

E-JOURNAL CULTURE AMONG MEDICAL FRATERNITY OF KASHMIR

Somaira Nabi

Assistant Librarian, Allama Iqbal Library, University of Kashmir, J&K, India.

Email: sumairanabi@yahoo.co.in

Abstract Purpose: *The purpose of the study is to understand level of awareness, use and allied parameters related to e-journals among medical fraternity of two prominent medical institutions of the Kashmir.*

Methodology: *A survey designed to collect information about use of electronic journals and parameters associated with it was undertaken by administering a structured questionnaire among the faculty.*

Findings: *The findings reveal that about 60% medical professionals with computer literacy use e-journals on weekly basis for the purpose of research. The keyword/subject approach is found the most popular search technique for the retrieval while the author and title are less chosen options. The important source of awareness is a friend or a colleague and a PDF is the most favoured format for delivery. However, dependency on e-journals is below 40%.*

Research Limitations/Implications: *The study is limited to medical fraternity of Government Medical College (Srinagar) and Sher-i-Kashmir Institute of Medical Science(Srinagar), both premier Institutions of the state. The newly emerged colleges and paramedical schools have not been included in the study.*

Keywords: *Electronic Journals, Information Seeking Behaviour, Electronic Publication, Information Retrieval*

INTRODUCTION

The evolution of the internet has made publishing instant, cost effective and affordable for everyone. It has fast become a global publishing platform (Hawkins, 2001) offering unlimited prospects for publication and distribution of information in digital form. Hence, print journals - a core component of academic library collection- are swiftly shifting to on-line 'e-journals'. Simultaneously, researchers have understood their pre-eminence as a channel for communicating research ideas and results among fellow professionals and peers. These have also become an effective and efficient mechanism for transfer of data, information and knowledge from an author to a user (Barker, 2006) and established as a viable publication media in many fields besides being accessed through online formats to help tremendously increase user acquisition of knowledge (Ajebomogun, 2007). The emergence of Medline and PubMed sources indexing more than 5,500 journals in the field of Biomedical Sciences have become the backbone of health research in the globe.

Hence, the present study deals with the awareness and use-pattern of e-journals among the medical fraternity of prominent medical institutions of Kashmir Valley. It

endeavours to find out the level of awareness and use of them in two medical institutions, namely Govt Medical College, (GMC) Srinagar and Sher-i-Kashmir Institute of Medical Sciences (SKIMS) Srinagar-deemed university. The first is the oldest institute established in 1959 in the State and affiliated to University of Kashmir imparting undergraduate and postgraduate programmes in many specialities. SKIMS was commissioned in 1982 and was later granted deemed University status in 1983 by an Act of the State Legislature. The institute has excelled in major specialities imparting Undergraduate, Postgraduate and Doctoral Programmes.

REVIEW OF RELATED LITERATURE

Many studies are carried out about use and awareness of e-journals in different institutions and subjects in different countries. Liew, Foo and Chennupati (2000) have surveyed graduate students of Nanyang Technology University (Singapore) to assess use and perception of e-journals and conclude thorough a review of the literature that majority of users prefer them. Rogers (2001) has studied e-journal, print journal, and database usage which also expose their greater use compared to print by faculty and graduate students in view of swell up in the size of e-journals from 200

to more than 3000. Bar-Ilan (2003) has made an extensive investigation of the senior academic staff of the Israeli universities in use of electronic journals and databases. The major pronouncement reveals the use of electronic sources is widespread that above 50% term electronic services indispensable. Disparities, however, are found between the usage patterns in the different disciplines. Bar-Ilan (2005) in later survey report the results on the use of print and electronic journals in a science library stating that the users had already been exposed to electronic journals for a number of years and most of the scientific journals being accessible in electronic format albeit print still available. Brady et al. (2006) have examined journal use in three scientific disciplines with similar results. Voorbij and Hilde (2006) have reviewed Dutch faculty about use of electronic journals, establish their indispensability for both scientists and social scientists. However, they divulge disciplinary differences in the use of paper and electronic formats. Borrego, Anglada, Barrios, & Comellas (2007) present the results on the use of electronic journals by the academic staff of the universities belonging to the consortium of academic libraries of California reporting a high proportion of teaching and research staff awareness about the collection besides their increasing preference for the electronic format.

