University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal) | Libraries at University of Nebraska-Lincoln

March 2018

Learning About the Information Seeking behavior of Allied Medical Sciences Students: Advices For Libraries of multidisciplinary Colleges

Saeideh Valizadeh-Haghi
Department of Medical Library and Information Sciences, School of Allied Medical Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran, saeideh.valizadeh@gmail.com

Shahabedin Rahmatizadeh
Department of Health Information Technology and Management, School of Allied Medical Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran, shahab.rahmatizadeh@gmail.com

Follow this and additional works at: https://digitalcommons.unl.edu/libphilprac

 Part of the Collection Development and Management Commons, and the Information Literacy Commons

Valizadeh-Haghi, Saeideh and Rahmatizadeh, Shahabedin, "Learning About the Information Seeking behavior of Allied Medical Sciences Students: Advices For Libraries of multidisciplinary Colleges" (2018). *Library Philosophy and Practice (e-journal)*. 1746.
https://digitalcommons.unl.edu/libphilprac/1746

Learning About the Information Seeking behavior of Allied Medical Sciences Students: Advices For Libraries of multidisciplinary Colleges

Saeideh Valizadeh-Haghi[1], Shahabedin Rahmatizadeh[2]

[1]Assistant professor, Department of Medical Library and Information Sciences, School of Allied Medical Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

[2]Assistant professor, Department of Health Information Technology and Management, School of Allied Medical Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Address for correspondence: Shahabedin Rahmatizadeh. 4th floor, No 21, Darband st., Tajrish sq., Tehran. Iran; Email: shahab.rahmatizadeh@gmail.com, Phone number: +989126490991

Abstract

Libraries will have satisfactory performance in terms of providing services to users if they firstly identify the information needs of their clients and then, they seek to meet these needs. To accomplish this aim, identifying the information seeking behavior of users seems necessary. The aim of the present study was to evaluate the methods and motives of information seeking by students of allied medical sciences. The population of the study included the postgraduate students of Faculty of Allied Medical Sciences of Shahid Beheshti University of Medical Sciences accepted to the university in 2015 to 2016. The results indicated that the main motivations of students for the information seeking is first to update their professional knowledge and then to do research activities. Among the information channels used, formal channels have been given more attention. In rating the difficulties ahead in the searching for information, the lack of or unavailability of resources was identified as the most important factor. Providing more and better information on the electronic resources of the university for the graduate students could lead to the more efficient use of the existing resources and would have much success in achieving the educational and research goals. In addition, librarians need to have detailed and scientific knowledge about the information seeking behaviors of their users so that they can meet the information needs of them through providing the necessary facilities and resources using minimum time and the lowest cost.

Keywords: Information Seeking Behaviour, Postgraduate Students, Information Channel, Health science library

Introduction

The nature of information cannot be easily described, and different people use information for different purposes and in different ways. Some of them apply information to do their research projects to create new data and help information services; some others use information only for training themselves or others; and others benefit from it in their careers. Therefore, the types of need for information and the way of its applying vary among the different groups of people. Libraries and information centers play an important role in gathering proper information for the community of users. The library community is the focus of the process of service delivery and supplying resources in libraries and in fact, this is the client that determines what types of resources should be provided through what kinds of services, in what manner and in what level by the library. The emergence of new information technologies has created new opportunities for the production and use of information and this issue has led to the changes in the interests of audiences and users of libraries and information centers.

The growing volume of publications in the world as well as the lack of funding and space have prompted libraries to choose some resources from among the huge volume of information resources and select only those that have the highest contribution in meeting the needs of their users. In this case, the quality of libraries would also increase, and they will be successful in their mission providing accurate and timely information. Sometimes libraries are not able to provide the required information of their clients appropriately and this leads to spending budget without considering the needs of their users. Having sufficient knowledge about the required resources of their users, libraries not only will be able to alleviate spending huge budgets for the purchase of incorrect resources, but also, they can identify the problems of their clients and offer appropriate services. Information centers will have satisfactory performance in providing services to the users if they firstly identify the information interests and needs of their community and then try to meet their needs(George et al., 2006). To accomplish this aim, it is necessary for the libraries to identify the information behaviors of their users. Wilson considers the information seeking behavior as the targeted search for information that individuals need to achieve some goals. Information seeking behavior can be described in different formats from studying printed resources to conducting research and experiment. The users purposefully search for the new information from the library resources that also includes electronic resources(Bhatti, 2009).

