

INTERNET ACCESS AND UTILIZATION FOR HEALTH INFORMATION AMONG UNIVERSITY STUDENTS IN ISLAMABAD

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Background: Internet has changed the way we live and work. Advent of this technology has fundamentally transformed our lives the way invention of automobile changed how our lives and cities looked and worked before. Practically no information is available on the use of internet for health by the people of Pakistan. The Objectives of the study were to assess the access and utilization pattern of internet by university students in Islamabad, with emphasis on the healthcare information seeking. **Methods:** An anonymous, self-administered, and pre-tested questionnaire with questions on the access, and usage pattern of internet, seeking health care information online, and belief about reliability of such information; was distributed to only those students who were enrolled in masters or higher degree programs. **Results:** A total of 600 students were approached and 598 (99.7%) completed the questionnaires. The mean age of students was 23.5 years (range 19–40). The majority of students (423) were enrolled in masters program. Four hundred and sixty-eight students (78.26%) students had access to the computer either at home or at their university hostel. While 304 (50.84%) students had internet access at home or in their university hostel. Out of 304 students who reported having access to internet in the past three months, one hundred and thirty-nine (43.4 %) students replied affirmatively to the question of having used internet for seeking health care information. And 109 (78.4 %) thought that such information was reliable. Out of 139 students who had used internet for seeking health information, 35 (25.2 %) students replied affirmatively to the question of having discussed health information obtained from internet with their doctor/physician whom they visited for any illness/treatment. **Conclusion:** Majority of Islamabad university students in this study had access to computer and internet. Young and healthy state of this educated age group perhaps accounts for limited use of internet for seeking healthcare related information. However, high reliability of internet obtained health information needs to be further studied in terms of websites utilized for seeking such information.

Keywords: Internet access; Internet health information, University students

INTRODUCTION

Internet has changed the way we live, love and work. Advent of this technology has fundamentally transformed our lives the way invention of automobile changed how our lives and cities looked and worked before. The maxim that “half the world does not know how the other half lives” is no longer true. Internet is increasingly becoming inextricably linked with our health; mental and physical. As well as how we approach and seek modern medicine either as practitioners or consumers.¹⁻⁵ For lay and professional people living in developing countries internet has opened new vistas, and broadened health horizons for everyone who has the willingness, access, and the ability to use computers and internet.⁶⁻⁷ Internet literally provides access to up-to-the-minute information on latest developments in health care at the user’s own pace; and beauty of internet based health resources and databases like Medline lies in the fact that it neither allows geography as any hindrance nor discriminates between people in terms of providing access to understanding and learning of disease and care issues.⁸⁻¹⁰

Pakistan is the second most populous muslim and sixth most populous country in the world with a 2005 estimated population of over 160 million

people. The number of internet users in the year 2000 was about 0.134 million, however internet use growth has been 1,393.7% from 2000 to 2005. Currently there are over 800 cities and towns connected with two million internet users in the country, and a 1.2% population penetration.¹¹⁻¹² There are no studies on the internet usage pattern or its correlates by Pakistanis other than the summary numbers mentioned, to our knowledge.

Increasing health consciences and knowledge through internet has the potential for improving health; the ultimate objective of every health policymaker. We carried out this study with the aim of assessing usage pattern of internet with specific emphasis on health related information among the university students of Pakistan’s capital city Islamabad, as a preliminary study.

SUBJECT AND METHODS

The survey was conducted at the three universities in Islamabad, the capital city of Pakistan. Three graduate students trained in data collection approached prospective respondents from both natural sciences and humanities departments; through random selection, from the Quaid-i-Azam, Islamic,

and Fatima Jinnah Universities. The students were approached individually in the libraries, hostels and various departments of these universities.

An anonymous, self-administered, and pre-tested questionnaire with questions on the access, and usage pattern of internet, seeking health care information online, and belief about reliability of such information; was distributed to only those students who were enrolled in masters or higher degree programs. These students were explained the objectives of the study and after obtaining verbal consent were invited to complete the questionnaire.

The convenience-based selected students were enrolled in masters or higher degree programs. We distributed 600 questionnaires to randomly selected students, only two students refused to participate in the study owing to time constraints.