Many scholars have studied use of e-journals and electronic resources in different institution of India. Naushad (2005) has examined use of electronic information services among the users of the Indian Institute of Technology Library (Delhi) and reveals lack of printing facilities, terminals and trained staff as the major concern for their accessing. Raza and Upadhyay (2006) have revealed that researchers use both printed and e-journals and a large number store e-journals articles on a disc after downloading. Deshpande and Pathak (2008) have revealed that prevalence of increasing use of electronic information seeking environment has changed the practice of science besides e-journals use for research needs with PDF being the favourite format. Madhusudan (2008) has surveyed use of the UGC-Infonet and revealed that it has created dependency value on their research work and need current article alert services and electronic document supply services. However, in Guru Gobind Singh Indraprastha University, teachers and research scholars choose to use e-journals in comparison to other e-resources and highest number of users prefers both the formats (Kaur & Verma, 2009). The research scholars of Goa University prefer to access the UGC Infonet in Department Computer laboratories and seek need of orientation programme for efficient searching of e-journals (Chirra & Madhusudan, 2009). Naushad and Nisha (2011) have revealed that more than 60% of users are aware about e-journals using them weekly for the purpose of research and 'Keywords' is most popular search method for searching e-journals. Singh and Gill (2012) have examined the usage of e-journals among the users of Indian Council of Medical Research (ICMR)

libraries (Delhi) found that almost all users of ICMR libraries are well aware about the availability of e-journals at their institute library, using them for research purpose. The longitudinal study about Indian Medical fraternity seems not carried out so far to address many concerns about awareness, use and behaviour.

OBJECTIVES

The study adheres to following objectives:

- To assess awareness and responsiveness towards e-journals among the medical fraternity.
- To determine use pattern and preferred format of e-journals among the medical fraternity.
- To reveal effectiveness and level of satisfaction of e-journals among the fraternity

METHODOLOGY

This study was carried out in two phases. In first phase, a review of related literature about the electronic journal use was done to uncover different findings as well as areas studied by various authors on diverse subject community. Later, second phase was undertaken to collect the relevant data to fulfil the objectives using a structured questionnaire as an instrument for data gathering from a random sample of medical fraternity. The structured and close ended questionnaire containing 14 questions under two sections were distributed among the fraternity during September–November 2012. Out of 200 distributed questionnaires among P. G Students and Faculty from 100 each in two institutions, 69 responded from GMC while 53 cooperated from SKIMS.

ANALYSIS AND DISCUSSION

The data collected were edited, analysed, evaluated, and interpreted using different parameters.

Computer Literacy

The most influential attribute of users of e-journals is their computer literacy level. The study reveals that the computer literacy of the medical fraternity is not encouraging as most of them (59.02%) possess average computer literacy. The computer literacy of the fraternity at G. M. C is highest (62.32% in G. M. C vs 54.72% in SKIMS). The beginners range is below 10% in both the institutions (Table 1). It has a negative impact on the effective use of otherwise available web resources in the field, mostly available through open access gateways. The major steps need to be taken to start some short term orientation courses for the beginners like

brain storming sessions for awareness of relevant computer literacy to help them download/ upload/ edit/ discover and publish their publications and related research.

Table 1: Computer Literacy of the Users

Computer Literacy	G. M. C	SKIMS	Total
Expert	0(00. 00)	9(16. 98)	9(7. 37)
Average	43(62. 32)	29(54. 72)	72(59. 02)
Good	19(27. 53)	11(20. 76)	30(24. 59)
Beginner	7(10. 15)	4(07. 54)	11(9. 02)
Total	69(100)	53(100)	122 (100)

Figures in parenthesis indicate percentage

Use of Resources

Different resources are used by the fraternity. Most of them are well familiar with journals compared to other types of e- resources. Majority(87. 70%) use journals and almost equally (74. 59%) rely on books but a meagre number use blogs (7. 37%) and repositories (2. 45%). The main choice is projected by patrons in journals by both the institutions GMC (95. 65%) and SKIMS (77. 35%) followed by the books 73. 91% (GMC) and 75. 47% (SKIMS). The access to blogs and repositories range below 6%-10. 14% in both institutions but fraternity from GMC is not aware about different repositories (Table 2). The astonishing revelation about high percentage use of books by the users need further enquiry about the nature of documents used at micro level especially type of users like novices in the trade or peers. The study need to extend to understand use of databases in harvesting different resources and its impact on their larger use. The less use of repositories or digital libraries by colleges/institutions reveals less or un-awareness of patrons or clients besides poor orientation by professionals.

