

AWARENESS & UTILIZATION OF ELECTRONIC INFORMATION RESOURCES AMONG MEDICAL STUDENTS

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ABSTRACT

Objective: The main objective of this research study is to find out the awareness and utilization of electronic resources by the KMC students.

Material and Methods: The total number of students in the KMC is 1484 who are enrolled in MBBS program. A random sample of 150 students from various programs of Basic Sciences and Clinical Sciences was selected.

Results: Results shows that 74 % of total population studied was males and only 26% of total were females, who can use internet and e-resources for different purposes. The majority of medical students, i.e. 121 (93 %) have access to computers but whereas a few of the respondents, i.e. 09 (7%) are not having access to computer. Computer literacy that majority of the medical students, i.e. 46 (35.5%) are enough to do their work on computer, similarly 35 (27.0%) of the respondents are good, 30 (23.0%) of the respondents are very good and 12 (9.0%) of the respondents to excellent, However a very less number of medical students i.e. 07(5.5%) have poor computer skills. Access to Internet that the majority i.e. 117 (90%) of respondents have access to internet, while only 13(10.0%) of the respondents has no access to internet. The majority of respondents under observation i.e. 48 (37.0%) are spent 1-2 hour on internet, 28(21.5%) of respondents spend less than 1 hour and 2-3 hour respectively, while 16(12.0%) of respondents spend more than 4 hours and only 10(8.0%) of the total respondents spend 3-4 hour on internet daily. The majority 116 (89.0%) of the study participants use the search engines to retrieve information they need for their study to quench the thirst of knowledge, while only 14(11.0%) of the respondents not use the search engines. The result shows that 24% of the Khyber Medical College are mostly using the British Medical Journals database for their study, Similarly 22% of respondents are using Pub-Med Journals, 19% of the respondents are using Journal of American Medical Association, 17% of the respondents use New England Journal of Medicine, 5% of the respondents are use Springer-Link database, 5% of the respondents are use Wiley-Blackwell Journal, 4% of respondents use Ebrary, and the lowest 4%, of the respondents use Taylor & Francis Journal.

Conclusion: The library should start regular orientation program for the newly admitted MBBS students, this will increase the usage of electronic resources.

Key Words: Medical institute, libraries, E-resources, search engines, internet.

INTRODUCTION

Digital communication age has brought a complete shift in the lives of professionals practicing in the 21st century. Medical profession is perhaps one of prime occupation who has embraced novel technologies in the professional development.¹ Medical students aggressively use digital medium to quench the thirst of their information needs. They are encouraged to keep

themselves update through the use of digital resources as part of their lifelong learning.² Medical apprentices are forced to update themselves for their sustaining and professional learning during the completion of degree.

Currently almost all famous scholarly and academic journals, databases, online library catalogues, and other relevant scholarly materials are now accessible through internet and same is the case with medical resources.³ Medical professionals are abreast of using digital materials as their routine practice. In most of the medical institutes students have the access to the full text electronic articles and other electronic resources. It has been observed that the students who use electronic resources are academically strong as compare to those students who don't not use this facility. The electronic

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information resources are easily accessible, low cost, and 24/7 hours availability to the students. Researches also revealed that medical students are well aware of the utilization of digital resources and have the searching skills to access the relevant information.⁴

Pakistan is enlisted in the underdeveloped countries, total population of Pakistan is approximately 188,144,044, and it is in rank of 6th in the world on Population. The internet users up to 2001 in Pakistan were 133900 and number increased to 20.431 million in 2009 and is 35 million in 2014 with increase of 16% internet penetration.⁵ In 2004 the Higher Education Commissions (HEC) launched National Digital Library Program (NDL) with the collaboration of International Networking for the availability of Scientific Publications (INASP). Through this program library provided access to electronic journals and electronic books. The main objective of the said program was to promote research culture and provide access to international scholarly information resources. The statistics show that in 1997 up-to 2004 the total impact was 800 research article, but after the NDL this number is increase to 2500 articles.⁶ The articles downloaded from NDL in 2004 were 0.5 million and this number is increase up-to 5.6 million in 2008. In the top ten subject areas of the research impact was in the field of medicine, general and internal during the period 2002-2008 are 605 articles.

The usage of electronic resources is tremendously increased in the last decade, and this benchmark will more increase if the professional librarians provide training to the users on searching techniques.⁷ The electronic version of manuscripts/ articles/ journals in many cases is available earlier to the print version. The awareness campaign from the librarians is very weak, especially in the medical librarianship and the researches in this field are also very few in Pakistan. The information seeking pattern of medical students needs to be studied for finding their information seeking behavior information needs.

