

Information needs and search behaviour of students of veterinary medicine in a Nigerian university

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Abstract

The changing information needs of library user, coupled with the need to keep abreast of the information technology advancement and the dynamic nature of publishing, make the information requirements of individuals differ. This has altered the behaviour of an individual towards information seeking in modern societies. It is against this background that this study examined the information needs and seeking behaviour of students of the veterinary medicine at the Usmanu Danfodiyo University, Sokoto (UDUS). The study adopted the descriptive survey design and questionnaire was used to collect data. A sample of 300 students was surveyed out of which 240 responded representing 80% response rate. The data collected were analysed using descriptive statistics. The findings revealed that the veterinary medicine students mostly need academic information to carry out any given assignments, class tests, examinations and research projects. The study also showed that for the student to meet their information needs, they usually visit the veterinary library, consult their personal collections, seek assistance from the library staff, surf the Internet and discuss with course mates. However, they are frustrated by the slowness in downloading information from the Internet, irregular power supply, lack of photocopying services, and lack of information skills. The study, therefore, recommends that the library improve on its Internet facilities, provide alternative source of electricity supply, provide photocopy services, and provide information literacy training to enhance students' capacity to access quality information.

Keywords: Information needs, information seeking behaviour, veterinary medicine students

Introduction

Finding the right information to meet today's information request is one of the challenges faced by the libraries and information professionals. This is due to numerous sources through which information is presented, the changing needs and taste of library users, the need to keep abreast of new development, technological advancement and the dynamic nature of publishing (Mabebera, 2003). Onifade (2019) concurred with this assertion and inferred that differences in human reasoning and engagement in life, makes the information need of every individual differs and thereby, making the behaviour of an individual to information seeking also differs. It was also envisaged that with the evolution of electronic resources and the advent of social media, there is likelihood of veterinarians current access to information to significantly change from what it used to be in the last 10-30 years (Rose, 2014).

For any library to adequately address the demands posed by the changing information environment of its users, there is the need to persistently examine the type of information and the needs of individual users (Hepworth, 2007; Chaura, 2015). Access to the most up-to-date evidence is an important cornerstone for veterinarians attempting to practice. Therefore, an understanding of what and how they accessed and used information is vital (Nielsen, Dean, Massey & Brennan, 2015). If the issues raised above are important for the future of veterinary medicine, then libraries and information professionals need to understand how information needs and seeking behaviour develop (O'Carroll, Westby, Dooley & Gordon, 2015). Chikonzo and Aina (2001:98) postulated that "Knowledge of the information-seeking behaviour and information needs of veterinary researchers can be a big asset to veterinary librarians in the design and

implementation of library use instructions". This will help in developing collections, upgrading facilities and improving services to effectively meet the information needs of the users (Gunasekar, 2010).

The process of laying the foundation of knowledge and behaviour patterns of future practitioners by veterinary schools requires students' active engagement in participatory knowledge building, information acquisition and use (O'Carroll, et al 2015). As the students continue with their clinical encounters it will lead them to continually integrate this knowledge, and they will gradually build mental maps that enable automatic processing for quick clinical decision making (Hutchinson, Maskrey, Slawson, Shaughnessy & Underhill, 2012). In the meantime, however, the students must recognize the ongoing need to engage with information sources to update their mental maps and to supplement when prior knowledge is absent or insufficient (Hutchinson, et al 2012). Their veterinary medical education must therefore, prepare them as managers of information as well as experts in veterinary health (O'Carroll, et al 2015).

Based on the foregoing, this study aimed to investigate the information needs and seeking behaviour of veterinary medicine students in the Faculty of Veterinary Medicine at UDUS. The finding of this study would contribute to understanding of the unique information needs and seeking behavior of the students based on their professional discipline of veterinary medicine. This would help the library in developing a strategy which could be geared toward meeting the information needs and seeking behaviour of the veterinary medicine student throughout their study period and beyond.

