Status of Medical Library Resources and Services in Teaching Hospitals in Enugu State, Nigeria: implications for quality health care services

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ABSTRACT

Considering the need for quality health information and resultant health care services in any society, this study was carried out to look into the status of library and information resources and services provided by medical libraries in Enugu State, Nigeria. The main objective of the study was to find out the information resources and services available for medical library users towards quality health care provision. Five (5) medical libraries of major teaching hospitals were used for the study with 980 registered users as the study population from where 245 users were sampled. Observation checklist was used to collect data on resources while questionnaire was used to collect data from the respondents on the services provided. The Medical Library Association Standard guided the analysis of data from observation while frequency counts and mean scores were used to analyze data from the questionnaire. Major findings showed that even though some of the required resources and services are available and provided the medical libraries, most of the required resources and services are not adequately provided by these libraries.

1. Introduction

The medical libraries according to U.S. National Library of Medicine in Ali (2010) are libraries found in hospitals, medical schools, and in medical or health associations. These libraries continued the author, are designed to assist physicians, health professionals, medical students, patients, consumers and medical researchers in locating health and scientific information to improve, update, access and evaluate health care services. The objectives for setting up the library include collection development

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in terms of resources and services, selection processes, library orientation cum instruction, and above all, the organization of these library resources (Mohammed, 2010). It shouldn't be enough to have a collection of textbooks, periodicals, etc with no effective library services. Providing adequate resources and services help in the delivery of actual information to the information seekers. The information needed could neither be provided through resources or services. The United States (US) Medical library Association (MLA) standards for health sciences and hospital libraries indicated that medical library resources and services must take cognizance of providing Knowledge-Based-Information for quality health care services.

The medical library belongs to the first group of special libraries which is the group that deals with special subjects. As a special library, it is established to serve the medical practitioners, medical students and other people who wish to carry out a research in the field of medicine. Good healthcare depends upon the existence of good communication and information network, hence the establishment of medical libraries (Okoro & Mbagwu, 2008).

Information resources according to Webster's encyclopedic dictionary (1974) are those materials that give information seekers the accurate and or actual thing needed to know about. Therefore Information Resources are those materials found in a library which are charged with the provision of current and retrospective information services to information seekers. These materials could be in book or non-book forms.

In medical libraries, books could be in reference forms- like medical dictionaries- which give the meaning of most medical words, encylopedias-which give detailed information about words and event; gazettes – which give information on periodicals including journals and newspapers; the physicians' desk reference (PDR) book- which is a commercially published and contains a compilation of manufacturers' prescription guideline updated annually. This is designed to provide physicians with full legal mandated information relevant to drug prescription.

WHO model formulary is also another resource – which is a list of essential medicines that serve as a guide for the development of national essential medicine list updated and revised every two years by WHO expert committee on selection and use of medicines. The library collections could also be in serials forms which include Pamphlets, medical Journals, medical magazines, the medical annual, current medical reference, the Nigerian medical practitioner, and other medical publications. Non-book materials are other materials in the library which as the name implies are not books. These include charts, maps, cassettes, diskettes, CD-ROM, micro card, microfiches and other microforms. All these contain vital information necessary for research. There are also the Electronic resources of the library accessed through computers and the internet which has been a wonder working tool in the case of research. The above mentioned e-resources are being used to carry out several researches in medical field.

2. Brief Historical Background to medical librarianship in Nigeria

The first medical library in Nigeria according to National Medical and Dental Council of Nigeria Regulation (2006) could be traced to the college of medicine library, University of Ibadan in 1984.

This was followed by others including the college of Medicine library UNEC Enugu in 1967.

The National Orthopedic Hospital Library Enugu was established in January, 1989 and also has a library for their post basic nursing school. The Federal Neuropsychiatry Hospital Library Enugu was established in 2006. They also have a mini-library for patients. The Federal School of Dental Technology and Therapy Library Enugu was established in 1982 as a reading room but fully took off as a library in 2001, due to the bid to satisfy the research needs of the students and lecturers of the institution. The College of Medicine Library, Enugu State University of Science and Technology (Park Lane) was established in 2005. All these medical libraries were established with the motive of meeting the research needs of the students, nurses and staff of the hospitals as well as researchers in other fields.

