Awareness and Use of E-Journals by the PG Doctors of JNMC in Aligarh Muslim University

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Abstract

The paper examines the awareness and use of e-journals and also highlights certain issues relating to print journals usage by the PG doctors (those who have completed MBBS and are pursuing MD) of Jawaharlal Nehru Medical College (JNMC) of the Faculty of Medicine in Aligarh Muslim University (A.M.U), Aligarh. The study reveals excellent awareness about e-journals among the PG doctors of JNMC i.e.100 per cent of them are aware and using them. A majority of the PG doctors begin their search for journal articles through a general purpose search engine however; PubMed is not lagging far behind and emerged to be the second popular choice with about 58 % per cent of the PG doctors start searching for e-journal articles through it.

Keywords

Electronic journals; Print journals; E-resources; Awareness;

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1. INTRODUCTION

Use of web and associated innovative technologies has changed the global trend of information access and dissemination opening up a broad range of channels for scholarly communication and journals forms an important part of these mediums. History of journals can be traced back to 'Journal des Scavans' the first journal published during 1665 as a new channel for scholarly communication and since then journals have played a crucial role in any form whether print or electronic. Journals play a central role in the dissemination of research output of scholarly communities all over the world. Apart from the carrying out the traditional function of being the disseminator of scholarly information spreading current awareness and continuing education, the evolution of e-journals has contributed to the appearance many more helpful features such as the powerful searching tools, availability of hyperlinks, speed of publication and archival facilities etc. to name a few which has helped e-journals to establish a prominent place among an array of other e-resources. Electronic journals are often referred to interchangeably as "online journals, "electronic serials" and "electronic periodicals".

2. PROFILE OF COLLEGE UNDER STUDY

Jawaharlal Nehru Medical College (JNMC) is a medical college located in Aligarh, Uttar Pradesh, India. JNMC was established on 2nd October, 1962. JNMC encompasses 22 departments of studies functional under it. It is affiliated with the Faculty of Medicine of Aligarh Muslim University (A.M.U).

3. REVIEW OF RELATED LITERATURE

Liew, Foo and Chennupati (2000) indicated a growing interest among graduate student regarding e-journals. High expectations, strong acceptance and enthusiasm were observed for e-journals along with some reservations. Sathe, Grad, and Giuse, (2002) investigated the use of print and electronic journals and reported that faculty preferred to use print journals while the student showed preference for e-journals. Ease of access of electronic journals was identified as a major advantage in comparison to print journals. King, Tenopir, Montgomery and Aerni (2003) reported an increase in the level of reading of journal articles among the university faculty members and increase in the size of library electronic journal collections was quoted as an important factor for this increase. The study also revealed that

majority of faculty members identify and locate journal articles through browsing recently published issues of journals.

A study to determine how medical faculty members use scholarly journals was carried out by Tenopir, King and Bush (2004) whether there is a pattern among types of users. Results showed that medical faculty read a great deal, especially compared to scientists. The most frequently reported principal purpose of reading was to support their primary research (30% of reading). The majority of reading came from recently published articles, mostly from personal subscriptions. Medical faculty continued to rely on print journals (approximately 70% of readings) versus electronic journals. Age of faculty did not appear to influence the choice of print or electronic format. Medical faculty read more articles than others on average and need information digested and verified in a way to save them time. Convenience and currency were highly valued attributes. Bar-Ilan and Fink (2005) concluded that faculty members are using e-journals more frequently than the doctoral candidates. Though the majority of the respondents preferred electronic journals over print journals for searching information the reasons that were mentioned for the preference was ease of information search and retrieval, accessibility of electronic journals at any time and place. Raza and Upadhyay (2006) revealed that researchers at Aligarh Muslim University are aware about e-journals and are using them frequently for the research work and also for updating their knowledge. The study revealed problems faced in e-journal access and lack of training was found to be the major hindrance in e-journal access. It was also found that majority of users search and access e-journal through search engines.