Objectives of the study

The main objective of this study was to determine the information needs and seeking

behaviour of veterinary medicine students at Usmanu Danfodiyo University, Sokoto, Nigeria. Specifically, the study set out to:

1. Identify the information needs of the students of the veterinary medicine at Usmanu Danfodiyo University, Sokoto,
2. determine the academic activities accomplished with the needed information by the students,
3. identify the types of information resources used by the students,
4. investigate the steps taken by the student in meeting their information needs, and
5. identify the challenges encountered by the students in seeking for the needed information.

Literature review

Among earlier studies was that of Drake and Woods (1978) which examined the information-gathering behaviour of veterinary practitioners in Indiana, USA and observed that veterinarians are actively seeking information and books were the primary information source used in critical care situations. Pelzer and Leysen (1988) found that the veterinary medical students at Iowa State University, USA identified with the libraries that included journals as the most important source of information and computerised information. Pelzer and Leysen (1991) established that US veterinary practitioners used journals, books, colleagues, and continuing education courses as sources to help them keep up-to-date. Bawden and Valleley (1996) found the British veterinarians to be rather pragmatic users of professional information sources, making use of a limited range of sources, and placing premium to quick and simple access to information. They also used veterinary libraries for their information needs. Pelzer, Wiese and Leysen (1998) compared the results of a survey on library use and information seeking behavior of

veterinary students with data obtained in a similar survey conducted ten years earlier. The study found a major increase in the use of computerized indexes and other electronic resources among the veterinary medicine students. Walse (2000) reported that UK veterinarians preferred using the internet to contacting the library. The study indicated journals, textbooks and conferences as the most common sources of drug, diagnostic and therapeutic information.

Veterinary practitioners in Slovenia required information for clinical decision-making and for research (Cuk & Fuznic, 2002). While veterinarians in Ohio emphasized the use of printed and electronic resources to gather information regarding particular cases for clinical care, clinical reasoning, diagnostic tests, treatment; prognosis and control and prevention (Murphy, 2003; Cockcroft & Holmes, 2004). Similarly, Slawson and Shaughnessy (2005) found that, veterinary researchers required clinical information for diagnosis and high quality patient care. However, the clinicians must learn the techniques and skills to focus on finding, evaluating, and using information at the point of care. Hess (2010) found that veterinary practitioners used the Internet to access current veterinary science information, access online medical records and client education information, make quick reference to veterinary websites, access animal husbandry and animal health information, send and receive email messages. Larson (2010) found that, rural veterinary practitioners in Kansas State required clinical information on veterinary science, human medicine, infectious and emerging infectious diseases, nursing science, agriculture and animal science information.

Weiner, Stephens and Nour (2011) on information-seeking behaviors of first-semester veterinary students at Purdue University, showed that students beginning

the program mostly used Google search for coursework, although some of the students also used the resources found on the libraries' web site. Brent (2011) found that veterinary practitioners read information sources to keep up to date on new procedures, diagnosis and patient care and treatment. Similarly, Vandeweerd, Kirschvink, Clegg, Vandemput, Gustinand, Saegerman (2012) found that the veterinary practitioners required clinical information for treatment, risk, frequency, diagnosis and prognosis. In India, Kumar and Naveen's (2016) found that printed form of information is preferred more compared to e-resource of information by teaching staff College of Veterinary Science, Proddatur, Andhra Pradesh. It was also found that the main purpose for which the staff seeks for information is to update their subject knowledge. Most of the staff had a daily frequency of information resource usage. A good number of them gave two options regarding location for accessing the information resources viz., at home and at college library. Majority opined that e-resource is the easy source of information. Searching information on internet seems to be the most common method of information seeking among the staff. The greater parts of teaching faculty are satisfied with both print and electronic resources. The mainstream of the respondents identified lack of adequate library infrastructure as the main constraint affecting their information seeking behaviour in the college. They unanimously indicated that e-resource is the overall best suited form of information.

