

Availability and use of E-resources by the Medical College Students and Faculty Members of NH Narayana Institute of Medical Sciences, Bangalore: An Analytical Study

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Abstract: T In the present study shows that all most all users in NH Narayan Institute of Medical Sciences are familiar and aware of e-resources and its usages, utilizing it in a higher level for their study and research purpose. The data analysis results also pointed out the major issues which are emerged in the survey from the response of users. It also dealt with some factors which improve the usage of e-resources such as awareness or motivation of users, more development and updates in ICT infrastructure and facilities, provision of remote access, participation of students in the selection of e-resources etc. It also given recommendations for the need of a periodical survey in the effective use of e-resources, requirement of a dedicated e-resources librarian and more training sessions or product demonstration of e-resources. Further, the study concludes that the library advisory committees, librarians and management of the NH Institutions need to be more committed to take the necessary steps to strengthen the e-resources collection, ICT infrastructure and library services in the diversifying modern ICT context in order to prove the quality and sustainable research in the medical education.

Keywords: e resources, digital collection, ICT, electronic services, Internet

1. Introduction

The emergence and developments of the Information Communication Technology (ICT) have changed the entire fields of information retrieval systems and its usages. It also opened a new way for transforming the modern education system, its standards and practices. The development of digital resources increased the accessibility and usage of information resources without any limitations such as time, place and costs. It also act as an integral part of a learner who is in seek of knowledge with a minimal time of acquiring information and as well as a self-directed learning method. The growth of knowledge is happening with a very high speed. New branches of knowledge are emerging through hybridization which leads to the increase of users and varieties of their needs. Libraries and Information Centers are become the providers of hybrid information resources and later concentrated to develop their

strengths in electronic resources due to various reasons like financial crunches, storage, staff and efficiency of user services. Electronic resources is become the most predominant element in the field of science and research areas. Information resources that can be created, accessed, stored, retrieved and used through electronic means can be seen as e-resources. Information in electronic format can be accessed via the internet, storage devices such as CD-ROMs, pen drives, and other peripheral devices through the use of computer systems. These resources include information on CD-ROMs, online databases, electronic journals (e-journals), electronic books, (e-books), internet resources, etc. According to Haridasan and Khan (2009), electronic information resources are resources in which information is stored electronically and accessed through electronic systems and networks. It wildly studied and experimented that the demand and use of e-resources increased in medical education, research and practices. It would help to acquire and up-to-date the knowledge levels in their respective subject fields and to improve the quality of learning in a competitive way. This improves the standards of medical professionals and their health practices in India which contribute to the business and economic development of health care industry.

A. *NH Narayana institute of medical sciences, Bangalore: An overview*

NH Narayana Institute of Medical Sciences, Bangalore (formerly known as Narayana Hrudayalaya Hospitals) is one of the major medical institutions in India with high qualities of healthcare services and educational status. The institution provides various educational courses which covers all areas in medical subjects, and exclusive in Cardiac specialties. Both faculty and students are encompasses medical, paramedical and nursing professionals, practitioners and educators. The courses offered by the institution are affiliated with the Medical Council of India (MCI); National Board of Examinations (DNB); Rajiv Gandhi University of Health Sciences (RGUHS), Karnataka; Indira Gandhi National Open University (IGNOU), Bangalore;

Indian Nursing Council; Karnataka Nursing Council and Paramedical Board, Karnataka etc.

B. Statement of the problem

Statement of the problem is “Availability and use of E-resources by the Medical College Students and Faculty Members of NH Narayana Institute of Medical Sciences, Bangalore: An Analytical Study”

2. Objectives of the study

The main objective of this study is to evaluate the availability and use of e-resources by the medical college students and faculty members of NH Narayana Institute of Medical Sciences, Bangalore. This study includes the following objectives:

- To know the availability of different types of e-resources in NH Narayana Health City campus library of Bangalore city.
- To analyze the availability of ICT infrastructure facilities to provide e-resources to user community.
- To understand the selection process and procedure followed to subscribe to e-resources.
- To study the level of awareness among the students and faculty about variety of e-resources in the field of medical and paramedical sciences.
- To know the frequency and purpose of use of e-resources by the students and faculty Members of Narayana Institute of Medical Sciences, Bangalore.
- To measure the level of satisfaction while accessing e-resources.

