

## Original Article

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# Computer Literacy and Attitudes Towards e-learning among Bangladeshi Medical Students.

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\*Nasrin Sultana Chowdhury<sup>a</sup>, Nurun Nahar Chowdhury,<sup>b</sup> Ferdous Rabbi<sup>c</sup>, Rehnuma Tabassum<sup>d</sup>, Sonia Ishrat<sup>e</sup>.

<sup>a</sup> Assistant Professor, Department of community Medicine, East- West Medical college ,Dhaka, Bangladesh

<sup>b</sup> Assistant Professor, Department of psychiatry, Green life Medical College, Dhaka, Bangladesh

<sup>c</sup> Associate Professor, Department of Community Medicine, East- West Medical college, Dhaka, Bangladesh

<sup>d</sup> Assistant Professor, Department of Physiology, East-West Medical college, Dhaka, Bangladesh

<sup>e</sup> Assistant Professor, Department of Biochemistry, East-West Medical college, Dhaka, Bangladesh

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### Abstracts :

**Background:** The use of computer has enhanced undergraduate medical education. Computer assisted learning improves performance at examination, develops problem solving skill. The study evaluates computer literacy among the medical students in Dhaka, Bangladesh. **Material and Method:** Cross sectional descriptive type of study. Data collected by interviewing 322 randomly selected medical student from East West Medical College & Hospital , Dhaka, Bangladesh. **Result:** Maximum respondents are within 20 -22 yrs (52.8%) female (54.7%), and have average computer skill (61.8%), mostly use for personal purpose (69.6%). Among the user most of them(66.8%) have own computer at home, mostly have laptop (52.2%) from their school period (51.6%).Among most of them consider using this hamper their study (59%), but they found it helpful to improve study (38.2%).They use internet every alternative day, majority for (35.7%) email & browsing. **Conclusion:** This study showed that students browses net and email for recreation & social communication mostly rather than acquiring knowledge of medical science. Computer is a good source of knowledge of medical science. It can be used to gain update information of medical education.

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### Introduction:

Graduate students are a unique population. Occupying a middle ground between childhood and adult hood , between work and leisure they are at the for front of social changes. Now a days use of the internet is a part of students daily routine in part because they have grown up with computers. It is integrated into their daily communication habits and has become a technology as ordinary as the telephone or television.<sup>1</sup>

One of the major goals of medical education is to encourage students to maintain their knowledge of medical science by becoming

\*Address of correspondence:-

**Dr. Nasrin Sultana Chowdhury**

Assistant Professor

Department of Community Medicine

East- West Medical College & Hospital

Aichi Nagor , JBCS sarani , Turag, Dhaka -

1711, Bangladesh

Telephone: +8801732622323

E- mail: sharna2020@gmail.com

lifelong learners. Adequate skills in information seeking and regular use of original scientific sources are key elements in this process. Additionally it is believed that medical students need training to learn how to use Web- based search tools and techniques in order to find high-quality information resources.<sup>1</sup>

## Materials & Methods:

### Result:

Following tables are showing the findings of this study.

**Table 1:** Baseline characteristic of the study population (N=322)

| Characteristics     | Number | Percentage(%) |
|---------------------|--------|---------------|
| 1.Age Group (years) |        |               |
| 17-19               | 58     | 18.0          |
| 20- 22              | 170    | 52.8          |
| 23 – 25             | 85     | 26.4          |
| 26- 28              | 9      | 2.8           |
| 2 Gender            |        |               |
| Male                | 146    | 45.3          |
| Female              | 176    | 54.7          |
| 3.Income            |        |               |
| <20000              | 37     | 11.5          |
| 20000 40000         | 105    | 32.6          |
| 40000 60000         | 118    | 36.6          |
| >60000              | 62     | 19.3          |

In the demographic profile of our study population (Table : 1) most of the participant (52.8%) were between 20-22 years of age and mostly female (54.7%) compare to their counter part. Most of this respondent (36.6%) came from a family monthly income 40,000 – 60,000 Bangladeshi Taka (BDT)

**Table 2 :** Pattern of use of computer among the medical students (N=322)

The present cross sectional descriptive study was carried out in East-West Medical College, Dhaka, Bangladesh. The study population consist of 322 medical student studying different year of that medical college. Data were collected with structured pretested questionnaire. Prior to the study question fill- up every participant were explain the purpose of the study.

| pattern of use of computer | Number | Percentage (%) |
|----------------------------|--------|----------------|
| 4. Skill                   |        |                |
| Not aware                  | 26     | 8.1            |
| Beginner                   | 61     | 18.9           |
| Average                    | 199    | 61.8           |
| Expert                     | 36     | 11.2           |
| 5. Purpose                 |        |                |
| Personal                   | 224    | 69.6           |
| Professional               | 1      | 0.3            |
| Academic                   | 91     | 28.3           |
| No use                     | 6      | 1.9            |
| 6.Residence                |        |                |
| None                       | 27     | 8.4            |
| At home                    | 215    | 66.8           |
| At hostel                  | 71     | 22.0           |
| At college                 | 2      | 0.6            |
| Cyber Café                 | 7      | 2.2            |
| 7.Type                     |        |                |
| Desktop                    | 118    | 36.6           |
| Laptop                     | 168    | 52.2           |
| Palmtop                    | 2      | 0.7            |
| None                       | 34     | 10.5           |

While evaluating their computer literacy we found that ( Table : 2) most of them consider themselves (61.8%) as an average user. Though few of them (8.1%) still don't know how to operate them but being a medical student some of them consider themselves as an expert (11.2%) user . How ever most of them (28.3%) use computer for academic purpose and only one of them reported to use for professional purpose. They mostly use it at their home(66.8%) and also a good number uses computer in their hostel (22.0%) Personal laptop computer is the most common (52.2%) mode of their use, with the second next common mode is dextop computer (36.6%) .

