Original Article

Prevalence of work related neck pain in computer operators

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Objective: To determine the prevalence of work related neck pain in computer operators.
Methodology: There were 309 computer operators taken for this research. The prevalence of neck pain was assessed with the help of a questionnaire. The results were analyzed through SPSS-20 software.
Results: Neck pain was more common in female computer operators. It was more common in middle class computer operators as compared to others. 67.3% of computers operators complained of localized neck and 32.7% complained of radiating neck pain. Neck pain occurred in computer operators due to wrong posture. It reduced the performance of computer operators. Neck pain was more common in those computer operators that used computer randomly 1-3 hours.
Conclusion: Female computer operators were more victims of neck pain as compared to male computer operators. (Rawal Med J 201;42:344-346)
Key Words: Neck pain, computer operators, ergonomics.

INTRODUCTION

Neck pain is very common in the society, particularly in office workers. By defining the pain, "pain is associated with tissue injury and an capability to identify pain sensations."[1] This pain and disability is due to the pressure of socioeconomic problems, especially reimbursement to which involves blow injuries.[2] Cervical pain involving skull and neck zone was the outcome of mechanical syndromes, shock, as well as provocative degenerative diseases.[3] This pain occurring from constant postures was defines "Nonspecific Neck Pain."[4] The continuous usage of computers, with wrong sitting neck posture and sit with rounded shoulders be able to interrupt the normal lordtic curve of neck that can lead towards muscular discrepancy and therefore neck pain.[5]

Those persons who work more than two hours on computers are more likely to develop postural neck pain and other musculoskeletal problems at neck region.[6] Continuous work on computers and constant load on para spinal neck muscles leads to stretch weakness and pain.[7] The prevalence of cervical pain that occur in 1875 year old people of the United Kingdom had been 17.9%.[8] In the Netherlands, neck and upper limb pain due to computer users leads to reduced efficiency, absent from work place and increase health expenditures.[9] Greater than 50% of the computer operators have pain in neck, shoulders, arms, wrists and fingers.[10] In one study, 285 of the over-all Dutch employed people worked on computers have pain in the neck, shoulder, arms, hands or wrists in the earlier twelve months of employment.[11]

Numerous researches have been working on the efficiency of workout plans to diminish pain and disorder in affected people that complained the neck and shoulder symptoms.[12-14] Computer users had symptoms of discomfort in posture, headaches, discomforts in the neck and shoulder due to pain.[15] The one important factor of computer oriented neck pain is the position of computer monitor screen and distance from eyes.[16] Electromyographic studies revealed that the muscles of neck, like upper trapezius and cervical erector spinal muscle (CES) had constant loading throughout typing and mouse use.[17] Computer worker had been related with poor posture and musculoskeletal neck and upper extremity pain.[18]

Prevalence of the complaints that had been identified to increase risk of neck pain in computer operators were, reduce in work location ergonomic,

employment duration, continuous sitting in front of computer, wrong body biomechanics and work station.[19] Rationale of this study was to spread awareness about neck pain in computer operators and to determine the prevalence of neck pain in computers users.

METHODOLOGY

In this cross sectional study, we enrolled 309 computer users with convenient sampling technique from different institutes; Punjab University Lahore (PU), Government College University Lahore (GCU), Education University Lahore (EU), and The Resource Group (TRG) Lahore. Permission was taken from the head of the institutes and consent was taken from the all subjects. The inclusion criteria were set as age between 17-60 years and computer operation for at least 1 hour a day. The people with pregnancy, history of trauma, throat infection and neck surgery were excluded. The respondent's rate was 95%. A valid questioner was used as a data collection instrument.

RESULTS

Out of 309 respondents, 28(9.1%) were married and 281(90.9%) were unmarried. There were 101(32.7%) males and 208(67.3%) females. 45(14.6%) respondents used desktop, 215(69.6%) respondents used laptop and 49(15.9%) used note book.

Neck pain was more common in females. It was more common in middle class computer operators as compared to others. 67.3% had localized neck and 32.7% complained of radiating neck pain. Neck pain occurred in computer operators due to wrong posture. It reduced the performance of computer operators. Neck pain was more common in those who used computer for 1-3 hours.

DISCUSSION

In the questionnaire, we asked the closed ended questions. The prevalence of neck pain was 52.4%. The occurrence of neck pain in middle class computer users was 86.1% as compared to upper class and lower class. The occurrence of neck pain was more common (63.8%) in those persons who use computer randomly more than 1-3 hours. The prevalence of neck pain was more in those computer operators (69.6%) who use laptops.

Eyes pain and headache was also occured due to prolonged usage of computer. With the help of neck extensor exercises and posture correction we can nullify the neck pain. Incidence of neck pain in computer users was very high i.e. 72%.[20] Associations between computer work had been demonstrated in several studies, with reported 12-month for neck pain in the general population, the lifetime prevalence had been reported to be greater than 70%.[21]

Prevalence rates of musculoskeletal pain in the neck, back and upper extremities of 55-69%, 31-54% and 15-52% have been reported.[22] The prevalence of neck pain in general population had been reported to range between 30% to 50% with women over 50 making up the larger portion.[23] For neck pain in the general population, the lifetime prevalence had been reported to be greater than 70%, 67%, and 80%.[24]

CONCLUSION

Female computer operators were more victims of neck pain as compared to male computer operators, due to their posture. The main reason of neck pain in computer operators is poor posture. Pain reduced the performance of computer operators. Neck pain was more common in those computer operators, which used computer more than 3 hours.

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