Voorbij and Ongering (2006) identified full-text searching and hyperlinks to the full-text of an article as the most important features of e-journals in a study conducted on Dutch researchers. They also found that availability of journals in electronic form has increased its importance among researchers due to the advantages such as currency, quick speed of access any time from any place etc. Asemi and Riyahiniya (2007) revealed that there existed a difference in the awareness and use of digital resources. Even though, after being aware of digital resources not all the users use them. 70 percent were aware of online databases, accessible via the Central Library web site, and about 53 percent respondents have used them. Slow Internet speed, shortage of hardware facilities and infrequent periodic orientation of offline databases were identified as some of the problems faced by the users. Dilek-Kayaoglu (2008) demonstrated positive attitude of faculty members at Istanbul University, Turkey towards e-journals where majority of the users exhibited preference for e-journals and supported the transition from print to electronic journals they were also found to be the frequent users of e-journals. The major reason for using them was revealed to be for research purposes. The study also found twenty-four hours availability of e-journals as the major benefit and put forward by the users. Lack of subscriptions to the electronic journals in the discipline preferred by the respondents was the major barrier in the e-journal use.

Tenopir, King, Edwards, and Wu (2009) found that the major purpose of reading journal articles by faculty members was for research purpose followed by teaching, current awareness and other purposes. 99.5 per cent of the respondents admitted that the reading the articles has positively affected the purpose of use by inspiring new ideas (54.5%) and improving the result (39.9%). The study concluded that the number of readings per faculty member is increasing but less amount of time is spent on average per reading. McClanahan, Wu, Tenopir and King (2010) put forward views of faculty members about various aspects related to e-journals and revealed that e-journals have positively influenced research, and teaching with the ease of access and archiving, also improving the quality of their scholarly work. Ali and Nisha (2011) revealed preference for print journals among research scholars at Central Science Library, University of Delhi, where the print journals are consulted by the majority of users as compared to e-journals. Tyagi (2012) examined the use of online journals and the databases by the postgraduate students, research scholars and faculty members of Indian Institute of Technology Kanpur. Level of awareness varied among different categories of users where the faculty members exhibited the highest degree of awareness i.e., 100% followed by research scholars (94.74%) and postgraduate students (83.78%). Study revealed e-journals to be the most preferred form of electronic information resources. The results also disclosed users' preference for e-journals (56.88%) rather than for printed ones (23.12%). Nisha and Ali (2013) revealed keyword searching to be the most used searching technique for finding the journal article by the users of IIT Delhi and Delhi University. They also recommended different method of training programs such as conducting formal courses,

workshops, seminars, lectures, discussion groups, etc. for the proper utilization of e-journals.

4. OBJECTIVES AND METHODOLOGY

1. To assess the use of print and e-journals by the PG doctors of Jawaharlal Nehru Medical College in the Faculty of Medicine of AMU.
2. To know about the sources which were significant in familiarizing doctors about the e-journals.
3. To determine the purpose of utilization of print and e-journals by PG doctors.
4. To find out the method of accessing e-journals.
5. To find out the access point for searching articles.
6. To identify the role of serendipity in e-journal article discovery.
7. To identify the hindrances faced by doctors in e-journal access.
8. To study the preference level of using the journals.
9. To determine the usefulness of user training.

The current problem was selected by the researchers to get an idea about the awareness and use of print journals and e-journals by the PG doctors of Jawaharlal Nehru Medical College of the Faculty of Medicine in AMU, so that the library can make a analysis of the existing condition of print journals and make changes to the e-journal service depending up on the results and suggestions.

The present study was conducted on a sample of 74 PG doctors of JNMC of the Faculty of Medicine in AMU, Aligarh. A total of 100 questionnaires were distributed by the investigator and 78 questionnaires were received back out of which 74 fully filled questionnaires were selected for the data analysis.

