



Health Information Services Delivery for Prevention and Treatment of Infertility in Teaching Hospital Libraries

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Abstract

Since the medical library is said to be or rather seen as a library created to support their parent institutions by meeting the needs of their medical personnel, staff and researchers seeking information about specific diseases, diagnoses, or treatments, which affect either their own health or clients, their services should know no bounds as it must cut across all ailments pertaining the human body. Therefore, it will never be odd that the medical librarians do offer reproductive information services to their users. These reproductive information services include infertility which is a major variable in this article. This paper therefore, explores the information services offered by the medical libraries particularly those of the teaching hospitals in Nigeria, South East Zone to be precise, in a bid to aid the eradication of reproductive problems or infertility as commonly known and addressed. The services ranged from the physical services to the electronic services and were properly explained to aid easy assimilation.

Keywords

Medical Library, Teaching Hospital, Information Services, Reproductive Services, Infertility

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Introduction

Every library is charged with the responsibility of delivering prompt, relevant and adequate information to the information user so as to satisfy his or her information quest, need or query. Giving that the library offers two set of responsibilities i.e. resources and services, both must be readily available to the users. Information services are those activities the librarians engage in so as to serve their clients better. It ranges from the welcome given to a client, to the assistance given to him in his search or quest for information seeking. It is the daily activities of the librarian towards giving their users or clientele quality assistance. Such

activities cannot be properly achieved if information resources are not provided. Utilization is a stage where the clientele uses or applies information to solve his/her need(s).

Medical libraries are known to be libraries established in hospitals, health institutions and health agencies. The Medical Library Association's *Standards for Hospital Libraries 2002* is developed as a guide for hospital administrators, librarians, and accrediting bodies to ensure that hospitals have the resources and services to effectively meet their needs for knowledge-based information (Okeke, Eze & Ani, 2019). The teaching hospital library is a form of medical library. It

is positioned to play a key role in the teaching hospital. Utilization of medical library's information resources and services generally is a communication process, which has to be properly observed since it is normally for research purposes as

birth. It could be seen as the inability of able bodied-couple to bear children. It happens to both males and females. It is the inability to conceive after one (1) year of regular sexual intercourse. This is due to fertility problem also known as infertility. It affects many couples negatively. Infertility is said to negatively affect 8-14% of couples (Emslie, Grimshaw & Templeton, 1993; Bhatti, Fikree & Khan, 1999, in Dyer, Abrahams, Hoffman & Van Der Spuy, 2002). According to the authors above, it is a major reproductive health problem with regional prevalence rates of 30-40% in Africa. These regions, according to the writers, are West Africa and South Africa. The reason for this, according to the authors, is untreated infections, which now result in high prevalence of stigmatization, ostracism, abuse and divorce of infertile women in Africa. The authors maintained that infection is the commonest cause of infertility and that it affects the physical health of both men and women. Worthy to note is that the objective of every marriage in South east Nigeria (Igboland) is to beget children who apparently, some couples do not achieve this great objective of marriage. This condition has led to disharmony of so many marriages and even to the extent of destabilizing homes. In Nigeria, infertility has long been a cultural concern, where it is generally held that all women should become mothers (in addition to filling other roles in the society), and infertility is

stated by Okeke, Eze and Ani (2019). They provide health information resources and services of which infertility is part of.

Infertility is the inability to conceive a pregnancy or to carry a pregnancy to a life

seen as a serious social problem for women fulfilling in her marriage. It is seen as the woman's problem not minding that the man/husband could have infertility problems as well.

This has led to several vices to the woman involved from both the in-laws' family and the society at large. For decades, infertility particularly in South Eastern Nigeria is seen as a careless or reckless lifestyle lived by the woman while a spinster. This assumed cause of infertility in marriage by people holds without taking considerations that men as well can be infertile in reproduction. Women in particular, commonly suffer from severe negative social consequences such as stigmatization, ostracism, abuse and economic deprivation due to infertility. The effective management of infertility therefore has considerable impact on reproductive health in Africa. The teaching hospitals currently have remedy to this situation with the aid of their medical libraries that have the resources and services needed through the provision of health information.

