

among them. Similar to other studies, current smokers were the least aware of the dangers of involuntary smoking. The higher proportions of ex-smokers who had specific knowledge of the dangers of smoking than nonsmokers could possibly be due to the fact that the former became aware of the dangers of active and passive smoking, and thus quit. The possibility that they had developed some signs and symptoms related to ETS smoking cannot be excluded. Although, the study population had negative attitudes towards passive smoking, they seemed to be not very assertive in asking people not to smoke in their presence. Having 15% undecided to whether they have a right to ask people not to smoke in their presence, and 15% denying them this right indicates that the community is still unaware of its rights with respect to ETS. Community involvement in facilitating tobacco control measures and public support to establish nonsmoking as the norm and encouraging self policing is needed. There was less agreement on knowledge and attitude statements among men and smokers in general, but it improved with age, educational and occupational levels. Greater attention should be given to these groups in tobacco related educational programs for the success of tobacco control policies and interventions.

In conclusion, this study provides baseline information on the knowledge and attitudes of the Bahraini public on ETS. Generally, there is widespread knowledge regarding the risks of ETS, and appropriate attitudes towards it. Tobacco control efforts should particularly focus on males, the young smokers and people with lower educational and occupational levels and should apply specific strategies for each population. Moreover, we should encourage the Bahraini public to object to breathing ETS, and impose their right to clean air. The young should be brought up and school children taught to defend their rights for a clean environment. Moreover, additional research is needed in this area, as the better the understanding of the knowledge and attitudes of the public, the higher the chance for successful planning and implementation of tobacco control policies and programs. As the knowledge and awareness of the public increases, the more would be the public demand towards imposing smoking restriction policies.

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The evaluation of the internet and computer utilization by the fourth grade medical students

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As the case for the world, the use of computers and internet in the schools, workplaces and at homes are increasing in Turkey as well.<sup>1</sup> The field of medicine is developing very rapidly and the use of computers and the internet in this field is widespread as well. The capability of the internet is to provide instant, and multiway communication accelerates the worldwide production and development of knowledge.<sup>2</sup> Research data shows that computer technology supports learning, that it improves skills of critical thinking, analysis and scientific research.<sup>3</sup> This study aimed to investigate at what frequency medical students made use of computers and internet, and for which purposes. We also aimed at delineating what types of opportunities were available and the factors linked to the use of internet.

We carried out this epidemiological study of descriptive nature in Hacettepe University Faculty of Medicine (HUFM), Turkey. The study covers 297 of fourth grade students (total of 374) HUFM. Mean age of the students was  $21.78 \pm 0.96$  years, 40.1% of the mothers and 65.3% of the fathers of these students were university graduates, 53.8% of the mothers were housewives, 46.1% of the fathers were employed as administrative personnel. Nearly half of the students (47.4%) had their personal computers, 29.6% declared using the computer

## Computer and internet use among medical students

Table 1 - The distribution of weekly duration of internet use by Hacettepe University Faculty of Medicine Grade IV students in comparison with certain characteristics (Ankara, February 2005).

Characteristics	Weekly duration of internet use (hours)					Weekly duration of medical sites access (minutes)					
	0.01-1.00	1.01-5.00	>5.00	Total	Chi square <i>p</i> -value	<15	15-44	45-89	≥90	Total	Chi square <i>p</i> -value
<b>Gender</b>											
Male	22	39.4	38.6	100	11.59	36.2	15	23.6	25.2	100	0.71
Female	31	49	20	100	0.003	35.2	18.6	21.4	24.8	100	0.870
<b>Language of education</b>											
Turkish	28.4	43.9	27.7	100	0.42	39.2	16.9	20.9	23	100	1.98
English	25	45.2	29.8	100	0.811	31.5	16.9	24.2	27.4	100	0.575
<b>Mother's education</b>											
Not elementary school graduate	47.4	36.8	15.8	100		31.6	36.8	15.8	15.8	100	
Elementary school	36.2	48.3	15.5	100		46.6	10.3	24.1	19	100	
Secondary school	40	60	-	100		46.7	33.3	13.3	6.7	100	
High school	32.3	30.9	36.8	100	31.92	47.1	10.3	13.2	29.4	100	31.88
University	13.4	50	36.6	100	0.000	22.3	18.7	29.5	29.5	100	0.001
<b>Father's education</b>											
Not elementary school graduate	66.6	16.7	16.7	100		66.6	0.0	16.7	16.7	100	
Elementary school	28.6	50	21.4	100		35.7	14.3	28.6	21.4	100	
Secondary school	44.4	44.4	11.2	100		11.1	33.3	22.3	33.3	100	
High school	40.5	34	25.5	100	5.55	42.6	10.6	14.9	31.9	100	11.35
University	20.9	47.3	31.8	100	0.049	34.1	18.7	23.6	23.6	100	0.499
<b>Computer literacy status</b>											
Very knowledgeable	3.2	22.6	74.2	100		16.1	16.1	19.4	48.4	100	
Knowledgeable	26.2	49.1	24.7	100		35.5	16.8	23.8	23.8	100	18.85
Illiterate	59.3	33.3	7.4	100	9.95	59.3	18.5	14.8	7.4	100	0.004
<b>The status of having personal computers and internet access</b>											
Has internet access	8.9	42.9	48.2	100		23.2	14.3	18.8	43.7	100	
Does not have internet access	28.4	50.7	20.9	100	55.50	38.8	19.4	25.4	16.4	100	38.96
Does not have computer	47.3	41.9	10.8	100	0.000	48.4	18.3	24.7	8.6	100	0.000