During the search, “individuals may interact with the manual information systems (newspaper or a library) or with the computer systems such as web”(Wilson, 2000). Investigating the information needs and information-seeking behaviors of users is one of the most important topics of interest to researchers to identify the real needs and problems of users in the retrieval and use of information. In recent years, Information Technology (IT) has had a significant impact on the needs and information-seeking behavior of users through influencing the information and the way of access to information and this has led to extensive studies carried out in this area. Students' access to information and the way of its utilizing play a major role in conducting educational and research affairs of the universities. To give the students quick and easy access to the required information, identifying their information needs and recognizing appropriate ways for meeting these needs seems necessary. Since the needs and procedures through which the information is utilized vary among the different groups of people(Covi, 1999), having knowledge of the process of searching for information is necessary to design and implement appropriate information media and to meet the information needs of students.

One of the indicators of the ability of the education system in each university is the training of Master and PhD students. In a world where the economy is increasingly globalizing, countries that have poor performance in the higher education sector will be marginalized. Accordingly, every country attempts to improve the quality of its higher education(Ajiboye, 2007). Shahid Beheshti University of Medical Sciences(SBMU) is one of the first ranking universities in Iran where a large number of students with various majors and degrees are studying in this university. Being as a reference and pioneer in the education and research fields, making success in satisfying the learners, and to be selected by the applicants to continue their graduate studies are among the important visions that this university has taken for itself. In addition, satisfying the clients is considered as the main values of this university. Shahid Beheshti University of Medical Sciences has 12 faculties including Allied Medical Sciences Faculty. At present, this faculty has 14 active majors, namely "Applied Proteomics", "Radiobiology and Radiation Protection", "Laboratory Sciences", "Radiology Technology", "Medical Records", "Medical Library and Information Sciences", "Biostatistics", "Radiation Therapy", "Medical Informatics", "Health Information Technology", "Laboratory Hematology and Blood Bank", "Clinical Biochemistry", "Imaging Technology of MRI", and

"Health Information Management"; these disciplines are presented in 3 degrees of PhD (3 majors), Masters (8 majors), and Bachelors (8 majors).

Given the importance of identifying the information seeking behavior of postgraduate students in multidisciplinary environments, the present study aims to identify the information needs of postgraduate students of Shahid Beheshti University of Medical Sciences in the Faculty of Allied Medical Sciences through investigating their information seeking behaviors. By doing so, the findings would be helpful for those who involved in providing resources to supply the required information resources of these groups of students and pave the ways for the university to reach to its considered visions. Furthermore, the findings of the present study can specify the importance and the role of information services as well as the necessity of its developing for the relevant authorities and help them to design and create an appropriate information system.

Materials and Methods

The present study is an applied research that has been conducted in the Faculty of Allied Medical Sciences of Shahid Beheshti University of Medical Sciences using descriptive survey method. The data gathering tool included a researcher-made questionnaire which contains 26 half-closed items. Content and face validity of the questionnaire was confirmed based on the viewpoints of 15 experts of library and information sciences. The reliability of internal consistency of the questionnaire was also investigated and confirmed using Cronbach's alpha (α=0.85). The statistical population of the present study included the M.A. and PhD students major in Health Information Management, Applied Proteomics, Biostatistics, Medical Informatics, Biochemistry, Health Information Technology, Radiobiology, Hematology, MRI, and Medical Librarianship major of the Faculty of Allied Medical Sciences who were accepted at the university in 2015 to 2016. The total number of M.A. and PhD students at the time of the study was 105 and 30 individuals, respectively. The study was conducted by census; after getting permission from the Graduate School of the Faculty of Allied Medical Sciences and determining the exact time of students' classes, the questionnaires were distributed among the 135 students; out of this number, 85 students (13 PhD students and 72 M.A. students) completed the questionnaires and give them back to

the researcher. The collected data were analyzed by SPSS Software using the indicators of frequency and percentage.

Results

First, the participants of the study were investigated in terms of their gender and educational level; it was found that 57.6% of them are female and 42.4% of them are male; in addition, the participants included 72 M.A. students and 13 PhD students. Then, their responses to every question were analyzed in terms of the purpose and motivation of searching for information, types of information channels used by them, the most important characteristics of an electronic resource from students' view, using printed and electronic resources, the existent problems with using the University's digital library, and status of the library in terms of providing books and journals; the results have been presented in Tables 1-7.

