

# Information Needs and Seeking Behaviour of Medical Students at the College of Medicine, University Of Ibadan, Nigeria

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## Abstract

**Purpose:** *This study was designed to investigate information needs and seeking behaviour of medical students at College of Medicine, University of Ibadan, Nigeria.*

**Research Design/Methodology:** *descriptive Survey design was used; five research questions were raised to achieve the five specific objectives stated. Double sampling method was adopted to select samples of 200 students from the population of 546 students. Out of 200 questionnaires that were distributed, 177 were returned and suitable for data analysis. SPSS output format based on simple frequency count and percentage distribution, mean and standard deviation was used for data analysis.*

**Findings:** *The findings from this study revealed that: information needs of medical students in University of Ibadan have many facets with medical information comes first on the list; assignment and academic projects were the main purposes of seeking for information; internet was the mostly used by medical students out of other sources; irregular power supply, obsolescence of CD-ROMs, and arrangement of library resources were some of the problems encountered by medical students while seeking for information; areas where Medical students want improvement in the College of Medicine library collections include: Electronic Databases, journals, textbooks, and reference materials.*

**Originality/Value:** *One of the recommendations made was that Management of Medical library at the College of Medicine, University of Ibadan should improve on her efforts at increasing the internet bandwidth in the library.*

**Implication:** *The findings of this study may be useful in helping medical libraries to develop effective information resources and services; determine the problems faced by medical students in the process of seeking for information; and examine areas in the library collection where medical students want improvements in library collections at College of Medicine.*

**Keywords:** *Information Needs, Information Seeking Behaviours, Information Resources, Medical Students, College of Medicine, User Studies, Nigeria*

**Paper type:** *Empirical research*

## Introduction

Information has been seen as an essential commodity for development. As a processed data to which meaning may be attached, information is useful for planning, decision making and reduction of uncertainty. The present atmosphere of information is influential and characterized by a number of information sources made available in systems through both human and computer interfaces, a multiplicity of methods for accessing information, and a redundancy of content from multiple sources. The usefulness of information is limitless, mainly because of its relevance in every human

activity as well as organizational development. There are several definitions for information. It has been defined in term of its utility, as such that has value in decision making; reduces uncertainties and ignorance; increases knowledge and literacy. It has also been defined in term of its characteristics as intangible commodity that increases rather than decreases the more it is consumed. In this case, information is in no way of less value than other factors of production. It is used for economic development. There were however, other positions on the nature, importance and relevance of information.

Adebayo and Salau (2014) stated that the dynamism of information makes it relevant in every sphere of human endeavors and activities

. Information sourcing is paramount, especially; in finding a lasting solution to any question raised as a result man's level of uncertainties on various problems. The whole world now depends on information because this is information age. The value of information is high in decision making as well as policy planning and implementation. They stressed further that information is an important commodity which has become an essential companion that cannot be compromised for anything. It answers questions of different forms which emerge as Atinmo (2012) remarked we live in a world of explosions, from nuclear bombs to improvised bombs; one explosion that is seemingly harmless by comparison, yet it is felt by everyone every day is the information explosion. It is frequently believed that we live in the information age, because nearly every day people learn some new development through information technology. The human need for information is growing, as our society grows to depend more and more on information to survive and flourish. As all need to be able to find facts, but we also need information on particular subjects (Adebayo, 2014).

Insight into information seeking can be gained by understanding how users seek information sources and how they choose content to meet their needs. Yet the library and information science literature has neglected to study how individuals decide what and how much information is enough to meet their needs or goals (Prabha, 2007). Thus, Information Behaviour includes face-to-face communication with others, as well as the passive reception of information as in, for example, watching TV advertisements, without any intention to act on the information given. Information seeking behaviour is the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems (such as a newspaper or a library), or with computer-based systems (such as the World Wide Web).

Prabha et.al (2007) explained that research on information-seeking and searching behavior has paid ample attention to sources of information sources used. The process of seeking and searching for information also has received considerable attention from researchers, resulting in several models, many of which are centered on information seeking and searching

in academic or professional settings. Though the models delineate the processes, they have not shed much light upon how users recognize what or how much information is enough to accomplish their objectives. Also, Joardar et.al (2006) added that though formal education draws more attention, education in its real sense starts through informal self – learning. It has been observed that both teachers and medical students rely mostly on text and didactic lectures. As medical science is a continuously advancing discipline, the use of medical library, both by students as well as the teachers, is an important means for enhancing knowledge and skills. Though an institution may have the best stocked libraries, the utilization of the libraries by the students need not simply depend on the number of books and journals in the library. The focus of this study however, is information needs and seeking behavior of medical students in College of Medicine, University of Ibadan, Nigeria.

