

Full Length Research

Availability and Utilization of Health Information Resources by Medical Practitioners in Federal Medical Centres In Nigeria.

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This study examined the availability and utilization of health information resources by medical practitioners in Federal Medical Centers in Nigeria. The purposes of the study were to: identify the types of health information resources available to medical practitioners in FMCs; determine the extent of utilization of health information resources for effective service delivery by medical practitioners in FMCs in Nigeria; identify the challenges militating against the utilization of health information resources by medical practitioners for effective service delivery in FMCs and proffer suggested solutions for overcoming the challenges militating against the utilization of health information resources for effective service delivery by medical practitioners in FMCs Nigeria. Four research questions guided the study. This study adopted descriptive survey research design. The population of the study comprised 350 medical practitioners from FMCs selected using multi-stage sampling procedure. Structured Questionnaire and Observation Checklist were used for data collection. Mean scores and standard deviation were used to answer the research questions. The result showed that medical practitioners in FMCs in Nigeria utilize available medical information resources for effective service delivery. The study also found out that certain challenges such as lack of awareness of available health information resources among medical practitioners, lack of virtual libraries, and lack of information literacy skills among medical practitioners in FMCs were some of the factors militating against availability and use of health information resources by the medical practitioners. Based on the findings of the study, it was recommended among others that current health information resources should be made available in the libraries of FMCs; also, there should be training and retraining of health professionals in FMCs on the utilization of health information resources and ICT to enable them stay abreast of latest developments in the health sector and gain knowledge for better service delivery.

Keywords: Availability; Utilization; Healthcare; Information Resources; Medical practitioners; Federal Medical Centres; Nigeria.

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Introduction

Medical centers are established in different parts of the country in order to meet health needs of the people. This can however be achieved if service delivery to the people is effectively rendered. The reason people troop to medical centers is for their health needs to be met. It is the basis for people's confidence and hope that whatever health challenge taken

to it can be addressed. Effective service delivery involves research into ailments and evolving ways to contain and manage them, training of medical practitioners and provision of health care service which is the mandate of medical centers (Oriogu, Subair, & Oriogu-Ogbuiyi, 2017). Health care today is persuaded not just to cure ill patients but to provide good services to them. Patients put demand on care providers to be effective and efficient in meeting their health needs and in a timely manner as well (Andersson, 2017). Effective service delivery can be said to be service rendered that meets the desired need of recipients. It involves the use of modern technology and facilities in medical treatment, adequate specialist medical practitioners being available and ensures that delays associated with health care service deliveries are minimized. Effective service delivery enables health challenges to be met in a satisfactory manner and it is achieved in research, training and provision of health care service based on health information resources available at the disposal of medical practitioners.

The growth and success of any organization is largely dependent on the amount of current information at their disposal (Ekere, Ewulum, Eze, Okpala and Ebobo, 2019). Health resources constitute the force behind effective service delivery in medical centers. These resources contain health information which according to Brice and Gray (2004) is an enemy of disease. This is because knowledge about the health challenges and different ways or medications for combating the challenges which is made available through health information helps to overcome the diseases. Health information is pertinent for medical practice all over the world and their significance to medical practitioners is invaluable. This is because medical practice has to do with life and death of human beings and is therefore of very sensitive nature. Health information, in the opinion of Anderson (2014) is likened to knowledge, facts and news generated from various sources, necessary for good physical and mental condition of human beings. Nwafor-Orizu and Onwudingo (2015) stated that health information in health information resources can be in printed, non-printed or electronic formats. They comprise of research guides by subject, medical textbooks, medical journals as well as online indexes, electronic books and texts.

Health information resources ensure that a large population's health care needs are addressed quickly, effectively and efficiently. These resources facilitate research of health issues by providing desired health information and also help trainings in medical centers to be more effective (Mngutyo, 2017). Also, provision of health services becomes easier because of ready access to health information to dispatch health issues expediently and within a short time which minimizes long queues and ineffective medical treatments.

