



## INTERNET ACCESS AND UTILIZATION AMONG MEDICAL UNDERGRADUATE AND POST GRADUATE STUDENTS OF A MEDICAL COLLEGE IN MADHYA PRADESH

Chhari Neeraj<sup>1</sup>, Chakole Swarupa<sup>2</sup>

**Financial Support:** None declared  
**Conflict of interest:** None declared  
**Copy right:** The Journal retains the copyrights of this article. However, reproduction of this article in the part or total in any form is permissible with due acknowledgement of the source.

**How to cite this article:**

Neeraj C, Swarupa C. Internet Access and Utilization among Medical Undergraduate and Post Graduate Students of a Medical College in Madhya Pradesh. Natl J Community Med. 2015; 6(1):78-81.

**Author's Affiliation:**

<sup>1</sup>Assistant Professor, Department of Community Medicine, Peoples college of Medical Sciences and Research Centre, Bhopal MP;

<sup>2</sup>Associate Professor, Department of Community Medicine, CM Medical college, Kachandur, Durg, Bhilai, CG, India

**Correspondence:**

Dr. Neeraj Chhari  
Email: nchhari@yahoo.com

**Date of Submission:** 16-01-15

**Date of Acceptance:** 07-03-15

**Date of Publication:** 31-03-15

### ABSTRACT

**Background:** Use of computerized information systems by medical professionals can improve the quality of care, enhance the use of evidence-based treatment, and maintain and update knowledge. Aim of this study was to evaluate the pattern of internet access and utilization by medical students in Ujjain.

**Methods:** Cross sectional study conducted on all undergraduate & post graduate. Open -ended semi-structured questionnaire was used.

**Results:** A total of 507 UG & 127 PG students were approached and 386(76%) UG, 119(93%) PG's completed the questionnaires. Majority of the respondents (87.0%) reported having knowledge of internet use. About 365(72%) of the study subjects own computer, being significantly higher among PG's (89% as compared to UG's (67%).Main purpose of using internet as cited by UG's was email/chatting (74%), where as dissertation work was main purpose among PG (66%).Slow speed of internet was the main problem faced by the subjects 299(595) while accessing the website.

**Conclusion:** Majority of the medical students in this study had access to internet and were using it for both academic and personal reasons. Students should be trained to extract valuable information from the special medical web sites and should be encouraged to check the authenticity of information by correlating with existing evidences.

**Keywords:** Medical students, health, Internet, Knowledge, Utilization, Access, Purpose

### BACKGROUND

The development and evolution of internet has brought profound changes in the health care delivery systems across the globe ranging from education and training to diagnosis and patient management<sup>(1)</sup> The Internet has become world's biggest library where retrieval of scientific resources is only a mouse click away. The geomet-

ric growth in Internet usage is mainly due to the great success of "World Wide Web"<sup>(2)</sup>

Increasing health consciences and knowledge through internet has the potential for improving health; the ultimate objective of every health policy maker. Internet is increasingly becoming inextricably linked with our health; mental and physical.<sup>(3)</sup>it has a lower cost as compared to paper based dissemination of information and also

had an added advantage of being available worldwide instantly on demand<sup>(4)</sup>. According to the guidelines of the World Federation for Medical Education (WFME), the use of computers as well as access to the Internet and, in particular, the worldwide web should be integrated into the medical curriculum in order to enhance quality of care and keep knowledge updated<sup>(5)</sup>.

UG uses the internet for gaining the knowledge of disease, new line of treatment and news related to health, PG uses the internet for searching full-text articles which helps them in researching material for the thesis that is mandatory to the completion of an MD/MS degree. The utilization of internet facilities in any medical institute depends on students (UG/PG) who has the knowledge of internet and know how to use the computer and it also depends on the quality of service provided in the facility.

This study was, therefore, conducted with an aim to evaluate the pattern of internet access and utilization by medical students in Ujjain and to evaluate level of dissatisfaction among them and reason for the same in relation to services provided by the internet café.

**MATERIAL AND METHODS**

The universe of the study was the 507 MBBS and 127 Post graduate students of the Ruxmaniben Deepchand Gardi Medical College, Ujjain. Nursing and other Para-medical students were excluded from the study. Structured questionnaires were employed to collect data from the students at various times during the months of October to November 2011.