A recent study by Lai, Khosa, Jones-Bitton and Dewey (2019) on students' experiences of seeking web-based Animal Health Information at the Ontario Veterinary College, Canada, offered an understanding of veterinary students' perceptions about the nature of Web-based animal health information, and how their search experiences impacted the way in which that

information is managed. Internet afforded the students a quick resource to conduct searches for basic content to facilitate learning of more advanced materials. However, the students voiced frustration at the time and effort it takes to retrieve relevant Web-based health information and made specific mention of their use and reliance on the WEB search engine Google. Eldemire, Fricke, Alpi, Davies, Kepsel and Norton (2019) studied DVM student information behaviors in North America. The study concluded that the students may lack the skills needed to evaluate scientific literature and need more practice and feedback in evaluating and interpreting scientific papers.

However, few studies on the information behaviour of veterinary practitioners in Africa were also reported. Ikpaahindi (1985) found that journal articles were the most used sources of information by veterinary scientists in Nigerian. They also preferred bibliographies, abstracts, indexes, and consulting library staff for new information. The veterinary scientists also needed information for research purposes, to keep up to date and for teaching. Nweke (1996) compared the information-seeking habits of human and veterinary medical scientists in Borno State, Nigeria. The study found that principally, they use informal methods of obtaining information, as the use of formal ways was hindered by lack of relevant sources. Specifically, the respondents primarily used personal records, discussion with colleagues, and scanning of a wide variety of reading materials, and they often obtain information serendipitously.

In Zimbabwe, Chikonzo and Aina (2006) found that library was the main source of information for the veterinary students at the University of Zimbabwe. Writing assignments and studying for tests or examination were the primary tasks for which the students required information. Particularly, books, videos, lecture notes,

handouts, internet, projects, CD-ROM database and journals were the major sources of information used in obtaining the required information. Nel (2009) found that veterinary practitioners in South Africa used Internet to access electronic books, journal articles, and animal health information and for communication purposes. The most used research tools were the PubMed, International Veterinary Information Service (IVIS), FAO and the World Organization for Animal Health (OIE) databases.

Onyekweodiri and Agbo (2015) study revealed that newspapers, magazines, current awareness services, journals, online resources related to veterinary medicine were the most required by the veterinary medicine students in two federal universities in South-East Zone of Nigeria. The study also found underutilization of library resources due to their obsolescence nature, lack of current awareness services, inadequate staff to attend to users. Nel and Fouie (2016) examined veterinary researchers and their requirements for academic library services in university of Pretoria South. The study found that the information needs of researchers are influenced by the research environment and expectations for research output. Tilahun and Natarajan (2016) examined the information seeking behavior of undergraduate students of Agriculture and Veterinary Medicine of Jimma University, Jimma, Ethiopia. The majority of the students frequent the library and they use internet facility more within the library. They also sought for assistance from the library professionals for information seeking from different resources and their purpose of seeking information was for academic purpose and also to update their subject interest. However, the students were not satisfied with the reading hall and reference service.

The studies reviewed so far revealed high usage of a variety of information

sources in both print and electronic media by both students and practitioners irrespective of their settings. Studies conducted between 2002 and 2019 showed an increase in the variety of usage of Internet, databases, and search engine such as Google for the purposes of research, teaching, treatment, communication in general by the practitioners, while students, needed the information to support their academic activities such as class assignment, examination and research. The literature also reported some difficulties associated with information seeking such as lack the skills needed to evaluate scientific literature. Summary of the literature reviewed has clearly shown a gap needed to be filled. The gap arose because from the available literature, only a few specifically reported information needs and seeking behavior of veterinary medicine practitioners and students in Nigeria, hence, the need for this research.

Methods

The study adopted the on descriptive survey design employing a structured questionnaire designed to find out the information needs and search behaviour of the undergraduate students of the Faculty of Veterinary

Medicine, UDUS. The total number of the undergraduate veterinary medicine students as at 2019 was 576. From the study population, a sample of size of 300 respondents was selected using simple random sampling technique. The required data for the study was collected using the questionnaire. Copies of the questionnaire were distributed and collected from the respondents with the help of three research assistants within two weeks. Two hundred and forty (240) out of the total three hundred (300) copies of the questionnaire administered were completed and retrieved thus, giving 80% return rate. The data collected were analyzed with frequency count and percentage and presented in tables in line with the research objectives.