However, where health information resources are inadequate in quantity and quality, in different formats, scarce, obsolete and not adequately available, the reverse is the case. There is incessant displeasure expressed towards health services rendered and there is eventual decline in the patronage of the health facilities. Again, service delivery degenerate into unacceptable methods of health care delivery resulting into complains and dissatisfaction with health care delivery. The importance of health information resources and ultimately health information cannot be over emphasized because it lies in its utilization at the point of need.

Utilization is the purpose for having a thing; it enables exploitation. It is undertaken to achieve a desired outcome which is its ultimate purpose. Utilization of information according to Bitagi and Garba (2014) is the extent to which available information resources are used to meet the information needs of the users. Utilization is possible where there is availability. Availability ensures the presence of a thing and enables it to be accessed. The availability of health information resources does not indicate its utilization because it is possible for a thing to be available but not accessible (Musa, Adamu, Nongu and Sadiku, 2019). Therefore, availability and utilization of health information resources by medical practitioners means making health information resources in printed and electronic formats present for medical practitioner's exploitation for the purpose of achieving effective health care service delivery that meet the health needs or challenges of patients as desired.

It is worthy to note that there are possible challenges to availability and utilization of health information resources. Some of which may include lack of fund, lack of up-to-date resources, inappropriate resources, lack of skills to use health information resources, high cost of internet connection and subscription to health databases, incompetence of library staff, lack of Information Technology (IT) skills by users and lack of awareness of IT-based library resources, low internet bandwidth and insufficient IT infrastructure among others (Ajuwon, 2015). It is these amongst others that are likely to hinder effective service delivery as far as medical centers are concern.

The likely strategies of improving availability and utilization of health information resources in medical centers could include provision of adequate current health information resources, provision of information retrieval devices, training of librarians in effective information retrieval for their clientele, and training of health professionals to use health information resources in printed, non-printed or electronic formats (Okeke, Eze, Eze and Asogwa, 2017). Other strategies could include the provision of computers and Internet facilities, subscription to Internet services and health databases such as HINARI, Elsevier etc. in the medical libraries of medical centers and making it available in workstations, organizing appropriate computer and internet literacy programmes for skill acquisition by medical practitioners among others (Afolayan and Oyekunle, 2014).

Medical practitioners, otherwise known as health care practitioners are persons who by the law of their countries are permitted to work or practice medicine in medical or health institutions. The different types of medical practitioners include;

physicians, dentists, pharmacists, nurses, midwives, dietitians, therapists, psychologists, chiropractors, clinical officers, phlebotomists, respiratory therapists, occupational therapists, audiologists, speech pathologists, optometrists, emergency medical technicians, paramedics, medical laboratory scientists, medical prosthetic technicians, radiographers, social workers and a variety of human resources trained to provide some type of health care services (World Health Organization, 2018).

Federal Medical Centers (FMCs) are tertiary health institutions where medicine is practiced (Oriogu, Subair and Oriogu-Ogbuiyi, 2017). They are national government owned hospitals required to provide truly scientific and appropriate treatment to injured or sick people and are expected to have substantial facilities to do that. They are basically involved in the provision of health care services, teaching and research just like teaching hospitals. According to Federal Ministry of Health (2015), the role of FMCs in the health chain is to provide avenues where complex and complicated health challenges beyond primary and secondary health care centers are addressed. FMCs are, therefore, government owned tertiary health institutions with substantial facilities including diverse specialists' medical practitioners to offer effective service delivery into complex and complicated health issues beyond the level of primary and secondary health care.

It is in recognition of the benefits of FMCs that the Federal Government of Nigeria has been able to establish FMCs in almost all the states in Nigeria including. These FMCs have been established to complement the services of apex secondary health centers in states which have not been able to adequately meet the demands for specialist health care issues to the citizenry (Ministry of Health, 2015). It is also meant to stem avoidable deaths and eliminate health issues associated with the absence of FMCs among others in a region that result from people seeking effective health care service delivery in distant places. As a general rule in Nigeria, they were established in state capitals to complement the efforts of the various states' government. Before now, FMCs as a general policy, were established in states that do not have Federal University Teaching Hospitals. However today, this is different as they are equally established in places where teaching hospitals exist as well.

