J Communication, 1(1): 37-44 (2010)
PRINT: ISSN 0976-691X ONLINE: ISSN 2456-6586
DOI: 10.31901/24566586.2010/01.01.06

Use of Internet and Electronic Resources for Medical Science Information: A Case Study

S. Thanuskodi

Library & Information Science Wing, Directorate of Distance Education Annamalai University, Annamalai Nagar 608 002, Tamil Nadu, India
E-mail: thanuskodi_s@yahoo.com

KEYWORDS Medical Science. Internet. Search Engines. E-Journal. Medical Data Bases. User Education. File Transfer Protocol

ABSTRACT The internet is also making substantial inroads in patient care and dissemination of health care information. It is changing the way health sciences professionals obtain information. They use the internet and electronic resources to do things like accessing medical records, providing remote patient care through telemedicine facilities, and accessing health care literature. Medicine is among many other sciences, an area in which the expansion of information is enormous and which is critically dependent on up to date information. These factors have influenced the implementation of problem based learning approach in the medical education. Numerous search tools are available to locate appropriate sources and without these search tools, the chance of finding relevant information on the Web would be slim. Even with the help of search tools, users must be able to sophisticated searching techniques and strategies of respective search tools in order to find relevant information. Results of the present study show that less than two hours of access to internet takes the first order reporting among the medical professionals of Tamil Nadu. About two to three hours of access to internet the second, 3-4 hours of access to internet the third, 4-5 hours of access to internet the fourth and above 5 hours of access to internet the last. Study reveals that respondents have high problems in accessing e-resources in terms of virus, difficulty in using digital resources due to lack of Information Technology (IT) knowledge and limited access to computers. The respondents have moderate problems in accessing relevant information and taking long time to view. The respondents have low problems in accessing towards slow accessibility, lack of time and too much information retrieved.

INTRODUCTION

The rapid proliferation of information in our era has important implications for the education of health professionals including medical professionals. Sources of information available via the Internet are increasing exponentially. This comes with a steady increase in Internet use for education and for research. India has a large educational system comprising thousands of Colleges and hundreds of Universities alongwith several institutes of higher learning and centers of excellence. The college and university libraries, being the nerve centres of the higher education and learning, play a vital role in support of all the activities such as teaching, research and publication. Our higher education system is passing through lot of problems due to economic recession and cost-recovery concepts. The college and university libraries in India are faced with the challenges to meet the user requirements due to various reasons such as exponential growth of knowledge, price escalation, budget restrictions. The increasing growth in the enrollment of students and researchers, lack of proper and adequate infrastructure further aggravates the overall problems and challenges for the college and university libraries. This situation has paved the way for serious thinking on the capabilities to compensate for reduced budgets. E-subscription is one of the emerging toolkit for libraries to survive in the present circumstances.

The internet is the most economical, easy, instant and vast resource of current information. The internet is an ideal tool for medical literature search, physician education, patient education and telemedicine. Organizations, journals, educational resources, academic departments, patient-oriented, corporate and index sites individual and group practices are some of the categories of websites. Internet based communications are evolving at a tremendous rate. It is very difficult to determine the size and distribution of medical professionals who have access to internet. Many people feel that India is on the top in the term of the numbers of cyber-cafes. The number of doctors accessing the internet is growing tremendously. Even doctors who are totally unfamiliar with the internet have the desire to learn it. Many medical associations of various specialists keep computer related lectures and or instruction course in their annual meetings at the local, state, regional, national and international levels. Digital libraries play a vital role in the field of health science and it's allied subjects. Because health information changes

quickly and often, a good health science library needs to be up to date. The objective of the electronic document service is to improve the knowledge of medical graduates / medical researchers. Health education study is a cluster of various subjects and also involved in all areas of technology and other developments. Electronic access to technical journals has become an important and commonly accepted tool for researchers, faculty and students.

Some of the many commonly used internet modalities are e-mail, World Wide Web, News group, real time chat, File Transfer Protocol, Gopher and remote computing applications such as Telnet. The amount of online information is constantly growing at an exponential rate but users should be aware of the critical need for quality control and validation of internet medical resources. Development in the information communication technology had made the whole world a global village with the collapse of traditional constraints of space and time. The convergence of computer and communication technologies has created a new channel of networking, which has revolutionized the traditional communication process by providing required information links and routes throughout the world.