Information services in the medical libraries in Enugu State cannot be far from the general services of special libraries. These services are those which give the clients direct answers to their research needs. A good Medical library should have a private cataloguing unit, circulation section, technical section, study rooms, book processing and journal recording and acquisition sections. Enugu is known to posses some of the best hospitals in the South-eastern part of Nigeria and people are normally referred to these hospitals from other parts for better health care services. The extent to which these medical libraries assist in information delivery to their clienteles as well as assist their parent institutions to successfully carry out their jobs still needs to be examined. This study therefore derives from the need to provide empirical evidence on the status of information resources and services in medical libraries in Enugu State which has not been extensively explored.

3. Objectives of the study

The study is generally set to examine the status of library and information resources and services in medical libraries in Enugu area. Specifically, the study intends to

1. Identify the types of information resources available in medical libraries in Enugu State.
2. Ascertain the extent of services rendered to clienteles by these medical libraries.

4. Literature review

4.1 The Concept of Information Resources in Medical Libraries

Information resources are those materials found in a library which provide current and retrospective information to information seekers (Iwhiwhu & Akporhonor, 2009). It is also referred to as information carriers (Aina, 2004). The criterion for selection and acquisition of medical library resources depends on the fields available as well as the current syllabus being used, (The Medical and Dental Council of Nigeria, 2006). The council gives directives on the materials to be used and stocked. These

resources or materials could therefore be books or non-book form.

There are also the E-Resources which are very vital in today's libraries such as -

- ➢ Access Medicine – Collection of book on educational and clinical medicine.
- ➢ AIDSLINE – CD-ROM: This is available through Medline and it contains AIDS/HIV information.
- ➢ MEDLINE – CD-ROM: This is the world's largest medical health database. It is a computer system that gives the librarians access to a vast amount of data stored in a computer at the National Library of Medicine. Here the librarians use a computer terminal to obtain information from the system. MEDLINE is even better accessed electronically/online; but in the Nigerian context where power and network issues pose challenges, the CD-ROM version is highly used.
- ➢ POPLINE – CD-ROM and Online: Worlds' largest database of family planning and related health issues.
- ➢ HINARI- (Health Inter Network Access to Research Initiative) Online. The WHO has negotiated with leading publishers in medicine/health and over 7200 journals are now available to health institutions in 113 countries benefiting many health workers and researchers. It is also available online, to some developing countries for teaching, research and practice.
- ➢ ELIN-Electronic Library Information Navigator. ELIN integrates data from different publishers, databases and e-print open achieves using a single user-friendly interface. It provides a range of full text journal articles, databases and journals. Only those that are included in ELIN are accessible in EBSCO which is a collection of online databases of journals and other contents. Under the PERii programme, access is provided to 8 database [Academic Search Premier, Business Source Premier, ERIC, Master file Premier, Newspaper Source, Health Source Nursing Academic, Health Source Customer Edition and MEDLINE], which can be searched individually or in groups by selection.
- ➢ OVID – a collection of 1,200 journals, over 500 books and more than 200 databases.
- ➢ MD Consult – this is a collection of medical books and journals.
- ➢ PubMed – Online. This contains over 15 million citations from biomedical articles in Medline and life sciences journals. In PubMed, other database like MEDLINE plus can be accessed. This is a goldmine of good health information from the National library of Medicine. Medline plus has extensive information from the national Institute of Health and other trusted sources on over 700 diseases and conditions.
- ➢ TALC CD-ROM: This is a teaching aid at low cost. It covers various topics.
- ➢ Topics in International health – CD-ROM: This covers various health topics.
- ➢ Best Practice [From BMJ Evidence Centre]: Best Practice combines the latest research evidences from Clinical Evidence with peer reviewed expert opinion and guidelines. Structured around the patient consultation, it covers diagnosis, prognosis, treatment and prevention. This serves as an instant second opinion.
- ➢ Clinical Evidence [from BMJ Evidence Centre] Clinical Evidence is one of the world's most authoritative medical resources for informing treatment and improving patient care (Gavgani & Mohan 2008).

4.2 Information Services to be provided by Medical Libraries

The information services to be provided by medical libraries include the following:

➢ Circulation service (lending services):
 this is the formal lending and borrowing activities of the library. It is essentially a social service in which users of a library have the privilege of borrowing library materials either for reading or for consultation (Aina, 2004). The first law of library science applies here which says 'books are for use'. It gives the clientele the opportunity to borrow a material which he finds useful to his information needs. The second law of library science also applies here which says 'Every reader has his book', and the third 'Every book has its reader' (Ranganathan, 1931).