laboratory in the school, 31.4% stated that computers were available in the places they stayed, 35.6% said that they were using internet cafes, 60.2% of the personal computer owners (total 186) had internet access, 12.8% of the students stated that they did not know how to use computers, 50.8% of the students stated that they learned how to use the computers by themselves and 12.1% mentioned having received computer classes at school. When 2 most important purposes for using computers were questioned, 84.1% of the students stated internet access, 32.6% mentioned writing texts. Most of the students (90.9%) stated that they use internet. When the 2 most common reasons for using the internet were questioned, 63.6% talked regarding communication (chat, electronic mail, messages, and so forth), 49.1% were accessing medical sites.

Internet users among HUFM fourth grade students were using internet for  $4.78 \pm 5.82$  hours/week on average (median=3 hours). The students using the internet were visiting medical sites for  $1.14 \pm 1.70$  (median=0.5 hours) hours per week, 44.5% were using the internet for 1.01-5.00

hours per week, and 48.5% of the students were using the medical sites for 1.00-1.99 hours per week on average. When the internet users access the internet, they have a mean stay of  $90 \pm 63$  minutes. Nearly half of the students (50.4%) stated not being able to use the internet at desired duration and frequency. The reasons behind this limited use of internet are: not being able to find time (28.3%), and limited numbers of computer facilities (23.9%). Financial constraints are being stated as the third most important reason behind not being able to use the internet at desired level (18%). Nearly half of the internet users could abide by the anticipated time of use when they access the internet (51.5%), 79.8% of the students stated using the internet for their courses, 29% mentioned decreased use when compared with the preclinical years while 35.3% talked regarding increased use, and 75.8% of the students found the number of computers available for their use insufficient, while 77.1% reported the offered time allocation being limited. There was no gender difference between the students regarding the rates of having personal computers, 47.2% of

the females, and 47.8% of the males had personal computers ( $p>0.05$ ). The possibility of having a computer increased together with the increasing educational status of the mother, 38.8% of the students whose mothers are not university graduates, and 60.5% of the students whose mothers were university graduates had their own computers ( $p<0.01$ ). Approximately 39.4% of the male students were using the internet for more than 5 hours per week while only 20% of the females were doing so ( $p<0.01$ ). As regards to the time spent for medical site access, there was no difference between male and female students. The language of education does not create any difference in terms of duration of internet use, and duration of use of the medical sites. Together with the increases in the educational status of the mother, there was a statistically significant increase in the duration of internet use and duration of use of the medical sites ( $p<0.01$ ). The duration of weekly internet use increased with the increases in the educational level of the father ( $p<0.05$ ), however, the duration of use for the medical sites did not differ. Having very good or good computer skills, having their own computer and having internet access significantly increases the duration of weekly internet use and the duration of access to medical sites ( $p<0.01$ ) (Table 1). Among those who were not using the internet for their courses there was an increase of use by 9.1% when compared with preclinical years whereas among those who were using the internet for their courses this increase was 41.9% ( $p<0.01$ ).

Main influences on the use of internet are; educational status of the mothers, and whether they have their personal computers or not. Together with the increase in the level of the education of the mother, it is interesting to see a statistically significant increase in the level of computer and internet use by the students. As it is true for different fields of education, in the education of medical students or in the level of using educational opportunities, educational status of the mother, her having a profession; thus, the status of women in the society has an influential role. The main denominator in this case might be the increased possibility of having a personal computer together with the increase in the educational status of the mother. In a study conducted in 2003 in another medical school in Turkey [Gulhane Military Medical School (GMMS)] different measures were

compared with the evaluate internet use, and similar conclusions were arrived at. In our study, 47.4% of the students had their personal computers whereas in GMMS only 8.9% of the students had this.<sup>4</sup> This difference might be related to the fact that GMMS is a military school that students attend as a boarding school, and the school provides several opportunities for computer and internet use. Other study which presents preliminary results from the study to evaluate the Medical Informatics curriculum at the Rijeka University School of Medicine, Rijeka, Croatia proved that, from one generation to the next, students show more and more interest in Medical Informatics, more of them have their own computers and more of them use internet and e-mail communication.<sup>5</sup>

In HUFM, the computer facilities made available for use by the students had coverage of 75.8%, and the duration of use was 77.1%, which was found to be insufficient. Due to the inadequacy of computer facilities, 23.9% of the students could not use the internet for the duration and the frequency they desired. The number of computers available for use and the time allocated for use should be increased. Medical curricula should include education pertaining to the use of computers and the internet.

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