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Prevalence of Upper Extremity Musculoskeletal Symptoms in Computer Users

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Abstract: Computer use can give rise to repetitive strain injuries with resultant pain in the neck, arms, shoulders, forearms, wrists and hands .Computer assisted injuries, which started gaining prominence in India from past five years and have now turned into an epidemic resulting in computer related health problems. Upper extremity musculoskeletal disorders continue to be a substantial public health problem. Because the labor market has changed where the proportion of young workers is increasing, musculoskeletal disorders are affecting young workers of age24 Years and as well youngers.
Keywords: Upper extremity, Musculoskeletal, Strain.

I. INTRODUCTION

Incorporating new technology is a multidimensional endeavor that includes assisting users to become familiar with the technology through training sessions and workshops and accommodating the technology within existing physical spaces or modifying those spaces to better accommodate the technology[(1)] .Using computers as an example, much has been written about incorporating computers into office work environments and problems that can arise that are linked to mismatches between the technology and the physical environment such as use of desks that are too high to afford comfortable use of a keyboard or overhead lights that produce glare on computer screens. Additional problems have been identified with certain patterns of use, such as prolonged hours of computer use for work or for pleasure, as well adoption of awkward postures when using a computer. Workplace risk factors include number of hours per week of computer use, working in non-neutral body postures e.g., reaching for mouse, looking up at a computer monitor, increasing age, and being female [(2).] With the increasing use of computers by secondary school and college students there is concern that the young may also be at increased risk for disabling musculoskeletal Disorders. Their usage, even for three hours per day, leads to a health risk of developing Occupational Overuse Syndrome (OOS), Computer Vision Syndrome (CVS), low back pain, tension headaches and psychosocial stress [(3).] Studies demonstrates that ergonomic training interventions can be effective as preventive health promotion measure to increase employee's knowledge of risk factor and possible solution, resulting in changed intentions altered risk behavior and self reported benefits. it follows that employee who make changes toward safe work areas and practice reduce risk factors and should have fewer injuries [(4) .]

II. AIM

To study the prevalence of text message injuries in mobile users. Specifically, the objectives were to determine whether-

A. Text message injuries considerably affect the active mobile users.
B. To compare the differences in the texting activity of school students, college students & professional users.
C. To spread the awareness about physiotherapy management of text message injury.

III. METHODOLOGY

The study was carried out on 450 subjects randomly selected from the population of Hisar and near by areas. The population consisted of school students, college students and professional users related with mobile data services.

A. Sample

The study was carried out on 450 subjects randomly selected from the population of Hisar and near by areas. The population consisted of school students, college students and professional users related with mobile data services.

B. Inclusion Criteria

Individuals who type twenty or more than twenty text messages daily using mobile phone.

C. Exclusion Criteria

Individuals with:-

1) Musculoskeletal Disorders arising due to any pathology.
2) Neurological disorders arising due to any pathology.
3) Uncooperative subjects.

D. Research Design

This study had survey design. A questionnaire was used for data collection. After taking the due concern from the subjects they made to fill questionnaire which included questions related to TMI.

E. Procedure

1) Subjects aged between 14-55 years were approached. Then the questionnaires were distributed after taking their voluntary consent.
2) The questionnaires were given to the individuals personally by the investigator (self). The participants were explained about the aims and objectives of the study. Confidentiality of subjects was maintained. Total time taken to fill the questionnaire was five to ten minutes.
3) All the individuals in the study were divided into 3 groups namely school students, college students and professional users. Then the data was calculated for further evaluation.

IV. RESULT

Data was analyzed manually using statistical analysis. Non parametric tests were chosen to compare the result of all the 3 groups i.e. school students, college students and professional users.

An extended chi squared test and chi squared test was used (only for comparing two parameters and they are Commonest position of hand while messaging or waiting for response in school students and college students) to test for any differences in all the groups. These values were compared to a table of critical values for degree of freedom (df) at different probability level (p value) based on the sample size.

If chi (χ) value is equal to or less than the critical value, then chi (χ) value is significant at that p value.

Area commonly painful	Total %
Thumb	34 %
Neck	6 %
Arm & Shoulder	8%
Wrist	6 %
Palm	4 %
No pain	46 %

Table 5.1 The given tables shows in terms of percentage the Areas commonly painful as a result of typing SMS in professional users.