➢ Reference Services:
 This is generally a person-to-person service (Aina, 2004). The writer continued that it is the most service rendered to clienteles especially to those of them who are not used to the library. The reference section answers the "5w" questions concerning the library. A clientele may come up with the question – where can I get this or what is this, who is this person, when did that happen, which method is better? etc. (Oduagwo, 2000). This brings in the special librarians' slogan 'putting knowledge to work'. The librarian being an expert in this applies the fourth law of librarianship which says 'save the reader's time by not providing a bulky material(s) or even going through a long process.

➢ Cataloguing Services:
 the catalogue is a bibliographic description of a book (Oduagwo, 2000). It enables the user know what the library has in stock.

➢ Medical Research Services:
 this is the approach which medical libraries adopt to ascertain the proper dissemination of information to the medical professionals (Gavgani, & Mohan, 2008). Medical research includes amongst other things the purchase of medical bulletins both new and retrospective, medical journals and magazines, etc. From these periodicals the clienteles will be able to know which drugs are in existence and which one have been dropped to heal certain ailment and why it is so or the reason behind it.

➢ Bibliotherapy Services:
 this is the therapeutic use of books in the treatment of illness or personal psychological problems. This entails a careful selection of books pertaining to the persons' ill-health. It is one of the services rendered since the library is charged with the provision of such materials to the patients according to doctors' prescription.

➢ Play −Therapy Services:
　this is mostly done in the psychiatry hospital. This is whereby the library is charged with the provision of writing materials and toys for children. In the case of the toy, there could be a toy room where children will stay and play and learn as well (Gavgani, & Mohan, 2008). Those of them who keep to themselves are given pencils and drawing books. There, they make drawings of which one could possibly decode. Some may draw a woman and a child, then father separate, indicating that the father left them. Some may draw father and mother together and a faceless child separate. Sometimes it will be a child without arms. All these indicate that the child was abandoned by the parents and needs alms and helps. All these are needed in the rehabilitation of these patients because it can be made known where the problem lies.

➢ Recreation/leisure Services:
　These are relaxation/recreational services offered to clienteles of the library by the librarians (Nwosu, 2000). Although the slogan of the special library is putting knowledge to work, there is still a saying that 'all work and no play makes jack a dull boy'. This is the reason why medical libraries acquire Newspapers and magazines. These will enable their clientele browse through and know what is happening around the globe as well as developments in their field.

　These services above are called 'conventional services'. They have now developed into Neo-conventional services in order to suit the needs of the industrial society and the emerging information society. To meet the changing needs and preferences of the users, libraries have developed a variety of information services that can be categorized as neo-conventional services. They have transformed themselves into information centers in the post industrial society and through the application of Information and Communication Technology (ICT). Libraries are one of the forerunners in application of new technologies.

4.3 New Technology-driven services

　By applying new technologies, they have developed the following information and other supportive services-:

➢ Current Awareness Services (CAS):
　This has been defined as the establishment of a system for reviewing publications immediately receipt, selecting information pertinent to the programme of the organization served, and recording individual items to be brought to the attention of those persons to whose work are related (Aina, 2004).

➢ Selective Dissemination of Information (SDI):
　This is a common service in special libraries. The main objective of SDI is to provide users (especially in special libraries) with information that will promote their research and other

day-to-day activities (Aina, 2004). This could be through the use of bill boards or notice board or through the internet.

➢ Inter-Library Loan (ILL):
This essentially involves transaction between two libraries (Aina, 2004). This is whereby the medical libraries come together to help each other by loaning each other materials. The participating libraries share a union catalogue list whereby they check upon to know the collections they lack (Casey & Savastinuk, 2006).

➢ Document Delivery Services:
This facilitates library activities since libraries can partner with publishers to delivery journals to clienteles who need them at a given fee.

➢ Reprography Services:
This is has to do with reproducing information materials to larger quantity whereby one can neither reduce nor enlarge the outlay/content of the material. The services provided here include photocopying, typesetting and bindery of works and or materials at a cheap rate.

➢ Translation Services:
Since the 'library is a growing organism' going by the fifth law of library science, it has grown to the level of translating relevant materials to their clienteles' language by the aid of a translator. This will enable the user have access to the materials. Library users desire some publications written in language other than English (Aina, 2004).

➢ Documentation Services:
As a library, one of its duties is to document activities for future use (Casey & Savastinuk, 2006). All the above neo-conventional services can be more efficiently rendered through the non-conventional methods or services. By applying advanced information technologies, Web 2.0 technologies and library 2.0 technologies, libraries are transforming themselves into digital libraries, virtual libraries and community building information centers.