Results and discussion

Research objective one: Identify the information needs of the students of the veterinary medicine at Usmanu Danfodiyo University, Sokoto,

In order to identify their information needs, the students of the veterinary medicine were asked the types of information they often needed. Table 1 presents the information needs of the respondents.

Table 1: Information needs of the students

Information needs	Always	Frequently	Rarely	Never
Academic information	209(87.1%)	31(12.9%)	-	-
Current affairs information	121(50.4%)	119(49.6%)	-	-
Sport update	40(16.7%)	25(10.4%)	125(52.1%)	50(20.8%)
Politics	-	25(10.4%)	65(27.1%)	150(62.5%)
Self-development	180 (75.0%)	60 (25%)	-	-
Entertainment/leisure	23(9.6%)	89(37.1%)	128(53.3%)	-
Health information	61(25.4%)	100(41.7%)	79(32.9%)	-
Job related information	150(62.5%)	84(35.0%)	6(2.5%)	-
Business information	79(32.9%)	23(9.6%)	130(54.2%)	8(3.3%)
Scholarship	74(30.8%)	166(69.2%)	-	-
Professional development	205(85.4%)	35(14.6%)	-	-

N = 240

As indicated in Table 1, it is quite obvious that the most needed information was academic information with 87.1%. This

corroborates the finding of Tilahun and Natarajan (2016) that the veterinary students mostly sought for academic information for

their studies. They also needed information for professional development with 85.4%, information for self-development with 75.0%, information for job opportunities with 62.5% and for current affairs with 50.4%. The respondents also needed information for scholarship purposes with response rate of 69.2% and information for businesses and sport update with 54.2% and 52.1% respectively. Meanwhile more than half (62.5%) of the student never seek political information. Based on the presentations above the students of veterinary medicine of the Usmanu

Danfodiyo University, Sokoto mostly needed information for academic purposes, self-development, professional development and current awareness.

Research objective two: Determine the academic activities accomplished with the needed information by the students.

In order to determine the academic activities accomplished with acquired information, the students were asked about academic activities they accomplished with the acquired information. Table 2 presents the accomplished academic activities by the respondents.

Table 2: Academic activities accomplished with the needed information

Academic activities	Always	Frequently	Rarely	Never
Lecture notes	168(70.0%)	72(30.0%)	-	-
Class test	180 (75.0%)	60 (25%)	-	-
Tutorials	151(62.9%)	43(17.9%)	33(13.8%)	13(5.4%)
Examinations	240 (100%)	-	-	-
Course assignment	240 (100%)	-	-	-
Research activities	75(31.2%)	170(70.8%)	60(25.0%)	-
Group discussion	89(37.1%)	101 (42.1%)	50 (20.8%)	-

N = 240

Table 2 presents the result of academic activities accomplished with the needed information. The result indicates that all the respondents (100%) always used the information for assignment and examinations. Class test (75.0%); lecture notes (70.0%) and 62.9% of the respondents indicated tutorials. 70.8% respondents indicated research activities frequently. From the presentation, the kinds of educational activities the students of the veterinary medicine accomplished using the needed information are not unique to the students of Usmanu Danfodiyo University, Sokoto. This was because Chikonzo and

Aina (2006) also found that veterinary medical students in Zimbabwe needed information to accomplish academic activities such as writing assignments, tests and examination, etc.

Research objective three: Identify the types of information resources used by the students.

To meet the information need, the students were asked about information sources they preferred while seeking information. Table 3 presents the preferred sources of information by the respondents.