Notwithstanding, there are preventive measures in place for treating infertility. These measures according to Ogbodo (2019), include personal hygiene, prompt treatment of any infection, early detection of infertility signs among others. In all these, Okeke and Ani (2021) maintained that the medical library must assist their parent institutions

by providing information resources and services suitable for awareness and eradication of infertility. These include the physical services as well as the electronic services of the libraries. The physical services include advice, through reading, workshops, conferences, etc. The electronic services include the treatment, implants, injections, etc. Whichever way, measures are taken to ensure safety of the patients (Ogbodo, 2019). Meanwhile, these measures are already in place for those who need such services. There are some known technology-assisted reproductive (TAR) measures or services obtainable in teaching hospitals. It is the medical libraries duty to provide information materials or medical literatures about them.

Recently, in a bid to curb and prevent infertility, the teaching hospital medical libraries have introduced the provision of services to their users in a bid to increase its utilization (Okeke and Amadi, 2022). Meanwhile, there are certain services geared toward combating infertility. These infertility combating services include but not limited to the following:

- Current awareness: this is a service that keeps users of the library abreast or informed of the happenings in their information environment. Strauss et al, in Aina (2004), defined it as the establishment of a system for reviewing publications immediately received, selecting information pertinent to the programme of the organization served, and recording individual items to be brought to the attention of those persons to whom work is related. It is essentially seen as a way to keep users up to date

with the happenings in their subject areas of interest. It is to ensure that users are aware of recent development in their fields of interest hence the librarians' duty to keep users informed of the latest documents available to the library or any related information that is obtainable elsewhere. This information availability to the users could be through photocopy of table of contents, periodicals routings, telephone calls, subscription to specialized services, electronic news groups, e-mail messages, letters, preprints of papers, etc.

In most cases, libraries do publish accession list or acquisition lists at regular or specified times so as to provide the full bibliographic details of materials that are recently acquired by them. Major subject categories are usually the order of arrangement of the new documents. These could be directly sent to users or posted on a notice board through the electronic mail (e-mail). Current awareness services (CAS) are always provided to users in broad subject categories without necessarily targeting a particular user. This in essence indicates that CAS is not a personalized service. On this service too, information is usually provided on a variety of documents like journals, books, conference proceedings, these and dissertations, newspapers and magazines. In essence, the awareness is highly channeled towards infertility thereby helping the users to be fully

aware of it and what action(s) to take as a remedy.

- **Displays and Exhibition:** This service enables the librarians showcase what resources they have in stock for their users. It is essentially to advertise the services and resources of a library. Nnadozie (2016) defines this as that which assists the library to draw attention of customers and visitors to certain resources and services. A display, according to Aina (2004), draws the attention of library users to the services rendered by the library. It publicizes the services through illustrative materials on display stands, display boards, etc. Exhibition, on the other hand, is generally to stimulate readers' interest on a particular area of interest to the community. These materials of the library could be exhibited through the use of, display stands, display boards, glass display cabinet, etc. Exhibitions and displays are focusing on a particular topic and that makes them often topical. They could also be mounted to enable or draw library users to explore some library resources. Displays and exhibitions on a particular topic usually do not exceed two months. Based on this, libraries are encouraged to mount the displays on a regular basis. When tracts and even cartographic materials are displayed or exhibited at strategic positions in the library, they are also disseminating information directly or indirectly to users.
- **Selective dissemination of information (SDI):** this service is very essential as well as

common in special libraries. This is because the librarian carefully selects and acquires resources based on the institution or organization the library serves. The main objectives of Selective Dissemination of Information, according to Aina (2004), are to provide users (especially in special libraries) with information that will promote their research and other day-to-day activities. Selecting infertility related information sources or the related ones is quite necessary since this service also relieves the users of the problem of sifting through a large number of materials before getting the relevant material that is needed. The time that is saved for the user could be used for other purposes thus fulfilling Ranganathan's 4th law of librarianship - Save the time of the user. Since this is a customized service that is very common in many special libraries of which the medical library is part of, the librarian on a regular basis, should search through a mass of literature from which those of interest to a particular user selected should be made available to him. This is seen as a personalized service since it takes into consideration, the category of users in its collection development.