Because of the diversity in the information needs and seeking behavior of students in higher institutions, the geographical scope of this study will be College of Medicine, University of Ibadan, Nigeria. The study will focus on the information needs, seeking behavior, purpose of seeking, various sources available for exploration, and problems encounter while searching for the needed information. This study is relevant not only to inculcate the right information seeking behavior in medical students, it will also help medical library in University of Ibadan, Nigeria on how to develop effective information resources and services. The specific objectives of the study are to: determine the information needs of medical students; find out the purpose for seeking for information by medical students; examine the sources of information used by medical students while seeking for information; determine the problems faced by medical students in the process of seeking for information; and examine areas in the library collection where medical students want improvements in library collections at College of Medicine, University of Ibadan, Nigeria.

### **Statement of the Problem**

Several studies have been carried out on information needs and seeking behavior of different categories of users. Nonetheless, study on information behavior of medical students at College of Medicine, University of Ibadan is

imperative. There is need to investigate sources of information being used by medical students and reveal the state of information sources and students' seeking behavior. From literature there has been very little comprehensive study on the information needs and seeking behavior of medical students at the University of Ibadan; their purpose of seeking for information requires further empirical investigation; the problem faced by medical students in the process of information seeking has to be established. For developing library collections, upgrading facilities, and improving information services that can effectively meet the needs of users at Adeola Odeku Library, College of Medicine, University of Ibadan, Nigeria, findings from this study are also needed, as parts of community analysis.

## **Literature Review**

### ***Concept of Information Needs***

The concept of information behavior was coined in the late 1990s, but it traces its roots to the concept of information needs and uses that arose in the 1960s. There has been a gradual shift in the focus of information behavior research from a system orientation to a user orientation (LISWiki, 2007). At the end of 1970's and in the beginning of 1980's researchers began to realize that questions in information needs, seeking and use couldn't been seen only from the systems point of view. The user of the information and his/her needs came into focus and research in cognitive science was applied in the studies. The new view was called the new paradigm or the cognitive view (Dervin and Nilan, 1986). According to Leckie et al. (1996), information need is not constant and can be influenced by a number of variables. Such as age, experience, education and geographic location, etc.; the context within which the information need arises, the frequency, importance and the complexity of the tasks are also important factors. All of these factors can influence the formulation of information need.

Information behavior can be defined by the general model of information behavior developed by Wilson (Wilson 1997). According to Wilson, a general model of information behavior needs to include at least the following three elements: an information need and its drivers, i.e., the factors that give rise to an individual's perception of need; the factors that affect the individual's response to the perception of need; and the processes or actions involved in

that response. He pointed out that there must be an attendant motive when a person experiences an information need. Information need is an individual or group's desire to locate and obtain information to satisfy both conscious and unconscious needs.

Uhegbu (2007) believed that every human being, no matter his level of education, sophistication, affluence and location needs and selects information from the environment, which gives help to the solution of a problem or satisfaction of a want as the case may be. Meanwhile, not all information in the society is useful to a person. Basically, it implies lack of something which if present would further our welfare or make easier the attainment of whatever objectives we may have in mind. The concept of need runs through the terms: want, desire, wish, and requirement, and closely related to the idea of motivation. However, Kakai (2010) cautioned that it is important that need is not mistaken for demand. The demand for information or document may be low, for example, because the library is seen as inaccessible by the users. Nevertheless, deeper analysis and consequent action is seldom taken based on this insight.

Chikonzo and Aina (2006) explored information needs and sources of information used by students at the University of Zimbabwe. Findings from the study revealed that writing assignments and studying for tests or examination were the primary tasks for which they required information and the major sources used to obtain information were books, videos, lecture notes, handouts, the internet, projects, CD-ROM database and journals. The students confirmed making little use of indexes, abstracts and dissertations. Laila and Mumtaz (2010) have found out that the social science faculties heavily depend on books and journals for teaching. Journals and books are considered as the most important for sources to meet their needs. It noteworthy however, that medical students need information. The phenomenal development of modern scientific medicine in the turn of 20th century has made dramatic changes in the quality and quantity of knowledge and applications in the field of health care (Elizabeth 2008). The growth of medicine branches has been phenomenal; there has been an explosion of new knowledge in these areas in the last decade. The numerous publications books, journals, and news-letters are the indicators of the parameters (Singhiet.al 2010).