Table 2: Resources Used by the Users (Multiple Responses)

Resource	G. M. C	SKIMS	Total
Blogs	7(10. 14)	2(3. 77)	9(7. 37)
Books	51(73. 91)	40(75. 47)	91(74. 59)
Journals	66(95. 65)	41(77. 35)	107 (87. 70)
Repositories	0	3(5. 66)	3(2. 45)

Figures in Parenthesis Indicate Percentage

Frequency & Time Span

The frequency of accessing e-journals is an important indicator of their utilisation. The study (Table 3) indicates

that 44. 26% use e-journals on weekly basis wherein G. M. C constitutes 47. 84% compared to 39. 63% of SKIMS. It is followed by use of e-journals on monthly basis by 22. 96% (G. M. C 20. 28% and SKIMS 26. 42%). The use of e-journals on daily and fortnightly basis does not have much difference falling in the range 18-13 percent. The fraternity from both institutions seems using e-journal rarely. By and large the respondents use about 70% on weekly and monthly basis. The fraternity is experiencing different approaches of frequency to access e-journals in both the institutions. However, with the present state of information technology facility the importance of e-journals is more recognised than of the p-journals, thus the frequency of accessing will certainly vary in due course of time.

Table 3: Frequency of Using e-journals

Frequency	GMC	SKIMS	Total
Daily	10(14. 49)	12(22. 64)	22(18. 03)
Weekly	33(47. 84)	21(39. 63)	54(44. 26)
Rarely	0(00. 00)	2(3. 77)	2(1. 63)
Fortnightly	12(17. 39)	4(7. 54)	16(13. 12)
Monthly	14(20. 28)	14(26. 42)	28(22. 96)

Figures in parenthesis indicate percentage

The scholars have a fairly not so long experience of e-journal use. Hence, it shows upper limit between 1-3 year for about 45. 91% scholars in both the institutions (Table 4). The time span does not have much difference between less than a year and more than three years. 15. 09% scholars at SKIMS experience time span of less than year in comparison to 40. 57% at GMC showing a higher range. The two institutions' participants indicate about fifty percent of difference in time spent, where SKIMS being the highest (39. 63%) as compared to GMC (13. 06%). The SKIMS being are search institution shows access to e-journals with more experience than GMC, due to research involvements/developments of institutional commitment. The experience will grow with span of time as new PGs are well versed with the technology compared to users who feel less comfortable with gadgets etc.

Table 4: Time Span of Using e-journals

Time span	G. M. C	SKIMS	Total
Less than year	28 (40. 57)	8(15. 09)	36 (29. 50)
Between 1-3 years	32(46. 37)	24 (45. 28)	56 (45. 91)
More than 3 years	9(13. 06)	21 (39. 63)	30 (24. 59)
Total	69 (100)	53 (100)	122 (100)

Figures in parenthesis indicate percentage

Awareness

The awareness about e-journals reveals multiple responses. The friends/colleagues (59.01%) are tagged as most aware group about e-journals, especially in GMC (68.11%) against SKIMS (47.16%), followed by evolution of search engines (36.06%). The teachers/guides and library staff seem to not have played their role in sharing information/awareness about disseminating information about e-journals as not more than 11% are indicated from both the institutions. Thus, it is imperative for the library staff to develop the awareness programmes of e-journals (both open access and licensed journals) for their users. Besides, the authorities of both Institutions need gradually to switch over to e-journal (Table 5).

Table 5: Sources of Learning to use (Multipleresponses)

Learn to use	G. M. C	SKIMS	Total
Search Engines	28(40.57)	16(30.18)	44(36.06)
Friends/Colleagues	47(68.11)	25(47.16)	72(59.01)
Teachers/Guides	2(2.89)	11(20.75)	13(10.65)
Library Staff	4(5.79)	5(9.43)	9(7.37)

Figures in parenthesis indicate percentage

Rationale

A large number of scholars use e-journals for research i.e. 68.11% (G.M.C) and 41.50% (SKIMS). Besides, 'current and up to date' in their area of specialisation accounts for 48.36%. The fraternity of two institutions almost shares equally to keep abreast with latest information about conferences (36.88%). The e-journal use for the publications is not encouraging as it covers 18.03%, whereas SKIMS (30.18%) fraternity involved in research shows healthy signs of using e-journals for publication as compared to GMC (8.69%). This clearly depicts the fact that use of e-journals add to the quality of research in terms of rich contents which has certainly added to the researchers' work. The quality and relevance of academic and research should not only be confined to two institutional systems, but to the wider medical community of the Kashmir Valley (Table 6).

