI	18 (6.1)	26 (8.8)	1.25	0.68

Respondents' rate of borrowing medical library books by subject.

Respondents were asked to indicate subjects for which they have ever borrowed books in the Library. As shown in Table 5 the highest numbers indicated borrowing books from Anatomy 63(21.4%), Physiology 56 (19%), Pharmacology 14 (14.9), Pathology 38 (12.9%) and Biochemistry 37(12.5%).

Table 5. Respondents Borrowing of Medical Library Books according to Subject Area

	Frequency	%
Anatomy	63	21.4
Physiology	56	19
Pharmacology	44	14.9
Pathology	38	12.9
Biochemistry	37	12.5
Internal Medicine	25	8.5
Paediatrics	23	7.8
Obstetrics and Gynaecology	22	7.5
Surgery	21	7.1
Radiology / radiography	16	5.4
Medical Rehabilitation	14	4.7
Nursing Sciences	14	4.7
Ophthalmology	12	4.1
Anaesthesiology	11	3.7
Community medicine	10	3.4
Medical Laboratory Sciences	7	2.4

Training Needs of Respondents

The training needs of respondents are shown in table 7

Table 6. Training Needs of Respondents

	Yes	%
What resources are available for use in the Library	118	40
How to find medical research information on the internet	109	36.9
How to use the Library Catalogue	101	34.2
How to search medical information databases on the Internet such as PubMed, HINARI	99	33.6
How to locate books on the shelves	68	23.1

Result in Table 6 shows that the highest percentage (40%) of the respondents will want to know what resources are available in the library. About one third will want to know how to find medical research information on the Internet (36.9%), how to use the library catalogue (34.2%), and how to search medical information databases on the Internet (33.6%). The least percentage (23.1%) will want to learn how to locate books.

Barriers to the use of the Medical Library

Barriers to effective use of the Medical Library are shown in table 7.

Major barriers reported by the students on the effective use of the Medical Library as shown in Table 7 are lack of computer / Internet (75.6%) and lack of current materials (60.7%), hot environment (46.1%), insufficient space and seats for reading (38.3%) and poor lighting (36.6%). Noise

was the least (18.3%) barrier to the use of the medical library.

Table 7. Barriers to the Use of the Medical Library

	Frequency	%
Lack of computer / Internet	223	75.6
Lack of current materials	179	60.7
Hot environment	136	46.1
insufficient space and seats	113	38.3
Poor lighting	108	36.6
Poor arranged material	66	22.4
Noise	54	18.3

4. Summary of Findings

- Majority of the respondents feel main purpose of the medical library are to provide information (85.1%) and a research resource (72.9%).
- Large percentage (84.8%) visits the Medical Library. Regular users constitute 44.1% while occasional users are 40.7%
- The Internet is meeting the information needs of a good number of non-users and irregular users.
- There is high awareness of availability of print based information materials but about 60% of the respondents are not aware or sure of the existence of electronic information resources in the library.
- Respondents' major activities in the Medical Library are reading personal textbooks (83.9%), newspapers (67.1%), sourcing information for research or project work (65.8%) and class assignments (65.3%). Over half have consulted library print books (58.9%), and journals (52.2%). Close to half (45.4%) have borrowed library books.
- On training needs, 40% will want to know what resources are available in the Library. 36.9% will want to know how to find medical information on the internet.
- Major barriers reported by the student on the effective use of the Medical Library are lack of computer / Internet (75.6%) and lack of current materials (60.7%).

5. Discussion

The study assessed awareness and use of the Medical Library of the Nnamdi Azikiwe University. A very high percentages of the respondents felt that the main purposes of the Library is to provide information and a research resource. This is positive and good perception because they correctly described the Medical Library's main functions. Awareness on the Library resources is mainly on print resources. Almost all respondents are aware that books are available in the Library. An equally high percentage is also aware that

journals, newspapers and encyclopaedia are available in the Medical Library. However, there is generally poor awareness of electronic resources being available in the Medical Library. About 60% of the respondents are not aware or sure of the existence of electronic resources in the Library. Baro, Endouware, and Ubogu [6] also found that majority of the students in their study are not aware and do not use online information resources. With the general inclination towards electronic resources and the library being a good access point for these resources, this low awareness will lead to underutilization of available resources. However, Asemi, and Riyahiniya [7] found that 70 percent of students in their study were aware of digital resources.

Pattern of use

Results show that 84.8% of the respondents visit the library. 44.1% visit regularly and 40.7% occasionally. This result is very much similar to Lal and Ingle [8] who found that although 97% of undergraduate students reported visiting the library, only 41% made regular visits. Percentage of regular visit for this study is much less when compared to findings of over 70% in similar studies [5, 9, 10].

However, in this electronic information age when there is report of the declining use of the library in the physical location [3, 4]. 84% use is impressive. Irrespective of the frequency of visits, this high percentage of total visits shows good inclination to the use of the resource by the students.

Major activities the students undertook in the Medical Library were to read personal textbooks (83.9%), newspapers (67.1%), do research or project work (65.8%) and class assignments (65.3%). The pattern of use is consistent with the findings of other researchers on the use of the medical library that reported the primary reasons for going to the library was to read text-books and newspapers [5, 9, 10]. However, results also show that a sizable portion of respondents use library resources. Over half (58.9%) have consulted library print books, (52.2%) have consulted journals and close to half 45.4% have borrowed library books; with Anatomy, physiology and pharmacology ranking highest as areas where respondents have borrowed books from the library.

Considering the high level of total library visits, what librarians should do is to improve these visits to more resource use especially use of electronic resources. As noted by Afebende and Ebye [11] the effectiveness of a library does not depend on only its collection/resources and other facilities per se, but also on the success of its exploitation and use. While the librarian is concerned with collection and organization of information materials, he also has the responsibility of creating awareness so that users can take full advantage of the acquired materials.

The Internet is meeting the information needs of a good number of non-users and irregular users. Others are not aware of library resources and where to locate the materials. Toner [12] also found similar factors influencing non-use including the purchase of books, use of the Internet, and a lack of awareness of services available.

The study identified areas where the students will want to receive training on information access. A good number will want to know what resources are available in the library, how to find medical research information on the Internet, use of online subject databases such as PubMed, HINARI and library catalogue. These needs can be met through library orientations and information literacy training.

Lack of computers and Internet facilities, lack of current materials and poor environmental conditions are the reasons deduced from the study for the under use of the Library resources. These barriers are weighty enough to discourage students from using the Medical Library. It is therefore pertinent that these technical and environmental barriers be solved for the comfort of the students and to improve the use of the Medical Library. Robust awareness campaign and provision of requisite facilities are required to motivate better utilization of library resources. Awareness campaigns can be done through outreach programmes to the various faculties, orientations and organized information literacy training.

6. Conclusions

Respondents in this study have good perceptions of the role of the Medical Library. However there is very low awareness of what they library have in terms of electronic resources. Though results indicate highest use of library to read personal textbooks and newspapers, there is moderate use of library resources with over half consulting books and journals and close to half borrowing library books. The respondents are willing to be trained on library use and information search skills. This calls for an organized information literacy programme. There is also need to upgrade facilities in the medical library especially as regards electronic information infrastructure and resources to meet the needs and expectations of the new age users. This will motivate the students to fully exploit the tool that is meant to provide information support for their studies and for practice of evidence based medicine upon their graduation.

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