## **Information Seeking Behaviour of Medical Students**

The origins of human information seeking behavior are found in the work on the users of libraries and in readership studies in general. The post-war increase in the amount of scientific literature which was either newly published or recently released from war-time restrictions led, in 1948, to the Royal Society Scientific Information Conference, which marks the beginning of the modern study of human information seeking behavior. However, the subject goes rather further back in time (Wilson, 2000). Watson, Blakeley, and Abbott (1998) carried out a study on the use of communication technologies in teacher education. Findings showed that teacher educators, whether in universities or schools appeared to have limited understanding and experience of ICT, with a complex set of perceptions that might be at odds with reality. The staff of university computer networks failed to understand users' needs of distributed and distance networks.

In another development, Shokeen and Kushik (2002) studied information seeking behavior of social scientists working in the universities located in Haryana. They reported most of the social scientists visit the library daily. The first preferred method of searching the required information by the social scientists followed by searching through indexing and abstracting periodicals, and citations in articles respectively. Fast and Campbell (2004) studied how university students perceive and interact with web search engines compared to web-based OPACs. A qualitative study was conducted involving just sixteen students, eight of whom were first-year undergraduates and eight of whom were graduate students in library and information science. The participants performed searches on Google and on a university OPAC. It was revealed that while students were aware of the problems inherent in web searching and of the many ways in which OPACs are organized, they generally preferred web searching. The coding of the data suggests that the reason for this preference lies in psychological factors associated with the comparative ease with which search engines can be used, and system and interface factors which made searching the web much easier and less confusing.

Cothey (2002) examined the information seeking behavior of 206 college students using the World Wide Web during a 10-month period. The study

was intended to suggest how the general population uses the web. It was concluded that Web users have become more passive and more eclectic as they become more experienced using the Web. It was also discovered that they use less querying techniques; however their Web usage was more sporadic, which might suggest greater selectivity. Apart from this several studies have been carried out on information needs of different categories of information users. Rowley and Urquhart (2007) indicated that there are gaps in the evidence concerning the browsing and selection strategies of undergraduate students and the interaction of some of the mediating influences on information behaviour.

Several studies have revealed the internet is being used for medical education in diverse ways including teaching, diagnosis, and conduct of medical examinations. Arora (2005) recommended that medical and dental students need formal training in accessing the medical databases like PubMed and Indmed – a bibliographic database of Indian biomedical literature. The interviews with the students confirmed that they use sources like lecturers, colleagues, and the internet. Therefore from the previous studies, one major discovery on information behaviour is that a need for information will lead to searching behaviour from different sources. There is therefore need to explore information sources.

## **Information Sources, Information Literacy and Medicine**

Two main categories of information sources are primary sources and secondary sources. A primary source is an original work created by a person who was directly involved in the subject of the work and gives first-hand information; secondary sources are works about primary sources which analyzes, report, summarizes, restructures an original work. The references found in secondary sources can also help you find primary sources (Spring, 2010). Primary sources comprise of: Diaries, Works of fiction, Autobiographies, Art objects Research articles written by those who performed the research, Artifacts; Secondary sources include like: Textbooks, Book reviews, Biographies Articles about other people's work. Information sources, in view of Popoola (2008), can be classified into two, namely: formal and informal. More often times, information sources could be classified into three: primary sources-journals, diaries,



surveys, e.t.c.; secondary sources-commentaries, dictionaries, encyclopedias, e.t.c.; tertiary sources-text books, manuals, library catalogue, e.t.c. He further enlightened that sources that are available to information seekers include but not limited to: journals, library, internet, encyclopedias, magazines, dictionaries, and other electronic resources. Meanwhile, various studies have been carried out on information sources available to information users.