Khyber Medical College (KMC), Peshawar was established in 1954 by the Governor General of Pakistan, Mr. Ghulam Muhammad. The total number of students in the year 1955 was fifty only. Today, Khyber Medical College enrolls 287 students annually. Total number of total in KMC is 1487. Khyber Medical College, Peshawar provides medical education to students of Khyber Pakhtunkhwa. In 1973, KMC established a research center namely Pakistan Medical Research Council. Library supports physicians, health professionals, medical students and medical researchers. KMC library also provide access to medical electronic information resources available to the students through HEC- PERN project from 2006.

Lal P⁷ concluded that there is significant difference between the usage of electronic resources among the medical students and dental students, another study was conducted in January 1997 concludes that medical students frequently utilize the electronic resources to meet the information needs.⁸ The objective of this research study is to find out the awareness and utilization of electronic resources by the Khyber Medical College students.

MATERIAL AND METHODS

In this case study the researcher used closed ended structured questionnaire to collect the data. In order to achieve the objectives descriptive research method was used to describe the situation. The total number of students in the KMC is 1484 who are enrolled in MBBS program. A random sample of 150 students from various programs of Basic Sciences and Clinical Sciences was selected. A detailed and well-structured questionnaire was designed and distributed among the selected sample students. Out of 150 respondents, hundred and thirty questionnaires were returned dully filled by the students correct in all respect. The response rate was 86.67 percent.

RESULTS

The personal detail section of the questionnaire provides information regarding the sex and different qualifications. The study reveals that 74% of total population studied was males and only 26% of total were females, who can use internet and e-resources for different purposes. Similarly 121 (93%) of medical students, have access to computers but whereas 09 (7%) of the respondents are not having access to computer.

Forty-six (35.5%) are enough to do their work on computer, similarly 35 (27.0%) of the respondents are good, 30 (23.0%) were very good and 12 (9.0%) were excellent, However 07(5.5%) have poor computer skills. The Figure 1 shows the access or no access to the internet. Seventy-seven (31%) use the internet for entertainment, 75(30%) used for social networking purpose. The analysis further describe that 64 (26%) of the respondents use internet for study, similarly 22(10%) of respondents use internet for research, and the lowest 07(3%) of the respondents use the internet for other activity.

One hundred and sixteen (89.0%) of the medical students of Khyber Medical College used the search engines to retrieve information they need for their study to quench the trust of knowledge, while only 14(11.0%) of the respondents did not used the search engines.

Eighty-nine (68%) of respondents were of the opinion that electronic resources are important for their study and research, while 09 (07%) sad that electronic

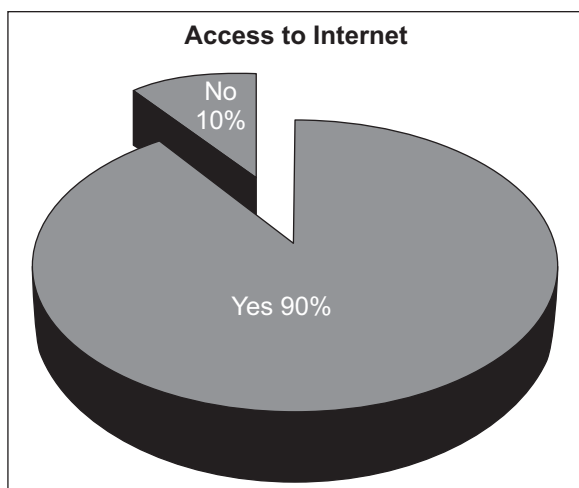


Figure 1: Access to Internet

Table 1: Usage of Electronic Resource

Usage of Electronic Resources	No. of Respondents & percentage
Every Time	48(36.9%)
Almost Every Time	31(23.8%)
Some Time	23(17.7%)
Never	19(14.6%)
Almost Never	9(6.9%)
Total	130(100%)

Table 2: Quality of Electronic Resources

Quality of information acquire from ER	No. of Respondents & percentage
Excellent	18(13.85%)
Very good	42(32.30%)
Good	44(33.80%)
Fair	18(13.85%)
Almost Never	9(6.9%)
Total	130(100%)

Table 3: Problems accessing electronic resources

Problems faced by students	No. of Respondents & percentage
Inadequate number of PCs	54(10.0%)
Lack of support from IT staff	82(15.1%)
Lack of IT infrastructure	66(12.2%)
Lack of time to use	74(13.6%)
No computer lab	62(11.4%)
E-Resources not available in library	78(14.4%)
No Internet connectivity	38(7.0%)
Lack of training/Orientation	89(16.4%)
Total	543(100%)

Note: Total sample exceeds the required size since the questions are multiple choices

resources do not play important role in their study because they used print resources to quench the thirst of information need.

Thirty-four (24%) students of the Khyber Medical College used the British Medical Journals database for their study, Similarly 30(22%) of respondents used Pub-Med Journals, Furthermore 27 (19%) of the respondents used Journal of American Medical Association, 23(17%) of the respondents used New England Journal of Medicine, 7(5%) of the respondents used Springer-Link database, 7(5%) of the respondents used Wiley-Blackwell Journal, 6(4%) of the respondents used Ebrary, and the lowest 5(4%), of the respondents use Taylor and Francis Journal.