The non-conventional services that could be rendered by libraries in general and medical libraries in particular, in the internet and Web 2.0 environment are:

➢ Library 2.0 Services:
This technology came into being after the application of Web 2.0 tools. It makes the use of libraries more transparent. Library 2.0 enables users to know the search address of first choice and easier access to required information from the massive information (Gavgani & Mohan, 2008). It does this so that user-centric information services could be put in place. Library 2.0 makes information demands go beyond the physical walls of libraries and make the entire network to form a site where information could be continually collected and provided.

This is done so that non compatible library service could be improved and library collections share could be realized. Library 2.0 is that which allows users participation and contribution, management and the sharing of their own knowledge and perspectives through writing comments, labeling, Blog and Wiki and participate in the libraries collections development.

➢ UMLS (Unified Medical Language System) Services:
This is a knowledge organization system based on ontology and Semantic Web. It is found in the field of biomedical science. According to Gavgani & Mohan (2008), it collects more than 800,000 biomedical concepts, 1.9 million words from 60 different types of biomedical controlled vocabularies, terminologies, classified and expert systems such as MeSH and International Classification of Diseases (ICD). It also provides 135 kinds of semantic types among these vocabularies and thus allows one to translate among the various terminology systems. It also provides natural language processing and language standardization, it has already been used in the medical information organization.

➢ Digital Technology Library Services:
This is an intranet-based clinical imaging service which was transformed from photography services (Hill, Hill & Hampton, 2004). Some aspect is also a common service that medical libraries render. It gives the clienteles the opportunity to know what the library has in stalk via the internet (Casey & Savastinuk, 2006). It involves the use of computers in all the library activities and intranet-based digital imaging system.

➢ Telemedicine services:
This is the provision of health-care consultation and education using telecommunication network to communicate information (Jones et al., 2004). It involves the assessment and review of patient information (history, examination or investigation) by a health professional who is separated temporally and/or spatially from the patient. However, it is split into two types, real-time and store-and-forward. The real time involves the transmission of images which are viewed synchronously in dedicated transmission rooms. A good example of this according to Jones et al. (2004) can be found in videoconferencing and tele-psychiatry, which rely on instantaneous interactions. Store-and-forward system rely on time-independent communication, usually involving still images not exclusively, and have been used to great effect by the military and dermatology services. Both types are reported to be accurate.

➢ The BackMed email discussion service:
This is a free electronic system maintained by Swetsblackell.com that enables hundreds of health sciences libraries across the Unites States as well as other places to quickly post lists of excess as well as wanted journal issues and books (Casey & Mohan, 2008). Evidence-based medicinal information services: This through the Web 2.0 and access to the Medicine 2.0 gives medicinal information as well as their evidences to clienteles (Casey & Mohan, 2008).

➢ Information therapy services:
This is a facet of the Web 2.0 which gives access to Medicine 2.0 (Casey & Mohan, 2008). This helps clienteles know the latest in the field of medicine.

➢ Online services through social networking:
This is whereby the library is connected to the internet and gives a clientele the access to view wherever you may be (Gavgani & Mohan, 2008).

➢ Blog:
Here too there are medical Blogs search query the 'allinurl: medicine blog'. Specialization plays an important role here as it gives information therapy, patient education, patient guides in hospitalization, patient discharge information, doctors time schedule, doctors list based on specialty, insurance and information about diseases caused by climate changes, common diseases, prevention of common diseases, seasonal diseases, etc (Gavgani & Mohan, 2008). According to the writer, all these could be presented and shared through hospital blogs.

➢ Wikis:
It is a tool from Web 2.0 which is a suitable platform for reference and information services in medical library and information centers. Medical libraries can create a special case study wiki which serves as an open course repository and finally best source of evidence.

➢ Slide shares, video shares and Photos Shares:
These are tools used to share medical images, atlases, educational clips in medical libraries. Librarians could digitalize these in order to serve their clienteles better. Such could be atlases of Skin Diseases, atlases of Heart Operation/Surgery that can be used to make a slide show or video clips about operation and chronicle/revolving processes of diseases, etc.

➢ Podcast:
This is one of the tools of Web 2.0 which is normally used for patient education. Some organizational Web sites offer patient education audio/video clips and podcasts through their web sites such as 'Medicine Health, patient UK (a comprehensive, free, up-to-date health information as provided by GPs to patients during consultation), Mayo clinic, UK National Health System, etc.

➢ Really Simple Syndication (RSS):
Librarians can utilize the RSS feeds to catch up with trends and changes in the desired medical specialty since it gives the possibility of being informed about new items added to the interested site (Seidman, 2008). It is an SDI since it gives the user the easy, fast accessibility to specific up-to-date information.