Adebayo and Salau (2014) carried out a study on relevance of information source and use of small scale traders in Ibadan Nigeria and maintained that information sources available to small scale traders are in different form; an effective business owner is expected to research information from a variety of sources that can help in making decisions for business growth. Business information is one of the aspects of information industry. Leigh and Media (2013) explained that businesses need information to be successful, and that information can come from a variety of sources, both internal and external. Understanding the various sources of information and how to access them can help companies and their leaders stay on top of emerging trends and environmental factors that can affect their success. Access to these sources is also important.

Accessibility of information sources is an important recurring theme in the literature. According to Agulu and Agulu (2002), resources may be available in the library and even identified bibliographically as relevant to one's subject of interest, but the user may not be able to lay hands on them. One may identify citations in indexes, but may not have access to the sources containing the relevant articles. The more accessible information sources are, the more likely they are to be used. They lament the attendant features of underdevelopment such as power failure, machine breakdowns, and lack of spare parts and technicians, which intermittently stall the performance of the modern gadgets of information storage and transfer in developing countries. From the findings of the study on Information Needs and Seeking Behaviour of Undergraduates in Ajayi Crowther University, Oyo, Adebayo (2014) revealed that both the University Library and ICT center were mostly being used by Undergraduates.

As the world becomes increasingly globalised and technological information expands, a non-information literate medical student is likely to

find the variety of information sources (print and electronic) and quantity of information overwhelming and threatening. Information literacy involves the knowledge and use of skills or competences that together make for effective and appropriate use of information (Baro, Endouware and Ubogu, 2011). Information literacy is defined by the Eisenberg, M. (2008) as a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information. Information literacy skills open the gateway of information to students and all information seekers and users across disciplines; it helps students know when information is required, how to organise and effectively create, use, and communicate it. As a specific set of information user, medical students need to be information-literate.

Medicine is, among many other sciences, an area in which the expansion of information is enormous and which is critically dependent on up-to-date information. Due to changes in medical education, interest in medical students' information behaviour has grown during the last decade. The implementation of student-centered learning and teaching methods in the medical curriculum has also resulted in a growing body of literature that explores different aspects of information literacy and user education for libraries (Minchow, 1996). Dee and Stanley's (2005) study revealed that both the clinical nurses and the nursing students did not know many advanced searching features existed, and they were not aware of subject headings or any kind of thesaurus for database searching. The participants in that study unanimously agreed during interviews that advanced training was essential for effective use of PubMed or MEDLINE. Hence, there is need for every information user to be information literate.

Commenting on the essence of information literacy, Eisenberg (2008) declared that information and communication technology affect every person in every possible setting-education, public setting and business. Education is fundamentally information based. That is, every aspect of learning and teaching requires the gathering, processing, and communication of information. In the past in education, there was a reliance on one primary information resource: the textbook. But this is rapidly changing due in large part to the explosion in information technology and networked information. Whether offering direct instruction to users, providing

skills-based help functions on websites, delivering one-on-one (physical or virtual) assistance, or even providing meaningful signage in a physical setting, every information and library situation requires helping users to succeed through improving their information skills or understandings.

Noticeably, an information literate person will be able to discover a need for information; search different sources; evaluate sources of information; retrieve information from a system and use information. Eisenberg (2008) maintained that Information literacy (IL) is the set of skills and knowledge that allows us to find, evaluate, and use the information we need, as well as to filter out the information we don't need. IL skills are the essential tools that successfully help navigate the present and future landscape of information. Other studies offer an overview of Information Literacy focusing on three contexts for learning and teaching: the information process itself, technology in context, and implementation through real needs in real situations.

**Methodology**

As a descriptive study, survey research design was used for this study. Survey research design is ideal for this study because it is meant to find facts on information needs and seeking behaviour of medical students at University of Ibadan. The population consisted undergraduate

medical students in faculties at the College of Medicine, University of Ibadan, Nigeria. The faculties are: Basic Medical Sciences with 422 students and Public Health with 124 students, giving the total population of 546 students. Double sampling method was adopted for this study. Cluster random sampling technique was used to select Faculties of Basic Medical Sciences and Public Health from others; simple random sampling was used to select samples of one hundred (100) respondents from each of the clusters using equal allocation method. This gave a total number of two hundred (200) respondents. A self-developed questionnaire by the researchers was used to collect data from respondents in order to answer the research questions. The instrument was subjected to both face and content validity. Output format of SPSS based on simple frequency count, percentage distribution, mean, and standard deviation was used for data analysis.

