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## Assessing the Information Seeking Behaviour of Researchers at the Okavango Research Institute, Botswana

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Assessing the Information Seeking Behaviour of Researchers  
at the Okavango Research Institute, Botswana

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**Abstract**

The Okavango Research Institute (ORI), a branch of the University of Botswana (UB), located in the North Western region of Botswana, serves researchers in the natural and social sciences. ORI researchers need information to support research that contributes towards sustainable use of Botswana's wetlands, which includes the Okavango Delta and other related wetlands. This study investigated the information seeking behaviour of ORI's researchers. The aim of the study was to understand how they seek information, the information sources they use, and the problems they encounter when seeking information. Since ORI is a small institution, all the organization's researchers were included in this study, which used a quantitative research method in the form of a survey. A structured questionnaire was used for data collection. The results showed that researchers in ORI seek information that is closely aligned to their research fields. The majority of researchers seek information to conduct research, write articles for publication, and to update their knowledge. Most of the researchers indicated that they prefer searching the internet and accessing the library remotely to satisfy their information needs. They reported poor internet connectivity, outdated library materials, and lack of time and skills to search for information as some of the challenges to successful information seeking. The study therefore recommends that acquisition of relevant and current information sources in appropriate formats be prioritised and that library staff undertake information literacy skills sessions for researchers.

*Keywords: Information seeking behaviour, Researchers, Okavango Research Institute, Botswana, Information needs*

**Introduction**

Researchers in institutions of higher learning seek information to accomplish goals and objectives as set out by the organization that they work for. In the process various information sources are consulted: libraries, the internet, telephone conversations, email correspondence, and the use of the so called ‘social media’. It is desirable for academic libraries to align their resources and services to the communities they serve. Collection development in libraries should be built based on the needs and seeking behavior of users.

Information seeking is defined as “the purposive seeking for information as a consequence of a need to satisfy some goal” (Wilson 2000). According to Ikoja- Odongo and Mostert (2006) information seeking behavior stems from the realization that an individual’s own knowledge is not enough to solve a particular issue or problem. Various studies have been conducted that investigated the information seeking behaviors of individuals in different professions or groups (Kumar, 2013; Nel, 2015; Makinde et al., 2020). These studies have revealed that information seeking behaviour of individuals varies considerably. Therefore, their findings cannot be generalised to professionals in other institutional settings. The information seeking behaviour of professional groups in Botswana, such as academic researchers, is still relatively unknown. This paper strives to fill part of that information gap.

Researchers at the Okavango Research Institute (ORI), need information daily as they undertake research that contributes to the improvement of the lives of Botswana, aims to influence policy, and contributes towards creation of new knowledge. They need credible, reliable and up-to-date information. The variety of research programmes and expertise at ORI means that researchers’ information needs will be varied. The kind of information that researchers need is often driven by the task they are performing, therefore, librarians must have a clear understanding of users’ information requirements

The University of Botswana (UB) is implementing its new strategy “*creating a future for knowledge generation*” (University of Botswana, 2020). The strategy will guide UB from April 2020 to March 2029. Research and innovation are the primary foci of the strategy which intends to “ *... position the university at the apex of the tertiary education system as a comprehensive and engaged research based university that is recognised nationally and internationally for its focus on quality and excellence, creativity, innovation, and entrepreneurship....*” (University of Botswana, 2020, p.5). Information is crucial for UB and ORI researchers to achieving this aspiration. ORI library should be strategically prepared to enhance the entire spectrum of

tertiary learning, teaching, and engaged research processes by providing comprehensive information sources with high quality, responsive service.

ORI Library can only adequately serve researchers if its staff is equipped with skills pertinent to the current and future information landscape. Thus, understanding the information needs and seeking behaviour of university library users is important. The information gleaned enables library staff to build collections relevant to users' needs, provide access to online journals that are cutting-edge in their field, and provide a first filter of academic integrity for materials available to students and staff. Information seeking behaviour studies help to devise policies and services that guides acquisition of pertinent material available to the students and staff at tertiary level educational institutions. According to van Zijl, (2005) it is crucial to understand how the different users of an institution undertake research so that library collections can be built towards those unique needs.

The Association of College and Research Libraries (2010) states that academic libraries are regarded as an important resource in institutions of higher learning. They support research and academic work of faculty staff and students. The advent of information and communication technologies has brought massive changes in the way people access information. The availability of online information sources and electronic databases have enabled information providers to provide access to information remotely. Research has shown that electronic resources are popularly used in universities, research institutions and other institutions of learning (Tella et al. 2017; Kumar and Singh, 2018; Hendl, 2020). The current COVID-19 pandemic has also changed the way people access information because of limitations in physical movement that various countries have enforced to curb the diseases transmission rate. Expectations have also been raised globally about access to information, ability to use online technologies, conduct research, and communicate with individuals and their larger organisations. The pandemic has also affected the way libraries offer services to their clientele. All these factors have an impact on the information searching behaviour of researchers and requires libraries to transform the provision of service. This can be accomplished through understanding user's needs - this was the motivation for the current study.