5. Data Analysis and Interpretation

The data collected through questionnaires were organized and tabulated by using statistical methods and percentages.

5.1. Awareness of E- journals

Table 1: Awareness of E- journals

Awareness	No of responses	JNMC
Yes	74	100%
No	0	0%

Responses on awareness of e-journals revealed that 100 % of the respondents who are PG doctors in Jawaharlal Nehru Medical College (JNMC**)** are aware of e- journals.

5.2. Sources of information about the E- journals

An attempt was made to know about the sources which were helpful in making the post graduate doctors familiar about the e-journals.

Table 2: Sources of information about the E- journals

Sources	No. of responses	%
Print journals	9	12.16 %
Library professionals	6	8.10 %
Teachers	11	14.86 %
Internet	38	51.35 %
Colleagues	21	28.37 %

(Multiple responses were permitted)

Results show that the highest percentage of respondents get information about e-journals from the Internet (51.35%), followed by getting the information about e-journals from colleagues (28.37%), while 14.86% consider teachers as the source of information to e-journals, print journals provided the information about the e-journals to12.16% of the students, and least number of users i.e. 6 (8.10%) Library professionals were source of information to e-journals.

5.3. Purpose of using journals

Journals as an important medium for scholarly communication serve a variety of important purposes for its user. In table no. 3 investigator tried to find out the various purposes for which the journals both print and electronic are used by the PG doctors.

Table 3: Purpose of using journals

Purpose	No of responses		Percentage	
	Electronic	Print	Electronic	Print
To update Knowledge	24	26	32.43%	35.13%
Seminars	28	21	37.83%	28.37%
Projects	14	9	18.91%	12.16%
Preparing notes	6	5	8.10%	6.75%
For finding relevant information in area of specialization	12	9	16.21%	12.16%
Writing papers	9	8	12.16%	10.81%

(Multiple responses were permitted)
It is observed form the above table a large number of the total respondents i.e. 37.83% use e-journals for seminar in case of print journals, 28.37% of the respondents use it for seminars, 32.43% use e-journals and 35.13% use print journals for the purpose of updating knowledge, 18.91% use e-journals for projects and 12.16 % use print journals for the same purpose, 16.21% access e-journals for finding relevant information in area of specialization and 12.16 % in the case of print journals. 12.16% use e-journals for writing papers, 10.81% use print journals for the purpose of writing papers and a very less number use both print and e-journals for preparing notes 6.75% in case of print and 8.10% in case of e-journals.

5.4. Mode of article searching

There are number of channel such as search engines, journal websites etc. available for searching and accessing journals. PG doctors were asked to express their opinion about the channels through which they search and access journal articles.

Table 4: Mode of article searching

Search through	No of responses	%
Search engines	48	64.86%
specific Journal's website	14	18.91%
PubMed 's multi-journal website	43	58.10%
Other multi-journal website	21	28.37 %
Print journals	28	37.83%

(Multiple responses were permitted)

The tabulation of data in table 4 indicates that in JNMC a majority (64.86%) of the PG doctors begin their search for journal articles through a general purpose search engines like Google, Yahoo etc. second popular choice being PubMed's multi-journal website 58.10%. 37.83 % students make use of print journals as a beginning point for searching articles. 28.37% of respondents use other multi-journal website such as Science Direct, NIC MEDLARS CENTER, OVID etc for searching journal articles. A very small number of users i.e. 18.91 % start their search by specific Journal's website.

5.5. Number of search screens consulted

The table depicts the users response on the number of search screen of the retrieved results consulted while searching for the journal articles.

Table 5: Number of search screens consulted

Number	No of responses	%
First screen only	22	29.72 %
2-3	36	48.64 %
4-5	9	12.16 %
5 or more	7	9.45 %

In JNMC majority 48.64% (36) of respondents look at 2-3 screens of search result retrieved. 29.72% (22) look at first screen only, 12.16 % (9) check 4-5 screens, and a very less percentage i.e. 9.45% (7) consult 5 or more screens.