- **Indexing:** this is seen as the process of producing a guide to the intellectual content of material or document. This is because an index is said to be a pointer that directs the information user to the information he seeks.

Ezukwuoke (2017), in his own words, states that indexing is the process of assigning keywords or concepts to documents or the process of determining what subject matter a document has. Therefore, indexing the titles on infertility shall go a long way in assisting the users promptly locate the information materials needed. This is because the index gives the descriptors the descriptions that are used in describing the intellectual contents of an information material. Its ultimate objective is to reduce efforts a user expends in increasing a topic of interest in a particular document or a set of documents that have been stored in a collection. Nwosu and Ottong (2014) stated that this information access tool provides access to the analyzed contents of bibliographic entities, that they are not limited to what is available in a local setting or do the location of information, that they are available in print, on-line and CD-ROM, etc. Aina (2004), in his own words, said that an index is an important tool for retrieving information contained in documents stored in the library, documentation or information center. The author continued that index provides a means of locating the information relevant to a request.

- Abstracting: this is the process of giving the summary of an information material. It also provides a bibliographic reference of information materials and then gives a concise and accurate summary of the essential contents of the

document in such a way that it presents a skeletal representation of the original documents. Ezukwuoke (2017) defined it as the process of preparing a summary presentation of a text/document in as much as possible using the language of the author. This is because it gives direct information in a summary form. By so doing, it serves as a surrogate of the main information material. This is because according to Aina (2004), it identifies the basic content of a document quickly and accurately, it determines its relevance to their interests, and thus be able to decide whether they need to read the document in its entirety or not. In essence, abstracts on infertility shall be able to give the users brief(s) on the topics they needed. This is because, reading the abstract of information materials gives the users the opportunity to either continue reading/searching for the full text to read or discontinue the usage immediately.

- Bibliotherapy: although the library cannot directly restore good health to the sick, but there is a way of helping them. Reading can make time fly faster than lying down for hours on the hospital bed. In the case of infertility, some long-term patients may be interested in serious reading for the first time while they are in hospital, since they may have more leisure hours now than they ever had. If they are served some library resources to read, they would appreciate this service and may continue to

use the library when they recover, as opined by Okeke (2019). Moreover, some patients might have been used to reading (e.g. Health magazines, newspaper health pages, flyers, etc.) or regular library users before they came to the hospital. This category of patients should not be denied library services because they are now in the hospital. By extending their services to the sick, Nigerian medical libraries would enable non-users of the libraries to become aware of the existence of their libraries with full resources and services obtainable from there. Given patients health information on infertility as part of bibliotherapy will therefore go a long way to help patients come out of their shells and give room to treatment. It is pertinent to note that, some patients do go through psychological trauma particularly those with infertility cases. Bibliotherapy services help bring their cases to minimal as they get engrossed with resources that can sooth their souls.

- Clinical/health information: this is the information that concerns health and its field. Nwafor-Orizu and Onwudinjo (2015) define clinical/health information as that knowledge, facts and news generated from various sources, necessary for good physical and mental condition of human beings. The authors continued that it is in the main sought after and utilized by health professionals who are the fountain head of health givers. These clinical/health information cuts

across resources and services of the medical library. Hence relevant information sought after where found here, the problem is solved. One does not need to be in the health/medical profession before getting acquainted with the ailments and prevention/curative measures. Infertility is not an exemption to this, sine the information gotten can help ameliorate the problem and reduce the menace. Therefore, it is imperative for medical libraries to provide relevant resources and services needed by their users since these users and the kind of information they need are known to the librarians.