Table 6: Purpose of Using e-journals (Multiple responses)

Purpose	G. M. C	SKIMS	Total
Research	47(68.11)	22(41.50)	69(56.55)
Teaching	18(26.08)	18(33.96)	35(28.68)
Current/Upto date	35(50.72)	24(45.28)	59(48.36)
Seminar/Conference	26(37.68)	19(35.84)	45(36.88)

Publication	6(8.69)	16(30.18)	22(18.03)
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Figures in parenthesis indicate percentage

Information Content & Format

The opinion regarding the usefulness of e-journals observes that the content of e-journals is good covering 50.09% (GMC) and 45.28% (SKIMS) respectively. The opinion regarding excellent and fair is expressed equally from both institution's fraternity terming content useful by about 24.59%. The opinion of information content largely depends on their use pattern, access points, and search methods and services they employ largely (Table 7).

Table 7: Satisfaction about Information Content in e-journals

Content	G. M. C	SKIMS	Total
Excellent	14(20.28)	16(28.30)	30(24.59)
Good	38(50.09)	24(45.28)	62(50.82)
Fair	17(24.63)	13(24.52)	30(24.59)
Total	69(100)	53(100)	122(100)

Figures in parenthesis indicate percentage

Both the institutions have different views of accessing and majority of users prefer PDF format particularly in GMC but 18-22% still use HTML (Table 8).

Table 8: Format preference of the User community

Format	G. M. C	SKIMS	Total
PDF	30(43.47)	14(26.42)	44(36.06)
HTML	13(18.85)	12(22.64)	25(20.49)
Both	26(37.68)	27(50.94)	53(43.44)
Total	69(100)	53(100)	122(100)

Figures in parenthesis indicate percentage

Search Strategy & Aptitude

The most popular search method among the respondents is keywords/subject (63.11%) with GMC (73.93%) higher than SKIMS (49.05%). The second popular option is title (44.26%) followed by journal name (34.42%). The SKIMS fraternity equally accesses through journal name and title of the article (33.96%). The author approach is least preferred by both institutional patrons. However, for quick retrieval search, in agreement to most of studies, it is revealed that keyword/subject searches have always been preferred by all scholars/ researchers perhaps being the natural-language liking (Table 9).

Table 9: Search Mechanism Revealed (Multiple responses)

Search strategy	G. M. C	SKIMS	Total
Keywords/subject	51(73. 93)	26(49. 05)	77(63. 11)
Author	8(11. 60)	10(18. 86)	18(14. 75)
Title	16(23. 19)	18(33. . 96)	54(44. 26)
Journal Name	24(34. 78)	18(33. 96)	42(34. 42)

Figures in parenthesis indicate percentage

Besides, capability and aptitude to use e-journals is considered as a factor which can affect e-journal use. For effective use of e-journals, the users have to possess ability of using e-journals. Thus to rate the ability to use of e-journals was based on four aspects. The analysis shows nearing half of the respondents (49. 18%) evaluate their ability as average. The second group rates their abilities as good (29. 50%), followed by 16. 80% respondents as beginners. The ability to use e-journals in both the institutions varies, the highest score in GMC (56.53%) being as average while in SKIMS (41. 51%) as good. In GMC, 23.19%-20. 28% treat themselves between beginner and good and none as expert. 39.62% of SKIMS fraternity responds as average while less than 12% evaluates themselves between expert and beginner. The institutions may offer readers a meticulous access to e-journals, use of Internet resources, and email communication; and e-journals will become indispensable to research activities, and profoundly change ability of use(Table 10).

Table 10: User Ability cum Aptitude of e-resources

Ability to Access	G. M. C	SKIMS	Total
Expert	0	6(11. 32)	6(4. 91)
Good	14(20. 28)	22(41. 51)	36(29. 50)
Average	39(56. 53)	21(39. 62)	60(49. 18)
Beginner	16(23. 19)	4(7. 55)	20(16. 80)
Total	69(100)	53(100)	122 (100)

Figures in parenthesis indicate percentage

Reading Interface and Dependency

It indicates that above 76% medical fraternity of both the institutions prefer reading on monitor while the percentage of readers on print format is 23. 18% (GMC) and 20. 76% (SKIMS) respectively. The study reveals that there is significant difference between the medical fraternity personal preference of electronic (on monitor) versus print out reading (Table 11).