Table 3: Information sources preferred by the students

Sources Preferred	Most preferred	Preferred	Less preferred	Not preferred
Textbooks	209(87.1%)	31(12.9%)	-	-
Journals	1(0.4%)	53(22.1%)	123(51.3%)	-
Reference Books (e.g. Dictionaries)	89(37.1%)	77(32.1%)	53(22.1%)	21(8.8%)
Thesis and Dissertations	12(5.0%)	33(13.8%)	85(53.4%)	110(45.8%)
Undergraduate Project	56(23.3%)	76(31.7%)	108(45.0%)	-
Media (TV, Radio, Newspaper etc.)	69(28.8%)	73(30.4%)	48(20.0%)	50(20.8%)
Lecture Notes	240(100.0%)	-	-	-
Past Question Papers	123(51.3%)	95(39.6%)	22(9.2%)	-
Handout/course materials other than textbooks	202(84.2%)	38(15.8%)	-	-
Indexes and Abstracts	1(0.4%)	35(14.6%)	87(36.3%)	117(48.8%)
Government Documents	10(4.2%)	3(1.3%)	68(28.3%)	159(66.3%)
Internet	199(82.9%)	41(17.1%)	-	-
Conference and Workshop Papers	79(32.9%)	46(19.2%)	65(27.1%)	119(49.6%)
Personal knowledge or experience	79(32.9%)	130(54.2%)	23(9.6%)	8(3.3%)
Friends, families and relations	83(34.6%)	157(65.4%)	-	-

N = 240

Table 3 reveals that the largest groups considered lecture notes as the most preferred with 100.0%, of the respondents indicating so. The next largest group (87.1%,) indicated text books as the second most preferred followed by 84.2% who indicated handout/course materials other than textbooks, the need for Internet was indicated by 82.9%. Specifically, lecture notes are very important to all the respondents. The responses further reveal that personal friends, families and relations as the prefer sources of information with 65.4%. Less preferred information sources among the students include thesis and dissertations (53.4%) followed by journals (51.3%). Government documents and

conference, workshop papers and indexes and abstracts were seldom used by the veterinary students. The result of this study is in line with Chikonzo and Aina's (2006) study, whose key findings revealed that most used information sources by students include books, lecture notes, handouts, Internet and projects.

Research objective four: Investigate the steps taken by the student in meeting their information needs.

To establish the steps taken by the veterinary medicine students in meeting their information needed, they were asked to indicate the steps taken. Table 4 presents the steps taken by the respondents in meeting their information needs.

Table 4: Steps taken by the respondents in meeting the information needs

S/N	Steps taken	Always	Frequently	Rarely	Never
1	Visit the veterinary medicine library	219(91.2%)	21(8.8%)	-	-
2	Consult with the course lecturer(s)	132(55.0%)	108(45.0%)	-	-
3	Discuss with course mates	139(57.9%)	101(42.1%)	-	-
4	Use personal collections	188(78.3%)	52(21.7%)	-	-
5	Ask the library staff	168(70.0%)	72(30.0%)	-	-
6	Surf the Internet	150(62.5%)	90(37.5%)	-	-
7	Search through the catalogue	91(37.9%)	81(33.8%)	68(28.3%)	-
8	Searching directly on the shelves	136(56.7%)	89(37.1%)	15(6.2%)	-
9	Using references at the back of textbooks	10(4.2%)	75(31.2%)	123(51.3%)	32(13.3%)
10	Checking the notice boards	145(60.4%)	95(39.6%)	-	-

N = 240

As presented in Table 4, most of the respondents (91.2%), visit the veterinary medicine library for information. 78.3% of the respondents consults their personal collection; 70.0% of the respondents asks the library staff for information; (62.5%) of the respondents relied on Internet for information; while (60.4%) of the respondents check the notice board for information. Some of the respondents (57.9%) discussed with course mates for information and 56.7% of them search directly on the shelves. The respondents

(51.3%) also used references to seek information. These findings corroborate that of Urhiewhu, Okeke and Ukoma (2015), that students used different strategies for searching information for their studies.