The purpose of this study therefore was to investigate the information seeking behaviour of researchers in Okavango Research Institute. The specific objectives of the study were to:

- i. Determine the information seeking behaviour of researchers in terms of the information sources and services they require.

- ii. Establish whether the institute library meets the needs identified by the researchers.
- iii. Identify the challenges faced by researchers when seeking information.

### **Study Setting**

This study was carried out at the Okavango Research Institute, University of Botswana campus located in Maun, Botswana. The mission of ORI is to conduct research on the Okavango Delta and other related wetlands (University of Botswana, 2020). The institute offers Masters and Doctorate level programmes in natural resources management-related programmes. Research fields include ecosystem dynamics, ecosystem services, water resources management, sustainable tourism, and climate change.

The Okavango Research Institute Library was established in 1994 (Nkhata, 2002). In 2021, it has a staff complement of four qualified and experienced staff members. The library houses a comprehensive collection of print information sources, which include books, journals, monographs, and government reports among others. ORI library also has a varied collection of electronic and networked information resources made accessible through through the library website. The provision and accessibility of information is a priority for the institute library. The library would like to transform its services through the procurement of more digital resources. For the current year, the library is focusing on purchasing electronic books in order to build a comprehensive collection of electronic resources. The library is currently housed in two portacabins and has two offsite on- campus storage facilities. The bulk of the information resources that make up the library's collections relates to the study programmes that are offered.

The uniqueness of ORI library is that it also has specialised legacy collections that were donated by researchers who lived and worked in Ngamiland and the Okavango Delta. The specialised collections are the Pete Smith collection, Richard Bell collection, Hans Joachim Heinz legacy collections and the Botswana Wildlife Management Association's hunting records collection and specimens (Boiditswe et.al 2018). Specialized legacy collections provide valuable and unique information on the Okavango Delta and northern Botswana (Morrison 2009). Students, researchers, and residents of Ngamiland have access to these resources. ORI Library also provides reading space, library orientation, training in referencing tools, access to Wi-Fi, reading space, and community engagement. ORI library provides access

to its resources to the community and stakeholders of Ngamiland, northern Botswana, through annual external membership.

### **Review of related literature**

This study is rooted within the broader field of information behaviour. Information seeking behaviour is an important concept in library and information science. Understanding users' information behaviour assists librarians to develop collections and services that meet the ever-changing needs of customers. There is much literature published about the information seeking behaviour of different library users in Africa and the world over ( e.g Fidzani, 1998; Jorosi, 2006; Ikoja -Odongo and Mostert 2006; Kumar, 2009; Idiegbeyan-Ose, Okoedion and Nwadioha, 2014; Ezeala and Hundu, 2016; Manjunath and Babu, 2018; Nwone and Mutula, 2018. The Botswana national study on information and communication technology policy named Maitlamo found that communities need information for various reasons (Government of Botswana 2007:9). There is lack of information, however, with regards to researchers information behaviour in Botswana and no study that investigated researcher information seeking behaviour in ORI.

### **Researchers' information seeking behaviour**

Thanuskodi (2009) found out that majority of Faculty of Law academics at the Central Law College in Salem seek information to prepare for lectures. In another study Idiegbeyan-Ose, Okoedion and Nwadioha (2014) investigated the information seeking behaviour of researchers in three universities in Nigeria. The study found out that researchers seek information for research purposes, information on current topic and for general knowledge among others.

Ezeala and Hundu (2016), conducted a study on the use of information by researchers in research libraries at the National Veterinary Research Institute in Nigeria. The study revealed that researchers use information in research work, for conferences papers, to establish facts, to be up to date with information, to generate information, to communicate ideas, and for lecturing and at times for decision making. Journals were revealed as frequently used source of information for researchers, because of its trustworthiness and timeliness. Another recent study by Makinde et al. (2021) revealed that researchers at the Federal Institute of Industrial Research Oshidi in Nigeria seek information to conduct research and for personal reasons.

Researchers at ORI institute are mandated by their job descriptions to undertake research that can assist in the studying and the planning for the Okavango Delta. To accomplish that task, they need credible and reliable information. Most of them are using multiple ways to access information

### **Libraries meeting the needs of researchers**

Information and communication technologies have made it possible for library customers across the world to access information without physically visiting the library. In the past information in libraries were provided through printed media, but the digital revolution has brought massive changes in libraries. Information technologies have transformed the provision of information in library services. According to Adeniran (2011:209), this has created many challenges for academic libraries, as libraries are now competing with other information providers. Adeniran further states that since libraries are competing with other information providers, libraries should consider customer services as their highest priority.