The questionnaire comprised of demographic information, and eight questions to be answered as either yes or no; students who have had used internet but did not use it for seeking health care related information were required to complete only five questions. Internet usage in the past two weeks was coded as 0=none, 1–10 hours=low, 11–30 hours=moderate, and 31 plus hours as high usage. While internet usage in the past three months was coded as 0=none, 1–30 hours=low, 31–100 hours=moderate, and 101 plus hours as high usage. Data analysis was done using STATA 9. Internet access, and utilization pattern among males and females was compared using Pearson Chi-square test to look for associations between various categorical variables.

RESULTS

A total of 600 students were approached and 598 (99.7%) completed the questionnaires. The mean age of students was 23.5 years (range 19–40). The majority of students (423) were enrolled in masters program, while the rest were either enrolled in masters of philosophy (M.Phil) or doctorate programs, and there were 319 (53.3%) males and 279 (46.7%) female students. Table-1 lists the demographic characteristics of all respondents. Four hundred and sixty-eight students (78.26%) students had access to the computer either at home or at their university hostel. While 304 (50.84%) students had internet access at home or in their university hostel. The computer and internet access by gender and enrollment status is presented in Table-2. There was significant differences between males and females in

terms of computer access ($p<0.0005$) as well as internet access ($p<0.0005$)

Students were asked about use of internet for seeking health care information in the past three months, specifically whether they have looked for advice or information about health or health care. Out of 304 students who reported having access to internet in the past three months, one hundred and thirty-nine (43.4%) students replied affirmatively to this question. Table-3 lists health care usage by gender and enrollment status. There was no statistically significant difference between males and females in seeking health care information on the internet in the past three months. Only those students who replied affirmatively to the question of having used internet for seeking health information were asked whether they thought such information on internet was reliable. Out of one hundred and thirty-nine students who had used internet for health related information, 109 (78.4%) thought that such information was reliable. Table-4 lists perceived reliability of internet health information by gender and enrollment status. There was no statistically significant difference between males and females in terms of perceived reliability of health care information on the internet.

Students who had used internet for seeking health information in the past three months were asked if in the past three months they have seen their doctor/physician for any illness/treatment and discussed health information obtained from internet with her. Out of 139 students who had used internet for seeking health information, 35 (25.2%) students replied affirmatively to this question. There was no statistically significant difference between males and females in terms of having discussed health care information obtained from internet with a doctor. Students who had used internet for seeking health information in the past three months were further asked if they discussed this information with any family member of a friend. Out of 139 students who had used internet for seeking health information in the past three months, 78 (56.1%) students replied affirmatively to this question. There was no statistically significant difference between males and females in terms of having discussed health care information obtained from internet with a family member or friends.

Table-1: Demographic characteristics of students

		Masters Program	M Phil Program	Doctoral Program
Male	n (%)	226 (70.85%)	71 (22.26%)	22 (6.90%)
	Age range in years (Mean ±SD)	19–29 (22.2±1.5)	22–40 (27±3.4)	24–40 (33±5.1)
Female	n (%)	197 (70.61%)	69 (24.73%)	13 (4.66%)
	Age range in years (Mean ±SD)	19–39 (21.4±1.8)	23–37 (25.6±2.4)	25–38 (30.7±3.9)

Table-2: Computer and internet access by gender

			Masters Program	M Phil Program	Doctoral Program
Computer access at home or hostel	Male	Yes	154 (68.31 %)	50 (70.42 %)	15 (68.18 %)
		No	72 (31.86 %)	21 (29.58 %)	7 (31.82 %)
	Female	Yes	179 (90.86 %)	62 (89.86 %)	8 (61.54 %)
		No	18 (9.14 %)	7 (10.14 %)	5 (38.46 %)
Internet access at home or hostel	Male	Yes	90 (39.82 %)	28 (39.44 %)	5 (22.73 %)
		No	136 (60.18 %)	43 (60.56 %)	17 (77.27 %)
	Female	Yes	129 (65.48 %)	45 (65.22 %)	7 (53.85 %)
		No	68 (34.52 %)	24 (34.78 %)	6 (46.15 %)