V. CONCLUSION

Comparison for the prevalence of text message injuries in mobile users shows that college students (20.18%) are at more risk to text message injuries as compared to school students (14.34%) and professional users (3.66%) for all the 5 parameters most likely to influence the texting activity of active mobile subscribers.

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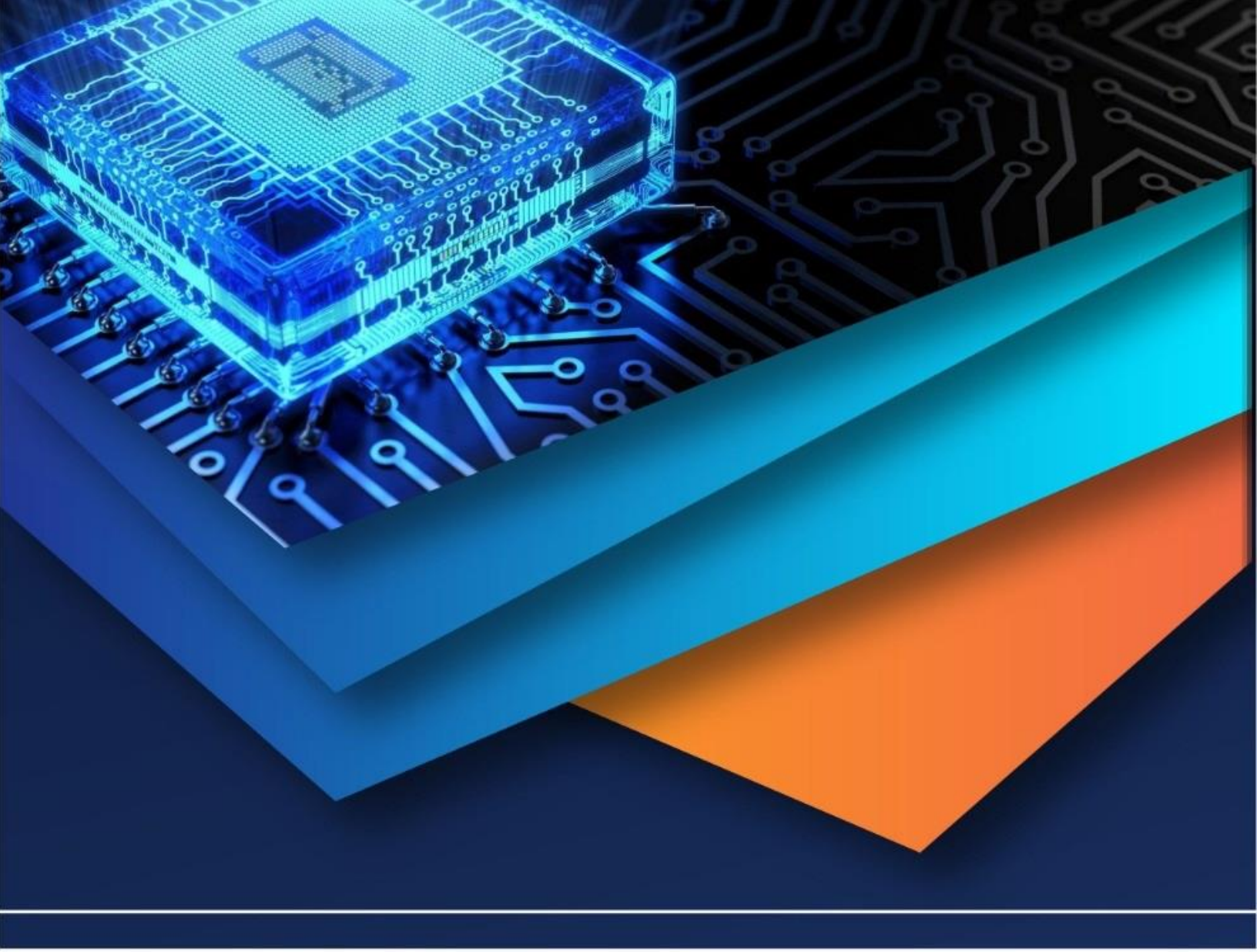

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