



**UTILIZATION OF INFERTILITY COMBATING INFORMATION RESOURCES IN
TEACHING HOSPITAL MEDICAL LIBRARIES OF SOUTH EAST NIGERIA**

BY

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Abstract

This study centered on the Utilization of Infertility Combating Information Resources in the Teaching Hospital Medical Libraries in South East Nigeria. A research objective, research question and as well, a research hypothesis guided the study. It gave an insight on infertility and most likely causes of it, also highlighted some of the treatments to combat it and then the information resources available to users in to combat infertility. Literature on infertility, medical library and as well measures to combat infertility were also reviewed. The population was 4425 medical library users from the 8 teaching hospital medical libraries in the 5 States of South East zone of Nigeria. 885 were sampled by simple random sampling, 618 responded adequately to the instrument. Analysis was made using mean scores and standard deviation. It was revealed that both the federal and state teaching hospital medical libraries users make good use of the provided infertility combating information resources. Recommendations were equally made based on the findings.

Key words: Information Resources Utilization, Infertility, Teaching Hospital, Medical library, Medical librarian.

Introduction

The utilization of infertility combating information resources in medical libraries of teaching hospitals seem to be a new phenomenon that needs to be extensively researched on. This is needful since the library has changed from being cultural monuments to knowledge acquisition and information communication Centre (Mwatela, 2013). Information resources utilization is an

important area of research in librarianship that need to be extremely explored. The utilization of information resources generally, has become imperative in all libraries hence the 1st laws of librarianship as propounded by Ranganathan (1931):” Books are for use”. This indicates that the materials of the library are meant to be used by information seekers who always sought information from these materials. This is because the materials of the library are information carriers and must be needed by information seekers at any given time. More so, it is the library that is the only centralized location where new and emerging information technologies can be combined with traditional knowledge resources in a user-focused, service-rich environment that supports today’s social and educational patterns of learning, teaching, and research (Anunne, 2017). The focus of this research is on teaching hospital libraries which is a form of medical library.

Teaching hospitals are established institutions usually a Faculty from a university that offers medical courses. The Library in these teaching hospitals are forms of medical libraries. Medical library is a library that is charged with the provision as well as control of Medical information systems. Oguonu (2012), defined the medical library as libraries 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. It is positioned to play a key role in the teaching hospital. The increasing use of the internet and new information technologies by medical, nursing, and allied health staff, patients and the community require new strategies, strategic planning, allocation of adequate resources, and selection and evaluation of appropriate information resources and technologies as opined by Okeke, Eze, Eze & Asogwa (2017). In line with this, the Medical and Dental Council of Nigeria [(MDCN), 2018] maintained that the medical library unit should be responsible for keeping records of all books, gazettes, journals and magazines; arranging all books, journals, magazines, gazettes and other materials orderly for easy retrieval; receiving and documenting of

items ordered/donated on delivery; guiding users on retrieval of information; and listing and keeping of items in archive. Aside medical practitioners who use the medical library, lawyers also use it to consult materials on some forensic cases they have in court. Librarians are professionally trained to work in medical libraries. These personnel are known as medical librarians. They plan, select, acquire, organize, maintain and disseminate information materials that are relevant to the organizations' day to day activities. The librarians of medical libraries are said to be specialists since they have core knowledge of the information needs of their parent body. Librarians are indispensable to the clinicians' continuing education because making information accessible and responding to information requests to meet their need cannot be relegated.

Dintsov in Berestova (2016), opined that "information resources are understood [by them] as the totality of information gained and accumulated in the development of science and practical activities of people for use in production, management, and everyday life". Webster's Encyclopedic Dictionary (1974), defined information resources as those materials that give information seekers the accurate and or actual thing they need to know. These materials could either be in book form or non-book form. Umunna as cited by Okeke (2019), defined a book as a non-periodical printed publication of at least forty-nine (49) pages or more that are bound together having a spine and a cover, written by an author or group of authors. They are arranged in a definite order. These materials are meant for consultations from time to time with prompt information services.