5.6: Access point for searching articles

An attempt was made to reveal about the access point for searching journal articles i.e. how the PG doctors start their search for the journal articles. The option provided included MeSH terms, keyword, title, author.

Table 6: Access point for searching articles

Search by	No of responses	%
Subject heading(MeSH term)	19	25.67%
Keyword	38	51.35%
Title	29	39.18%
Author	7	9.45%

In JNMC majority of users search articles by keywords constituting 51.35% of the total population, 39.18% make of use of title for searching articles 25.67% search it by Subject heading (MeSH term),very few of them i.e. 9.45% search it by author.

5.7. Role of serendipity in e-journal article discovery

Searching and browsing journal content occurs in serendipity i.e. the chance discovery of valuable information. A question was posed to the PG doctors on how frequently serendipity plays a role in their search for journal articles.

Table 7: Role of serendipity in e-journal article discovery

Frequency	No of responses	%
Frequently	51	68.91%
Occasionally	21	28.37%
Never	2	2.70%

(Multiple responses were permitted)

It is observed form the above table that a large number of the total respondents 68.91% believe that serendipity (unintentional discovery of valuable information) frequently plays a role in their search for journal articles, 28.37% think that serendipity occurs occasionally 2.70% feel that serendipity never played a role.

5.8. Hindrances with e- journals

There are several factors that cause hindrance in e-journals access. PG doctors were asked to pool their opinion about the factors that cause major hindrance in their e-journal access.

Table 8: Hindrances with e- journals

Problems	No of responses	%
Difficult to read from screen	14	18.91%
Limited access to full text	23	31.08%
Lack of training	16	21.62%
Not easy to use	3	04.05%
Prefer to consult printed journals	11	14.86%
Internet connectivity	5	06.75%
Any other		16.21%

(Multiple responses were permitted)

The table above depicts the hindrances faced by the respondents in e-journals access. Majority of users (31.08%) described limited access to full text as the chief hindrance, followed by lack of training on how to search scholarly information (21.62%), some other problems such as subscription of less number of journals, unorganized content, lack of searching skills were also identified as hindrances by the users.

5.9. Authoritativeness of e-journals

Investigator posed a question to doctors regarding authoritativeness of e-journals i.e. whether they consider e-journals as trustworthy or credible as print journals.

Table 9: Authoritativeness of e-journals

Equivalent to print journals	No of responses	%
Yes	58	78.37%
No	16	21.62%

The above tabulated data clearly indicates that majority of PG doctors i.e. 58 (78.37%) of them consider e-journals as authoritative as print journals and only 16 (21.62%) do not consider it as authoritative as print journals exhibiting some ambiguity about the authoritativeness of e-journals.

5.10. Preferred form of journal

PG doctors were inquired regarding which of the journal format viz. Print, Electronic or both will they like better to use in future.

Table 10: Preferred form of journal

Form	No of responses	%
Print	6	8.10%
Electronic	27	36.48%
Both	39	52.70%

In JNMC 52.70% of the PG doctors plan to use both print and e-journals in future, 36.48% consider using only e-journals while very less few i.e. only 8.10% will continue to use print only journals in future.

5.11. Training received

Users were asked whether they have ever received any training on how to search scientific information.

Table 11: Training received

Training received	No of responses	%
Yes	21	28.37 %
No	53	71.62%

Very less numbers of doctors 21 (28.37 %) have received training, while majority of them 53 (71.62%) have not received any sort of training on how to search scientific information.

5.12. Usefulness of user training

Table 12 tried to establish the importance of user training for the better search and retrieval of journal articles. Question was posed to both who have received training and the ones who have not received any training. Gathering their thoughts on whether if they have received any training it would have been useful and the result clearly indicated the usefulness of user training.