Manjunath and Babu (2018), performed a study on the information needs and information seeking behaviour of research scholars in Bangalore University. Their study found out that only one third (33.8%) of scholars visit the library daily. Most respondents in this study reported that they use internet services for sending electronic mails, Google search engine, and that they are aware of electronic information sources. In a similar study that investigated selected federal universities in southwest Nigeria, it was observed that professors use their personal computers and desktops to access information to develop content for teaching and conduct research (Nwone and Mutula, 2018).

A study that evaluated the satisfaction of users at the University of Limpopo have found that library users regard high quality service and electronic resources important in their information needs (Motiang, Wallis, and Korodia, 2014). The study also indicated that library users were also satisfied with library opening hours, availability of library materials and the library's interlibrary lending service. Muthanna and Sang (2019) recommend that, research should be done on the provision of services in academic libraries. The study has discovered that university libraries are still operating like traditional libraries, in the sense that the use of information technologies to provide information is still low

### **Challenges researchers face to access and utilise information**

Scholars have indicated that there are challenges that individuals encounter when seeking information. The challenges differ from one person to person. In India, Chopkar and Khaparde

(2011) studied the information seeking behaviour of researchers in the Dr. Babasaheb Ambedkar Marathwada University. The study found that 80% of research scholars fail to access information due to lack of time. Researchers also indicated that their lack of knowledge in accessing library materials and unfriendly library staff as barriers.

In another similar study, challenges identified by Kumar (2018) include lack of time, poor internet connectivity, irrelevant information retrieved, and noisy atmosphere when seeking information in electronic resources. These are some of the issues that can hinder individuals when seeking information in the physical library environment.

### **Research methodology**

Quantitative research methodology was employed in this study. Permission to conduct the study was granted by the Ministry of Tertiary Education, Research, Science and technology and the Office of Research and Development, University of Botswana. Descriptive survey research was used and twenty-nine (29) researchers who were available in ORI at the time the study was done were included.

Self-administered and online questionnaires were used as data collection techniques. The reason for using two data collection methods was that the researcher wanted to reach respondents who were not available on campus and also improve response rate. The self-administered method was used for researchers who were available on campus, while those who were not available were sent questionnaires through KoboToolBox. Data was collected between 21 April to 16 May 2020. The data collected was cleaned and transferred to Statistical Package for Social Sciences (SPSS) Version 21 for the analysis. Analysis of data was generated using descriptive statistics such as tables, percentages and frequencies. Out of the 29 questionnaires that were distributed to ORI researchers, 25 completed questionnaires were returned. This translated to a response rate of 86.2%.

### **Findings of the study**

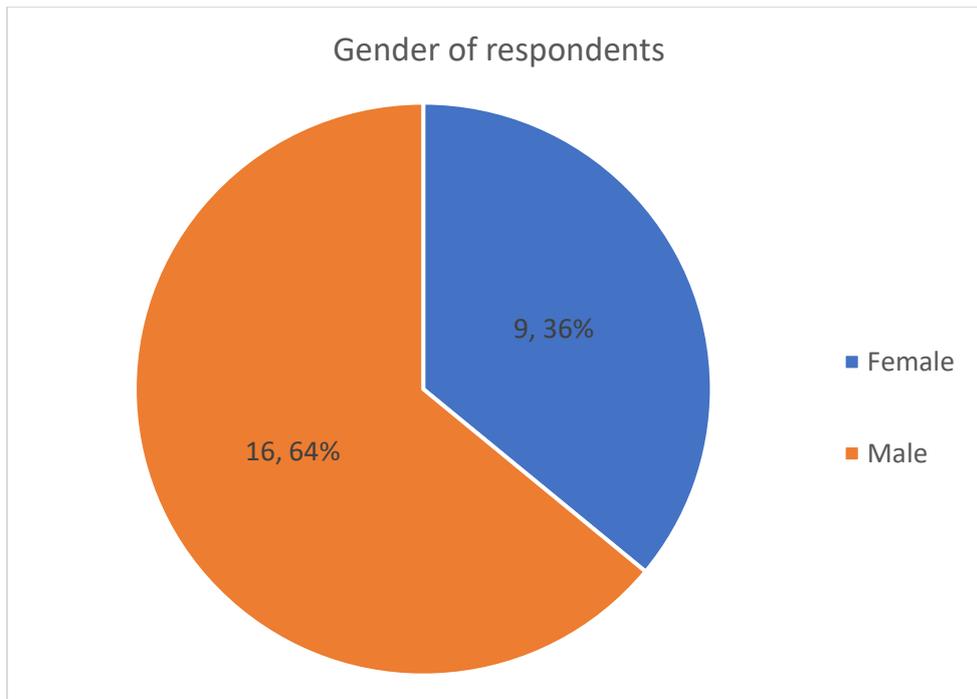
The data collection instrument was organized in four sections. The first section dealt with demographic information for respondents. The second section sought to find out information sources and information seeking behavior of researchers, followed by the third section which analysed whether the institute library meet researchers' information needs. Lastly, challenges researchers experienced when seeking information were also sought.