➢ Folksonomy:

This is also a tool from the Web 2.0. It is used to advocate the controlled vocabulary, thesaurus, taxonomy, etc. It is used to decode the meaning of several slangs used in the medical world. Therefore, it is this system that is used as a thesaurus.

5. Methodology

The study was carried out as a descriptive survey using 5 medical libraries - University of Nigeria Teaching Hospital (UNTH), National Orthopedic Hospital (NOH) Enugu, Enugu state University of Science and Technology Teaching Hospital (Parklane), National Psychiatric Hospital, and Federal School of Dental Technology, Enugu. The 980 registered users of these libraries were the population of the study. While Observation Checklist was used to collect data on availability of resources, questionnaire was used to collect data from 245 users sampled from the population. The observation checklist was drafted by the researchers collectively guided by the standards of the US MLA (2007) and the observation was carried out by the researchers (each researcher was assigned to a library/ libraries) assisted by their colleagues in the libraries studied. The questionnaire was administered with adequate time (two weeks) given before collection. Data from the checklist was analyzed quantitatively by presenting a detailed result of the observation and guided by the specifications of the Medical Library Association (MLA) (2007) Standards for health sciences libraries on required services and resources while data from the questionnaire was analyzed using frequency counts and mean scores all presented in tables in line with the research question.

Table 1. Population and Sample for the study

Library	Population of users	Number Sampled	Remarks
ESUTH Parklane	158	39	
UNTH	80	20	
NOHE	70	18	
PSYCHIA	72	18	
DENTAL SCH	600	150	Has many programmes hence high number
TOTAL	980	245	1 out of every 4 users was randomly selected

6. Data analysis and presentation

The data collected on resource availability was analyzed based on the MLA Standards while that of services was analyzed using mean scores. Data for each research question was analyzed in order to ease comprehension of respondents' responses.

6.1 Research Question 1. What are the types of information resources available in medical libraries in Enugu State?

The research question above was posed to ascertain the availability of information resources in all these medical libraries. Data for this was collected using an observation checklist. The analysis was guided by the specifications of the Medical Library Association (MLA) (2007) Standards for health sciences libraries on required services and resources.

A brief overview of the MLA Standard for health sciences libraries

The MLA standard is a world standard for determining the status of medical/health sciences library resources and services. The standard specified that a medical library should ensure sustainable knowledge-based information services which refers to current expert information, produced externally to the organization/library, including:

- Journals, texts, documents, and databases in print or electronic format;
- Benchmarks, best practices, guidelines, consensus development statements;
- Research studies;
- Quality-filtered Internet resources.

For the human resources − staffing of the libraries, the Standard specified that - a qualified librarian is a person who has earned a Master's degree from a program accredited by the Library Association or its successor accrediting organization, or from a master's level program in library and information studies accredited or recognized by the appropriate national body of a particular country.

Material resources, technology and services that must be provided include:

- Convenient access to expert searching
- A current and authoritative collection of print, electronic and multimedia resources for the timely provision of knowledge-based information. There is a plan to provide access to knowledge-based information during times when electronic systems are unavailable.
- Appropriate technology to enable the use of these information resources.
- A catalog or database and taxonomy to efficiently locate materials.
- Resource sharing agreements and membership in library and information consortia to enable efficient provision of materials not directly accessible.

The table below shows the available resources in these medical libraries under study.

Table 2. Availability of information resources in the medical libraries

S/N	Information Resources	UNTH		PARKLANE		PSYCHIA.		ORTHOPEDIC		DENTAL	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1	**Dictionary**										
	• Medicine	√		√		√		√			
	• Words	√		√		√		√		√	
	• Medical subject	√		√		√		√		√	
	• Glossary									√	
	• Thesaurus	√		√		√				√	
	• Ailment	√				√					
	• Drugs	√		√		√					
	• Injection										
	• Medical Equipment	√				√					
	• Medical& Health	√		√						√	
	• Bones										
	• Dental									√	
	• Health & Food			√						√	
	• Quotations									√	
	• Subjects									√	
	• English & Other Language	√									
	• Microbial Taxonomy	√		√						√	
	• Acronyms	√									
	• Infected Diseased	√		√						√	
	• Orthopedics							√			
	• Psychiatric					√					
2	**Encyclopedia**										
	• Word	√		√		√				√	
	• Medicine							√			
	• Drugs	√		√							
	• Subjects	√		√		√				√	
	• Injections									√	
	• Britannica	√		√		√		√		√	
	• Americana	√		√		√		√		√	
	• McGrawHill Series	√		√		√		√		√	
	• Medicine & Health	√		√		√		√		√	
	• Orthopedics					√					
	• Psychiatrix										
	• Pharmacy					√					
	• Flaps					√					
3	**Gazettes**	√						√		√	