LITERATURE REVIEW

Agarwal and Dave (2009) have studied the use of internet by the scientists and research fellows of Central Arid Zone Research Institute, Jodhpur (Rajasthan) was assessed on the basis of the results of a questionnaire survey in CAZRI, Jodhpur. Further, it also attempts to assess the frequency of use, location where used search engine accessed; purpose of use etc. The study revealed that the respondents accessed Google search frequently (100%) followed by Yahoo (85.29%). It is also observed that equally (97.06%) respondents use the internet for education and research. The strong desire of respondents is that the library initiate various functions and services like e-portals, on-line information, abstracts retrieval along with internet.

Kumar and Kaur (2006) report on the results of a survey of internet use, which also provides information about the benefits of internet vs. print documents. Panda and Sahu (2003) have conducted a study of the engineering colleges of Orissa. The study reveals that a majority of the colleges use the internet to provide online demonstrations. Jagboro (2003) has conducted a case study of internet usage in Nigeria with a particular reference to Obafemi Awolowo University, Ile-Ife. The study reveals that the respondents use the internet to access research materials and for e-mail. The study concludes that the use of internet for academic activities would improve significantly with more access in departments. Igun (2005) examines levels of internet skill, and how the internet has its influence on research. The study finds that the internet skills are low and that the internet has no significant influence because the university does not have a functional and comprehensive internet in the university-wide information system.

Maheswarappa and Ebnazar (2003) have conducted an exploratory study at Gulbarga city, showing a high rate of computer knowledge. Mahajan (2006) conducted a study on internet use by researchers in Punjab University, Chandigrah, which analyzes how the convergence of information and communication technologies, as embodied by the internet, has transformed the present day society into a knowledge society. Chandran (2000) has carried out a study on the use of internet resources and services in S.V. University, Tirupati, indicating that more than 56 percent of respondents are used to the internet to access information. Kaur (2000) studied Guru Nanak Dev University, and Bavakutty and Salih (1999) conducted a survey at Calicut University, which showed that students, research scholars, and faculty members used the internet on education and research purpose. Madhusudhan (2007) conducted a survey on internet use by research scholars at Delhi University, which reveals that most respondents used search engines more than subject gateways or web directories to locate information. Negative attitudes as well as conservatism act as barriers to effective internet use.

Mariyappagoudar and Jayashree (2000) discuss the growing importance and use of internet for information search and services as more and more services are being provided by many journal publishers websites. More or less, some of these services are free, which is beneficial to those libraries that have minimum requirements for providing the same. This is also useful for those monetarily starved libraries and information centres. A systematic approach towards optimum utilization for those resources is made. Also, they discuss a model for implementation by way of creating a profile based SDI services

by e-mail. It also looks into the possibilities and mechanisms for archiving this information.

Brown (1998) brings out the results of a 1996 FIND / SVP telephone survey in which 1000 US adult internet users determine how many have accessed health and medical information during the previous 12 months, 39 percent are found to fall into this category and the user characteristics of this particular group denote how Health Med Retrievers are presented.

Garrison (1998) has identified many health related world wide web sites, introduced by libraries and groups representing doctors. He has created sets of guide lines or criteria that influence the links they establish. This is particularly true of sites that feature internet subject guides. However, there has not been a comprehensive set of evaluative criteria that users can use to filter out all but the most useful health information on the internet. Reports on the latest draft of the white paper: Criteria for Assessing the Quality of Health Information on the internet, Produced by the Mitretek Systems Health Information Technology Institute (http: //www.mitretek. org/ hiti/ showcase/ documents/ criteria.html). He lists and discusses the major criteria for empowering users in finding the best health information available on the internet.

Objectives of the Study

The following objectives are evolved for the purpose of the present study:

1. To examine the respondents' duration and quantum of time utilization in search of medical information.
2. To analyze the respondents' extent of access to e-resources
3. To examine the respondents' purpose of gathering e-resources
4. To study the respondents' satisfaction and problems in utilizing the e-resources

METHODOLOGY

The researcher has employed a well-structured questionnaire for collecting the data from the medical professionals of Chennai. The questionnaire has been prepared in such a way that the respondents could easily understand the items. A total number of 500 questionnaires were distributed among the medical professionals, who reside in and around Chennai. The investigator could collect questionnaires from only 320 out of 500 medical professionals among whom the questionnaires were distributed. This constitutes 64 % (320/500) of the total response.