The data in this study were analysed quantitatively through descriptive statistics, using tables, percentages, bar charts and pie charts.

### Demographic information for respondents

#### Gender

**Figure 1:** Gender of respondents (N=25)



Khan and Nisa (2017) states that gender plays a very important role in the way in which researchers seek information. Figure 1 above indicates gender distribution of respondents who participated in this study. It shows that male respondents constituted 64%, while female constituted 36% of the respondents.

**Figure 2:** Number of years respondents worked in ORI (N=25)

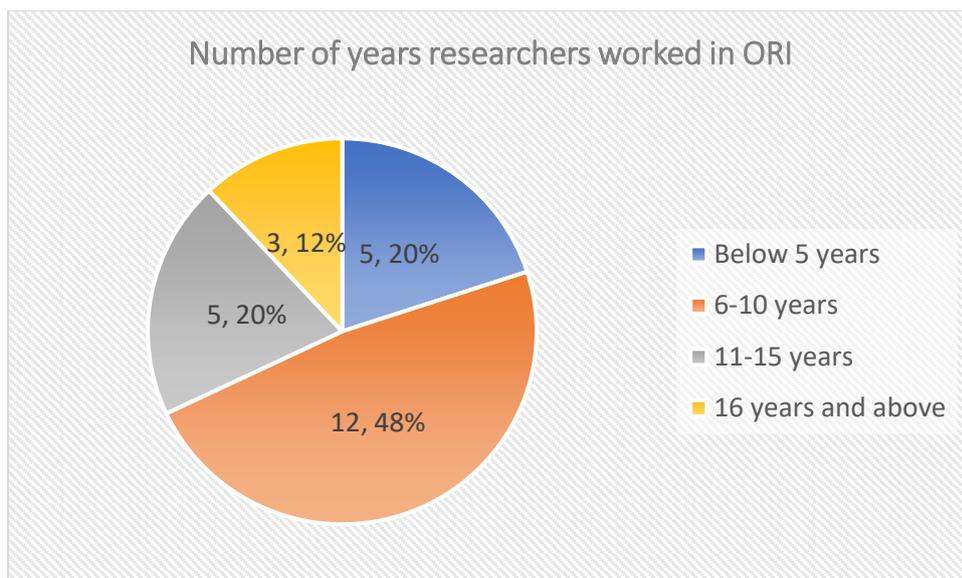


Figure 2 indicate the number of years researchers worked in the institute. The figure illustrates that majority of respondents have been working in ORI between 6-10-year range with 12 (48%) of the total respondents. Respondents who worked in ORI below 5 years and 11-15 years have the same number of respondents with 5 (20%) of respondents each. The lowest number were those who worked in ORI for 16 years and above which constituted only 3 (5%).