Table 1. The Frequency Distribution of the Purpose and Motivation of Searching for Information

Purpose	Frequency	Percentage Frequency
Preparing of professional Lecture	45	20/4%
Update of professional knowledge	55	24/5%
Conducting research works	51	24/1%
Training of others	27	11/8%
Writing paper	44	19/2%
Total	222	100%

The main goal and motivation for searching information was to update of professional knowledge; conducting research works has been in the next priority.

Table 2. The Frequency Distribution of the Types of Information Channels used by the Students

Item	Frequency	Percentage Frequency
Help from the faculty members	46	% 16/2
Use of internet and search engines	71	% 26/4
Library	40	% 15/2
Personal collection	22	% 8/1
Conferences' reports	12	% 4/1
Professional newsletter	8	% 2/7
Free use of the electronic resources	50	% 17/9
Non-free use of the electronic resources	28	% 9/5
total	277	100

Among the information channels used by the students, internet and search engines are the most widely used channels; free use of the electronic resources and getting help from the faculty members are in the next ranks.

Table 3. Frequency distribution of the types of information resources used by the postgraduate students

Types of Information Resources used	Frequency	Percentage Frequency
Availability of databases in university digital library	42	%18/9
Free electronic journals	69	% 31/6
Printed scientific journals	30	% 13/9
Books	51	% 22/5
Newspapers	8	% 3/3
Theses	20	% 8/6
Others	2	% 1/2
total	222	100

As can be seen in Table 3, free electronic journals are the most widely used source by the participants of the study.

Table 4. The frequency distribution of the most important features of an electronic resource

Features	**Frequency**	**Percentage Frequency**
Quick access	49	%18
Being up-to-date, rapid dissemination of new research results	69	% 25/4
Free access	59	% 21/7
Possibility of full text searching	52	% 19/1
Hyperlink to other resources	39	% 14/3
Others	4	% 1/5
Total	**100**	**272**

☼ *since there has been the possibility to choose more than one option, the total number of responses are more than the research population.*

According to Table 4, being up-to-date, rapid dissemination of new research results, and free access to resources are among the main characteristics of an electronic resource in participants' viewpoints.

Table 5. The Frequency Distribution of Using Printed and Electronic Resources

Type of resource	**Frequency**	**Percentage Frequency**
Printed resources	22	% 28/6
Electronic resources	55	71/4
total	77	100

Table above shows that the use of electronic resources has been much higher than the use of printed resources in the study population.

Table 6. The frequency distribution of the existing problems with using the university's digital library according to students' rating

Items	Frequency	Percentage Frequency
Lack of awareness of the existence of database	14	%23/73
Lack of awareness of the existence of how to use	12	%20/34
Lack of awareness of the existence of information and facilities in databases	10	%16/95
Lack of required training	11	%18/64
Insufficient information resources in database	10	%16/95
Others	2	%3/39

The results of Table 6 indicate that lack of awareness of the existence of digital library databases and lack of awareness of how to use it have been reported as the most important existing problems with using this library.

Regarding the information obtained in Table 7, among the existing barriers to searching for information, unavailability of the required resources has been identified as the main factor; being out-of-date and incompleteness of the information resources have been placed in the next ranks of problems.

Table 7. The frequency distribution of rating of the problems encountered while searching for information

The existing barriers	Frequency	Percentage Frequency
Unavailability of the required resources	68	% 23/7
Incompleteness of the information resources	41	%14/3
Being out-of-date of some resources	50	%17/4
Long access to information	39	%13/6
Lack of awareness of how to search in internet and databases	32	%11/1
Lack of awareness of how to use from library	22	%7/7
.Lack of English proficiency	35	%12/2

Table 8. Library status regarding journals and books provision

	Poor	Average	Good
Journals and books provision	% 39/7	50%	% 10/3

According to Table above, majority of the study population evaluated the status of the library in an average level in terms of providing books and journals.

Discussion:

Updating professional knowledge has been introduced as the main motivation of students to search for the information and after that doing research projects has been identified as the second reason of information searching behavior (Table 1). This result is in line with the results of the study conducted by Tahir. That study found that most of the students search for information to meet their research needs(Tahir, Mahmood, & Shafique, 2008). Therefore, up-to-date resources should be provided for the postgraduate students of Allied Medical Sciences to achieve this goal. Meanwhile, unavailability of the required resources has been introduced as the most important problem for the students when searching for information (Table7).