Research objective five: 1. Identify the challenges encountered by the students in seeking for the needed information.

The respondents were asked about the challenges they faced while seeking for information. Table 5 presented the responses of the respondents.

Table 5: Difficulties encountered in searching for information

Difficulties encountered	Major Difficulties	Minor Difficulties	No Difficulties
Lack of awareness	108(45.0%)	79(32.9%)	53(22.1%)
Inability to find the relevant information easily	145(60.4%)	62(25.8%)	33(13.8%)
Too much information to cope with	50(20.8%)	60(25.0%)	130(54.2%)
Did not have enough time	104(43.3%)	105(43.8%)	31(12.9%)
Information was not easy to interpret and use	47(19.6%)	130(54.2%)	63(26.2%)
Slowness in downloading information from Internet	224(93.3%)	16(6.7%)	-
Lack of computer skills	159(66.2%)	40(16.7%)	41(17.1%)
Poor information skills	164(68.3%)	76(31.7%)	-
Inadequate knowledge about library	76(31.7%)	79(32.9%)	85(35.4%)
Attitude of the library staff	70(29.2%)	39(16.2%)	131(54.6%)
Irregular power supply	202(84.2%)	38(15.8%)	-
Inadequate library resources	75(31.2%)	170(70.8%)	60(25.0%)
Less number of copies of books	89(37.1%)	101 (42.1%)	50 (20.8%)
Lack of photocopying services	180 (75.0%)	60 (25%)	-

N = 240

Table 5 shows that the majority of the respondents (93.3%), indicated slowness in downloading information due to poor Internet facilities. Irregular power supply was another challenges faced by the respondents as majority (84.2%) attested. Photocopying services was also very poor as indicated by (75.0%) of the respondents. Lack of information and computer skills were also found to be a major hindrance to information search. This was represented by (68.3% and 66.2%) of the respondents respectively. It is very disturbing because without information skills, students will not have the mastery of necessary knowledge of gathering, synthesizing, analyzing, interpreting and evaluating information. This concurred with the views of Kong (2014) that the problems encountered when seeking information were mostly due to the inability to find the relevant information easily.

This study found that majority of the respondent encountered one problem or the other when seeking information. This is in tandem with (Oluwaseye, Akanni & Busuyi, 2017; Lai, et al, 2019; Eldermire, et al, 2019 & Okonoko, Atanda & Brume-Ezewu, 2018) that lack of basic skills, poor and erratic supply of electricity, poor Internet facilities and photocopying services were chiefly responsible for the problems facing information search among the veterinary medicine students at Usmanu Danfodiyo University, Sokoto.

Conclusion

This study explored the information needs and seeking behavior of veterinary medicine students at the Usmanu Danfodiyo University, Sokoto. The finding revealed that the information-seeking behaviour of the students comprised identifying information needs and searching the required information using different steps in order to fulfill the needs. The students

sought information in relation to their academic and professional development. They relied heavily on lecture notes, text books, handout/course materials other than textbooks and Internet. In addition, majority of the students visit the Veterinary Medicine Library, consulted their personal collections, asked the library staff and discussed with course mates in an attempt to meet their information need. Part of the difficulties encountered by the students in the course of seeking information included slowness in downloading information from Internet, irregular power supply, lack of photocopying services in the Veterinary Medicine Library and lack of information skills. The following recommendations are made based on the findings of the study:

1. The management of the Usmanu Danfodiyo University, Sokoto should ensure the provision of the adequate ICT infrastructure/internet connectivity in the university libraries, departments/faculties and throughout the campuses of the university.
2. Electricity should be available regularly to enable the students have access to and use available information resources and services. The university may subscribe to solar system as an alternative to standby generator and national grid.
3. The library should, as a matter of urgency, ensure the provision of photocopy services at the veterinary medicine library to ease the problem of taking library items out for photocopy.
4. The veterinary medicine students need to be taught information literacy skills during library orientation so as to build their information seeking, access and use during and even after graduation.

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