**Table 1:** Qualifications of researchers (N=25)

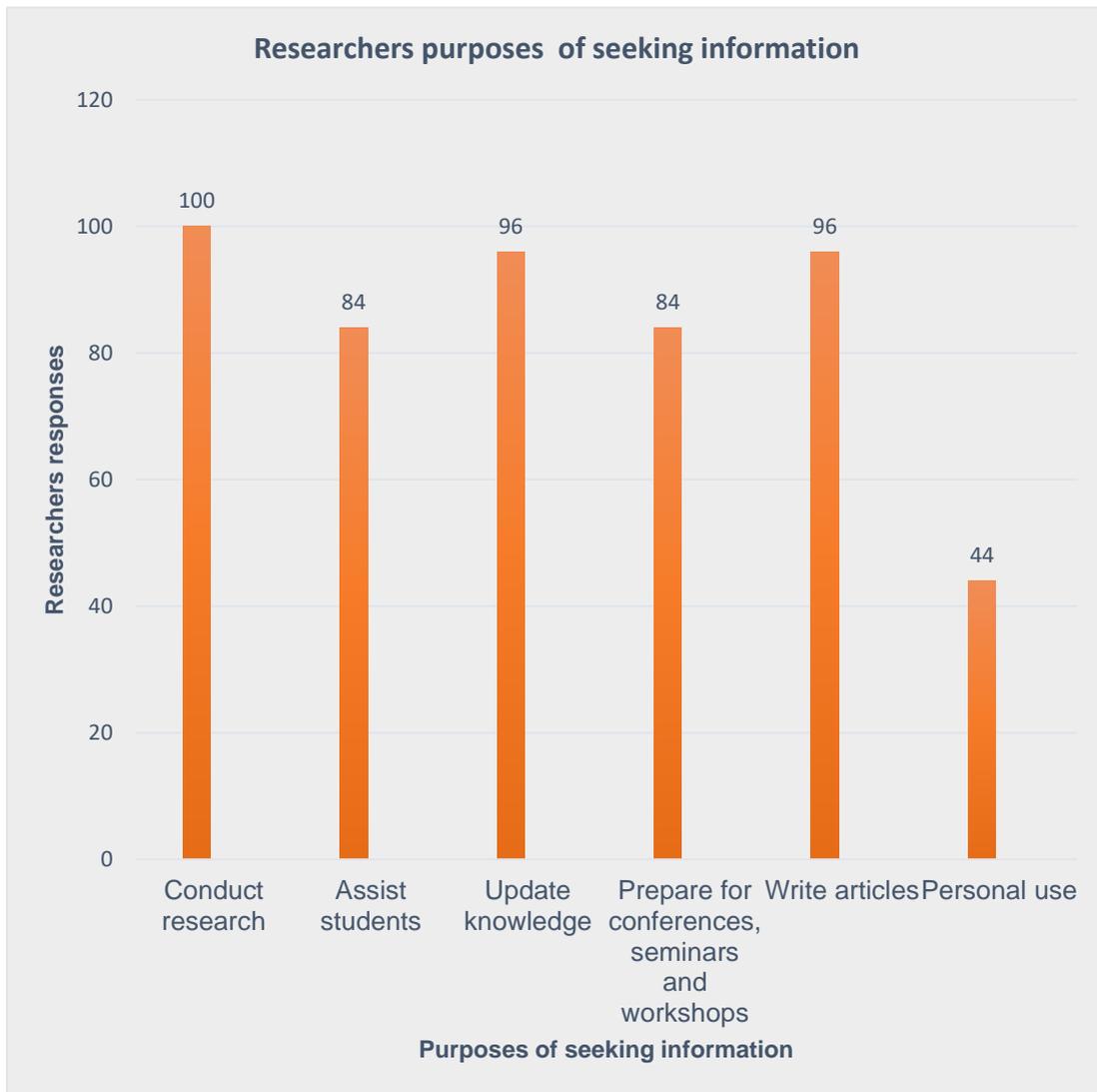
<b>Researchers qualifications</b>		
<i>Qualifications</i>	<i>No.</i>	<i>Percentage</i>
Master's degree	6	24%
DPhil/PhD	19	76%
<b>Total</b>	<b>25</b>	<b>100%</b>

Respondents were asked to indicate their highest qualifications. Table 1 illustrates that the highest number of respondents have attained Doctoral degree qualification which constituted 19 (76%), followed by 6(24%) who have Masters degrees.

### **Information sources and information seeking behaviour of researchers**

The information seeking behavior of researchers was investigated with the regard to the information they use in their respective research areas, how they search for information, and how they use the Okavango Research Institute library.

**Figure 3:** Researchers’ purpose in seeking information (N=25)



Respondents were asked to indicate their purpose of seeking information. From the table above, all respondents indicated that they seek information to conduct research with 25 (100%) of respondents, followed by updating knowledge and writing articles with 24 (96%) of respondents respectively. Assisting students and preparing for conferences and seminars each have 21 (84%) of respondents each, while 11(44%) of respondents said they seek information for personal use. The finding of this study agrees with a study by Nwone and Mutula (2018), where professoriate sought information to “develop contents for teaching”, “conduct research”, “keep abreast with current information” and “educational purposes”.

**Information sources and services researcher use**

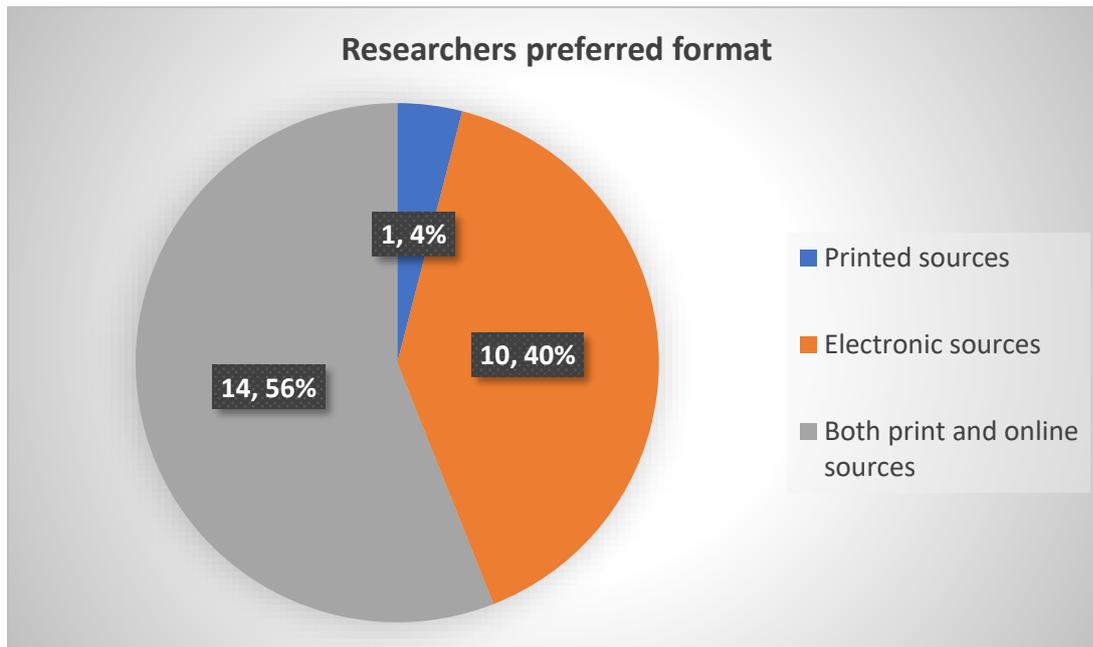
**Table 2:** Researchers' purposes in seeking information