S/N	Information Resources	UNTH Yes	No	PARKLANE Yes	No	PSYCHIA. Yes	No	ORTHOPEDIC Yes	No	DENTAL Yes	No
4	**Index**										
	• **Medicus**	√									
	• Subjects	√				√					
	• Aliments	√				√		√			
	• Catalogue	√									
	• Britannica	√									
5	**WHO Formulary**	√		√						√	
6	**Abstract**										
	• **Prostaglandin**	√									
	• Subject	√				√				√	
	• Abstract	√		√		√				√	
7	**Catalogue**										
	• **Cards**	√		√		√		√		√	
	• Book			√							
	• Union										
	• Electronic										
8	**Maps. Charts & Atlas**	√		√		√		√		√	
9	**Physicians' Desk Reference (PDR)**	√		√		√		√			
10	**Newspapers**	√				√		√		√	
11	**Journals**										
	• **Subjects**	√		√		√		√			
	• Aliment	√		√		√		√		√	
	• WHO Journals	√		√		√		√		√	
	• TB	√		√		√		√			
	• HIV/AIDS	√		√		√		√		√	
	• HPV	√		√		√		√		√	
	• Infectious Diseases	√		√		√		√		√	
	• Foreign	√		√		√		√			
	• Medical	√		√		√		√		√	
	• Cazeery	√		√				√			
	• Diabetes	√		√							
	• Food, injury &	√		√		√				√	
	• Immunity	√		√		√				√	
	• Nigerian Universities	√		√		√					
	• Drug targeting	√		√							
	• Research & Human Retroviruses	√		√		√					
	• Plastic & Reconstructive surgeon					√					
	• Local	√				√				√	
	• Ordinary			√		√		√		√	
	• Physiotherapy	√		√		√		√		√	
	• Surgeries	√		√		√		√		√	
	• Orthopedic & Trauma					√					
12	**Pamphlets**	√		√		√		√		√	

S/N	Information Resources	UNTH Yes	No	PARKLANE Yes	No	PSYCHIA. Yes	No	ORTHOPEDIC Yes	No	DENTAL Yes	No
13	**Text books** • **Core Course**	√		√		√		√		√	
	• Subjects	√		√		√		√		√	
	• Aliments	√		√		√		√		√	
	• Diseases	√		√		√		√		√	
	• Injuries	√		√		√		√		√	
	• HIV/AIDS (Cardiovascular)	√		√		√		√		√	
	• Cancer	√		√		√		√		√	
	• Joints	√		√		√		√		√	
	• Pediatrics	√		√		√		√		√	
	• Departmental	√		√		√		√		√	
	• Anesthesia	√		√		√		√		√	
	• Surgeries	√		√		√		√		√	
	• Politics	√		√		√		√		√	
	• Legal materials	√		√		√		√		√	
14	**Novels** • **Fiction**					√		√		√	
	• Prose					√		√		√	
	• Poetry					√		√		√	
	• Drama					√		√		√	
15	**Year Book**	√				√		√		√	
16	**Directories**	√		√		√		√		√	
17	**Manuals**	√		√		√		√		√	
18	**Biographies**	√		√		√				√	
19	**Who is Who**	√		√		√		√		√	
20	**Projects**	√								√	
21	**Handbooks**	√		√				√		√	
22	**Computers**	√		√		√		√		√	
23	**Microforms** • **Fishes**					√		√		√	
	• **Cards**					√		√		√	
	• **Films**					√		√		√	
	• **Diskettes**	√		√		√				√	
24	**Telecommunications** • **C.D**	√		√		√		√		√	
	• **Internet**			√		√		√			
	• **Flash drive**	√				√		√		√	
25	**Database Resources**	√				√					
26	**Printers & Scanners**	√		√		√		√		√	
27	**Photocopiers**	√		√		√		√		√	
28	**Guide**									√	
29	**Human Resources (Staff)**	√		√		√		√		√	

Observation checklist of Information Resources

From the resources listed in the table above, the highlights and major finding reveal that some reading and information resources like journals and textbooks are available in the five medical libraries but most of the other resources like electronic and union catalogues are not available in any of the 5 libraries. Some of the libraries do not have indexes and also lacked subject dictionaries in core areas of health care – injections, bones and dental care. Encyclopedias are inadequate and available in 4 libraries. Only UNTH has Index Medicus. While 2 of the libraries (UNTH and Dental school library) do not have functional internet, up to 3 of them do not have access to database resources. The most available resources are textbooks in core courses, medical journals, bulletins and general encyclopedias and dictionaries. Each of the libraries had up to 80% of these required materials. Three of the libraries also have the fiction in their collections indicating the presence of leisure/recreational reading resources in these libraries. Although the libraries have qualified staff particularly professional librarians, they are not adequate in number. It is only UNTH library that had adequate number of librarians who had up to Masters Degree in Library and information science.