Among the information channels used by the participants, official channels have been given more attention; however, utilizing the help of experts and faculty members who are part of the informal channels has been ranked in the first place. These findings are consistent with the results of the study carried out by Haglund and Olsson(Haglund & Olsson, 2008). Haglund and Olsson investigated the information needs of young researchers in the three universities of Stockholm in Sweden; they concluded that a considerable part of the studied population relies on the recommendations of colleagues and professors in the search for their required information. Their findings indicated that young researchers consult with the colleagues and faculty members before attempting to use information from the official resources such as books and journals. Furthermore, in a study, the information journey experienced by marketing professionals, including task-driven information seeking, information judgments, information use, and information sharing, from a more contextualized and holistic viewpoint was examined and the consultation with colleagues has been found as the most used information-seeking method(Du, 2014). This reflects the confidence of students to their professors in the

field of acquiring specialized knowledge and information-seeking. Thus, the Faculty Members of Allied Medical Sciences can be helpful in answering the students' questions by continuous updating of their knowledge and information. Regarding the use of formal channels, in the current study, library has been ranked in the lower places compared to the other formal channels. Considering that after the search engines, books are the most widely used resources of the students (Table 3), it can be concluded that the library may don't have their required resources and due to this reason, it has been given less attention by the investigated students. On the other hand, according to Tables 4 and 7, library resources used by the students are less up-to-date than the available electronic resources for them and since being up-to-date is of great importance for the students and lack of updated resources is one of the problems of searching for information, so to overcome this problem, fewer students may refer to the library. The result of the present study is similar to the study entitled "Information Seeking Behavior of Graduate Students of Library and Information Sciences" in which lack of resources and being out-of-date have been reported as the most important problems of the existing resources; textbooks, specialized journals, and information databases were identified among the most used resources in this study (Khakpour, 2004)

In using the library, book has been introduced as the most used information resource (58%); therefore, the library of this faculty should try its utmost to provide this information resource in an appropriate way to satisfy the clients.

According to Table 5, most of the students participated in this study (74%) prefer to use electronic resources than printed ones; this is while only 67.1% of them have been trained on how to search for electronic information. Some of the most important features of electronic resources are defined as follows: being up-to-date, free availability, being full-text, and quick retrieval. In addition, among the existing problems in the use of the University's digital library is the lack of awareness of the existence of this resource (Table 6); lack of awareness of the existence of the database is due to the lack of accurate and timely introduction of this database. The Central Library of Shahid Beheshti University of Medical Sciences as well as the Library of the Faculty of Allied Medical Sciences should prepare the necessary brochures and hold some introduction sessions at the beginning of each academic year to inform the freshmen students about the existence of this database and its features. It seems logical that to achieve the

educational and research purposes of the university as well as the faculty, providing more and better information on the university's electronic resources for the postgraduate students can lead to more efficient use of the existing resources and gaining more achievements in the research affairs. On the other hand, within the faculty, in order to have access to the internet and through which access to the resources in the University's digital library, Computer Center or wireless internet of the faculty should be used that based on the viewpoints of the study population, it lacks high quality and students always have difficulty in accessing the internet, and consequently, searching is very time consuming. Similarly, in a study conducted by Eslami, many participants stated that the low quality of internet (low speed) and high network traffic is a deterrent and barrier to using the Internet for gaining access to information(Eslami, 2008).

Lack of necessary trainings and lack of awareness of how to use it have also been proposed as the existing problems of using the University's digital library (Table 6). Lack of knowledge of how to use the University's digital library is linked to the lack of adequate trainings which has been proposed as one of the problems with using this site (Table 6). Central Library of the University along with the Library of the Faculty of Allied Medical Sciences should hold training classes for the students periodically and teach them how to use the database to improve their information-seeking skills so that they would be able to meet their information needs by using this database. Otherwise, the costs incurred by the university to set up the base would not be justifiable. Lack of sufficient information resources available in the database is also added to problems in the use of the University's digital library (Table 6). This issue is directly related to the lack of correct and periodic assessment of teachers and students of different disciplines. The viewpoints of faculty members of various disciplines must be considered before supplying the databases; information needs of students has a direct relationship with their professors' views since most of the students search for information in line with their class assignments to do research and update their knowledge (Table 1) and then they refer to the University's digital library and other information resources.

Many of Master and PhD students believe that they couldn't find their required resources in the library. In some other studies, lack of resources has been reported as one of the main problems in achieving the required information(Bhatti,

2009; Eslami, 2008; Khakpour, 2004). Therefore, more attention should be paid to the collection of library in the Faculty of Allied Medical Sciences.