Despite the benefits associated with availability and utilization of health information resources for effective service delivery in FMCs, It has also been observed that in spite of FMCs' presence in Nigeria, medical tourism is still on the high side. Moreover, it appears that people are still seen seeking for health care services in teaching hospitals around. It is not clear whether it is the absence of modern standard facilities and equipment to address health challenges, or that the health information resources provided to medical practitioners are not adequate and appropriate, or lack of how to use health information resources that is causing this situation. It is against this background that the study sought to investigate the availability and utilization of health information resources for effective service delivery by medical practitioners in Federal Medical Centers in Nigeria to proffer dependable solution to the phenomenon.

Statement of the Problem

Delivery of high-quality efficient health services is a cornerstone of the global agenda to achieve universal health coverage. Globally, countries are faced with health system problems which vary from one to the other and it has been observed that health service delivery challenges are often seen in continents with a very high Human Development Index like Africa where health care systems over the years have suffered from man-made issues which cut across institutional, human resources, financial, technical and political developments.

Effective healthcare delivery in Nigeria has been an issue of discuss among stakeholders. Accessing quality and up-to-date information has also been identified as vital to maintaining quality health care. It is no wonder that international funding agencies like the World Bank are funding projects aimed at making health information available, especially in developing countries like Nigeria. Health information resource is the force behind effective health care service delivery. It enables medical practitioners deliver health care services effectively especially in line with international best practices; enables a lot of cases to be dispatched expediently and effectively; enables medical practice to be based on health information (evidence) and also stems incessant complains against medical practitioners, dissatisfaction among patients, avoidance of health facilities and medical tourism. Alternatively, absence of health information resources results in complaints, delayed medical treatment, avoidable mistakes, mass deaths and medical tourism and ultimately, ineffective service delivery.

Unfortunately, in Federal Medical Centers in Nigeria, it has been observed that there seemed to be dissatisfaction over the health information resources provided for medical practitioners. The available health information resources appear not to be fully utilized and it is equally observed that health information resources in printed as well as electronic formats appear to be grossly inadequate. The medical libraries in these centers also appear to be poorly equipped with ICT/Internet facilities; there are inadequate subscriptions to Internet services hence Evidence Based Medicine sources on Internet and other health databases are lacking as well as Internet facilities at the work stations or offices of medical practitioners.

Health care service delivery therefore appears to be less effective. More so, Nigerians appear to seek for health care

service in teaching hospitals and other health facilities around as well as abroad. Health care service delivery appears not to be in line with international best practices and as a result, effective service delivery is not routinely practiced as expected. Any further inaction may result into frequent avoidable deaths in FMCs and at the hands of quacks. It is against this background that the study on availability and utilization of health information resources for effective service delivery by medical practitioners in Federal Medical Centers in Nigeria was instituted to offer dependable solution to this challenge.

Purpose of the Study

The purposes to:

1. Determine the types of health information resources available to medical practitioners in FMCs in Nigeria.
2. Determine the extent of utilization of health information resources for effective service delivery by medical practitioners in FMCs in Nigeria.
3. Determine the challenges militating against the utilization of health information resources by medical practitioners for effective service delivery in FMCs in Nigeria.
4. Determine suggested solutions for overcoming the challenges militating against the utilization of health information resources for effective service delivery by medical practitioners in FMCs in Nigeria.

Literature Review

Federal Medical Centers (FMCs) are national medical facilities of federating units. In Nigeria, FMCs are tertiary health care institutions provided by the Federal Government of Nigeria in each State of the Nigerian Federation (Ministry of Health, 2015). As a general rule, most of the centers are situated in the state capitals.

Medical centers are medical institutions that are created for the practice of medicine. In most climes, national medical centers are interdisciplinary hospitals with excellent diagnostic services including laboratory, radiological and imaging services, as well as nuclear medicine. They have the most modern facilities designed to meet international standards and the highest standards in the field of infrastructure, medicine, fire safety and the environment. In fact, every element of the center, from the rooms to the professionals through the processes, contributes to the general principle: respect for life (Flavin, 2018).