**Data Analysis, Results and Discussion**

Two hundred (200) photocopies of questionnaire were administered to students in both faculties that were selected for this study out of which one hundred and seventy seven (177) giving a response rate of 88.5% were returned with useful responses. Table 4.1 presents the response rate and most of the respondents (91 or 51.4%) were from the Faculty of Basic Sciences.

**Questionnaire Administration and Return Rate**

**Table 1: Distribution of Respondents by Faculties**

Name of Faculty	No of Questionnaire Administered	No of Questionnaire Returned	Percentage (%)
<i>Basic Medical Sciences</i>	<i>100</i>	<i>91</i>	<i>51.4</i>
<i>Public Health</i>	<i>100</i>	<i>86</i>	<i>48.6</i>
<b>Total</b>	<b>200</b>	<b>177</b>	<b>100.0</b>

Table 1 revealed that 200 copies of questionnaire were distributed in each of the faculties. Faculty of Basic Sciences had 100

while Public Health also had 100. Meanwhile, 177 copies of the questionnaire were returned by the respondents.

**Distribution of Respondents by Demographic Factors**

**Table 2: Distribution of Respondents by gender, age and marital status**

Gender	Frequency	Percentage (%)
Male	81	45.8
Female	93	52.5
No Indication	3	1.7
<b>Age</b>		
21-25	123	69.5
26-30	38	21.5
31-35	12	6.8
36 and Above	1	.6
No Indication	3	1.7
<b>Marital Status</b>		
Single	153	86.4
Married	24	13.6
<b>N = 177</b>		

Table 2 shows that most of the respondents (52.5%) were females. However, 3(1.7%) respondents did not indicate whether they were males or females. The results on table 2 shows further that 69.5% of the respondents were between ages 21-25 years. This shows that the respondents were still in their youthful and active years of university education since they

were still under 30 years. It also reveals that the university’s admission policy favours students within this age range. However, only 3(1.7%) respondents refused to indicate their age categories. On marital status, 86.4% of the respondents were singles. This is adequate since the respondents were still at the university level of education.

**Research Question One: What are information needs of medical students in University of Ibadan?**

**Table 3: Information needs of medical students**

S/N	Information needs of medical students	SA		A		D		SD		Mean	Std. Deviation
		F	%	F	%	F	%	F	%		
a.	Specific medical information	129	72.9	25	14.1	4	2.3	17	9.6	3.52	.940
b.	General medical information	32	18.1	116	65.5	11	6.2	17	9.6	2.93	.793
c.	Reference info	113	63.8	22	12.4	26	14.7	16	9.0	3.31	1.028
d.	Social information	114	64.4	25	14.1	21	11.9	17	9.6	3.33	1.021
e.	Information on research	98	55.4	51	28.8	19	10.7	9	5.1	3.34	.866
f.	Information on personal development	22	12.4	108	61.0	24	13.6	23	13.0	2.73	.843
g.	Information on sport/fashion	23	13.0	121	68.4	12	6.8	21	11.9	2.82	.803
<b>N = 177</b>											

One hundred and twenty nine (72.9%) strongly agreed that they need specific medical information with mean = 3.52. This is followed by information on research (mean = 3.34), social information (mean = 3.33), reference information (mean = 3.31), general medical information (mean = 2.93). The least information needed by medical students of the

University of Ibadan is information for personal development (mean = 2.73) and information on sports/fashion (mean = 2.82). Based on the results on table 4.3, it was revealed that medical students at the University of Ibadan need specific medical information, information on research, social information, reference information, general medical information.



### Research Question Two: What are the purposes of seeking for information by medical students in University of Ibadan?

**Table 4: Purposes of seeking for information by medical students**

S/N	Purposes of seeking for information by medical students	SA		A		D		SD		Mean	Std. Deviation
		F	%	F	%	F	%	F	%		
a.	For assignment and academic project	121	68.4	36	20.3	13	7.3	7	4.0	3.53	.798
b.	For Professional competence	110	62.1	23	13.0	12	6.8	32	18.1	3.19	1.176
c.	To keep up with current dev	29	16.4	111	62.7	14	7.9	23	13.0	2.82	.858
d.	To support research work	109	61.6	20	11.3	36	20.3	12	6.8	3.28	1.010
e.	To support project write-up	110	62.1	38	21.5	14	7.9	15	8.5	3.37	.952
f.	For general knowledge	28	15.8	116	65.5	15	8.5	18	10.2	2.87	.798
g.	To aid peer info exchange	44	24.9	102	57.6	14	7.9	17	9.6	2.98	.846
h.	To develop educational materials	33	18.6	112	63.3	10	5.6	22	12.4	2.88	.854
i.	For social activities e.g. facebook etc.	23	13.0	113	63.8	24	13.6	17	9.6	2.80	.784