Though electronic information resources have become a common source among the medical students and research communities, the majority of students stated that there is lack of proper training and orientation of the electronic resources and they are facing difficulties to use these electronic resources. The specific problems faced by the users are given in Table 3.

DISCUSSION

The Personal detail section of the questionnaire provides information regarding the medical college students' gender and their qualifications. The result show that majority of the respondents were male who are using internet and electronic resources for different purposes during their studies. This shows that female medical students are reluctant to use the internet and electronic resources.

In this modern era of information technology, the access to computer is available to almost every medical student. The result of the study shows that majority of the medical students' have access to computer, having good computer skills, and used computer at home. Apart from this majority of the students spent 1-2 hours on the use of internet and the purpose of use internet is entertainment and social networking. The same argument is supported by another study conducted in Nigerian University.⁹ In another study the majority of the medical and engineering students used internet, similarly in another study majority 33% of medical students used internet.^{10,11}

Majority of the Medical students used search engines whenever they need information. The search engines play a vital role in information retrieval. The user can get the current and up dated information to its users in minimum possible time. The analysis can be supported by the Romanov K¹² and describe that the due to the lack of information communication technology infrastructure, accessibility, search engines, searching skills, cost and training of are obstacles to the use of electronic resources.

Medical libraries provide print resources and electronic resources. The library does not provide ade-

quate access to electronic resources. The majority of the medical students reported that electronic resources are very important for their study and research in support of this, the other studies also reveal that majority of the medical students are report that electronic information is important for research and the quality of information retrieved from the electronic resources is good.

The medical students are not utilizing the electronic information resource up to the maximum level just because of lack of awareness and training. This argument is supported by Tamkanat, S.¹³

CONCLUSION

The medical students are not fully aware about the electronic resources available to them. There is lack of proper training, orientation, lack of access to medical journals, tight schedule of students' classes, low speed of Internet, home accessibility and library timing. Although electronic resources are very important for their study and research.

RECOMMENDATIONS

Establishment of a separate section for the acquisition and management of electronic resources within the college library is recommended. To improve the usability of electronic resources, the Librarian should arrange awareness and training programs for the students and faculty members. It is also recommended that the college administration should Provide Virtual Private Network (VPN) facility to the students and faculty members so than they can utilize e-resources outside the college campus. This will help maximal utilization of these resources.

REFERENCES

1. Adomi EE. Internet development and connectivity in Nigeria. Program. 2005; 39(3): 257-68.
2. Ashcroft L, Chris W ICT. Skills for information professionals in developing countries: Perspectives from a study of the electronic information environment in Nigeria. IFLA journal. 2005; 31(1): 6-12.
3. Baro EE, Benake-ebide CE, Janet OU. Awareness and use of online information resources by medical students at Delta State University in Nigeria. Library Hi Tech News. 2011; 28(10): 11-17.
4. Emmanuel EB, Benake-ebide CE., Janet OU. Awareness and use of online information resources by medical students at Delta State University in Nigeria. Library Hi Tech News. 2011; 28(10): 11-17.
5. Frisby, Anthony J, Kipnis, Daniel G. Has the Internet improved medical student information literacy skills? A retrospective case study. Center for Teaching and Learning and Scott Memorial Library Staff Papers and Presentations. Paper13.1995-2005. (2006). <http://jdc.jefferson.edu/aisrpubs/13><http://www.biomedcentral.com/1472-6947/11/37>
6. Jadoon. Evaluation of internet access and utilization by medical students in Lahore, Pakistan. BMC Medical Informatics and Decision Making. 2011; 11: 37-39.
7. Lal P. Internet use among medical students and residents of a medical college of North India. Indian Journal of Community Medicine. 2006; 31(4): 293-94.
8. Lobach DF, Hammond WE. Computerized decision support based on a clinical practice guideline improves compliance with care standards. Am J Med. 1997, 102: 89-98.
9. Oduwole AA, Sowole. Utilisation and impact of The Essential Electronic Agricultural Database (TEEAL) on library services in a Nigerian university of agriculture. Program. 2005; 40(2): 157-67.
10. Peterson, Michael W. Medical students' use of information resources: Is the digital age dawning. Academic medicine. 2004; 79(1): 89-95.
11. Renwick S. Knowledge and use of electronic information resources by medical sciences faculty at The University of the West Indies. Journal of the Medical Library Association. 2005; 93(1): 21-25.
12. Bhatti R, Javed MW. Digital commons at University of Nebraska — Lincon. Lib Philo Prac 2014 11(4); 1081-85.
13. Tamkanat S. Role of HEC digital library services and Impact, HEC, Islamabad. 2004; 3-13.

AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Ali M:	Idea and Data Collection
Jan T:	Analysis of Data & Discussion
Rehman H:	Result of the data analysis
Jan SU:	Critical review of paper

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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