Table 12: Usefulness of user training

Useful	No of responses	%
Yes	57	77.02%
No	17	22.97%

In JNMC 77.02% (57) of the total population supports training program. The PG doctors who were part of user training found it useful while, the others had an opinion that if they had ever received any training on how to search scientific information it would have been useful however, the remaining 22.97% (17) reflected that user training is not much necessary and they are themselves capable of efficiently searching and retrieving scholarly information.

6. MAJOR FINDINGS

The major findings of the study conducted among the PG doctors of JNMC are given below:

- The study reveals that to the majority of PG doctors 38 (51.35 %) Internet was found to be the chief source of information about the e-journals (Table 2).

- The highest percentage of users uses e-journals for seminars 28 (37.83%), while in case of print journals majority 26 (35.13%) of them use it for the purpose of updating knowledge (Figure 1).

- The study reports that the highest percentage 75.67% (56) of the PG doctors begin their search for journal articles through a general purpose search engines like Google, Yahoo etc. second popular choice being PubMed‘s multi-journal website as 50.00% (37) of them start their search for journal articles through Pub med (Figure 2).

- The study indicates that majority of PG doctors search articles by keywords constituting 51.35% (38) of the total population (Table 6).

- A large number of the total respondents 51 (68.91%) believe that serendipity (unintentional discovery of valuable information) frequently plays a role in their search for journal articles (Table 7).

- Analysis of barriers during e journal access show that to the majority of PG doctors 23 (31.08%) limited access to full text was identified as a major hindrance in e-journals access, lack of training16 (21.62%) was also identified as a key issue creating hindrance in e-journals access (Figure 3).

- The study indicated that e-journals were found to be equally authoritative as print journals by the majority of PG doctors in JNMC 58 (78.37%) (Table 9).

- A noteworthy finding of the study is that majority of PG doctors 39 (52.70%) will still like to use journals in both electronic and print form (Table 10).

- The study discloses that only a minor number of PG doctors 21 (28.37%) have received training, while the majority 53(71.62%) of them have never received any sort of training on how to search scientific information (Table 11).

- Analysis of data in table 12 reveals that majority of PG doctors 57 (77.02%) in JNMC consider user training useful.

7. Recommendations:

- An important step that can be taken to enhance the usage of e-journals is to organize regular workshops, orientation programs, hands on training by the authorities responsible.

- Special lectures by the publishers of medical and health science information can be arranged keeping in view special clientele. Demonstrating, the features and search techniques of the various e-journal databases to the doctors.

- Training Resources such as manuals and self help guides along with the supplementary material such as video tutorials can also be made available to the doctors who are not able to attend the training programs due to the busy schedule.

- 24 hours high speed internet connectivity should be provided to PG doctors in the Faculty of Medicine to increase the usage of e-journals by them, as they are always busy with patient-care.

- Since limited access to full text emerged as a major hindrance in e-journal access, relevant literature familiarizing doctors with open access medical and health science journals and databases can be circulated.

- Appropriate feedback mechanism should be established catering to the queries and concerns regarding various issues relating to search, retrieval and accessing of e-journals by the doctors.

8. CONCLUSION

The present study was carried to examine the use of electronic and print journals by the PG doctors in the faculty of medicine, AMU, and the result show that the objectives formulated for the study were adequately accomplished. The study reveals excellent awareness about e-journals among the PG doctors. Internet was identified as the major source to give information about the e-journals. Using e-journals for seminars was recognized as the principal purpose, while print journals are mostly used for updating knowledge, going through the issues of newly arrived print journals. A major portion of PG doctors search articles through search engines. Keywords are mostly used by the respondents for locating e-journal articles. Exploration of the hindrances faced by the respondents in e-journals access reveals that to majority of PG doctors limited access to full text acts as the chief hindrance, apparently because of the high cost of subscription of medical and health science journals and scarcity of subscriptions of electronic journals in the discipline preferred by the respondents, followed by lack of training on how to search scholarly information. Majority of PG doctors feel that user training is useful for increasing the usage of e-journals.

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