RESULTS AND DISCUSSION

A study of data in table 1 indicates the age wise distribution of respondents. It could be noted that out of the total 320 respondents, 14.37 per cent of them belong to the age group of below 30 years and 22.51 per cent of them come under the age group of 31-35 years. In this study, 12.18 per cent of the respondents' age is in the range of 36-40 years and 18.12 per cent of them are found in the age group of 41-45 years. It is observed that 12.51 per cent of the respondents belong to the age group 46-50 years and the rest 20.31 per cent of them belong to the age group of above 50 years. It is concluded from the above table that majority of the respondents are found to be with the age group of above 50.

Table1: Age wise distribution of respondents

Age	*No. of respondents*	*Percentage*
Below 30	46	14.37
31-35	72	22.51
36-40	39	12.18
41-45	58	18.12
46-50	40	12.51
Above 50	65	20.31
Total	320	100.00

A study of data in table 2 indicates the gender distribution of respondents. It could be noted that out of the total 320 respondents, majority of the respondents (54.68%) belong to the male group and the rest of them (45.32%) are females. It is concluded that male respondents constitute more in number than female respondents, indicating the presence of male domination in medical profession in Tamil Nadu.

Table 2: Gender wise distribution of respondents

Gender	*No. of respondents*	*Percentage*
Male	175	54.68
Female	145	45.32
Total	320	100.00

Data presented in table 3 indicate the age wise respondents' frequency of access to internet. It could be noted that out of the total 320 respondents, 40.00 per cent of them have below 2 hours of access to internet. More than a half of the re-

spondents (52.30%) in the age group above 50 years have below 2 hours of access to internet. In this study, 20.93per cent of them have 2-3 hours of access to internet and majority of the respondents (26.38%) in the age group 31-35 have 2-3 hours of access to internet. Out of the total 320 respondents, 16.87per cent of them have 3-4 hours of access to internet. Majority of the respondents (25.00%) in the age group 41-45 years have 3-4 hours of access to internet. In this study, 14.38 per cent of the respondents have 4-5 hours of access to internet. Majority of the respondents (20.68%) in the age group 41-45 years have 4-5 hours of access to internet. Moreover, 7.82 per cent of the respondents have above 5 hours of access to internet and majority of the respondents (12.06%) in the age group 41-45 fall under this category.

Table 3: Age wise respondents' frequency of access to internet

Age	*Less than 2 hours*	*2-3 hours*	*3-4 hours*	*4- 5 hours*	*Above 5 hours*	*Total*
Below 30	16	11	9	7	3	46
	34.78	23.91	19.56	15.22	6.53	
31-35	22	19	14	11	6	72
	30.55	26.38	19.45	15.28	8.34	
36-40	13	9	8	5	4	39
	33.33	23.07	20.51	12.83	10.26	
41-45	24	8	7	12	7	58
	41.37	13.79	12.06	20.68	12.06	
46-50	19	5	10	4	2	40
	47.50	12.50	25.00	10.00	5.00	
Above 50	34	15	6	7	3	65
	52.30	23.08	9.24	10.76	4.62	
Total	128	67	54	46	25	320
	40.00	20.93	16.87	14.38	7.82	

It could be seen clearly from the above discussion that less than 2 hours of access to internet takes the first order reporting among the medical professionals of Tamil Nadu. About 2-3 hours of access to internet the second, 3-4 hours of access to internet the third, 4-5 hours of access to internet the fourth and above 5 hours of access to internet the last.

Data presented in table 4 indicate the age wise respondents' frequency of library visits. It could be noted that out of the total 320 respondents, 31.25 per cent of them make daily library visit. In this study, 10.62 per cent of them make library visit thrice a week and majority of the respondents (13.79 %) in the age group 41-45 years make library visit thrice a week. Out of the total 320 respondents, 10.31per cent of them make library visit twice a week. Majority of the respondents (15.28%) in the age group 31-35 years make library visit twice a week. In this study, 11.87 per cent of the respondents make library visit once in a week. Majority of the respondents (23.07%) in the age group 36-40 years make library visit once in a week. In this study, 20.32 per cent of the respondents make library visit once in a fortnight and the rest 15.63 per cent of them make library visit as and when required.

