

Pattern of Internet Use Among Medical Students in Hawler Medical University in Erbil Kurdistan Region

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ABSTRACT:

BACKGROUND:

The use of computer and internet by people in all walks of life increase day by day, The internet plays a crucial role in access to information resources especially for medical students.

OBJECTIVE:

The purpose of current study is to determine the pattern of internet use among Hawler medical university students .

METHODS:

A cross sectional study started between 10/4-8/5/2014 involve 400 undergraduate students in four colleges of Hawler medical university. A self-administered questionnaire was used to collect data and analyzed using Microsoft Excel and open-info version 2.3 to find the association between variables at p value ≤ 0.05 to be significant.

RESULTS :

Out of 400 students, 298(74.5%) use internet daily,252(63%) of users were females.192(48%) were from first stage,372(93%) access internet at home ,235(58%) connecting to internet using either smart phone or personal laptop,225(56%) of students fathers and 166(41.5%) of mothers educational level were college degree. 313(78.3%) of students were from families with medium socioeconomic status ,335(84%) preferred facebook sector of internet,145(36.%)thought that internet interfere negatively with their study,213 (53%) want and 120(30%) want strongly to use internet in medical education in future..The main barriers to internet use is time constraints 280(70%) while only 48(12%) report poor computer and internet skills .

CONCLUSION :

It was seen that there is under utilization of the potential of internet resources to augment learning. Increase awareness is mandatory for correct manner of better utilization of internet resources in medical education.

KEYWORDS: medical education, internet user, social communication.

INTRODUCTION:

Internet is one of the technology of the modern era that is being extensively used around the world.⁽¹⁾The Internet has become the world's biggest library, where retrieval of scientific resources can be done within minutes.⁽²⁾ use of internet is part of medical college students' daily routine, in part because they have grown up with computers.⁽³⁾ It is integrated into their daily communication habits and has become a technology as ordinary as the telephone or television. College students use the internet nearly as much for social communication as they do for their academic education. But just as they use the internet to supplements the formal parts of their education, they go online to enhance their social lives.⁽⁴⁾

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One of the major goals of medical education is to encourage students to maintain their knowledge of medical science by becoming lifelong learners. Adequate skills in information seeking and regular use of original scientific sources are key elements in this process.⁽⁵⁾ It has a lower cost compared to paper-based dissemination of information and also has an added advantage of being available worldwide instantly on demand. Therefore, there is a need not only to equip medical fraternity with adequate skills for use of Internet but also to make Internet facility available in institutions providing medical education and health care.⁽⁶⁾

There are several activities that can be performed on the Internet: surfing, e-mailing, downloading, social networking, navigating in virtual worlds, gaming, chatting, and others.⁽⁷⁾ All of these can be used for work, leisure or interpersonal communication. Despite its inherent benefits, the Internet is not without its problems, especially when its use becomes excessive and addictive.⁽⁸⁾

One of the most powerful benefits of the Internet in higher education is its role in E-Learning which uses course materials that exist entirely on a computer or the Internet.⁽⁹⁾ The availability of internet-based information resources has increased rapidly and clinical medical students frequently use the internet to obtain information. Consequently, the internet has become an important component of quality-oriented education in medical colleges, as it encourages students to obtain current and up-to-date information.⁽¹⁰⁾

This study was done to find out the pattern of use of the internet among Hawler medical university students in term of frequency of use, internet access and utilization in study, in addition to socio-demographic profile of the participants .

SUBJECTS AND METHODS:

A cross sectional study done among undergraduate students from hawler medical university(HMU) including 1st, 2nd and 3rd stages (100 students from each of College of medicine, Dentistry, Pharmacy, and Nursing) The study started on April 15th 2014 till May 8th 2014 . A specifically designed questionnaire was designed. Verbal consent was obtained from every participants on the understanding that participation was voluntary, collected data were to be used for research purposes only and that the questionnaires were anonymous. The data was collected from the students during their weekly lectures. The information obtained includes the socio-demographic profile of students , access to internet during last week , frequency and purpose of use (personal or academic) and kind of information resources preferred by students (e.g e-mail, facebook, games, databases), place of using internet, how much internet is use for studying and how much it will affect the performance of the user and willing to use internet to supplement learning and academic education . Inclusion criteria include all students in the mentioned colleges and stages who agree to participate in the study. Descriptive data were presented in the form of table and graph. Open-info version 2.3 was used for statistical

analysis,Chi-square test and Fisher exact test with $P \leq 0.05$ was used to find out the statistical significance of the difference in the proportions after categorization of internet users for studying into (often, always, occasionally and rarely).