Furthermore, The Free Medical Clinic Handbook (2016) asserted that medical centers focus more on providing inpatient care - a type of care where patients stay overnight at a medical facility, or patients see a specialist, have surgery or receive care for a serious illness or medical emergency. The medical centers typically have a larger workforce of medical practitioners; many of whom are specialized in a particular medical field and the cost is often more expensive than going to a medical clinic.

In addition, Babalola (2021) stated that medical centers provide basic medical health services to students, staff, church members and the general public as well as ensures adequate referral support/services. It is nationally recognized for improving the health of the citizens of her country through innovative integration of research, education, and clinical care. It is viewed as a model for the integration of the latest knowledge into the provision of health care and disease prevention and for transferring what we have learned into the community.

Medical practitioners, also known as health care practitioners, are persons who practice medicine or one of the allied health care professions (WHO, 2018). They are found in general hospitals, teaching hospitals, dispensaries, medical/health centers, clinics etc. They are responsible for teaching/training of medical practitioners, researching into known and unknown diseases that keep emanating in society from time to time and provision of health care services in medical or health institutions in order to improve the lives of people. They are many in number and diverse as well, a reflection of the different areas they cover.

Today, medical practitioners are required to practice based on evidence, which requires health information (Johnson, Sarah, Joseph, Marie, Mark and Currow, 2021). Therefore, all medical practitioners, most especially those in federal medical centers and teaching hospitals are expected to be in the forefront in the provision of services in this regard. They need dependable health information always from empirical research studies to offer evidence-based medicine services. The contributions of health information resources to medical professionals include the promotion of knowledge sharing, adequate health monitoring, statistics gathering analysis and the delivery of effective healthcare services (Olatokun and Adeboyejo, 2009).

Daniel and Oyetunji (2013) identified various purposes for which medical practitioners utilize health information. Examples of such utilization are the provision of adequate access to professional colleagues, power search utilities to

locate information stored in millions of computers around the world, diagnosis of patients and evidence-based medical practice. Mngutyo and Aboh (2017) stated that a break down shows that there are information needs on different approaches to diagnosis, treatments and patient management of different ailments brought or referred to the centers for treatment. They further maintained that the cases brought are not only treated but are also used for teaching and training of resident doctors and medical students.

Availability connotes the presence of a thing before it can be used. Encarta (2009) disclosed that it is the condition of being available especially being easily accessible or obtainable. Medical practitioners need various information sources in order to obtain relevant, current and reliable information resources to satisfy their information needs and discharge their clinical duties because information is a tool for both clinical and professional development in the medical profession (Abdullahi, Buba and Mohammed, 2020).

According to Anyaoku (2017), medical libraries are institutions for health information dissemination and access. They are set up to collect, organize and disseminate health and well-being information in a hospital or health academic setting. They support medical doctors, nurses, pharmacists, other allied health professionals and students in learning, knowledge acquisition and research through provision of information resources that cover all areas of medical specialties. Mngutyô (2017) stated that the emergence and deployment of ICTs especially the Internet in the library as part of library resource including the medical library, has given medical institutions a wide range of available Internet health information resources to practice Evidence Based Medicine including effective service delivery. The availability of these health information resources is dependent on the importance attached to them or priority given to them for the purpose of achieving quality health care service, the financial resources budgeted for them and their actual acquisition for utilization.

According to Hornby (2010), utilization can be inferred as the state of which something is used for practical purpose. Information is used when information is processed and applied to a need (Mallinger, Griggs and Shields, 2005). According to Wilson (2007), utilization of information takes place when information acquired by a person to satisfy an information need is actually put into use.

To perform optimally, healthcare providers need to be able to access and use relevant, acceptable and available health information sources which will enable them make the right clinical decisions. The medical libraries are set up to collect, organize and disseminate health and well-being information in a health or hospital setting.