It could be seen clearly from the above discussion that library visit daily takes the first order reporting among the medical professionals of Tamil Nadu, library visit of once in a fortnight the second, library visit of as and when required the third, library visit of once in a week the fourth and library visit of thrice a week the fifth and the twice a week library visit behaviour the last.

Table 4: Age wise respondents' frequency of library visits

Age	*Daily*	*Thrice a week*	*Twice a week*	*Once in a week*	*Once in a fortnight*	*As and when required*	*Total*
Below 30	10	6	6	4	11	9	46
	21.74	13.05	13.05	8.69	23.91	19.56	
31-35	18	7	11	3	19	14	72
	15.00	9.73	15.28	4.16	26.38	19.45	
36-40	13	5	2	9	8	2	39
	33.33	12.83	5.13	23.07	20.51	5.13	
41-45	23	8	4	8	5	10	58
	39.66	13.79	6.89	13.79	8.63	17.24	
46-50	19	2	3	5	7	4	40
	47.50	5.00	7.50	12.50	17.50	10.00	
Above 50	17	6	7	9	15	11	65
	26.15	9.24	10.76	13.84	23.08	16.93	
Total	100	34	33	38	65	50	320
	31.25	10.62	10.31	11.87	20.32	15.63	

Table 5: Age wise respondents' preference to medical database

CD-ROM	*Age*						*Total*
	Below 30	*31-35*	*36-40*	*41-45*	*46-50*	*Above 50*	
Highwire press	3.79	3.89	4.10	4.22	4.36	4.52	4.15
MedBio world	2.79	2.52	3.36	3.79	3.89	3.92	3.37
Ingenta	3.37	3.87	4.10	4.26	4.36	7.44	4.06
All health net	2.52	2.42	2.56	3.79	3.82	3.77	3.16
Blackwell synergy	3.76	3.77	3.79	4.10	4.12	4.26	3.96
Medind	2.11	2.21	2.36	2.86	3.39	3.56	2.75
Science direct	3.37	3.56	3.89	4.11	4.26	4.36	3.90
LWW online	2.14	2.16	2.56	2.76	3.36	3.52	2.80
Springer link	3.52	3.76	3.99	4.01	4.11	4.26	4.00
Health inter network India	2.12	2.14	2.02	2.56	2.96	2.88	2.45
Total	2.95	3.03	3.27	3.65	3.86	4.25	3.46

A study of data in table 5 indicates the age wise respondents' preference to medical database. It can be assessed with the help of 10 factors on a 5 point rating scale. These include database on Highwire Press, database on MedBio World, database on Ingenta, database on All Health Net, database on Blackwell Synergy, database on MedInd, database on Science Direct, database on LWW Online, database on Springer Link and database on Health Inter Network India

The respondents' preference towards utilization of 10 medical database can be observed from the following discussion. The respondents give first order preference towards utilization of CD-ROM database on Highwire Press as it secures a mean score of 4.15 on a 5 point rating scale. The respondents have second order preference with respect to utilization of database on Ingenta as it secures a mean score of 4.06 on a 5 point rating scale. The respondents give third order preference towards utilization of database on Springer Link as it secures a mean score of 4 on a 5 point rating scale. The respondents have the fourth order preference towards utilization of database on Blackwell Synergy as it secures a mean score of 3.96 on a 5 point rating scale. The respondents attribute the fifth order preference towards utilization of database on Science Direct as it secures a mean score of 3.90 on a 5 point rating scale. The respondents have the sixth order preference towards utilization of database on MedBio World as it secures a mean score of 3.37 on a 5 point rating scale. It is observed that the utilization of database on All Health Net gets the seventh order preference to the respondents as it secures a mean score of 3.16 on a 5 point rating scale. The respondents express the eighth order preference towards utilization of database on LWW Online as it secures a mean score of 2.80 on a 5 point rating scale. The utilization of database on MedInd gives the ninth order preference to the respondents as it secures a mean score of 2.75 on a 5 point rating scale. The respondents have the tenth order preference towards utilization of database on Helath Inter Network India as it secures a mean score of 2.45 on a 5 point rating scale.