Variables	Never		Seldom		Sometimes		Often		Always	
	N	%	N	%	N	%	N	%	N	%
Physically visit the library	3	12%	3	12%	12	48%	5	20%	2	8%
Use library catalogue and online databases	1	4%	3	12%	5	20%	8	32%	8	32%
Internet	0	0	0	0	2	8%	1	4%	22	88%
Use personal collections	1	4%	4	16%	10	40%	5	20%	4	16%
Ask colleagues	2	8%	9	36%	5	20%	7	28%	0	0
Attend professional associations	2	8%	6	24%	7	28	7	28%	1	4%

The findings above reveals that respondents seems to occasionally physically visit the library with 12 (48%). Only 5 (20%) of the respondents indicated that they often visit the library. Regarding use of the library catalogue and online databases 8 (32%) of the respondents indicated that they always use the library. Surprisingly, 1 (4%) of the respondents said they never use the library. Respondents reported lower use of the library catalogue and online catalogue. The majority of respondents 22 (88%) revealed that they always use the internet to search for information. It seems that all researchers use the internet to seek information. Personal collections seemed to be occasionally used by 10 (40%) of respondents. Respondents seemed to be less likely to ask colleagues for information. Professional associations are rarely used by respondents with only 7 (28%). When asked about other information sources and services they use, respondents indicated that they use Google and Research Gate to seek information.

### Researchers preferred information formats

**Figure 3:** Preferred format when accessing information (N=25)



Respondents were asked to indicate their preferred method of accessing information. The chart above indicates that majority 14 (56%) of respondents prefer to use both printed and online information sources, while 10 (40%) prefer online resources. Only 1 (4%) of respondents said that printed information sources are their preferred method.

### Frequency of library visits by researchers

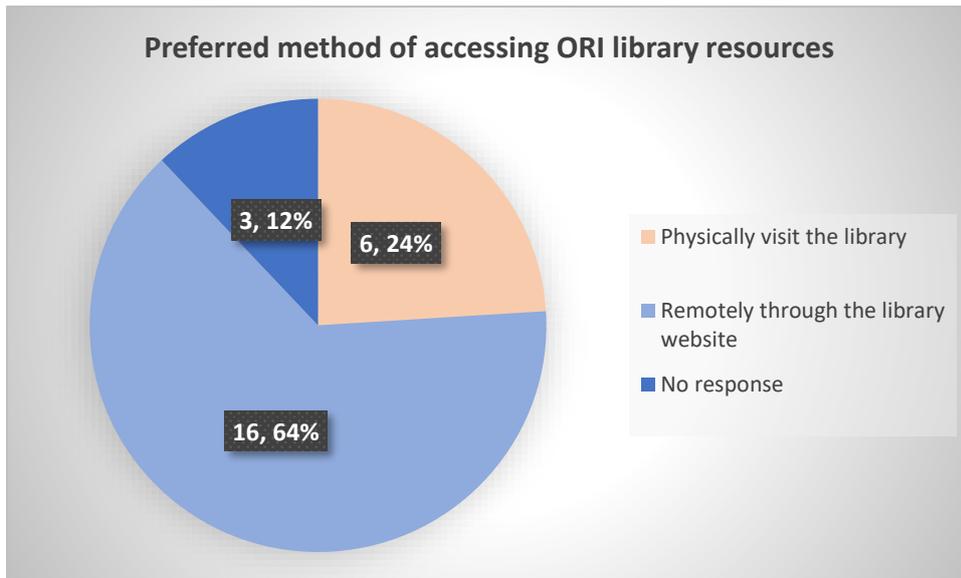
**Table 3:** Frequency of library visits

Frequency	Number of respondents	Percentages
Never	5	20%
Occasionally	14	56%
Monthly	5	20%
Once a week	1	4%
Almost Daily	0	0
<b>Total</b>	<b>25</b>	<b>100%</b>

The analysis of data in Table 3 depicts that 14 (56%) of researchers visit the library occasionally. The 5 (20%) of researchers indicated that they visit the library monthly. Five (20%) of researchers do not visit the library. One (4%) respondent visits the library once a week.