3. Scope and limitations of the study

Today medical education is one of the big components in higher education system. During the last several years there is a rapid increase in different levels of medical educational institutions thought-out the country. Karnataka State is a pioneering region in India to having good number of medical education institutions and having lots of healthcare practicing. The scope of the present study is to know, how e-resources are utilized by the faculty and students community for their teaching and learning. Further the present study is limited NH Narayana Institute of Medical Sciences, Bangalore (formerly known as Narayana Hrudayalaya Hospitals) due to nature,

objectives and scope of the study.

A. Sample Size

Since NH Narayana Institute of Medical Sciences, Bangalore is offering many medical and paramedical courses, the present study is adopted “Simple Random Sampling technique” while selecting the study population. 100 Students and 50 Faculty members will be selected for the study to know the effective use of e-resources for their teaching and learning process. The size of the sample also covers all areas in medical subject students, and exclusive in cardiac specialties. Both faculty and student bodies encompasses medical, paramedical and nursing professionals.

4. Data analysis and interpretation

The analysis and interpretation of the data collected for the present study. A total of 100 questionnaires were distributed among the GCNHF Library users in the NH Health City campus during months of June-October in 2018. Out of 100, a total number of 95 users were responded to the questionnaire i.e. 70 students and 25 faculty members which constitute 95% of the total response. Hence the response rate is 95% and the collected data were analyzed, tabulated and interpreted to draw the inferences. The data have been analyzed by applying suitable statistical techniques wherever necessary and are presented in the following tables and graphs. Looking at the objectives and nature of the research problem, the study will be adopted survey method and questionnaire method will be used to collect the primary data from students and faculty members of NH Narayana Institute of Medical Sciences, NH Health City Campus, and Bangalore. The collected data will be cross checked with the help of check list. Finally data will be entered into MS Excel sheet for statistical analysis and accordingly data will be analyzed. The outcome of the study will be presented in table and graphical manner for better understanding of the research results.

A. Personal data / demographic information

The study is organized and conducted with both gender and two major categories of library users in NH Health City Campus, Bangalore. The following data described the gender wise and category wise response of the users.

Table 1
Category wise respondents

S. No.	Respondents Category	No. of Respondents	Percentage of Respondents
1.	Students	70	73.68%
2.	Faculty	25	26.31%
Total		95	100%

Table 2
No. of Users Using E-Resources in the Library

S. No.	Respondents Category	Yes		No		Total	Percentage of Respondents N=95
		No.	Percentage	No.	Percentage		
1.	Students	64	91.42%	6	8.57%	70	73.68%
2.	Faculty	25	100%	0	0	25	26.31%
Total						95	100%

The Table 1 displays the carrier-wise distribution of the respondents. It shows that 70 (73.68%) respondents are students and 25 (26.31%) respondents are faculty members.

B. Availability and Use Medical E-Resources in NH Health City Library

It can be observed from the above Table 2 that, out of 70 student respondents, 64 (91.42%) are using e-resources and 6 (8.57%) are not using e-resources provided by the library. In case of faculty members, all are effectively utilizing e-resources.

C. Type of Medical E-Resources Used in the Library

Table 3
 Type of Medical E-Resources Used in the Library

S. No.	Type of E-Resource	No. of Respondents N=95	Percentage of Respondents
1.	E-Books	77	81%
2.	E-Journals	76	80%
3.	Online Database	50	52.63%
4.	Audio-Video	44	46.31%
5.	Database on CD/DVD's	47	49.47%
6.	Internet Websites	63	66.31%
7.	Search Engines	61	64.21%
8.	Online Reference Books	49	51.57%
9.	E-Thesis/Dissertations	42	44.21%
10.	E-News Papers	31	32.63%
11.	E-Mail	84	88.42%

This section covers the type of different e-resources available in the library and its utility among the respondents. The majority of users are in favorable of using e-resources shows the respondent rates as E-books 77 (81%), E-journals 76 (80%), Online Database 50 (52.63%), Online reference books 49 (51.57%), E-Thesis/Dissertations etc. The same time 44 (46.31%) users use Audio-Video resources and 47 (49.47%) utilized CD or DVD databases. The rate of using Internet Websites is 63 (66.31%) and Search Engines is 61 (64.21%). It also noticed that the frequency of using e-services other medical resources such as E-mail 84 (88.42%) and E-newspapers 31 (32.63%) along with their study purpose. Hence this study it is experimented that e-resources used more frequently than any other resources available in the library.