The age wise analysis examines the following facts. The respondents in the age group of above 50 years occupy the first position with respect to their overall preference for all databases as their secured mean score is 4.25 on a 5 point rating scale. The respondents in the age group 46-50 years take the second position in their overall preference to all databases as their secured mean score is 3.86 on a 5 point rating scale. The respondents in the age group 41-45 years rank in the third position in their overall preference to all databases as their secured mean score is 3.65 on a 5 point rating scale. The respondents in the age group 36-40 years take the fourth position in their overall preference to all databases as their secured mean score is 3.27 on a 5 point rating scale. The respondents in the age group 31-35 years occupy the fifth position in their overall preference to all databases as their secured mean score is 3.03 on a 5 point rating scale. The respondents of the lowest age group lag behind others in their overall preference to all CD-ROM databases as their secured mean score is 2.95 on a 5 point rating scale.

It could be seen clearly from the above discussion that respondents have high level of preference towards utilization of database on Highwire Press, database on Ingenta and database on Springer Link. The respondents have moderate level of preference towards utilization

Table 6: Age wise respondents' purpose of gathering e-resources

Purpose for using E-resources	*Age*						*Total*
	Below 30	*31-35*	*36-40*	*41-45*	*46-50*	*Above 50*	
To access PubMed	3.99	4.01	4.21	4.31	4.39	4.42	4.15
To access Indian MEDLARS	3.88	3.96	3.77	4.21	4.11	4.24	4.08
To access Medical Data Bases	2.56	2.76	2.79	3.11	3.56	3.78	3.09
To access Medical Publishers	2.41	2.51	3.39	3.79	3.52	3.79	3.23
To access Professional Societies and Organizations	4.01	3.77	2.96	3.79	4.11	4.14	3.80
For research	2.15	2.16	2.79	3.39	3.30	3.76	2.92
For getting relevant information in the area of specialization	3.81	3.89	4.11	4.16	4.26	4.31	4.02
For improving Medical Science knowledge	3.72	3.59	3.96	4.10	4.15	3.99	3.90
E-journals	3.52	3.66	3.96	3.99	4.11	4.26	3.85
E-books	2.26	2.56	2.12	3.96	3.76	4.05	3.12
Career Information	3.39	2.76	2.15	3.15	3.76	3.90	3.20
General Information	2.12	2.26	2.19	3.11	3.42	3.59	2.78
Sending and receiving e-mail	3.66	3.79	3.86	4.14	4.20	4.33	4.00
Entertainment	1.96	2.01	2.26	2.39	3.38	3.56	2.65
Total	3.10	3.12	3.18	3.69	3.86	4.01	3.49

of database on Blackwell Synergy, database on Science Direct, database on MedBio World and database on All Health Net. The respondents have low level of preference towards utilization of database on LWW Online, database on MedInd and database on Health Inter Network India.

The respondents' purpose of gathering information from the e-resources can be observed from the following discussion. The respondents rank first order purpose of gathering e-resource in terms of accessing the PubMed as it secures a mean score of 4.15 on a 5 point rating scale. The respondents have second order purpose of gathering e-resource with respect to access the Indian MEDLARS as it secures a mean score of 4.08 on a 5 point rating scale. The respondents put in the third order purpose of gathering e-resource towards getting relevant information in the area of specialization as it secures a mean score of 4.02 on a 5 point rating scale. The respondents have fourth order purpose of gathering e-resource to send and receive e-mail for medical science information as it secures a mean score of 4 on a 5 point rating scale. The respondents possess fifth order purpose of gathering e-resource with respect to improving their medical science knowledge as it secures a mean score of 3.9 on a 5 point rating scale. The respondents have sixth order purpose of gathering e-resource of e-journals as it secures a mean score of 3.85 on a 5 point rating scale. It is observed that to access professional societies and organisations seventh order purpose of gathering e-resource as per the views of the respondents since it secures a mean score of 3.8 on a 5 point rating scale. The respondents have eighth order purpose of gathering e-resource towards accessing medical publishers as it secures a mean score of 3.23 on a 5 point rating scale.

The respondents rank the ninth order purpose of gathering e-resource towards career information as it secures a mean score of 3.2 on a 5 point rating scale. The respondents have the tenth order purpose of gathering e-resource with respect to access to e-books as it secures a mean score of 3.12 on a 5 point rating scale. The respondents give the eleventh order purpose of gathering e-resource towards accessing medical databases as it secures a mean score of 3.09 on a 5 point rating scale. The respondents have the twelfth order purpose of gathering e-resource for research purpose as it secures a mean score of 2.92 on a 5 point rating scale. The respondents possess the thirteenth order purpose of gathering e-resource towards getting general information as it secures a mean score of 2.78 on a 5 point rating scale. The respondents have the last order purpose of gathering e-resource towards entertainment as it secures a mean score of 2.65 on a 5 point rating scale.