### Preferred method of accessing information from the library

**Figure 4:** Preferred method of accessing information in ORI Library

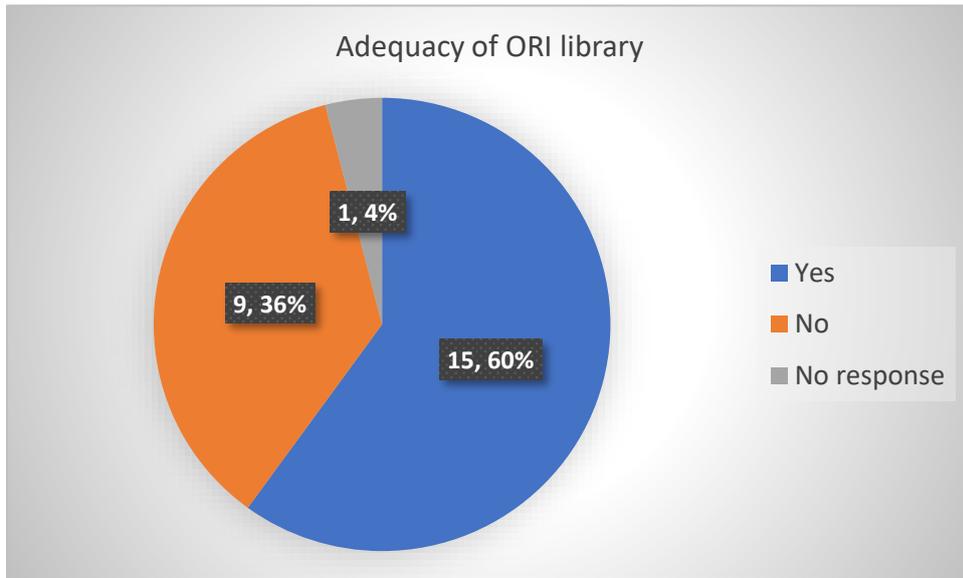


The above graph shows that most 16 (64%) of respondents access information from the library remotely through the library website, while 6 (24%) physically visit the library to access information. Three (12%) respondents did not indicate their preferred method.

### Status of the library meeting the information needs of researchers

Adequacy of ORI library collection

**Figure 5: Adequacy of ORI library**



It is observed from the graph that 15(60%) of researchers are satisfied with the library collection, while 9 (36%) indicated that the library collection is not adequate for their needs. Only one (4%) respondent did not answer this question. The results show that the library collection is adequate for most respondents, but efforts need to be made to reach a satisfactory level.

**Challenges researchers experience when seeking information**

**Table 4:** Challenges researchers experience when seeking information

Possible challenges	Respondents	
	Number	%
Material not available	15	60%
Inability to deal with information overload	1	4%
Outdated library materials	8	32%
Inadequate reading materials	6	24%
Poor internet connectivity	3	12%
Lack of information literacy skills to use the library	3	12%
Library staff not willing to assist	0	0
Library environment not conducive for research	3	12%
Lack of time to search for information	6	24%

***NB: Multiple responses received***

The analysis of the data in Table 4 reveals that a majority of respondents reported that unavailability of material is the main challenge that they face when seeking information with 15(60%). Eight (32%) of respondents indicated that outdated library materials is also a challenge, and 6 (24%) mention that inadequate reading material is also a barrier when seeking information. Poor internet connectivity, lack of information literacy skills, and library staff not willing to assist were the least challenges experienced by respondents with 3 (12 %) of respondents respectively. The most notable and encouraging feedback is that none of the respondents mentioned unwillingness of library staff to assist as a challenge to their information seeking behavior

### **Discussion of findings**

Three research questions guided this study. The first research question wanted to determine and explore the information seeking behavior of ORI researchers in terms of their purposes of seeking information. The results indicate that all respondents indicated that they seek information to conduct research. It is not surprising that all respondents seek information to conduct research because it is the institute core mandate. Therefore, undertaking research is a core responsibility. Researchers also reported that they seek information to write articles, to update knowledge, assist students, prepare for conferences, and for personal use. When asked about other reasons for seeking information two respondents mentioned that they seek information for reading and teaching. The research results are similar to that of Okonoko, Njideka and Mazah (2015) and that of Ezeala and Hundu (2016) who revealed that researchers in academic institutions seek information to undertake research, to write research articles, update knowledge, for teaching and assisting students, among others. Similarly, Makinde (2018) also found out that researchers needed information for both research and for personal use.

It is evident from data above that the information seeking behaviour is a process that happens as a result of an individual's search for information to meet goals (Wilson 2000). Researchers in ORI need information to conduct research. Information plays an important role for them to accomplish the role. This shows that indeed the search information is guided by an individual's need to fill a gap on a specific topic on a given time.