Literature Review

Infertility is a problem that makes a couple unable to have children. It has been defined as the 'inability of able bodied couple to bear children (Dyer, Abrahams, Hoffman and Van der Spuy, 2002). It is the inability of young couples to attain God's procreation commandment. Ombelet

(2011), defined infertility as the inability of a person, animal or plant to reproduce by natural means. But the question is, what is/are the main cause(s) of infertility? The researchers' understanding is that there are several causes of infertility but the one vividly clear is that of age. When a woman has reached menopause, the effect is infertility. However, Taru (2013), listed the following as the causes of infertility: immune infertility, sexually transmitted infections, genetic, DNA damage, general factors like diabetes mellitus, thyroid disorders, undiagnosed celiac disease, and adrenal disease; hypothalamic-pituitary factors like hyperprolactinemia, hypopituitarism, presence of anti-thyroid antibodies that is associated with an increased risk of unexplained sub-fertility with an odds ratio of 1.5 and 95% confidence interval of 1.1 – 2.0; environmental factors like toxins such as glues, volatile organic solvents or silicones, physical agents, chemical dusts and pesticides as well as tobacco smokers who are 60% more likely to be infertile than non-smokers; alimentary habits like obesity and low weight. Meanwhile, infertility has been recognized as problem therefore, measures are being taken to make sure couples smile. There are the physical services as well as the electronic services. The physical services include advice, through reading, workshops, conferences, among others. The electronic services include the treatment, implants, injections, among others. 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. These assistances include the following:

- Therapeutic insemination: this is the deposition of semen at the cervix or in the uterus of a woman by mechanical means. This could be the man's (husband) sperm or another man's (donor) sperm. Scott (2015), stated that therapeutic husband insemination (THI) is

the term used to denote husband's own sperm while therapeutic donor insemination (TDI) is used when another man's sperm is used for the insemination.

- Gamete intra-fallopian transfer – (GIFT): this is the placement of retrieved ova with washed spermatozoa using a tube (catheter) into the filmbriated part of the fallopian tube for fertilization followed by implantation as in normal conception. Ogbodo (2019), defined this as the retrieval of oocytes by laparoscopy, immediate placement of the oocyte in a catheter with a washed motile sperm and placement of the gametes into the filmbriated part of the fallopian tube. By this fertility treatment, fertilization occurs in the fallopian tube (in vivo).
- Transurethral resection of verumontanum: this is the removal of obstruction in the distal part of ejaculatory duct known as verumontanum where seminal duct joins prostatic urethra to increase volume of semen (Scott, 2015).
- Tubal Embryo Transfer (TET): this is the placement of an embryo to the fallopian tube. In essence, fertilization here is always documented and or done before the placement in the fallopian tube. Mostly the gametes here are not from the couple and this hinders many infertile couple from adopting this. According to Akinloye and Truter (2011), many individuals both professionals and non-professionals do not accept this due to either culture or religious belief.

The medical librarians' duty is to provide users with information resources on these. The users on their own part is to make use of such information resources. Utilization is the stage where information resources and services are used to acquire knowledge, be informed, used for research as well as make decision. Okeke, Eze, Eze & Asogwa (2017), state that utilization is making proper use of something in order to achieve a desired result. Utilization of information resources and services is a function of how resources and services are organized and made

available for use. According to Uhegbu in Anunne (2017), information utilization is the actual putting into appropriate use of acquired information. Utilization of information material by any user is influenced by the kind of information resources available to the user that meets his/her information need. Chima and Nwokocha (2013), identified three basic categories of understanding in the context of information utilization of a person thus:

- Perception and understanding in which provision and accessibility of information to a user is anchored on the seekers demand within the purview of his behavior, gesture, words and writing.
- Normative or objective understanding in which provision and utilization of information is viewed within the context of users' objectives and purposes of seeking it.
- Contextual or subjective understanding in which utilization of information is a function of the subjective meaning given to it.