Table-3: Internet utilization pattern of students

			Masters Program	M Phil Program	Doctoral Program
Internet Use in the past two weeks	Male n (%)	None	32 (14.16 %)	8 (11.27 %)	0 (0 %)
		Low	81 (35.84 %)	31 (43.66 %)	7 (31.82 %)
		Moderate	55 (24.34)	15 (21.13 %)	14 (63.64 %)
		High	58 (25.66%)	17 (23.94 %)	1 (4.55 %)
	Female n (%)	None	18 (9.14 %)	3 (4.35 %)	0 (0 %)
		Low	99 (50.25 %)	25 (36.23 %)	6 (46.15 %)
		Moderate	47 (23.86 %)	19 (27.54 %)	5 (38.46 %)
		High	33 (16.75 %)	22 (31.88 %)	2 (15.38 %)
Internet Use in the past three months	Male n (%)	None	24 (10.62 %)	3 (4.23 %)	0 (0 %)
		Low	59 (26.11 %)	25 (35.21 %)	4 (18.18 %)
		Moderate	56 (24.78 %)	17 (23.94 %)	9 (40.91 %)
		High	87 (38.50 %)	26 (36.62 %)	9 (40.91 %)
	Female n (%)	None	4 (2.03 %)	2 (2.90 %)	0 (0 %)
		Low	87 (44.16 %)	15 (21.74 %)	2 (15.38 %)
		Moderate	57 (28.93 %)	21 (30.43 %)	5 (38.46 %)
		High	49 (24.87 %)	31 (44.93 %)	6 (46.15%)

Table-4: Pattern of Internet utilization for health information by students

			Masters Program	M Phil Program	Doctoral Program
Internet Use for Seeking Health Information/Advice	Male n (%)	Yes	56 (24.8 %)	17 (23.9 %)	1 (4.6 %)
		No	170 (75.2 %)	54 (76.01 %)	21 (95.4 %)
	Female n (%)	Yes	46 (23.4 %)	16 (23.2 %)	3 (23.1 %)
		No	151 (76.6 %)	53 (76.8 %)	10 (76.9 %)

Table-5: Perceived Reliability of Internet health information by students.

			Masters Program	M Phil Program	Doctoral Program
Think Health Information on Internet is Reliable	Male n (%)	Yes	45 (80.4 %)	15 (88.2 %)	1 9100 %)
		No	11 (19.6 %)	2 (11.8 %)	-
	Female n (%)	Yes	36 (78.3 %)	10 (62.5 %)	2 (66.7 %)
		No	10 (21.7 %)	6 (37.5 %)	1 (33.3 %)

DISCUSSION

We found in this study that computer access was very high in the university students of Islamabad, as only 21.7% reported not having access to a computer at either home or at the university. Internet access was reported by little over half of all the students, at either home or university. Most of the students were enrolled in the masters program and gender distribution was roughly equal in our study. Cumulatively about one fourth of students (139) have had used internet for seeking health care information in the past three months. Perception of health information obtained form internet was considered reliable by over three-quarter of students in our study. Thirty-five students who happened to visit their doctor in the preceding three months, discussed health information obtained form internet. Seventy-eight students also discussed this information with

either friends or relatives in the past three months. This testifies to the perceived reliability of internet obtained health information by our respondents.

Literacy rate in Pakistan is reported as 54% for the ten years and older population, according to the official figures.¹³ However, these are wide variations between various provinces and between gender groups. Literacy rate is 66.25% for males while for female sit is 41.75%. According to estimates based on 2000–2001 fiscal year data, 32% of the population lives below poverty line.¹⁴

Against this backdrop graduate and post-graduate university student’s computer access and internet usage is very encouraging; especially in the light of fact that English is a second language for people in Pakistan. Internet holds the promise of raising health consciousness and better health consumerism in addition to gaining latest information

on virtually any subject area for the peoples of developing countries. Promotion of internet and widening access of populations to this medium of knowledge would further enhance the need for indigenously developed health websites promoting health in the national and regional languages of Pakistan¹⁵. However, high reliability of internet obtained health information needs to be further studied in terms of websites utilized for seeking such information.

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