In preparing the questionnaire, similar studies and previously drafted questionnaires in this area were consulted. The Performa contained the questions regarding professional year, sex, use of computer and internet service, place and purpose of using internet, and reasons for dissatisfaction regard to internet services.

A total of 505 filled in questionnaires were received back, which comes to a response rate of 81 per cent. The data collected through the questionnaires were converted into machine-readable form and imported into the statistical analysis package SPSS. The data were analyzed and inferences were made based on standard statistical methods.

**RESULTS**

Out of total 507 UG and 127 PG students, 386 and 119 students responded the questionnaire. So the response rate came to be 76% among UG and 93% among PG students.

**Table 1: Comparison of undergraduate and post graduate student for various study variables**

Variables	Undergraduates (n=386) (%)	Postgraduates (n=119) (%)
<b>Gender</b>		
Male	214 (55.4)	63 (53)
Female	172 (44.6)	56 (47)
<b>Knowledge about internet</b>		
Yes	325 (84)	119 (100)
No	61 (16)	0 (0)
<b>Place &amp; mean of access</b>		
Personal desk-top/laptop	127 (32.9)	106 (89)
Library	121 (31.4)	6 (5.0)
Cybercafé	73 (19.0)	0 (0.0)
Friends mobile/computer	37 (9.5)	4 (3.4)
Own mobile	28 (7.2)	3 (2.6)
<b>Main purpose of using internet</b>		
Email/chat	286 (74)	9 (8)
Gen. information	50 (13)	23 (19)
Research	07 (02)	79 (66)
Others	43 (11)	8 (07)
<b>Frequency of using internet</b>		
Daily	166 (43)	70 (59)
Weekly	104 (27)	45 (38)
Monthly	65 (17)	03 (04)
Rarely	51 (13)	00 (00)
<b>Most Commonly used website</b>		
Google	282 (73)	49 (41)
Gmail/yahoo	31 (8)	12 (10)
Medical library	8 (2)	52 (43)
Others	65 (17)	6 (6)
<b>Problem while surfing</b>		
Slow speed	254 (66)	44 (37)
Less time	20 (5)	65 (65)
Less computers	66 (17)	00 (00)
Others	46 (12)	10 (10)

As shown in Table 1, its very much clear that PG students have cent percent knowledge about internet as compared to UG's among whom 84% students ie, 325 students knows about internet.

Internet has become a need of daily routine life and this can be shown by the result that 33% UG students own the computer in form of desktop or laptop, and this figure is more in PG's, About 106(89%) PG students out of 119 own computer. Library is the main place of accessing the internet both in UG & PG students. Cyber café is the Second place of accessing the web in UG students

(26.6%), No PG student cited cyber café in their response, it may be because Pg students doesn't get time to visit because of heavy duty schedules. Other places of accessing are own mobile and friends mobile or laptop.

Most UG students (74%) use the internet for e-mail/chatting purpose, only 2% uses internet for research work. This purpose is main among PG students(66%).the reason might be that PG students has to search articles for their dissertation which is mandatory for any MD/MS course.

Most of the UG's(43%) and PG's(59%) uses internet daily. Only 13% UG students access the web rarely, while no PG's cited their response for rare access.

Google is main site undergraduates access, followed by other sites. Only 2% UG's uses the medical related sites for any information. Post-graduate students access mainly medical E-library related (43%) sites followed by Google (41%).

It can be explained on the basis that PG students search the information to increase their knowledge or for their thesis work.

The primary problem faced while surfing the web, both among UGs(66%) & PGs(37%) was observed to be the slow speed of data transfer at café. Other reasons were impolite staff, high cost, inadequate software content of the computers.

## DISCUSSION

The aim of this study was to evaluate the pattern of internet access and utilization by medical students in Ujjain. A total of 505 study subjects comprising 386 UG students and 119 PG were covered in the study. Knowledge about internet was reported by 87% study subjects, which is maximum in PGs(100%).This was almost similar to the figures reported from a medical college in Lahore, Pakistan, but it was little lower than the study done in Finland(95%)(6).This inclination towards internet can be attributed to the increase in awareness about the social media and thirst of being updated with day to day knowledge.