D. Purpose of using e-resources

Table 4 shows and describes the purpose of using e-resources. 61 (87.14%) students and 24 (96%) staff use for educational purpose and 36 (51.14%) students and 22 (88%) staff use for research works. Whereas 52 (74.28%) students and 22 (88%) faculty members using for information, 42 (60%) students and 15 (6%) staff use e-resources for updating knowledge. There are many other important purposes of using e-resources such as patient care/practice, health information, using medical database and communication etc. shown in the Table 4. But maximum of respondents are reported that they use e-resources for education and related purpose.

Table 4
 Purpose of Using E-Resources

S. No.	Purpose	N / %	Respondents (Students) N=70	Respondents (Faculty) N=25
1.	Education	N	61	24
		%	87.14%	96%
2.	Research	N	36	22
		%	51.42%	88%
3.	Information	N	52	22
		%	74.28%	88%
4.	Updating Knowledge	N	42	15
		%	60%	6%
5.	Patient care/Practice	N	26	21
		%	37.1%	84%
6.	Health information	N	31	17
		%	44.28	68%
7.	Medical Database	N	28	18
		%	40%	72%
8.	Communication	N	2	0
		%	2.85%	0
9.	Others	N	2	0
		%	2.85%	0

E. Type of Medical E-Resources Used in the Library

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Table 5
 Type of Medical E-Resources Used in the Library

S. No.	Type of E-Resource	No. of Respondents N=95	Percentage of Respondents
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6.	Internet Websites	63	66.31%
7.	Search Engines	61	64.21%
8.	Online Reference Books	49	51.57%
9.	E-Thesis/Dissertations	42	44.21%
10.	E-News Papers	31	32.63%
11.	E-Mail	84	88.42%

F. Levels of awareness of e-resources in users

Table 6 shows the users awareness approach and sources to e-resources. It is clear from the table that out of a total of 95 respondents, 66 (69.47%) respondents are aware of e-resources

through library notice/bulletins, followed by 68 (71.57%) are aware through library training sessions. 30 (31.57%) respondents are aware through teachers/educators and 26 (27.36%) respondents are aware through classmates. The same time 67 (70.52%) respondents are aware through personally from library staff, and 63 (66.31%) respondents are aware through institutional web-pages. There are 7 (7.36%) respondents reported about other type of approaches to get the awareness of using e-resources in the library.

Table 6
Source of awareness of E-Resources

S. No.	Sources of awareness	No. of Respondents N=95	Percentage of Respondents
1.	Library notice/bulletins	66	69.47%
2.	Library training sessions	68	71.57%
3.	Teachers/Educators	30	31.57%
4.	Classmates	26	27.36%
5.	Personally from library staff	67	70.52%
6.	Institutional web-pages	63	66.31%
7.	Others	7	7.36%

G. Frequently Used Medical E-Resources

Table 7 presents the frequently used e-resources by the respondents. The “most frequently” used e-resources are both e-books and e-journals 49 (51.57%) followed by internet websites 41 (43.15%), search engines 43 (45.26%), e-mails 44 (46.31%) etc. “Frequently” used e-resources are online databases 34 (35.78%), audio/videos 23 (24.21%), CD/DVD databases 33 (34.73%), Online reference books 27 (28.42%),

Table 7
Frequently Used Medical E-Resources

S. No	E-Resources	Most Frequently	Frequently	Occasionally	Not at All	Total Respondents	Percentage of Respondents
1.	E-Books	49	28	6	12	95	100%
2.	E-Journals	49	27	10	9	95	100%
3.	Online Databases	18	34	23	20	95	100%
4.	Audio/Video	17	23	33	22	95	100%
5.	Databases on CD/DVD	7	33	35	20	95	100%
6.	Internet Websites	41	30	16	8	95	100%
7.	Search Engines	43	28	14	10	95	100%
8.	Online Reference Books	17	27	33	18	95	100%
9.	E-Thesis/Dissertations	9	16	45	25	95	100%
10.	E-Newspapers	9	27	34	25	95	100%
11.	E-Mail	44	39	9	3	95	100%