Worthy to note is that information resources and services utilization differ from users, environment and profession. This is based on their professional information needs, accessibility and other imperatives, which may include location and socio-economic. It could also be viewed from the context of users' needs and accessibility in relation to profession or functions performed. There are principles of utilization of information resources and services based on broad premises as stipulated by Chima and Nwokocha (2013), which involve the following:

- Goal: every use of data and information is goal oriented. Meaning that it must aim at solving a problem or enhancing a better understanding of an already known situation. The purpose of seeking information is central to its demand and use.

- Availability: information when made available is equally made accessible to users through information retrieving tools. It is through accessibility that the information seeker utilizes the available information.
- Process (channel of communication): this entails whatever medium is used. That effective information utilization is possible is only if the processes of accessibility are cheap, unambiguous, relevant, available to people, and in line with their level of literacy and understanding. This is because when information is made available, it should as well be made accessible through information retrieval devices.

The utilization of information resources and services in medical libraries are therefore charged with the proper provision of adequate resources and services needed to enhance its standards. But in all this, the use of information resources and services in medical libraries depends on the nature of the library. Ilochi in Okeke, Eze, Eze and Asogwa (2017), stipulated that the use of library resources and services in medical libraries depends on the virtual need of the information contained in those resources. This assertion is very correct since there is always a need for information resources and or services utilization. Iroka as cited in Okeke (2013), maintains that library orientation is important to new students of the teaching hospitals because they may find themselves in an environment where the library facilities of a medical centre do not exist. The writer maintained that the information can be provided in two ways, which are the library orientation and the library instruction. Library orientation introduces users/students to the physical plant/existence of the library, its policies and procedures as well as its resources. Library instruction on the other hand, teaches bibliographic skills useful in teaching, research, and or practice. In other words, the library orientation allows the user to be comfortable in the library and then use the library instructions received to make successful use of the library and its related resources and services.

This explains why the use of medical library has improved in recent times. It has helped in many ways through diagnoses and treatment of several ailments and health conditions. Mclean, Richards and Wardman (2007) in Okeke, Eze and Ani (2019), explained that the use of medical library has improved the participation of patients in health information formally and informally. They went further to say that patients as consumers cum users of medicine and web 2.0 are now writing and publishing their own experiences as well as exchanging such with the patient society. Worthy to note is that the utilization of information resources is usually determined by the library statistics. This statistics according to Okeke, Eze, Eze and Asogwa (2017), shows the number of materials consulted and those that were actually borrowed for home reading by the library users.

Information needs of the patients coupled with that of the clinicians, entail that the medical library would not relent in the provision of infertility combating resources. These resources according to University of Maiduguri medical library bulletin (2018), include:

- Gynecological Books: the books on gynecology furnishes the clinicians with information on fertility and the cases thereof, in both male and female and thus gives them suggestions or rather clues for treatments and as well symptoms of such cases.
- Subject guides: these guides could be displayed or placed where all eyes can easily see it. It is the medical library's role to provide such materials particularly on gynecology, sexually transmitted diseases and infections, etc. for the users from this field. By so doing the users will know what is obtainable in their subject areas.
- Newspaper: these are the national dailies. They are information materials of great importance. This is because according to Igwebuike (2014), they carry current information in various fields of study with immediate results of experimental research and development. The writer maintained that they represent a variety of point from

various authors and on various subjects. The newspapers are said to report results of recent research more quickly than books. This therefore makes it a necessity for medical libraries subscribe to the dailies always. Besides, these dailies have their health columns where reports and claims are made on daily bases concerning health matters of which fertility/infertility are part of.

Research Objective

1. To ascertain the extent of utilization of infertility combating information resources in teaching hospital medical libraries in South East Nigeria.

Research Question

1. What is the extent of utilization of infertility combating information resources in the teaching hospital medical libraries in South East Nigeria?

Hypothesis

H₀₁: There is no significant difference between the mean rating of respondents of federal and state teaching hospital medical libraries on the extent of utilization of infertility combating information resources in South East Nigeria.