**N = 177**

One hundred and twenty one (68.4%) indicated that they strongly agreed that they seek information for assignment and academic projects with mean = 3.53. This is followed by information to: support project write-up (mean = 3.37), support research work (mean = 3.28), for professional competence (mean = 3.19). However, information for social activities e.g. facebook etc. was the least with (mean = 2.80) and information to keep up with current

development (mean = 2.82). Observation from the table 4.4 therefore shows that the purposes of seeking for information by medical students in University of Ibadan are for assignment and academic projects, to support project write-up, to support research work, for professional competence, to aid peer information exchange, to develop educational materials, for general knowledge, and so on.

### Research Question Three: What are the sources of information used by medical students in University of Ibadan while seeking for information?

**Table 5: Information resources available to medical students**

S/N	Information/resources available	VRA		RA		NRA		NA		Mean	Std. Deviation
		F	%	F	%	F	%	F	%		
a.	Library	108	61.0	30	16.9	25	14.1	14	7.9	3.31	.988
b.	Internet	108	61.0	32	18.1	24	13.6	13	7.3	3.33	.968
c.	Electronic Database	17	9.6	119	67.2	30	16.9	11	6.2	2.80	.691
d.	OPAC/WEBPAC	8	4.5	20	11.3	120	67.8	29	16.4	2.04	.677
e.	Online discussion	95	53.7	47	26.6	20	11.3	15	8.5	3.25	.964

**N = 177**

One hundred and eight (61.0%) respondents indicated that Internet was very readily available with mean = 3.33. This is followed by library (mean = 3.31), online discussion (mean = 3.25) and electronic database (mean = 2.80). However, 120 respondents indicated that OPAC/WEBPAC

was not readily available with mean = 2.04. Based on the results on table 4.5, the information resources available to medical students at the University of Ibadan are Internet, library, online discussion and electronic database.

**Frequency of use of information resources by medical students at the University of Ibadan**

**Table 6: Sources of information used by medical students in University of Ibadan**

S/N	Sources of information used	Regular		Rarely		Never		Mean	Std. Deviation
		F	%	F	%	F	%		
a.	Library	25	14.1	128	72.3	24	13.6	2.01	.528
b.	Internet	149	84.2	22	12.4	6	3.4	2.81	.474
c.	Textbooks	149	84.2	12	6.8	16	9.0	2.75	.608
d.	HINARY	20	11.3	30	16.9	119	67.2	1.41	.694
e.	MEDLINE	29	16.4	34	19.2	108	61.0	1.54	.769
f.	Journals	134	75.7	34	19.2	9	5.1	2.71	.558
g.	Medical CD-ROMS	51	28.8	112	63.3	14	7.9	2.21	.570
h.	Reference Materials	118	66.7	32	18.1	27	15.3	2.51	.747
i.	Conference Papers	38	21.5	128	72.3	11	6.2	2.15	.505
j.	Lecturers, Seminar	127	71.8	23	13.0	27	15.3	2.56	.744
k.	Communication with Peers	123	69.5	35	19.8	19	10.7	2.59	.678

**N = 177**

Most of the respondents used the Internet (mean = 2.81), textbooks (mean = 2.75), journals (mean = 2.71), Communication with Peers (mean = 2.59), Lecturers, Seminar (mean = 2.56), and Reference Materials (mean = 2.51), Medical CD-ROMS (mean = 2.21), Conference Papers (mean = 2.15) and Library (mean = 2.01). However, the respondents indicated that they never used HINARY (mean = 1.41) and MEDLINE (mean = 1.54). Therefore, the results on table 4.6 shows that medical students at the University of Ibadan regularly used the Internet, textbooks, journals, communication with peers, lecturers, seminar, and reference materials.