Table 3: Computer using Attitude for study purpose among study population. (N=322)

| Computer use               | Number | Percentage (%) |
|----------------------------|--------|----------------|
| 8. Time                    |        |                |
| Not                        | 52     | 16.1           |
| Rarely                     | 68     | 21.1           |
| Weekly                     | 76     | 23.6           |
| Every alternate day        | 123    | 38.2           |
| None                       | 3      | 0.9            |
| 9. Online activities       |        |                |
| Search medical information | 90     | 28.0           |
| Email & browsing           | 115    | 35.7           |
| Movies & music             | 91     | 28.3           |
| Game                       | 21     | 6.5            |
| 10. Acquired computer      |        |                |
| School period              | 166    | 51.6           |
| Last 5 years               | 103    | 32.0           |
| Last 1 year                | 48     | 14.9           |
| None                       | 5      | 1.6            |
| 11. over use effect        |        |                |
| Enrich knowledge           | 132    | 41             |
| Hamper study               | 190    | 59             |

Regarding computer using attitude of this population (Table : 3) we came to know that most of the student use this (38.2%) every alternate day & (35.7%) internet for email & browsing. Beside this the two other major group use computer are for entertainment like movie & music (28.3%) and also for searching medical information (28.0%). Majority of the computer using since their school period (51.6%). Among the user most of them (59%) consider its use hamper their study.

### Discussion:

The recent technological advances in the fields of medicine and medical education have made computer literacy a vital competency for the present day medical undergraduate. In our study

maximum respondents are within 20-22 years of age. This is very common as it is the actual age of beginner medical students that is 1st and 2nd yrs of medical education. This age group is also similar with our neighbouring countries.<sup>1</sup> Regarding gender maximum respondents are female (54.7%) than male (45.3%). It is due to

more female students admission into this college. Regarding parents income of the respondent majority have income within 40000 - 60000 (36.6%) taka/month. It is also consistent as it is a private medical college and so most students parent income are come from medium/high socio- economic condition.

Regarding skills of the respondents majority of the students have average (61.8%) skill on computer. This is because among medical students there is less interest of becoming expertise in computer as it is not used so. Other study shows skill of use (76.2%).<sup>2,3</sup> Regarding use of computer maximum respondents 69.6% can operate computer and social community purposes. Some have 28.3% internet on academic purpose. There they go for acquiring knowledge of their learning matter. This is also similar with other study in India.<sup>1</sup> 21.9% medical students at Jeddah used computer for academic purpose.<sup>4</sup> Other study in Yemen shows 76.2% use internet for general purpose and lesser use internet for educational & research purposes.<sup>5</sup> Regarding having computer at residence majority of students have own computer at home (66.8%) a few have no computer (8.4%). This study is also correlates with other study at where 71.9% of medical students owned a personal computer.<sup>6,7</sup> Other study shows (73%) had access to computer at home.<sup>2</sup> Regarding variety of computer, most of the respondents possess laptop (52.2%) and some have desktop (36.6%). Rest have no computers at all. This is because now a days laptop is more popular for its portability. It is cheaper now and can carry easily from here and there. Other study show in Saudi Arabia where 71.9% of medical students owned a personal computer.<sup>4</sup> Similar finding were also noted in Finland where more than 70% Danish medical students had their own computer.<sup>7</sup> In other two studies in India computer ownership varied from 48%<sup>1</sup> to 55%.<sup>8</sup>

Regarding time to connect of computer, majority of respondents get time to connect every alternate day (38.2%). 25% of medical students used computer (2 – 3) times a week.<sup>10</sup> This study is similar with a study done Saudi Arabia, where 16% medical students used computer on daily basis.<sup>4,9</sup> Other study shows 75% of university and high school students used

computer daily.<sup>10</sup> Regarding online activities, majority of respondents email and browsing games (35.7%) only (28%) search medical information and 28.3% watches movies & music. Few 6.5% playing games. Internet was the most common computer application utilized in by medical students in Tanzania and Denmark especially for email communication.<sup>4,11</sup> Another study medical students from south India has reported a higher usage (97.3%) of email for internet use<sup>12</sup> Among medical students around the world have reported that e –mailing is the most frequent reason for accessing the internet<sup>12,13,14,15</sup>

Regarding time of acquired computer of the respondent majority have computer during school period (51.6)% some have from last 5 years(32.8%).This is because now our primary & secondary education system is enriched with computer from school.so from there they can learn it besides home.This study is also similar with other study.<sup>4,16</sup> Study done on medical students in saudia Arabia where a majority (53.2%) of medical students had been using the computer for 4 -6 years.<sup>4</sup> Regarding computer over use majority of respondents find it hampers study (59%)as by watching movies and musics and playing games.Rest 41% find enrichment of knowledge.

### Conclusion:

The use of the computer and internet is rapidly becoming a key component of medical education in many parts of the world.The use of computerized information systems by medical professionals can improve the quality of care, enhance the use of evidence based treatment, and maintain on update knowledge

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