Table 8
Frequently Used Medical Databases / Web-Resources

S. No	E-Resources	Most Frequently	Frequently	Occasionally	Not at All	Total Respondents	Percentage of Respondents
1.	PubMed/Medline	22	40	20	13	95	100%
2.	ProQuest	33	36	16	10	95	100%
3.	OvidSP/Wolters Kluwer	24	31	24	16	95	100%
4.	ScienceDirect	42	29	15	9	95	100%
5.	ClinicalKey	60	16	15	4	95	100%
6.	Springer	9	34	25	27	95	100%
7.	Cochrane Library	10	35	27	23	95	100%
8.	Oxford Journals	27	35	19	14	95	100%
9.	BMJ	36	24	21	14	95	100%
10.	JaypeeDigital	45	29	12	9	95	100%
11.	Wiley Online Library	13	28	25	29	95	100%
12.	Any other (Pls.specify...)	14	16	9	56	95	100%

ETD’s 16 (16.84%) and e-newspapers 27 (28.42%). This study shows that the respondents highly use e-resources in the library.

H. Frequently Used Medical Databases/Web-Resources

Table 8 supported presents the use of different types of medical databases frequently used by the respondents. The most frequently used database are Clinical Key 60 (63.15%), Jaypee Digital 45 (47.36%), Science Direct 42 (44.21%), and BMJ 36 (37.89%). Whereas frequently used databases are PubMed 40 (42.10%), ProQuest 36 (37.89%), Springer 34 (35.78%), Cochrane Library 35 (36.84%), OvidSP 31 (32.63%), Oxford Journals 35 (36.84%), and Wiley 28 (29.47%). Also found that 16 (16.84%) users frequently used other database such as EBESCO, Up To Date and Access Medicine

Table 9 shows the satisfaction levels of using e-resources. It is clear that 40 (57.14%) students and 22 (88%) faculty are very much satisfied. While 13 (18.57%) students and 3 (12%) faculty are somewhat satisfied. Same time 3 (4.28%) students dissatisfied and 14 (20%) students didn’t have any comments on this.

5. Findings

- It is inferred from the table 5.4 that out of 70 students 64 (91.42%) are using e-resources. A small number of students 6 (8.57%) are not using due to different reasons. Interestingly in 25 faculty members, all are using e-resources showing 100% of utility of e-

resources.

- This study shows that the availability and usage of different kinds of e-resources in the library. It reported that E-books 77 (81%) and by E-journals 76 (80%) are in the first preference among other e-resources. The other available and used medical e-resources are Online Database (50%), Audio-video 44 (46.31%), CD/DVD Databases 47 (49.47%), Online Reference books 49 (51-57%), ETD's 42 (44.21%).

6. Suggestions

Based on the findings of the study, an attempt has been made to suggest a few recommendations, which will help to improve the availability and use of e-resources more efficiently and effectively. The main suggestions for improvements are as follows:

- It is observed that out of 70 student respondents, 64 (91.42%) are using e-resources and still 6 (8.57%) are not using e-resources. There is a need to increase information awareness and motivation about the e-resources among the students in NH Health City Campus to achieve 100% of usage.
- The study shows the importance of the development and increase of ICT infrastructure in the library. It denotes the need of more computer terminals for users, improving the network facilities with speed and connectivity and regular update of ICT.
- It also recommended to giving more publicity and awareness to the remote access facility of using e-resources so that users can access their required information whenever and wherever they need.
- It is suggested and requires more participation of students in the selection and subscription of e-resources to the library collection, since the NH Health City Campus has different levels of institutions.

7. Conclusion

E-resources are become the major part and play a drastic role in the medical faculty and students. The ever changing environment of technical education made a vast impact on the services of the medical libraries. In the present scenario, libraries and information centers in the medical institutions more consider with the on-going issues of financial crunches, spacing, staff and services, lack of time or interest of the users, challenges from the modern ICT's etc. So it became the prime duty of the library to select and give a prompt access to the relevant e-resources for the benefit of medical students and faculty members. It helps them to access and sharing the information and keeps aware of the emerging trends and new practices in the medical profession. It also updates the knowledge of users and informative to their research areas.

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