**Research Question Four: What are the problems faced by medical students in University of Ibadan in the process of seeking for information?**

**Table 7: Problems faced by medical students in University of Ibadan in the process of seeking for information**

S/N	Problems	SA		A		D		SD		Mean	Std. Deviation
		F	%	F	%	F	%	F	%		
a.	Poor info lit skills	12	6.8	12	6.8	22	12.4	131	74.0	1.46	.892
b.	Lack of computer self-efficacy	13	7.3	10	5.6	13	7.3	141	79.7	1.41	.894
c.	Inability to subscribe to online databases	101	57.1	26	14.7	23	13.0	27	15.3	3.14	1.140
d.	Irregular power supply	123	69.5	12	6.8	16	9.0	26	14.7	3.31	1.133
e.	Arrangement of Resources in the library	17	9.6	119	67.2	22	12.4	14	7.9	2.81	.720
f.	Attitude of library staff	14	7.9	22	12.4	94	53.1	44	24.9	2.03	.839
g.	Having too much information to cope with	24	13.6	114	64.4	13	7.3	26	14.7	2.77	.864
h.	Obsolence of CD-ROMS	23	13.0	40	22.6	98	55.4	16	9.0	2.40	.827
i.	Inability to access the Internet	11	6.2	14	7.9	124	70.1	28	15.8	2.05	.698

**N = 177**

One hundred and twenty three (69.5%) respondents strongly agreed on irregular power supply with mean = 3.31. This is followed by Inability to subscribe to online databases (mean = 3.14), Arrangement of Resources in the library (mean = 2.81), too much information to cope with (mean = 2.77), and Obsolence of CD-ROMS (mean = 2.40). The respondents opposed lack of computer self-efficacy (mean = 1.41), poor information literacy skills (mean = 1.46), Attitude of library staff (mean = 2.03), and Inability to access the Internet (mean = 2.05).

### Answer to Research Question Five: What are the areas in the library collection where medical students in University of Ibadan want improvement?

**Table 8: Areas in the library collection where medical students in University of Ibadan want improvement**

S/N	Areas of improvement	SA		A		D		SD		Mean	Std. Deviation
		F	%	F	%	F	%	F	%		
a.	Electronic Database	106	59.9	44	24.9	10	5.6	17	9.6	3.35	.960
b.	Print Resources e.g. Textbooks	19	10.7	115	65.0	25	14.1	18	10.2	2.76	.776
c.	E-books	105	59.3	32	18.1	19	10.7	21	11.9	3.25	1.058
d.	Reference Materials	25	14.1	109	61.6	29	16.4	14	7.9	2.82	.769
e.	Journals (Print and Electronic)	36	20.3	110	62.1	20	11.3	11	6.2	2.97	.753
f.	Magazines	19	10.7	129	72.9	11	6.2	18	10.2	2.84	.745
g.	Audio-Visual Resources	102	57.6	42	23.7	12	6.8	21	11.9	3.27	1.025
h.	Medical CD-ROMs	115	65.0	31	17.5	13	7.3	17	9.6	3.39	.985

**N = 177**

Most of the respondents (65.0%) strongly agreed that Medical CD-ROMs need improvement with mean = (3.39). This is followed by Electronic Database (mean = 3.35), Audio-Visual Resources (mean = 3.27), E-books (mean = 3.25), Journals (Print and Electronic) (mean = 2.97), Magazines (mean = 2.84), Reference Materials (mean = 2.82), and Print Resources e.g. Textbooks (mean = 2.76). Observation from table 4.8 shows that there is need for improvement in the following areas in the library collection: medical CD-ROMs electronic database, audio-visual resources, e-books, journals (print and electronic), reference materials, and print resources e.g. textbooks.

#### Discussion of Findings

This study revealed that information needs of medical students in University of Ibadan have many facets, with regards to table 3. However, specific medical information top the list of other needs with 72.9% respondents strongly agreed that they need it. This gave the mean of 3.52. Others in the list are: research information needs, with mean of 3.34; social information, 3.33; and reference information, 3.31. This result has implication for library information resources and services. Collections should be developed to meet specific medical information needs of the students. This is very necessary because they have different academic disciplines and areas of interest. Also, information services must be well provided so as to help users in their research through reference materials. Socialization is part of life; hence, the medical library should ensure that social information is provided in different formats to medical student. This finding agrees with what Aina (1983) stated that every

individual has information needs. Such information could be for recreation, leisure or meeting tasks that are crucial to survival. It also confirmed the position of Adebayo (2014) that there is no undergraduate with single information needs, this is because need for information has to do with interest, perception and sometimes, gender-based.