Study shows that 47% of subjects own the computer in form of desktop or laptop. This was almost similar to the figures reported from medical colleges in J&K(7).But it was observed to be lower as compared to that reported among medical students of Subharti Medical College(8). Meerut(53.7%),Lahore, Pakistan (70%) and Calicut

medical college, Kerala (75%)(9). This might be due to thought of use of computers is more for non medical professionals like Engineers. Lack of a personal computer may be due to the lack of a felt need from the parent's side.

In our study library is the main place of accessing the internet(46.6%),figure is same for UG and PG. This figure is just a little higher than the study done by Sharma D et al(44.2%) in south India(10) higher than as compared to medical college in Lahore, Pakistan(20.8%), and medical college of J&K(17%) where cyber café is the main place of accessing, but lower than the study conducted in Calicut medical college(97%)

The main accessed website reported among UG students is Google (73%) which is higher as compared to study done in J&K medical college (14%) and in Medical colleges of Mangalore (62%)(11).The same studies has shown that access of journal sites among PG students is 80% in J&K medical college and 33% in Medical colleges of Mangalore, which is reported only 43% in our study. This might be due to want of literature by PGs for preparing seminars and research work & thesis.

Study shows the difference in purpose of using the web in UG and PG students.UG students mainly use web for email/chatting(74%),only 13% uses for getting general information. Research (66%) is the main purpose of using web in PG students. This is higher as compared to study conducted in MAMC, New Delhi, and lower than the study done in Pondicherry(12) where 55.3% and 97.3% UG uses internet for email/chatting respectively, study in J&K medical college shows that 80% PG students search web for research purpose.

## CONCLUSION

This study looks at the use of computers by Undergraduates and Postgraduate students and found that the use was limited to entertainment by the undergraduate.

It is concluded that the use of internet is widespread among the students but there is limited use as of potential source of learning. Further studies are needed to gather data to design cost effective ways of integrating information technology in education of medical students.

## ACKNOWLEDGEMENTS

We thank all undergraduate and post graduate for participating in the study.

## REFERENCES

1. Nauman A Jadoon et al: Evaluation of internet access and utilization by medical students in Lahore, Pakistan: BMC Medical Informatics & Decision making 2011,11:37
2. Yadav H, Jain S, Kapila S, Prasad G. Internet resources for diabetes. Ind J Med Sci 2005 ; 59 (1) : 32-42.
3. Irshad Ali Shaikh et al: Internet access and utilization for health information among university students in Islamabad: J Ayub Med Coll Abbottabad 2008;20(4)
4. Lal P, Malhotra R, Ahuja C, Ingle GK: Internet use among medical students and residents of a medical college of North India: Indian Journal of Community medicine Vol 31, No.4, Oct-Dec 2006
5. Kamyar Ghalib, Mahasti Alizadeh. Computer and Internet use among Iranian medical students: Medical education 2008;42:113-115
6. Virtanen JI, Nieminen P.: Information and communication technology among undergraduate dental students in Finland. Eur J Dent Educ 2002,6(4):147-52.
7. Sharma R, Verma U, Sawhney V, Arora S, Kapoor V. Trend of internet use among medical students: JK Sciences 2006; vol.8, No.2 april-june
8. Khan Amir Maroof, Pawan Parashar, Rahul Bansal. How are our medical students using the computer and internet? A study from a medical college of north India. Niger Med J. 2012 Apr-Jun; 53(2): 89-93.
9. Mohamed Haneefa K, Jina E M. Web-based information retrieval pattern of medical students: 8<sup>th</sup> International CALIBER 2011, Goa university, Goa, March 02-04, 2011
10. Shrama D, Kumaresen K, Ashok B: Internet Use among Medical Students in an Institution in South India. Indian journal of Public Health Research & Development 2013; Vol 4, N0.2:110-114
11. Unnikrishnan B, Kulshrestha V, Saraf A, Agrahari A C, Prakash S, Samantaray L. et al: Pattern of computer and internet use among medical students in Coastal South India. South East Asian Journal of Medical Education Vol. 2 no 2, 2008
12. Inamdar SC, Rotti SB: Computer use among medical students in an institution in southern India. Natl Med J India 2004, 17(1):8-10.