The findings of this study have also shown that researchers in ORI always use the internet and online databases to search for information. Only a small number of researchers indicated that they use their personal collections for information. ORI researchers use the internet to access

online databases for information as compared to physically using the library. A study by Kwafoa, Imoro and Afful-Arthur (2014), have shown that faculty members access online databases through channels other than the library. Technological developments have changed the way researchers access information. Therefore, it is not surprising that most researchers in the study use the internet to search for information. It appears that ORI researchers only occasionally visit the library to use print resources and use other information sources such as Google Scholar and ResearchGate to locate information.

The second objective wanted to establish whether the institute library meets researchers' information needs. The findings reveal that 14 (56%) percent of researchers frequently visit the library. This concludes that a substantial number of ORI researchers visit the library when they need information. When asked about the modes of accessing information most researchers revealed that they use library books, electronic journal and books, and online databases. However, only a small 4 (16%) of researchers indicated that they use library books frequently. The study concludes that most researchers in ORI prefer to use online resources as compared to print resources. Most researchers 16 (64%) reported that they access library resources remotely through the library catalogue. The findings of the study concur with a study done by Folorunso (2015), who found out that 91.4% of social science scholars use electronic information.

Researchers who responded that they prefer the online sources revealed that remote access is convenient and faster. Others indicated that they access materials remotely because they can search for information anytime even at home or wherever. Therefore, this indicate that researchers are accessing the library's subscription databases, even though they are not physically visiting the library on daily basis. This means that researchers still view the library as a very important resource in the realisation of their objectives. This conclusion is supported by the 15 (60%) of respondents who reported that ORI library collection is adequate for their needs.

Regarding researchers' satisfaction with library services, 17 (68%) of researchers' responses indicated that they are satisfied with the services that the library offers. Therefore, this indicates that in terms of service provision in the library is performing well. Library staff should conduct a mini survey on the overall satisfaction level of researchers with library services and resources. In that way, it should be possible to identify areas that need to be improved. The library should find ways to improve the satisfaction level to an acceptable standard of excellence which is

around 85 –100% as stipulated by the performance management tool in place in ORI. Few respondents indicated that they were not aware of the services that the library offers. Upon analysing the results further, the findings show that few respondents who have either not used the library, are not satisfied with services it provides, or who do not access the library resources remotely have been working in the institute for less than five years.

The third objective addressed the challenges researchers experience in their information seeking process. According to Wilson (1999), individuals experience several challenges when seeking information. Wilson also states that personal, role-related and environmental barriers affect information seeking behavior. The findings of this study at ORI revealed that majority of respondents encounter problems such as unavailability of library resources, outdated library material, and lack of time to search for information. Other challenges such as lack of information literacy skills, a library environment that is not conducive, and inadequate reading materials were experienced by a significantly lower number of respondents. When asked about any other hindrance to their information seeking, some respondents reported that complicated search systems, lack of understanding about what the library offers, and limited operating hours.

The findings of this study correspond with Manjunath and Babu's (2018) study, which investigated the information needs and seeking behaviour of research scholars at Bangalore University. The study found out that researchers at Bangalore university experience problems such as unavailability of materials, inadequate library materials and lack of library skills. Other non-library barriers such as poor internet connectivity and lack of time to conduct research were also mentioned. Omah and Urhiewhu's (2019) findings revealed that unavailability of abstracting and indexing services, lack of skills to search for information, and unavailability of current information sources are some of the challenges that researchers encounter.

### **Conclusion and recommendations**

This study investigated the information seeking behavior of researchers in ORI. It can be concluded that researchers understand the value of information. This study has found that researchers in ORI seek information to conduct research, write articles, update knowledge, assists students, prepare for conferences, and for personal development. The majority of researchers in ORI have revealed that they use electronic journals and online databases to access information. Information sources that researchers use to obtain information are library books, reference materials, government publications and special collections. Researchers have

indicated that they physically use the library occasionally. However, a majority of researchers pointed out they access information remotely through the library website. The study has also revealed that researchers use both print and online sources to access information. Most researchers have reported that they also use the internet to obtain information.

The findings of the study have shown that sixty percent of respondents have indicated that they are satisfied with the library collection. On the satisfaction level of researchers a majority (68%) of respondents have indicated that they are satisfied with the services that the library offered. However, researchers indicated that they encounter some challenges. Researchers experience challenges such as lack of time, unavailability of information sources, outdated library materials and poor internet connectivity.

Based on the findings, this study therefore recommends that:

- Library staff should market and train researchers on accessing information in the library, incorporating updated information literacy coaching and follow-up.
- The library should increase its online content to reflect the needs of its researchers. A survey of these needs should be carried out at least annually. Varied and relevant information should be provided for subscription-based journals and online journals.
- Researchers have indicated that some books in the library are outdated, while at some time not available on the shelves. The library needs to update its collection to meet the needs of users and review its collection maintenance procedures.
- Library staff should find ways of improving the satisfaction level of researchers.
- Improvement of bandwidth of internet connectivity should be a priority.

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