As revealed by table 4, there are different purposes of seeking information by medical students in the University of Ibadan. This is done to confirm that users will not go through the rigor of information retrieval if they are not going to use it for a purpose. On this note, one hundred and twenty one (68.4%) indicated that they strongly agreed that they seek information for assignment and academic projects with mean = 3.53. Project write up has mean of 3.37; research has 3.28; while professional competence has 3.19. These purposes of information seeking by medical students have implication for library information resources, services, and personnel. The reason is that, users will come to the library with different needs, and it is very likely that librarians will attend to different needs at the same time. To effectively provide effective information services in this case, library personnel must be aware of all the sources that can best serve the users; the resources must be well organized to facilitate easy retrieval; and also, different information services must be provided. These also expose how information materials would be used by the users because they visit library for research and academic project mostly. Also, librarians should also encourage the use of the resources and again teach basic information literacy. This also confirms Adebayo's (2014) submission that

undergraduates have different information need; sometimes, the needs are gender-based.

It can be deduced from table 6 that most of the respondents used the Internet (mean = 2.81), textbooks (mean = 2.75), journals (mean = 2.71), Communication with Peers (mean = 2.59), Lecturers, Seminar (mean = 2.56), and Reference Materials (mean = 2.51). Although there are internet facilities in the medical library, yet, this study does not cover where exactly the respondents access the internet. This is an indication that medical students go to the internet to get updated information that can help them in their respective fields. As a result, the medical library should subscribe to more digital information resources and open access. Consortium should be formed among medical libraries to facilitate electronic information retrieval. Also, textbooks should be acquired at regular intervals and journals be subscribed to, both manually and electronically. Since medical students also use communication with peers to seek for information, application of web 2.0 should also be encouraged among students. Meanwhile, seminars should be frequently organized and designed to meet the varying problems faced by medical students in their studies. However, HINARI was the least used source by the students. The factors responsible for this were not covered in this study, but this could be a yardstick for materials to be weeded from the collections.

Aside all these, the problems encountered by medical students while seeking for information at the College of Medicine, University of Ibadan was also revealed in this study, this was shown on table 7. One hundred and twenty three (69.5%) respondents strongly agreed on irregular power supply with mean = 3.31. This is followed by inability to subscribe to online databases (mean = 3.14), Arrangement of Resources in the library (mean = 2.81), too much information to cope with (mean = 2.77), and Obsolescence of CD-ROMS (mean = 2.40). The respondents opposed lack of computer self-efficacy (mean = 1.41), poor information literacy skills (mean = 1.46), Attitude of library staff (mean = 2.03), and Inability to access the Internet (mean = 2.05). Hence, it could easily be concluded from the observation of results on table 7 that the problems faced by medical students in University of Ibadan in the process of seeking for information were: irregular power supply, inability to subscribe to online databases, irregularities in the arrangement of resources in

the library, too much information to cope with (information overload) and obsolescence of CD-ROMS. All these problems have to be addressed to ensure effective use of resources in the library. It was earlier revealed that internet was the major source used by the students; hence, regular power supply is needed. Also, since medical students cannot subscribe to online databases, library should ensure some, if not all are subscribed to, so that medical students in University of Ibadan can compete globally with other students. In addition, basic information literacy skills should be taught during library orientation and when the use of library is taught.

Finally, this study also revealed areas in the library collection where medical students in University of Ibadan want improvement. Most of the respondents (65.0%) strongly agreed that Medical CD-ROMs need improvement with mean = 3.39. This is followed by Electronic Database (mean = 3.35), Audio-Visual Resources (mean = 3.27), E-books (mean = 3.25), Journals (Print and Electronic) (mean = 2.97), Magazines (mean = 2.84), Reference Materials (mean = 2.82), and Print Resources e.g. Textbooks (mean = 2.76). Evaluation of information resources is very good because it shows the effect of the materials on the services being provided. Hence, library management should ensure that acquisition of medical CD-ROMs are improved; more electronic databases be subscribed to. As established by the respondents, textbooks, e-books and journals, as well as magazines should be acquired in different subjects so that the needs of medical students would be met.

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