The age wise analysis examines the following facts. The respondents in the age group 55 years and above occupy the first position with respect to their overall purpose of gathering e-resources as their secured mean score is 4.01 on a 5 point rating scale. The respondents in the age group 46-50 years take the second position in their overall purpose of gathering e-resources as

Table 7: Age wise respondents' problems in accessing e-resources

Problems	*Age*						*Total*
	Below 30	*31-35*	*36-40*	*41-45*	*46-50*	*Above 50*	
Difficulty in finding relevant information	3.99	4.01	3.42	3.36	2.96	3.56	3.55
Longtime to view	4.10	3.96	3.18	2.96	2.52	2.39	3.20
Slow accessibility	3.96	3.77	2.96	2.52	2.26	1.96	2.90
Difficulty in using digital resources due to lack of IT Knowledge	4.11	4.05	3.96	3.88	3.36	3.10	3.75
Too much information retrieved	3.49	3.36	2.96	2.42	2.26	2.10	2.75
Limited access to computers	4.10	4.05	3.96	3.52	3.40	3.12	3.65
Lack of Time	3.55	3.44	2.96	2.41	2.26	2.10	2.80
Virus	4.26	4.10	3.96	3.98	3.65	3.77	4.00
Total	3.95	3.84	3.42	3.13	2.83	2.76	3.33

their secured mean score is 3.86 on a 5 point rating scale. The respondents in the age group 41-45 years rank in the third position in their overall purpose of gathering e-resources as their secured mean score is 3.69 on a 5 point rating scale. The respondents in the age group 36-40 years take the fourth position in their overall purpose of gathering e-resources as their secured mean score is 3.18 on a 5 point rating scale. The respondents in the age group 31-35 years occupy the fifth position in their overall purpose of gathering e-resources as their secured mean score is 3.12 on a 5 point rating scale. The respondents of the lowest age group lag behind others in their overall purpose of gathering e-resources as their secured mean score is 3.10 on a 5 point rating scale.

A study of data in table 7 indicates the age wise respondents' problems in accessing e-resources. It can be assessed with the help of 8 factors on a 5 point rating scale. These include difficulty in finding relevant information, long time to view, slow accessibility, difficulty in using digital resources due to lack of IT knowledge, Too much information retrieved, limited access to computers, lack of time and virus.

The respondents' problems in accessing e-resources can be observed from the following discussion. The respondents rank in the first order problem of virus in accessing e-resources as it secures mean score of 4.0 on a 5 point rating scale. The respondents have the second order problem of difficulty in using digital resources due to lack of IT Knowledge in accessing e- resources as it secures a mean score of 3.75 on a 5 point rating scale. The respondents consider it the third order problem of limited access to computers in accessing e-resources as it secures a mean score of 3.65 on a 5 point rating scale. The respondents have the fourth order problem of difficulty in finding relevant information in accessing e-resources as it secures a mean score of 3.55 on a 5 point rating scale. The respondents find it as the fifth order problem of taking long time to view in accessing e-resources as it secures a mean score of 3.2 on a 5 point rating scale. The respondents have the sixth order problem of slow accessibility in accessing e- resources as it secures a mean score of 2.9 on a 5 point rating scale. It is observed that lack of time is known as the seventh order problem in accessing e-resources as per the views of the respondents as it secures a mean score of 2.8 on a 5 point rating scale. The respondents have the last order problem of retrieving much information in accessing e-resources as it secures a mean score of 2.75 on a 5 point rating scale.

The age wise analysis examines the following facts. The respondents of the lowest age group occupy the first position with respect to their overall problems in accessing e-resources as their secured mean score is 3.95 on a 5 point rating scale. The respondents in the age group 31-35 years take the second position in accessing e-resources as their secured mean score is 3.84 on a 5 point rating scale. The respondents in the age group 36-40 years rank in the third position their overall problems in accessing e-resources as their secured mean score is 3.42 on a 5 point rating scale. The respondents in the age group 41-45 years take the fourth position in their overall problems in accessing e-resources as their secured mean score is 3.13 on a 5 point rating scale. The respondents in the age group 46-50 occupy the fifth position in their overall problems in accessing e-resources as their secured mean score is 2.83 on a 5 point rating scale. The respondents in the age group above 50 years lag behind the others in realization of overall problems in accessing e-resources as their secured mean score is 2.76 on a 5 point rating scale.