Quite a number of studies in the literature have evaluated the extent of utilization of health information resources and its impact in the health sector in developing countries. According to Iorver (2020), the extent of utilization of health information resources is dependent on access to these health information resources. The extent of use of reliable and current health information plays a vital role in the quality of service rendered by medical practitioners in hospitals.

Musa, Adamu, Nongo and Sadiku (2019) reported that medical practitioners are very satisfied with encyclopedia, electronic health records, handbooks, Theses/Dissertations, paper resources and utilize them to a very high extent for diagnosis and tackling other medical challenges. Ehioghæ and Madukoma (2020) stated that the extent of utilization of health information resources by medical practitioners in Nigeria is very high because from their study, majority of the health workers in Lagos State University Teaching Hospital attest to placing high regard for the use of these resources for clinical decision-making, exercising good judgment about the best course of action for an individual patient, clinical research, professional examinations, answering patients' specific questions, prescribing drugs and knowing disease outcome.

Medical practitioners as health care providers need access to relevant, acceptable and available health information resources to make the right clinical decisions as the cost of the wrong diagnosis can be fatal. Unfortunately, in developing countries like Nigeria, despite the overwhelming advantages of health information resources, access and utilization of health information resources by medical practitioners is a perennial challenge (Nwosu, Ogbomo and Anaehobi, 2013). A number of studies have investigated medical practitioners' challenges with the use of health information resources. These challenges have been identified as poor information technology infrastructure development, lack of knowledge on how to use ejournal, lack of facilities, lack of time and awareness (Agba, Kingongo-Bukanya and Nyumba, Andrews, Pearce, Ireson and Love, 2005).

Owing to the numerous problems facing the utilization of library resources, authors have suggested various ways by which the problems affecting the use of health information resources can be reduced to enhance effective medical service delivery. Ajayi and Adebayo (2005) suggested that the medical library environment should be made more pleasant and comfortable. Ikegbune (2014) suggested the provision of more space for medical library's collection, larger and better-trained staff members with more subject competencies to explain resources, prepare bibliographies, and participation in the acquisition and dissemination of health information resources.

Methodology

The study adopted the descriptive survey design. Uzoagulu (2011) stated that descriptive survey is concerned with the collection of data for the purpose of describing and interpreting existing condition on practice, belief and attitude. The

choice of descriptive survey design is because of the nature of the study and processes involved in the collection of data which has to do with using a representative sample of the entire population of a group of people or items to studied.

The population of the study was 350 medical practitioners in Federal Medical Centers in Nigeria. The sample was drawn from two medical centres namely Federal Medical Centre, Uyo, Akwa Ibom State and Federal Medical Centre, Makurdi, Benue State.

Multi-stage sampling procedure was used for the study. In the first stage, purposive sampling technique was used to consider only medical practitioners in FMCs. In the second stage, the researchers adopted proportionate stratified random sampling technique to draw a sample of the medical practitioners from the FMCs. In the third stage, the researcher used simple random sampling technique to pick respondents from the FMCs.

Data collection was achieved using a structured questionnaire and observation checklist developed by the researchers.

Quantitative descriptive statistical method using percentages and mean scores (X) were used in the analysis of data gathered. A cut-off point of 2.5 criterion mean was used for decision making. By this, any mean score that is 2.5 and above was regarded as agreed and accepted whereas, any mean score below 2.5 was considered as disagreed and rejected.

Results and Discussion

This section presents the analysis and interpretation of findings based on the data collected from the field.

Research Question 1:

What are the types of health information resources available to medical practitioners in FMCs in Nigeria?

The data that provided answer to the research question are presented on Table 1.

Table 1. Observation Checklist on the Types of Health Information Resources Available to Medical Practitioners in FMCs in Nigeria.