Methodology

This study adopted descriptive survey design. The area of this study is south-east zone of Nigeria which comprised five (5) states. These states are namely: Abia, Anambra, Ebonyi, Enugu and Imo. The south east zone of Nigeria is located at the southern part of Nigeria. The zone has 3 federal teaching hospitals and 5 state teaching hospitals making a total of 8 teaching hospitals and they all have their libraries. The population of the study is the medical librarians in these teaching hospital medical libraries which is 44 (Statistics Register of the medical libraries under study). The federal teaching hospital medical libraries have 15 medical librarians while the state owned teaching hospital medical libraries have 29 medical librarians. Census sampling was used

since the size is manageable. The instrument for data collection was the questionnaire titled “Utilization of Infertility Combating Information Resources in Teaching Hospital Medical Libraries Questionnaire (UICIRTHMLQ)”. 30 copies of the questionnaire were suitably responded and were used for the analysis. The data collected was analyzed using Descriptive statistics of mean value.

Analysis

RQ1: What is the Extent of Utilization of Infertility Combating Information Resources in these teaching hospital medical libraries?

Table 7: Mean responses of respondents on the extent of utilization of infertility combating information resources in the teaching hospital medical libraries under study.

S/N	Extent of utilization of infertility combating information resources	FEDERAL \bar{X}	FEDERAL SD	STATE \bar{X}	STATE SD	AVERAGE \bar{X}	AVERAGE SD	DECISION
106	E-newspaper	2.27	1.14	3.10	.84	2.69	.99	FU
107	E-audio	2.78	.88	3.12	.98	2.95	.93	FU
108	E-magazine	2.63	1.05	3.22	.75	2.93	.90	FU
109	E-image	3.32	.85	3.11	.99	3.22	.92	FU
110	E-book	2.96	1.17	3.21	1.00	3.09	1.09	FU
111	E-journal	2.91	1.05	3.45	.70	3.18	.88	FU
112	Video, Slide and Photo shares	3.33	.95	3.52	.71	3.43	.83	FU
113	E-research report	2.90	1.09	3.66	.51	3.28	.80	FU
114	E-help and tutorials	2.98	1.14	3.56	.62	3.29	.88	FU
115	E-repository	2.83	1.06	2.95	.94	2.89	1.00	FU
116	E-thesis Dissertation	3.41	.75	2.89	1.04	3.15	.90	FU
117	World wide web	3.48	.66	3.34	.73	3.41	.70	FU
118	E-database	2.36	1.15	3.17	.81	2.77	.98	FU
119	CD-ROM	2.08	.91	2.88	1.12	2.48	.93	NU
120	JStor	2.50	.94	2.95	.92	2.73	.93	FU
121	E-Ephemera	2.12	1.10	2.91	1.03	2.52	1.07	FU
122	Newspaper	2.00	1.05	3.12	.81	2.56	.93	FU
123	Gynecological Books	3.47	.67	3.45	.72	3.46	.70	FU
124	Magazine	2.50	1.00	3.13	.87	2.82	.094	FU
125	Infertility journals	3.36	.89	3.38	.88	3.37	.89	FU
126	Drug books	3.50	.79	3.52	.82	3.51	.81	FU
127	Gynecological journals	3.38	.91	3.43	.85	3.41	.88	FU
128	Fertility videos	3.28	.95	3.40	.99	3.34	.97	FU
129	Fertility research reports	3.29	.81	3.38	.94	3.34	.88	FU
130	Fertility drawings and charts	3.38	.84	3.19	1.02	3.29	.93	FU
131	Fertility projects	2.28	1.18	3.13	1.08	2.71	1.13	FU
132	Thesis on fertility	1.87	1.09	2.82	1.01	2.35	1.05	NU
133	Journals on disease control	3.36	.77	2.76	1.15	3.06	.96	FU
134	Books on sexually transmitted infections	2.89	1.14	2.79	1.23	2.84	1.19	FU
135	Materials (Ephemera) on STIs	2.65	1.23	2.70	1.14	2.68	1.19	FU
136	Conference Proceedings	1.87	.99	2.56	1.26	2.22	1.13	NU
137	Subject Guides	2.82	1.05	2.99	1.10	2.91	1.08	FU
138	Databases	2.43	1.25	2.84	1.09	2.64	1.17	FU