On their physical facilities, the libraries had conducive reading environments for their clients. It was also observed that Parklane medical library, Federal Neuropsychiatry hospital library and the National Orthopaedic hospital library are newly equipped. These libraries are neatly and well equipped with library resources, infrastructures and computers.

The foremost Augustine Nnamani medical library of UNTH also have various resources but unfortunately, they are not being used as required due to the change in location from the present location of the medical library to Ituku/Ozalla where the teaching hospital is now located. This made the library to be somehow deserted indicating that clienteles do not frequent the library as they ought to.

The UNTH, Orthopedic and Parklane hospital Libraries have most of their old journals bound and shelved. These journals comprised of both local and foreign journals. There are shelf list of these bound journals with dates on their shelves. Although these journals are no longer being supplied regularly, at UNTH, but those supplied are maintained very well.

The Dental library on its own is very spacious and has cool atmosphere for its users. It has precious resources properly arranged for users to access. It has a guide on a big notice, showing or giving the directions to materials on the shelves and their locations. Their journals are parked though not in an arranged manner but still suitable for users to access them. Most of their resources are also obsolete.

Although these resources are available to an extent, the medical librarian should endavour to make these resources accessible to users as opined by Akusu (1987) that the Nigerian Medical Librarian has an uphill task in his/her effort to satisfy the resources and services' needs of the users of his library. Being available does not mean that they are hundred percent (100%) contented with their resources in their various libraries. By this, the researchers believe that interlibrary loan and cooperation will help a lot as opined by Umenwa (2010) that cooperation among medical libraries is a continually evolving process, driven increasingly by the enormous effort of coping with the exponential expansion of published biomedical information and the spiral cost of acquiring this information.

6.2 Research Question 2. What is the extent of services rendered by the medical libraries?

The data for this research question were collected using research questionnaire.

Table 3. Library and information services rendered to clients of the medical libraries

S/N	Libraries Services	Mean UNTH	Mean Parklane	Mean Orthopedic	Mean Psychia	Mean Dental	Overall mean X	Decision on availa-bility	Rank
1	Current Awareness Services (CAS)	2.6	2.1	3.6	3.8	3.2	3.2	HE	3
2	Selective Dissemination of Information (SDI)	2.7	3.3	3.1	3.9	3.3	3.3	HE	2
3	Biblio −therapy/ Play-therapy	1.1	3.1	1.8	3.8	1.5	2.3	LE	11
4	Information Communication Technology (ICT)	2.8	3.5	2.7	3.0	3.6	3.1	HE	5
5	Circulation/Lending	3.4	3.3	3.2	2.7	3.4	3.2	HE	3
6	Reference	3.1	3.2	3.6	3.1	3.3	3.8	VHE	1
7	Catalogue	3.1	2.9	2.8	2.8	3.4	3.0	HE	6
8	Indexing Abstract	2.8	3.3	2.7	2.4	2.2	2.7	ME	8
9	Medical Research	2.9	2.8	3.3	3.0	2.3	2.9	ME	7
10	Recreation/Leisure	2.0	3.1	2.2	3.2	2.3	2.6	ME	9
11	Inter library loan	2.0	3.1	1.4	2.5	2.1	2.2	LE	12
12	Documentary Delivery	1.8	2.9	1.8	3.5	2.0	2.4	LE	10
13	Translation	1.8	1.37	1.78	1.59	1.70	1.52	VLE	17
14	Documentation	1.65	1.57	2.28	3.53	1.94	2.2	ME	13
15	Library 2.0	1.24	1.14	1.00	2.29	1.74	1.48	VLE	18
16	Unified Medical Language System (UMLS)	1.30	1.71	1.00	2.18	1.52	1.93	VLE	14
17	Digital library	1.53	1.63	1.00	2.59	1.58	1.63	VLE	16
18	Information therapy	1.18	1.69	1.00	3.88	1.63	1.88	VLE	15

To get the extent of services rendered or given to clients of these medical libraries, table 2 below shows that the users accept that they are being given high standard of services on current awareness (2.26), SDI (3.26), ICT (3.1), circulation/lending (3.2), Ref. services (3.26), cataloguing (3.0), indexing/Abstracting (2.67), medical research (2.87), recreation/leisure (2.6), since their means are above 2.5, while the other services such as Biblio-therapy (2.30), Inter library loan (2.20), Document delivery (2.41), translation (1.52), Documentation (2.19), library 2.0 (1.48), UMLS (1.93), Digital Library (1.63) and information therapy (1.88) are being given at low standard.