Table 11: Reading Interface Choice of e-journals

Reading Aspect	G. M. C	SKIMS	Total
Read electronic(monitor)	53 (76. 81)	42(79. 24)	95(77. 86)
Print	16(23. 18)	11(20. 76)	27 (22. 14)
Total	69 (100)	53(100)	122 (100)

Figures in parenthesis indicate percentage

However, the dependency on electronic and print journals indicates the extent of their dependency on usage of e-journals. It demonstrates that 36.07% have medium dependency on e-journals, GMC (37.68%) is slightly higher than SKIMS (33.96%), followed by some extent and little extent covering 50%. The SKIMS respondents (20.76 %) show highest dependency to great extent in comparison to GMC (8.69%). The data reveal that the dependency on e-journals in each of four parameters is below 40%. The two medical institutions are not having sound IT infrastructure to use e-resources which can hamper their research /academics work (Table 12).

Table 12: Dependency of users on use perspective

Dependency	G. M. C	SKIMS	Total
Great extent	6 (8. 69)	11 (20. 76)	17 (13. 94)
Medium extent	26 (37. 68)	18 (33. 96)	44 (36. 07)
Some extent	22 (31. 89)	14 (26. 42)	36 (29. 51)
Little extent	15 (21. 74)	10 (18. 86)	25 (20. 49)
Total	69 (100)	53 (100)	122 (100)

Figures in parenthesis indicate percentage

Procurement and Infrastructure

The e-journals are accessible through Internet and are either freely available or subscribed by the institutional library. Table 13 shows that three out of four points comprise 25-36%. The largest segment of respondents accounts for 'to little extend' (36. 07%), followed by to some extent (32. 78%). 25. 41% respondents state not at all the institution is subscribing e-journals as per their requirement. Only 5. 74% respondents indicate to great extent.

The data reveal that less than 10% from both the institutions are satisfied to great extent with the e- journal subscription, and indicate the least segment. GMC (30. 44%) and SKIMS (35. 85%) treat subscription of e-journals by their institutions towards some extent. The GMC subscribes e-journals to little extent covering 40. 58% which is the highest among two institutions while SKIMS accounts 30. 18% under this parameter. Both the institutions seem to be in infant stage for procurement of e-journals as revealed by the study. The institutions should speed up the policy of procurement of e-journals than p-journals that will be beneficial for

the medical fraternity in retrieving the large segment of information in their field of specialisation (Table 13).

Table 13: User Satisfaction about e-journals Subscription

Subscription	G. M. C	SKIMS	Total
To great extent	2(2. 89)	5(9. 44)	7(5. 74)
To some extent	21 (30. 44)	19(35. 85)	40(32. 78)
Toa little extent	28 (40. 58)	16(30. 18)	44(36. 07)
Not at all	18 (26. 09)	13(24. 53)	31(25. 41)
Total	69 (100)	53 (100)	122 (100)

Figures in parenthesis indicate percentage

Access and use of e-journals depend on systems like computer with network facility. Adequacy and infrastructure facilities are very important for optimal e-journal use. It reveals that the fraternity of two institutions have different views about the facilities in their institutions. The results for adequacy of infrastructure facilities at the institutional libraries for accessing e-journals in respective institution for accessing and using e-journal show slightly satisfied 37. 71%, wherein GMC (46. 38%) having highest range than SKIMS (26. 42%). Further 32. 79% respondents state 'to moderate' followed by 25. 41% respondents that are not at all satisfied with the infrastructure provided at their institutional libraries. From two institutions only few respondents from SKIMS (9. 43%) evaluated infrastructure facilities to great extent. About 70% of respondents evaluate the adequacy of infrastructure facilities at their respective institution from moderate to slightly satisfy. Thus it can be concluded that the institutional libraries need to improve their infrastructure facilities (Table 14).

Table 14: User Opinion of the Infrastructure

Level of satisfaction	G. M. C	SKIMS	Total
To great extent	0	5(9. 43)	5(4. 09)
To moderate	24 (34. 78)	16(30. 18)	40(32. 79)
Slightly satisfied	32 (46. 38)	14(26. 42)	46(37. 71)
Not at all satisfied	13 (18. 84)	18(33. 97)	31(25. 41)
Total	69 (100)	53(100)	122 (100)

Figures in parenthesis indicate percentage

CONCLUSION

The study shows that medical fraternity of the institutions of Kashmir Valley are switching largely to culture of e-journals in tandem with India and globe. The institutions however need to expedite consortium on medical stream offered

by different medical institutions/agencies at national and international levels, to avail the opportunity of accessing the latest research developments in medical sciences available globally. The investment on subscription of e-journals by institutions is not up to mark. Therefore, upgrading the library system in form of infrastructure, Internet within the library and remote access facility to such resources need to be provided on priority basis The awareness of e-journals/books should be a regular affair of the Library system by organising workshops/seminars, preparing informative booklets to support user training on e-journals/books to benefit the fraternity with latest research development worldwide in medicine.

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