NO	Item statement	Available	Not Available	Total
1	Medline/pubmed central	2(100.0)	0(0.0)	2(100%)
2	Bioline International	0(0.0)	2(100.0)	2(100%)
3	African Index Medicus	2(100.0)	0(0.0)	2(100%)
4	Cochrane library	2(100.0)	0(0.0)	2(100%)
5	Directory of Open Access Journals	2(100.0)	0(0.0)	2(100%)
6	Database of Abstracts of reviews of Effects	0(0.0)	2(100.0)	2(100%)
7	Cochrane Central Register of Controlled Trials	0(0.0)	2(100.0)	2(100%)
8	Health Technology Assessment Database	0(0.0)	2(100.0)	2(100%)
9	NHS Economic Evaluation Database	0(0.0)	2(100.0)	2(100%)
10	Health Links	2(100.0)	0(0.0)	2(100%)
11	AC Journal Club	2(100.0)	0(0.0)	2(100%)
12	American Family Planning Physicians	0(0.0)	2(100.0)	2(100%)
13	Bandolier	0(0.0)	2(100.0)	2(100%)
14	Journal of Family Practice	2(100.0)	0(0.0)	2(100%)
15	Evidence Summaries	0(0.0)	2(100.0)	2(100%)
16	Clinical Evidence	2(100.0)	0(0.0)	2(100%)
17	The Cochrane Database of Systematic Reviews	0(0.0)	2(100.0)	2(100%)
18	Dynamed	2(100.0)	0(0.0)	2(100%)
19	FIRSTConsult	2(100.0)	0(0.0)	2(100%)
20	Infor Retriever	0(0.0)	2(100.0)	2(100%)
21	SUM Search	0(0.0)	2(100.0)	2(100%)
22	The New York Database of Abstracts	0(0.0)	2(100.0)	2(100%)
23	Clinical Guidelines	2(100.0)	0(0.0)	2(100%)
24	National Guidelines	0(0.0)	2(100.0)	2(100%)
25	US preventive Services Taskforce	0(0.0)	2(100.0)	2(100%)
Total Percentage		22(44%)	28(56%)	50(100%)

Table 1 indicated that item 1-25 had percentages of the responses of the respondents from the observation checklist on the types of health information resources available to medical practitioners in FMCs in Nigeria. A total of 22 (44%) of the total 50 indicated availability while 28 (56%) shows not available. Based on the criteria for decision making of 50% cut-off mark for percentages, it means that the respondents disagreed on availability of types of health information resources to medical practitioners in FMCs in Nigeria. This implies that most of the health information resources are not available to medical practitioners in FMCs in Nigeria.

Research Question 2:

What is the extent of utilization of health information resources by medical practitioners for effective service delivery in Federal Medical Centers in Nigeria?

The data that provided answer to the research question are presented on Table 2.

Table 2. Mean Ratings and Standard Deviation of the Extent of Utilization of Health Information Resources by Medical Practitioners for Effective Service Delivery in FMCs in Nigeria.

NO	Item Description	VHE	HE	LE	VLE	XS	D	Dec.
1	SMedline/pubmed central	47	31	168	82	2.13	0.95	LE
2	Bioline International	28	53	176	71	2.12	0.84	LE
3	African Index Medicus	41	44	150	93	2.10	0.95	LE
4	Cochrane library	210	59	38	21	3.40	0.93	HE
5	Directory of Open Access Journals	196	38	56	38	3.20	1.09	HE
6	Database of Abstracts of reviews of Effects	87	173	24	44	2.92	0.93	HE
7	Cochrane Central Register of Controlled Trials	151	87	60	30	3.09	1.00	HE
8	Health Technology Assessment Database	86	168	33	41	2.91	0.93	HE
9	NHS Economic Evaluation Database	149	25	101	53	2.82	1.18	HE
10	Health Links	149	25	101	53	2.82	1.18	HE
11	AC Journal Club	65	174	28	61	2.44	1.01	LE
12	American Family Planning Physicians	102	188	18	20	3.13	0.77	HE
13	Bandolier	182	103	27	16	3.37	0.83	HE
14	Journal of Family Practice	111	164	32	21	3.11	0.83	HE
15	Evidence Summaries	207	84	23	14	3.48	0.81	HE
16	Clinical Evidence	112	155	36	25	3.08	0.87	HE
17	The Cochrane Database of Systematic Reviews	103	19	47	159	2.20	1.33	LE
18	Dynamed	10	24	108	186	1.57	0.76	LE
19	The New York Database of Abstracts	53	42	174	59	2.27	0.94	LE
20	Clinical Guidelines	43	28	109	148	1.90	1.03	LE
	Cluster Mean/Standard Deviation					2.73	0.94	HE