- Providing Patient education literature and information: this is a service that makes the patient understand the illness he has and the comforting solutions he can get through relaxation of his mind with the health literature. Okeke (2013) stipulated that people perish due to lack of knowledge. This assertion is true because when one is not informed he is deformed. Educating patients through literature and information has a long way to help out in saving lives. The bible made us to understand that God's people perish for lack of knowledge (Hosea 4:6). It is worthy to note that when one is informed, he/she is aware and hence knowledge has been acquired. Providing patients with health education/information on infertility therefore, teaches and as well makes them know clearly all they need to know concerning infertility. This is

because, precautionary measures will be taken in the sense that the patients being informed will then know that prevention is better than cure. Besides, it is always said that a healthy nation is a wealthy nation. Supporting this, Umenwa (2010), opined that the medical library in developing countries like Nigeria must raise hopes of readers of these literatures by making it available to them at all times. This is because according to the author, the advancement of knowledge is made possible by scholars' research in all fields particularly health sciences. The researcher believes that in the case of infertility, the provision of such service will be highly appreciated since it will enable the patient understand more about his/her predicament and how to go about it cum the curative measures needed.

- Medical education research: the medical library provides resources and service that will promote the educational standards of their parent institution. One of the objectives of establishing a medical library is to promote medical research and education. This according to American Society for Reproductive Medicine (2015) is a biomedical research or experimental medicine that encompasses a wide array of research which extends from basic research to clinical research thereby involving studies of people who may be subjects in clinical trials. This is mostly applied in pharmaceutical medicine. It

gives physicians and clinical research professionals support in the planning, conduct and evaluation of clinical trials particularly in the area of infertility. Here too, medical writing and publishing of medical and regulatory documentation developed by experienced medical writing teams play a pivotal role in the success of such research. Therefore, giving medical education research services on infertility shall not only promote the curative measures of combating it but rather promote the awareness on causes as well as preventive measures of the phenomena.

- Information search: information is a processed data that conveys meaning to the receiver or user. Aina (2004) maintained that information is a processed data from which meaning arises and that it is communicated. The author went further to state that information search entails the scanning of information from the resources as well as the services available to the user. This entails the user's need for information and knows where to get it. As part of the services of the medical library, the users' query will be ascertained and assistance given to him. Also the search strategy which is a move that is made to search for information will be shown or taught him so that he can be independent on future use of the library, as asserted by Obinyan and Aidenojie (2014). A typical example here is the researchers/authors who are not in the medical line, but

were able to gather such information on infertility.

- User instruction: here, it is the duty of the medical library to provide user education in order to equip users with enough knowledge on the use of the library. It will enable the user make use of the library at his leisure. Iroka, in Okeke (2013), stated that we all know that information is expanding at a fast rate resulting in information explosion, and new resources are being introduced into the library, therefore it is wise to carry users along by giving them the necessary education on library use for them to satisfy their information needs. Medical library concerns health and it must deliver and meet up with the objectives of their existence so as to help clinicians save life. One of the objectives is to enable users exploit the resources of a library to the fullest. Through user education, the user is able to get any information he desires and as well develop the skills to use the resources of the library independently. As opined by Iroka, in Okeke, Eze and Ani (2019), user instruction/education enables the user to make a successful use of the medical library and its related resources. Relatively, provision of user education of the medical library resources and services on infertility shall enhance the awareness on its courses, prevention and ways to combat it.
- Medical information workshop: this is seen as the collaboration of medical librarians and their parent institutions to create an

orientation for users. The users are being given health information on issues concerning their professions and fields. It could also be on new ailments and treatments particularly that of infertility. According to Nadgaer (2020) citing Pub Med Plus Medical Encyclopedia (2015), explained it as that which provides a service to assist the development, maintenance and safety of its research and teaching facilities. This ranges from equipment and facilities relevant to contemporary biomedical science. Since infertility eradication is trending in teaching hospitals, the medical libraries will not hesitate to prepare workshop concerning it. The medical library provides the library with all those electronic services that enables users see the library as a warehouse of information.