In the present study, 50% of students evaluated performance of the library in the average level and 39.7% in the poor level in terms of providing resources to their users (Table 8). While in investigating the aims of using the library, it was specified that 33.1% of students refer to the library for borrowing resources and 30.9% for studying the resources available in the library such as printed journals, thesis, etc. Using various books has also been devoted a high percentage in using the information resources (Table 3). Therefore, to deal with the problem of lack of resources as well as providing appropriate resources, it is necessary for the collection development of library to be done with great care and high quality. In this respect, conducting polls to gather the opinions of students from different disciplines would be helpful; then, the collection development can be done according to the assessment of students' educational and research needs.

Among the various disciplines of M.A. and PhD, the greatest problem of lack of the required resources is linked to the disciplines of Hematology (100%), Health Information Management (100%), MRI (81.8%), and Radiobiology (72.7%), respectively. This indicates that the information needs of students of these disciplines have not been identified correctly and the library's policies on collection have some problems. Lack of resources can be a great disservice to the students of these disciplines in the educational and research fields.

Conclusion:

Information seeking behaviour varies from person to person. Many researchers have conducted research to study information seeking behaviour of students and found that it differs with the place, environment, facilities, time and with age group. In the faculties that include various disciplines, libraries must try to provide an appropriate set of resources for each of the departments since students of various disciplines are equally entitled to use the library resources. Furthermore, these libraries should fully and correctly identify the information-seeking behaviors as well as the information needs of their clients to be able to provide accurate information and services to their users through designing and implementation of new information systems(Anwar, 2007). Librarians that their main professional mission is to meet the information needs of researchers, students, professors and in

general the needs of information users would be successful in their business if they have accurate information about the information-seeking behavior and pattern of their visitors; in this case, they would be able to meet their information needs through providing the required facilities and resources by spending the minimum time and cost. Furthermore, The university library should purchase the needed documents considering different availible disciplines.

References:

Ajiboye, J. O. (2007). University undergraduate students' information seeking behaviour: implications for quality in higher education in africa. *The Turkish Online Journal of Educational Technology – TOJET, 6*, 1303–6521.

Anwar, M. (2007). Research on information seeking and use in Pakistan: An assessment. *Pakistan Journal of LIS*, *7*, 15–32.

Bhatti, R. (2009). Information Needs and Information-Seeking Behaviour of Faculty Members at the Islamia University of Bahawalpur. *Library Philosophy & Practice*, 1–10. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=lxh&AN=47776512&site=ehost-live

Covi, L. M. (1999). Material mastery: situating digital library use in university research practices. *Information Processing & Management*, *35*(3), 293–316. https://doi.org/10.1016/S0306-4573(98)00063-6

Du, J. T. (2014). The information journey of marketing professionals: Incorporating work task-driven information seeking, information judgments, information use, and information sharing. *Journal of the Association for Information Science and Technology*, *65*(9), 1850–1859. https://doi.org/10.1002/asi.23085

Eslami, A. (2008). Internet and electronic recourses searching behavior among geography ph.d. students of tehran university: an exploratory analysis. *Journal of Academic Librarianship and Information Research*, *40*(46).

George, C. A., Bright, A., Hurlbert, T., Linke, E. C., St Clair, G., & Stein, J. (2006). Scholarly use of information: graduate students' information seeking behaviour. *Information Research*, *11*(4), paper 272.

Haglund, L., & Olsson, P. (2008). The Impact on University Libraries of Changes in Information Behavior Among Academic Researchers: A Multiple Case

Study. *The Journal of Academic Librarianship*, *34*(1), 52–59. Retrieved from http://www.librijournal.org.libaccess.sjlibrary.org/issues.html

Khakpour, A. (2004). Information behavior of master students of LIS. *Journal of national studies on librarianship and information organization*, *57*(15), 88–96. Retrieved from https://www.noormags.ir/view/fa/articlepage/87743

Tahir, M., Mahmood, K., & Shafique, F. (2008). Information needs and information-seeking behavior of arts and humanities teachers: a survey of the university of the punjab, lahore, Pakistan. *Library Philosophy & Practice*, *2008*(1997), 1–11. https://doi.org/10.1086/517840

Wilson, T. D. (2000). Human information behavior. *Informing Science*, *3*(2), 49–55. https://doi.org/10.1186/1472-6963-7-190