139	Web 2.0	2.39	.85	2.59	1.13	2.49	.99	NU
140	PubMed	3.48	.88	3.61	.57	3.55	.73	FU
Cluster Mean		2.88	.98	3.14	.93	3.01	.96	RU

Key: \bar{x} – Mean; SD – Standard Deviation; RU – Regularly Utilized; NU – Not Utilized;

Table 1 displays the data driven from the responses of federal and state teaching hospital medical librarians on the extent of utilization of infertility combating information resources in teaching hospital medical libraries under study.

The table above clearly shows the mean responses of respondents of both federal and state teaching hospital medical library users on the extent of utilization of infertility combating information resources in teaching hospital medical libraries in the south east Nigeria. It can be clearly deducted that on a general note, the infertility combating resources on these teaching hospital medical libraries under study are regularly utilized. Although on a general note, some resources like the CD – ROM, Conference proceedings, Thesis on infertility and Web 2.0 are not utilized. Nevertheless, federal teaching hospital medical libraries have lapses in their utilization since they indicated that resources such as E-newspaper, E-database, CD-ROM, E-ephemera, among others are not utilized, but the general mean indicated that all the infertility combating information resources are regularly utilized hence the mean of 3.01 which exceeded the judgement base of 2.50.

Table 2: An independent t-test analysis of federal and state teaching hospital medical library users on the extent of utilization of infertility combating information resources in south east Nigeria.

Status	N	Mean	SD	Df	t-value	t-cal	Decision
Federal	288	100.80	34.23	586	1.98	3.13	Reject Ho
State	300	109.77	32.43				

Result on table 2 above shows the t-test for independent samples assuming equal variance of the mean responses of the federal and state users on the extent of utilization of infertility combating

information resource available to them. Since the t-Cal is greater than the t-value, the researcher therefore rejects the null hypothesis and states that there is a significant difference between the mean responses of the federal and state teaching hospital medical library users.

Findings

The findings extent of utilization of infertility combating information resources in the teaching hospital medical libraries, that users regularly utilize the resources available to them. some resources in the federal teaching hospital medical libraries like e-Newspaper, e-Database, CD-ROM, E-ephemeral, Newspaper, Thesis and Dissertation on infertility, conference proceedings, database and web 2.0 have means of less than 2.5. Their state counterparts responded that they utilize all the available resources provided to them. Utilization of infertility combating information resources are very adequate as opined by Okeke, Eze & Ani (2019), that the utilization of medical library resources and services depends solely on the strategies the medical librarians chose to serve their users best. They stipulated that the use of library resource in medical libraries depends on the virtual need of the information contained in those resources. This is true since there is always a need for health information utilization amongst medical community members. Still proving that the utilization of health information resources particularly the infertility combating information resources are very essential, Abubakar (2016), stated that only the frequent use of the medical library by their users will determine their support not only as collection centre of books and journals but as quick access point for health information retrieval and use. Parande, Tapare & Borle (2017), stated that the use of information resources by medical professionals can improve the quality of care, enhance the use of evidence based treatments, and maintain and update knowledge. In addition to formal classroom lectures, medical students must learn to collect information by their own efforts, to develop adequate professional competence.

Recommendations

Based on the findings, the author recommends that the teaching hospital medical library users should endeavor to utilize the provided infertility combating information resources so that they will be able to achieve their aim of combating infertility. The users of these teaching hospital medical library should endeavor to make good use of it since it is a place where information resources are acquired, stored, organized and accessed easily to satisfy their information need. So their utilization zeal should be elated.

Conclusion

The researcher concluded that there are regular utilization of infertility combating information resources and services in the teaching hospital medical libraries as well as their frequent utilization by the users. Also, the management and authorities of these teaching hospital medical libraries should beef up in their provision of infertility combating information resources so as to enable the users make good utilization of same to achieve a reasonable goal of combating infertility in the south east Nigeria.

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