There are also the electronic information services offered by the librarians to their library users so as to combat infertility. These e-services of the medical library are those functions cum activities of the medical librarians that require the use of electronic gadgets to serve their clients/patrons/users. These activities are geared towards effective information delivery to satisfy the information needs of the clients. These electronic activities make use of the electronic facilities in delivering prompt, timely and adequate information on infertility to the users. The e-services of the medical library include the following:

- Internet services: this is the interconnectivity of computer networks to provide information

dissemination using electronic means. As opined by Okeke (2017), that the internet is a worldwide system of interconnected computer networks that make use of internet service provider (IP) set of network protocols to reach billions of users. Asogwa (2010) postulated that internet is a worldwide network of computers that that is made up of networks linked together by the international telephone project. The author stressed that internet is accessible to varied groups of people including the business executives, academics, military, students, researchers and bureaucrats. Based on these therefore, it is the medical library's duty to provide internet services to its users since most of them are researchers and as well students. Through the internet, a lot of health information on infertility are disseminated which will in turn, enable the medical professional/workers/clinicians and medical librarians enhance productivity in health services teaching and delivery. On the issue of infertility, the internet is needed by these users so as to gain more knowledge cum information on the best approaches to use on patients.

- Database provision: this is a large electronic file that contains digital information. According to Asogwa (2010), it is that which enables the user or librarian to organize information for easy retrieval. They are said to be a collection of records. They exist for the purpose of providing

information when needed. It is made up of files or records that are related to a particular subject or discipline. It is being updated at a regular basis in order to maintain it relevance and currency. Provision of databases on infertility goes a long way to assist the users in their utilization. This is because; the materials or files are arranged or organized in a definite order so as to ease retrieval of the information with the best possible speed and accuracy. The database records may be journal articles, abstracts, reports, images, etc. which all have relevant information in them.

- Telemedicine services: this, according to Okeke, Eze and Ani (2019), is the remote diagnosis and treatment of patients by means of telecommunications technology. It involves the distribution of health related services and information through electronic information and telecommunication technologies. When this service is provided to the users by the medical librarians, it will assist both the patients and the clinicians in health teachings and explanations particularly when it pertains to infertility. This is because the service allows the interaction as well as long distance patient/clinician contact and care, advice, reminders, education, intervention and monitoring as well as remote admissions. It is simply the delivery of healthcare services to patients with the aid of telecommunication infrastructures. In this, it

provides or rather allows healthcare providers to evaluate, diagnose and treat patients using common technologies like video conferencing and smart phones, without the need of an in-person visit.

- Really simple syndication (RSS): It is the term used to refer the collection of web feed formats that provide updated or shared information in a standardized way. Okeke (2013) defined this as a type of web which allows users and applications to access updates to websites in a standardized and computer-readable format. When infertility topics are provided on really simple syndication, it gives easy access to its utilization since it gives users prompt information needed on any field and serves as a good alternative to social media. Some call it rich site summary and this is because it gives the summary of basic updated information on both articles, news pieces, and others. The sites are complex and thus allow users to create their own files so as to allow feeds.
- Podcasts: this is a digital audio file that is made available on the internet for downloading to a computer or mobile device. These are typically available as a series and or installments of which can be automatically received by subscribers. Okeke (2012) defined it as an episodic series of digital audio or files which a user can download in order to listen to. It often uses a subscription model whereby new episodes are automatically downloaded through web syndication to users' own

computers, and or other electronic media applications. Given the fact that infertility and its combating processes are a new phenomenon to Africans, providing podcasts on it shall easily promote its eradication through teachings and slide shows of the casts.