RESULTS:

Four hundred student were enrolled in this study,191(48%) of students were between 20-21 years old ,female gender 252(63%),192(48%) from first stage,142(35.5%) from third stage. Home was the main place of using internet 372(93%), 298(74.5%) were using internet daily. Regarding the device students use for internet access,253(58.7%) use both smart phone and personal computer .Regarding educational level of Father,225(56.3%) were for college while for mother education were Primary and college 168(42%),166(41.5%),respectively.313(78.3%) were within medium socioeconomic level as shown in table(1).Regarding which sector of internet students preferred ,Majority 335(84%) preferred Facebook as shown in the figure (1).To how often students use internet in studying, 216(54%) replied with always as shown in figure (2)

Students thinking about the impact of internet on their studies, 145(36%) said it decrease degree, 125(31%) said it improve and130(33%) said it doesn't affect students degree as shown in figure (3) To how much students want to use internet in education, Majority213(83.3%) wanted to use internet in education while 67(16.7%)students were not sure as shown in figure (5). Difficulties or barriers that may prevent students from using internet in education ,280(70%) of the difficulties were time constraints while 22(5%) were afraid from hacking as shown in figure (5). Table(2) shows that the only variables which is significantly associated with using internet in study is socioeconomic status and use of internet affect students' degree ($p \leq 0.05$) while gender, stage, place of using internet, sector preferred, barriers for using internet in study were not statistically significant ($p \geq 0.05$)

Table 1: Socio-demographic profile of the participants .

Variable		No.	%
Age	<19	168	42%
	20-21	191	47.7%
	22-23	41	10.3%
Gender	Female	252	63%
Year of college	First stage	192	48%
	Second	66	16.5%
	Third	142	35.5%
Place of access to internet	Home	372	93%
	College	23	5.8%
	Café	5	1.2%
Frequency of using internet	Daily	298	74.5%
	Weekly	56	14%
	monthly	46	11.5%
Device students use for connecting to internet	Laptop	106	26.5%
	Smart phone	59	14.8%
	Both	235	58.7%
Educational level of father	College	225	56.3%
	primary	94	23.5%
Educational level of mother	College	166	41.5%
	Primary	168	42%
Socio-economic status	Low	16	4%
	Medium	313	78.3%
	high	71	17.7%

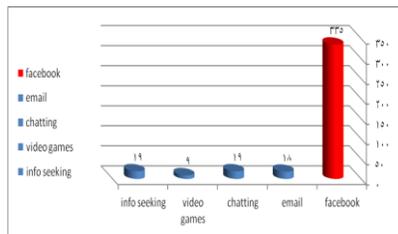


Figure1: Sample distribution according to which sector of internet preferred by students.

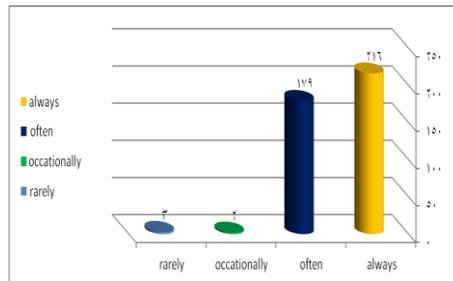


Figure2: Sample distribution according to how often student use internet in studying.

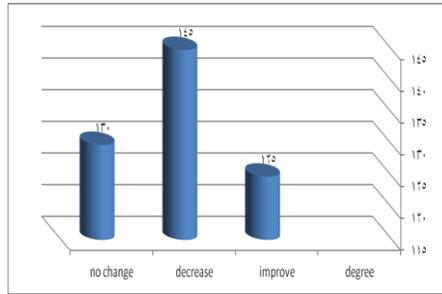


Figure 3: Sample distribution according to internet improves or decrease student degree.

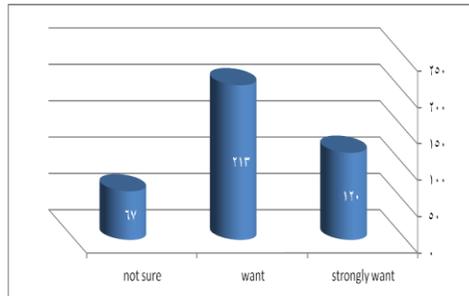


Figure 5: Distribution according to how much student want to use internet in education.

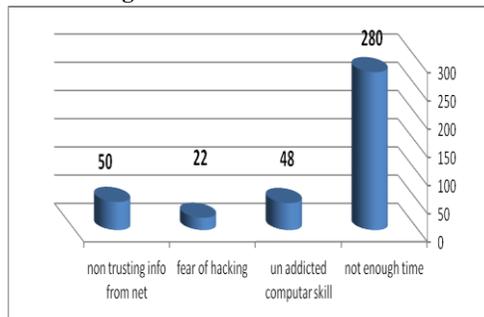


Figure 6: Sample distribution according to difficulties that prevent using internet.