It could be seen clearly from the above discussion that respondents have high problems in accessing e-resources in terms of virus, difficulty in using digital resources due to lack of IT knowledge and limited access to computers. The respondents have moderate problems in accessing relevant information and taking long time to view. The respondents have low problems in accessing towards slow accessibility, lack of time and too much information retrieved.

CONCLUSION

In recent years, Internet has emerged as a powerful educational and informational tool. Presently we are living in knowledge society where information is the key item. In this era of information, the internet is very important and useful source for fulfill the requirements of the society. Digital resources can be used for efficient retrieval and meeting information needs. It is clear from the study that electronic resources are useful to medical professionals. The study reveals that, medical professional libraries give more importance to providing access to electronic resources. In this connection library authority, may take initiatives to improve the information searching on the electronic resources among users. These initiatives can be in terms of formal and informal in formation literacy program specific to searching information sources on the web. Library and information professionals should take initiatives to prepare list of e-resources and their techniques for retrieving relevant information.

REFERENCES

Agarwal Umesh Kumar, Dave Rajesh Kumar 2009. Use of Internet by the Scientists of CAZRI: A survey. *Indian Journal of Library and Information Science,* 3(1): 15-21.

Bavakutty M, Salih Muhamad TK 1999. Internet services in Calicut University. Conference, Academic Libraries in the Internet Era . Ahemdabad, India. *Proceedings of the 6th National Convention on Academic Libraries in the Internet Era*. pp. 37-44.

Brown MS 1998. Health Care information Seekers aren't typical Internet users. *Medicine on the Net,* 4(2): 17-18.

Chandran D 2000. Use of Internet resources and services in S.V. University (Tirupati) Environment. In: R Vengan, V Shrinivas, E Shashikala (Eds): *Information Services in a Networked Environment In India.* Ahmedabad: INFLIBNET, pp. 124-127.

Garrison S 1998. Evaluating health Internet sites: a white paper's Criteria. *Medical Reference Service Quarterly,* 17(3): 41-47.

Igun SE 2005. Users and Internet skills: A report from Delta State University Abraka, Nigeria. *Electronic Journal of Academic and Special Librarianship,* 6(3): 1-9.

Jagboro OI 2003. Information needs and information seeking habits of science lecturers at Olabisi Onabanjo University, Ago-Iwoye. *Lagos Journal of Library and Information Science,* 2(1): 50-55.

Kaur A 2000. Internet facility at Guru Nanak Dev University: A Survey. In: *XIX IASLIC Seminar Proceeding.* Bhopal: IASLIC, pp. 119-124.

Kumar R, Kaur A 2006. Internet use by teachers and students in engineering colleges of Punjab, Haryana, and Himachal Pradesh States of India: An analysis. *Electronic Journal of Academic and Special Librarianship,* 7(1): 1-13.

Madhusudhan M 2007. Internet use by research scholars in University of Delhi India. *Library Hi Tech News,* 8: 36-42.

Mahajan P 2006. Internet use by researchers: A study of Punjab University, Chandigarh. *Library Philosophy and Practice,* 8(2). From www.webpages.Uidaho.edu/~mbolin/mahajan2.htm (Retrieved on 5/02/2010)

Maheswarappa BS, Ebnazar CE 2003. Use of Internet resources and services in Gulbarga City: An exploratory study. *SRELS Journal of Information Management,* 40(4): 409-420.

Mariyappagoudar Sathish K, Jayashree S 2000. Network Information Sources and Services: Email and web based System for SDI. In: *Information Services in a Networked Environment in India*. 7th National Conference for Automation of Libraries in Education and Research. CALIBER 2000. Chennai, pp.1.193-1.198.

Panda KC, Sahu NK 2003. Use of Internet in the Engineering College of Orissa: An analysis. *Conference, Mapping Technology on Libraries and People. Ahemdabad, India :* Proceedings of the 1st International Conference on Mapping Technology on Libraries and People, pp. 619-631.