- Unified medical language system service: this is a set of files and software that brings together many health and biomedical vocabularies and standards to enable interoperability between different computer systems. Using this service to combat infertility is a welcome development, as many files will be shared, both locally and internationally so as to give a wider horizon on the factors that is to be known. The essence of this in medical libraries is to bring together many health and biomedical vocabularies as well as standards to enable this cooperation between computer systems.
- Medical research service: according to Nargar (2020) citing Pub Med Plus Medical encyclopedia (2015), this is a biomedical research or experimental medicine that encompasses a wide array of research, which extends from basic research to clinical research thereby involving studies of people who may be subjects in clinical trials. Although this is mostly applied in pharmaceutical medicine, applying it to infertility pharmaceutical products shall also be wise. This is because, it will give physicians and clinical research professionals support

in the planning, conduct and evaluation of clinical trials such as infertility. Also with these services, medical writing and publishing of medical and regulatory documentation developed by experienced medical writing teams play a pivotal role in the success of such research.

- E-workshop: this is the collaboration of medical librarians and their parent institutions to create a workshop or orientation for users. Nagar (2020) explained it as that which provides a service to assist the development, maintenance and safety of its research and teaching facilities. This ranges from equipment and facilities relevant to contemporary biomedical science. The medical library provides the facilities like projectors, necessary for the e-workshop. Since infertility eradication is a new aspect or rather project in medical field, this e-workshop by the medical library shall be of great importance to the health sector.
- E-seminar/E-conference: this is an electronic platform that gives professional groups or individuals the opportunity to come together and have discussion on a particular topic or issue. It is otherwise known as conference, training or meeting for discussion. It could be in form of symposium, congress, convention, colloquy, summit, synod, conclave, consultation, forum, etc. when this is done electronically, or online, it becomes an electronic seminar/conference. Nnadozie (2016) explained it as a form of

academic instruction, either at an academic institution or offered by a commercial or professional organization. It has a function of bringing together small groups for recurring meetings, focusing each time on some particular subject in which everyone present is requested to participate. Both clinicians, medical professionals and even para-medics, users of medical library as well as medical librarians, when engaged in infertility seminars/conferences shall learn a lot so as to promote the eradication of infertility.

- E-Selective Dissemination of Information (e-SDI): this involves the automatic notification of users when new records are added to the database of the library. Nnadozie (2016) maintained that the records are matched against a search strategy which reflects the users' interest profile. The author continued that the library tries to capture the user's profile together with their areas of interest and as well packages information to them in their comfort zones. Providing services on infertility via electronic dissemination of information will also increase its awareness and thus help in the process of combating it although the individual may be asked to pay for this service.
- E-Current Awareness Services (e-CAS): this provides the users with their specific information needs and as well keep them abreast of the latest developments in and outside their areas of interests. This service according to Nnadozie (2016) involves the selection of

one or more systems that provide notification of the existence of new entities added to systems database in its entirety. It allows the user to be automatically notified on periodical updates of library resources and services as well. Hence, providing infertility e-current awareness services shall therefore, enlighten all the users thereby keeping them abreast on all that they should know about it.

Conclusion

In the light of these, this study which mainly centered on health information services on infertility and its treatments, with focus on teaching hospital libraries in the south east region of Nigeria; and also with a purpose of enlightening the masses on infertility, concludes that, the management and authorities of these teaching hospital medical libraries should beef up in their provision of infertility combating information resources and services. This is because, the study has a significance of great importance to the universities that do medical courses, the government, ministry of health, medical practitioners, national health policy makers, World Health Organization (WHO), couples with fertility problems, medical libraries and librarians, information agents, researchers, pharmaceutical industries, education authorities and the general public, in so many ways. This will therefore, enable the users make good utilization of same to achieve a reasonable goal of combating infertility in the south east Nigeria since there is awareness to its causes and remedies.

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