Decision Rule: 1.00-1.49=VLE, 1.50-2.49=LE, 2.50-3.49=HE, 3.50-4.00=VHE

Table 2 reveals that items 1-20 had mean scores of 3.48 to 1.90 with corresponding standard deviations of 1.33 to 0.76 respectively. Based on the criteria for decision making, it means that the mean scores for items 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15 and 16 were rated above the cut-off point of 2.50, while item 1, 2, 3, 11, 17, 18, 19 and 20 were rated below the cut-off mark of 2.50. The cluster mean of 2.73 was also above the cut-off point of 2.50. The standard deviations are small. This shows that there is homogeneity in respondents' responses for the items raised. This implies that there is a high extent of utilization of health information resources by medical practitioners for effective service delivery in FMCs in Nigeria.

Research Question 3:

What are the challenges militating against the utilization of health information resources by medical practitioners for effective service delivery in FMCs in Nigeria?

The data that provided answer to the research question are presented on Table 3

Table 3. Mean Ratings and Standard Deviation of the Challenges Militating Against the Utilization of Health Information Resources by Medical Practitioners for Effective Service Delivery in FMCs in Nigeria.

No	Item Description	SA	A	D	SD	X Δ	Decision	
1	Lack of library & information facilities(e.g. library/Internet)	160	97	43	28	3.19	0.96	Agree
2	There is lack of information literacy skills (both printed & Internet)	86	180	23	39	2.95	0.90	Agree
3	There is lack of awareness on available health information resources (printed, non-printed &Internet) among medical practitioners	81	122	74	51	2.71	1.00	Agree
4	Lack of subscription of e-databases for medical practitioners	132	107	54	35	3.02	1.00	Agree
5	Lack of functional virtual/electronic library in the hospital	129	118	50	31	3.05	0.96	Agree
6	Lack of training to use printed resource &e-databases	58	187	49	34	2.82	0.84	Agree
7	Lack of computers institutionally and personally	68	191	47	22	2.93	0.79	Agree
8	Poor Internet connection in the office	54	183	28	63	2.70	0.96	Agree
9	Lack of policy to regulate the use of online health information resource	66	15	158	89	2.18	1.05	Disagree
	Cluster Mean/Standard Deviation					2.84	0.94	Agree

Decision Rule: 1.00-1.49=SD, 1.50-2.49=D, 2.50-3.49=A, 3.50-4.00=SA

Table 3 reveals that items 1-9 had mean scores of 3.19 to 2.18 with corresponding standard deviations of 1.05 to 0.84 respectively. Based on the criteria for decision making, it means that the mean scores for items 1, 2, 3, 4, 5, 6, 7, and 8 were rated above the cut-off point of 2.50, while item 9 was rated below the cut-off mark of 2.50. The cluster mean of 2.84 was also above the cut-off point of 2.50. The standard deviations are small. This shows that there is homogeneity in respondents' responses for the items raised. This implies that these are challenges militating against the utilization of health information resources by medical practitioners for effective service delivery in FMCs in Nigeria.

Research Question 4:

What are the strategies of overcoming the challenges militating against the utilization of health information resources by medical practitioners for effective service delivery in FMCs in Nigeria?

The data that provided answer to the research question are presented on Table 4.

Table 4. Mean Ratings and Standard Deviation of the Strategies of Overcoming the Challenges Militating Against the Utilization of Health Information Resources by Medical Practitioners for Effective Service Delivery in FMCs in Nigeria.