DISCUSSION :

All the respondents reported using internet , irrespective of the frequency of its use. This is an encouraging sign and shows that our medical students have a strong base to utilize information technology for academic purposes .However, the students need to be guided in choosing the right materials. Results revealed that two third of our participants were female as female response to survey more seriously than male in all the involved

colleges especially in nursing college but this difference is not significant(p 0.24) comparing our result with a study done in Coastal south india ,our result is inconsistent with their results because most of their samples were male 56%.⁽⁵⁾ Regarding place of using internet, Majority,372 (93%) use internet in their homes as they found it more comfortable than other places and because most of our samples were female

Table 2: Association between internet use in study and different variables.

Variables		Using Internet in Study				P value
		Always	Often	Occasionally	Rarely	
Gender	Male	29	62	36	21	0.24
	Female	57	122	43	30	
Stages of college	first	49	95	27	21	0.08
	second	11	30	16	9	
	third	26	59	36	21	
Place of using internet	home	81	168	73	50	0.6
	college	4	14	4	1	
	cafe	1	2	2	0	
Socio-economic status	low	1	13	2	0	0.05
	medium	68	136	63	46	
	high	17	35	14	5	
Sector of internet preferred by students	facebook	74	153	63	45	0.44
	e-mail	3	13	2	0	
	chatting	3	6	7	3	
	video games	3	3	2	1	
	info seeking	3	9	5	2	
Did use of internet affect students' degree	improve	41	60	15	9	0.00004
	decrease	28	69	24	24	
	no change	17	55	40	18	
Difficulties or barriers for using internet	Time constrain	64	128	54	34	0.68
	computer skills	8	23	9	8	
	Fear of hack	3	14	4	1	
	Not trusting information	11	19	13	7	

they can't go to café or public places to access internet their because of the slightly conservative community and family restriction which is consistent with study in Saudi Arabia in Qassim university.⁹ and Jadoon et al in Pakistan.¹¹ and inconsistent with Sharma et al.⁽²⁾ in India that shows that majority of medical students were using internet in cyber cafe although the difference in our study is not significant(p 0.6).

One hundred ninety two (48%) of our internet user were from the first stage may be because students nowadays use the internet at home before arriving to college and highlights the fact that in many schools at present time computer training and

internet is part of the curriculum and the proportion of such schools especially international schools are rising in Kurdistan region .

Educational levels of students father and mother mostly were college degree (%56,41.4%), respectively which can be explained by that both students father and mother are using internet for their work and for social networking with a medium socioeconomic status 313(78%) and is significant (p 0.05).

Two hundred ninety eight(74.5%) of students use internet daily which is inconsistent with a study done on medical students in north India .⁶ and sudan.¹² that shows that three-fourth of the

respondents accessed internet for less than 3 hours per week but consistent with a study in Saudi Arabia in Jeddah.¹³ that reveal that half of medical students use internet at least 1 hour per day to keep contact with others.

For access to internet, our students use both smart mobile and/or personal laptop 235(58.7%) as nowadays most of students could afford to purchase of smart phone or laptop which is inconsistent with study in turkey.¹⁴ that show that only 10% of medical students had owned their own computers. 335(83%) access facebook rather than using internet for medical information seeking19(4.8%) although there are many medical pages and groups in Facebook like (Zanyari Tandrust , Medical videos, web medicine...etc) which anyone can get medical information although the difference in using different sites is not significant (p 0.44) which is inconsistent with a study done in Coastal south india .⁵ and Turkish military medical school.¹⁴ in which their students use e-mail more 72% ,82%. respectively may be because at that time there are no facebook but only e-mail ,also inconsistent with study done by Chathoth et al.¹⁵ for first year medical student showed that most usable site 63% was information seeking. Asking on the impact of internet on students' degree, 145(36%) said it decrease their degree ,125(31%) said it improve the degree and 130(33%) said it doesn't affect it. The decrease is due to that the students are wasting time in facebook rather than studying and the difference was highly significant (p 0.0004). 213(53.3%) always use internet for studying, while 120(30%) strongly want to use internet in future as a source of medical information where retrieval of medical scientific resources can be done within minutes and getting update medical information . there are many barriers for using internet, most commonly were time constraints, which is consistent with study in Pakistan.¹⁴ while only 12% , 5.5% report poor computer skill and afraid from hacking, respectively. In 2002, Mansor.¹³ in Saudi Arabia stated that 94% of computer and internet user felt the necessity of learning high computer skills during their medical education and 53% thought that computer and internet could improve their studies and professional skills Our results were consistent with other studies in coastal south india, north India and sudan.^(5,6, 12)

CONCLUSION:

Internet is one of the important sources of medical education and it create an educational delivery system. the web-based learning program are able to

replace the conventional class lectures and the high demand required of the medical students for the recent advances.

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