Extent of Services Given/Rendered by the medical libraries

The results of the study showed that generally, the medical library users all agreed that reference services, Selective dissemination of Information (SDT) Current Awareness Services (CAS), Circulation/lending, Information and Communication technology (ICT), Cataloguing, Indexing and abstracting Recreation/Leisure were being provided at a high standard level while other services such as document Delivery, Biblio-therapy/Play-therapy, Inter library loan, Documentation, unified medical language system (UMLS), Information therapy, Digital Library, Translation and Library 2.0 were not given at a standard level.

Specifically, Parklane and UNTH medical libraries provided most of these services to a high extent. De Genero in Ajayi (2004) predicted correctly when he said that there is need to evaluate medical libraries, because in no distant time, the excellence and usefulness of a library will be measured not only by the state and quality of its collections but also by the range of services that its staff are able to deliver to users by conventional and electronic means from a growing variety of services it can provide. Though the respondents said some of these services are not available, but they are being given in one way or the other. This is true because most of their free time falls between 10pm and 8am when most libraries are closed due to the nature of their education and profession. This finding is supported by Umenwa (2010) who noted that the healthcare professional and students are not aware of the services available in their medical libraries due to their inability to enjoy their free time during the day. The researchers are of the opinion that the library staff should make out time and effort to carry the users along while working for them by telling or explaining what he/she is doing and what type of services they are receiving at any point in time and also market their library through several means as has been suggested earlier. Umenwa (2010) supports this when she opined that the medical library should be identified with leading edge of medical development and always surprising their users by offering services consistently better than that which they expected to receive.

7. Implications of the Study

The results of this study have far reaching implications. Health is very important in people's lives and access to sound health information for quality health care provision should be guaranteed by teaching hospitals since their users need information resources and services to train and develop in their different specialties of the medical field. This will also enable them measure up to international standards. In addition to the fact that Nigerian teaching hospitals especially those within and around Enugu area are referral hospitals used by both indigenes and foreigners, most of the specialist residential training undergone by the medical personnel are of international standard – such as the West African College of Surgeons Fellowship Examinations and others. These medical libraries need to measure up to the standard of those in the advanced countries of Europe and America to be able to provide adequately for their users who are medical personnel at different levels. Furthermore, that most of the medical libraries do not have the adequate resources implies that they are not cooperating as required. They should therefore form an avenue of sharing their resources locally since they

are all in one state as this will uplift the standard of whatever resources each medical library has as well as boost access to health information with a modest effect and less expenses.

8. Recommendations

Based on the findings of the study, it is highly recommended that the medical libraries should engage in more collaborative activities to pull their resources together — interlibrary loan, forming repositories of the medical libraries etc so as to improve their resources and services for better health care services in the area. Since they are located in the same state and they are pursuing common goal of enhancing better health care in the region and beyond, it will be worthwhile to work together.

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[Appendix A]

Questionnaire on Status of Medical Library and information services in Enugu State

Enugu State University of Science

and Technology, Agbani.

Dear Respondent

Please, kindly assist in supplying the required data on the above subject matter. The information so given will be used specifically for the study.

Thanks.

Mrs. Okeke, O.C; Dr. J.U. Eze & Others.

What is the extent of services rendered by the medical libraries?
Kindly indicate with a tick as applicable below thus; VHE ⁻ Very high extent; HE- High Extent; LE ⁻ Low Extent; VLE ⁻ Very Low Extent

Response

S/N	Libraries Services	VHE	HE	LE	VLE
1	Current Awareness Services (CAS)				
2	Selective Dissemination ofInformation (SDI)				
3	Biblio ⁻therapy/Play-therapy				
4	Information Communication Technology (ICT)				
5	Circulation/Lending				
6	Reference				
7	Catalogue				
8	Indexing Abstract				
9	Medical Research				
10	Recreation/Leisure				
11	Inter library loan				
12	Documentary Delivery				
13	Translation				
14	Documentation				
15	Library 2.0				
16	Unified Medical Language System (UMLS)				
17	Digital library				
18	Information therapy				