No	Item Description	SA	A	D	SD	X \bar{d}	Decision	
1	Make available library and information (library &ICTs/Internet) facilities to encourage use of printed and online health information resources	243	49	15	21	3.57	0.85	Strongly Agree
2	Provision of basic information literacy (printed & technology) training to health professionals	107	85	17	19	3.16	0.77	Agree
3	Create awareness on available printed &online health information resources	122	173	13	20	3.21	0.78	Agree
4	Maintain continuous provision and subscription of health printed & e-databases	199	81	31	17	3.41	0.86	Agree

Table 4. continuation

5	Creation of ICT unit in the library especially where there is no e-library, virtual library etc for training medical practitioners on how to access and retrieve printed/online health information	110	181	14	23	3.15	0.80	Agree
6	Training medical practitioners in utilizing printed/databases	116	194	7	11	3.27	0.66	Agree
7	Educate medical practitioners on use of library/ICT based resources	201	102	10	15	3.49	0.77	Agree
8	Make provision for medical practitioners to use printed materials in office & own their personal computers	126	168	16	18	3.23	0.78	Agree
9	Making Wi-Fi Internet available to medical practitioners	113	144	30	41	3.00	0.97	Agree
10	Create policy to implement medical practitioners training in effective service delivery using printed/Internet health Information resources	133	159	19	17	3.24	0.78	Agree
	Cluster Mean/Standard Deviation					3.27	0.80	Agree

Decision Rule: 1.00-1.49=SD, 1.50-2.49=D, 2.50-3.49=A, 3.50-4.00=SA

Table 4 reveals that items 1-10 had mean scores of 3.57 to 3.00 with corresponding standard deviations of 0.85, 0.77, 0.78, 0.86, 0.80, 0.66, 0.77, 0.78, 0.97 and 0.78 respectively. Based on the criteria for decision making, it means that the mean scores for all the items were rated above the cut-off point of 2.50. The cluster mean of 3.27 was also above the cut-off point of 2.50. The standard deviations are small. This shows that there is homogeneity in respondents' responses for the items raised. This implies that these are the strategies of overcoming the challenges militating against the utilization of health information resources by medical practitioners for effective service delivery in FMCs in Nigeria.

Conclusion

Medical centers are established in Nigeria to meet the health needs of people. This can, however, be achieved if service delivery to the people is effectively rendered by medical practitioners. The availability and utilization of health information resources by medical practitioners will no doubt, improve the level of health care delivery and wellness of the people. To achieve the above goals, the FMCs through her libraries usually makes efforts to acquire health information resources relevant to the information needs of medical practitioners who make use of such resources.

In view of the foregoing, FMCs in Nigeria, like their counterparts in other parts of the world, have made efforts to encourage their medical practitioners to utilize the available information resources for effective service delivery. The problem, however, has been the uncertainty surrounding the extent of effective utilization of the available information resources for service delivery especially by medical practitioners.

The result of this study has shown that medical practitioners in FMCs in Nigeria utilize available medical information resources for effective service delivery. It is further concluded from the findings that certain challenges such as lack of awareness of available health information resources among medical practitioners and lack of virtual libraries in FMCs are factors militating against availability and utilization of health information resources by medical practitioners. This work has equally exposed some grey areas to be given attention if availability and utilization of health information resources by medical practitioners is to be made robust and achieving. These grey areas would include to create awareness on available online and printed health information; provision of basic information literacy training for health professionals and the creation of an ICT unit in the FMC libraries.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Management of FMCs should make readily available more health information resources in the hospital libraries, effective subscription of health-related databases and awareness of open access journal to increase wider access of these health information resources for effective utilization by medical practitioners.
2. There should be training and retraining of health professionals in FMCs on the utilization of health resources and ICT so that the health professionals can be abreast of the latest happenings in the health sector and gain knowledge for better service delivery.
3. Medical librarians should establish/provide Current Awareness Services and Selective Dissemination of Information to help create awareness of resources available to the medical practitioners in order to enhance their effectiveness in service delivery.
4. Authorities of the FMCs should ensure that medical information resources are acquired from authentic and reliable sources so as to aid medical practitioners in delivering effective services.

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