

Research Article

STUDY OF PREVALENCE OF HEALTH PROBLEMS AMONG COMPUTER PROFESSIONALS IN SELECTED INFORMATION TECHNOLOGY (IT) COMPANY IN NAGPUR DISTRICT OF CENTRAL INDIA

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ABSTRACT

Background: Computers are being used in every aspect of life. This has also lead to occupational health problem. Hence the study was aimed at exploring the health related problems in computer professionals.

Objective: 1) To study the prevalence of health disorders among computer professionals. 2) To assess the Knowledge, Attitude & Practices (KAP) among the computer professionals.

Method: A Cross-sectional study was conducted with sample size of 134(M: 95, F: 39) computer professionals, from Nagpur IT company which included software developers, marketing groups and data entry workers.

Result: Prevalence of health problem is 83% in the computer workers Awareness about Health effects on computer professionals was good 72% .Body ache (59%) and Visual symptoms (52%) were very commonly seen. In the Body ache; Backache (34%) and Headache 16%) were very common .In the Visual symptoms; watering of eye (13%) and eye strain (12%) were common.

Conclusion: Computer professionals were prone to certain health problems like backache, watering of eye; computer field needs to be emphasized as a field of concern in occupational health and appropriate ergonomics should be applied in order to decrease the health problems related to morbidity.

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INTRODUCTION

In the twenty-first century, computers have become almost as ubiquitous as the humble pen and paper in many peoples' daily life. There are approximately six computers per thousand populations with an installation of 18 million personal computers (PCs) and their number is increasing all the time. The computer is a vital tool in every dimension. However, the long periods of working at a computer as most people do, can cause musculoskeletal problems, eyestrain, and overuse injuries of the hands and wrists which can be reduced or eliminated with proper workstation design and improved posture. A survey done by the American Optometric Association estimates that at least 10 million cases of computer-related eyestrain were reported each year.^[1]

While computers have revolutionized our lives, they have also brought in some job-related complaints and symptoms. Some of the common symptoms associated with excessive use of computers include; frequent headaches, blurry or double vision, burning eyes, focusing difficulties, eye fatigue, eye irritation, excessive tearing, dry eyes, pain in the eyes and frequently blinking and squinting.^[2]

Currently, Indian Information Technology (IT) Sector is growing rapidly with 2,236,614 working in it. This has generated a new genre of occupational health problems such as musculo-skeletal disorders, computer vision syndrome, psycho-social and sleep problems.^[3]

MATERIAL & METHODS

The study design was cross sectional. The IT professionals working in different sectors were identified and representative sample was taken to complete the sample size. Based on various studies conducted in India and taking into account time constraints the sample size of 134 individuals working in the selected IT company in Nagpur district was taken. The study period was from September 2013 to October 2013. The inclusion criteria for subjects to be considered for the study were, firstly the subject should be working in the current job for past six months. Secondly, he/ she should be working on the computer for at least 3 hours/ day. Excluded from the study were the clerks, security guards of that company and those were not willing to participate in study. Permission

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from the respective organizations for doing the study was taken.

The following tools were used during the study: a pre-designed, semi-structured questionnaire, a Mercury sphygmomanometer, measuring tape and a weighing machine. Informed consent was obtained from each respondent prior to the interview and physical examination, age, income, working hours, working environment, experiencing of any problem while working on computers and the type and kind of problems perceived. The study subjects were examined for their visual acuity by using a Snellens visual acuity chart for distant vision. Examination of spine and general examination were also done. If the study subject complained of any problem or had computer related health problem on examination he/she was advised medical treatment, counseled for proper ergonomics or referred for a specialist treatment. Statistical appraisal was done by using Chi-Square test.

RESULTS

The present study included 134 IT workers (M: 95, F: 39) Prevalence of health problem is 83% in the computer workers. Awareness about Health effects on computer professionals was 72%. Body ache (68%) and Visual symptoms (50%) were very commonly seen. In the musculoskeletal problems; Backache (35.82%) and Headache (32.83%) were very common. In the Visual symptoms; watering of eye (26.86%) and blurring (17.16%) were common. Most of them had knowledge (72%) & right attitude (67%) about the health effects due to computer use and measures to prevent it. Regarding practices, very little of the computer users regularly exercised (30%). Most of them lead a sedentary lifestyle (70 %).

Table I: Working pattern & health problems of IT workers.

Characteristics	No of workers N=134		Total
	Male	Female	
Job type			
Software	61	20	81(60.44%)
Hardware	12	09	21(15.67%)
Marketing	06	4	10(7.4%)
Others eg: data entry, both hardware & marketing.	16	06	22(16.41%)
Status of health			
Having Health Problems	78	32	110(82.08%)
Not Having any Problems	16	08	24 (17.91%)
Type of health problems			
a(Musculoskeletal)	61	30	91(67.91%)
b(Eye problem)	45	22	67(50%)
c(Acid peptic disease)	17	9	26(19%)
d (Other, cough ,fever, etc)	22	12	34(25.37%)
e (None)	20	4	24(17.91%)

* Multiple answers, $\chi^2 = 2.91$, $df = 4$, $p=0.572(p > 0.05)$, figure in parenthesis denotes the percentage.

Table II: Knowledge Attitude and Practices

a) Knowledge: Can computer use for long hours affect body?	
a)Yes	96(71.64%)
b)No	38(28.35%)
Can regular exercise help reduce body ache, stress?	
a)Yes	78(58.20%)
b)No	56(41.79%)
b) Attitude: Does the protective screen on computer protect eyes?	
a)Yes	86(64.17%)
b)No	48(35.82%)
Does rotatory chairs help reduce the back ache?	
a)Yes	90(67.16%)
b)No	44(32.83%)
c) Practice: Do you exercise regularly?	

a)Yes	40(29.85%)
b)No	94(70.14%)
Do you use the correct erect sitting posture?	
a)Yes	46(34.32%)
b)No	88(65.67%)

*Multiple answers; figure in parenthesis denotes the percentage.

DISCUSSION

In the present study as many as 82% of the subjects had one or more than one computer related health problem, which is a very high computer related morbidity. This observation is in conformity with Shah et al^[4] where 93.56% software professionals, had one or more problems. In the study done by Sjogren-Rouka et al^[5] in Finland on computer operators, as many as 91.8% reported one or other problem.

The musculoskeletal problem was found to be 67% and the visual problem found was 50 % which is similar to the study conducted by Sharma et al^[6] in Delhi which reported 77.5% of body ache and the visual problems reported in his study was 76%. In a study done in Loni, Maharashtra, it was observed that in 93.3% of study subjects had one or more computer-related health problem, the most common complaint being musculoskeletal (73.3%) followed by ocular (65.3%)^[7].

In the present study 71% of the workers had knowledge about computer using and health related problems. A survey conducted by Khan R et al, 2012 on computer users from different professional background shows 52% awareness^[8]. Seventeen out of twenty human resource development (HRD) managers were aware of the health risks^[9].

In the current study 34% of the workers had been using the correct posture. In a study conducted by Chavda E et al showed 20% of the students acquired desk sitting every time^[10] rest others used lying down posture or wrong postures.

CONCLUSION

Computer professionals were prone to certain health problems like backache, watering of eye; computer field needs to be emphasized as a field of concern in occupational health and appropriate ergonomics should be applied in order to decrease the health problems related to morbidity.

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