Computer use pattern among adolescent school students in Chennai

Anitha Rani Muthuthandavan¹, Sathyasekaran Bernard Winfred Christadoss²
¹Associate Professor, ²Professor, Department of Community Medicine, Sri Ramachandra Medical College and Research Institute, Sri Ramachandra University, Porur, Chennai, India

Abstract

Background: Computer use among adolescents is increased during the recent years. Computer has become important social medium for adolescents. Aim: To assess the computer use pattern among adolescent school students in Chennai. Methods: This is a cross sectional study done among 1842 adolescent school students studying in secondary and higher secondary schools in Chennai. Data was collected by self-administered questionnaire. Results: There were 895 boys and 947 girls included in this study. Nearly 18% of adolescents were using computer for more than 3 hours. Nearly 35% of adolescents were non users of computer. Conclusion: Greater proportion of adolescents use computer for longer hours which need to be restricted for prevention of long term adverse health consequences.

Key Words

Computer Use; Adolescents; School Students

Introduction

In India, during the recent years, computer has become an important medium in every day social life of adolescents. Computer use may lead to decreased time spent being physically active, which may predispose to excess weight gain. Moreover previous studies have proved the higher prevalence of musculoskeletal discomfort and disorders among adolescents who use computers [1, 2]. Working on a computer for long periods of time can lead to inflammation of tendons, nerve sheaths and ligaments and damage to soft tissues [3]. Some of the cross sectional studies [4, 5] and one longitudinal study [6] have found that internet use was associated with more loneliness and depression for adolescents. However to our knowledge, computer use pattern among Indian adolescents has not been previously described.

Aims & Objectives

To assess the computer use pattern i.e. the rate of computer use, the purpose for which it is used, place where it is used and the gender differences in computer use among adolescent school students of Chennai.

Material and Methods

This is a cross sectional study among students in standards 8-12 conducted in September 2008 to July 2009 in Chennai, Tamil Nadu. Sixty secondary and higher secondary schools in Chennai city were selected randomly and approached for permission to conduct the study. The schools which gave permission were included in the study (N=30).The schools included were 17 private and 13 public schools. The number of students selected from 30 schools was 1896. The number of students selected randomly from each school was 64.

Permission to conduct the study was obtained from the head of the school. In each school, all the sections in VIII- XII Std classes were included in the sampling frame. A sampling frame was prepared by enlisting using attendance registers of all the eligible classes and 64 students were selected by simple random sampling technique using the table of random numbers and the consent forms were handed over to them to be signed by their parents. During the subsequent visit, data was collected from students whose parents have given consent.

Data was collected using self-administered questionnaire. Questionnaire was made in English and Tamil. After explaining the purpose of the survey, questionnaire was given to all students. Each question...
The students use multiple places for computer use such as schools (48.8%), home (29.9%), friend home (10.4%), Internet centres (12.5%), Library (4.8%) and other places (3.4%).

Greater proportions of students use computers for academic purpose followed by playing games and the duration of computer use also more for these purposes. Use of computer for graphics, photos, images, audio, video was also common among adolescents [Table 1]. Significantly greater proportion of males use computer for academic purpose and for playing games than females (p<0.001). (Data not shown in table).

Discussion
This study done among 1842 adolescents in Chennai city showed that one third of them do not use computer and nearly two thirds regularly use computers. About 54% of adolescents in this study use computers for more than an hour in a day. A study in Karnataka showed that 35% of adolescents used computer daily for more than 180 minutes. [7] High proportion of adolescents use computer for academic information and some of them are computer group students. But previous studies have proved that computer use is not associated with high academic performance. [8, 9]

Nearly 30% of adolescents in this study use computers at home. Spending time with computers at home, usually is at the expense of other daily activities especially face to face interactions with family members which will weaken the family ties. In this study significantly greater proportion of males use computer for longer duration of hours than females. Excessive use of computer can lead to computer addiction which will interfere with daily life. Computer addiction can affect the relationships, social interaction, mood, personality, thought process and sleep of individuals. [10]

Nearly 50% of adolescents use computers in schools which cannot be restricted as they are part of their curriculum. But remaining use computers at home, friend’s house, cyber cafes etc which can be restricted by the parents to prevent computer addictive behaviour among adolescents.

Conclusion and Recommendation
This study reports longer hours of computer use by adolescent school students. The hours need to be restricted to prevent long term health consequences among adolescents.

Authors Contribution
MAR has planned the study, collected and analyzed the data and drafted the manuscript. BWCS has contributed in designing the methodology, writing the research proposal and refining the manuscript.
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References


Tables

| TABLE NO. 1 DURATION OF COMPUTER USE AMONG ADOLESCENTS FOR VARIED PURPOSES |
|---------------------------------|-----------|-----------|-----------|-----------|
| **Computer use**                | <1 hr     | 1-3 hrs   | >3 hrs    | Total     |
| Academic information            | 356(19.3) | 338(18.3) | 50(2.7)   | 744(40.4) |
| Play games                      | 221(12.0) | 400(21.7) | 22(1.2)   | 643(34.9) |
| Graphics, photos, images, audio, video | 155(8.4) | 183(9.9)  | 29(1.6)   | 367(19.9) |
| News, weather, sports           | 142(7.7)  | 145(7.9)  | 5(0.3)    | 292(15.9) |
| e mail and social networks      | 153(8.3)  | 116(6.3)  | 17(0.9)   | 286(15.5) |
| Word processing                 | 117(6.4)  | 78(4.2)   | 8(0.4)    | 203(11.0) |
| Find health information         | 83(4.5)   | 86(4.7)   | 1(0.1)    | 170(9.2)  |
| Consumer products information   | 58(3.1)   | 47(2.6)   | 4(0.2)    | 109(5.9)  |
| others                          | 54(2.9)   | 97(5.3)   | 5(0.3)    | 156(8.5)  |