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Research Article

**AN OBSERVATIONAL RESEARCH TO ASSESS THE ONSET
OF NECK PAIN AMONG VARIOUS COMPUTER USERS
WORKING FOR VARIOUS TIME DURATIONS ON
DIFFERENT TYPES OF COMPUTERS****¹Dr. Iqra Amin, ¹Dr. Afifa Arshad, ²Dr. Rabia Asghar**¹Fatima Jinnah Medical University²Basic Health Unit Haji Shah, Attock**Abstract:**

Objective: The study includes many goals. These include to check out the connection between kinds of a chair being used in prolonged use of computer and incidence of neck pain, the occurrence of neck pain in use of a computer, the influence of rest during prolonged work and the relationship between sitting in the wrong position during a long period and neck pain. **Methodology:** This observational study was carried out at Sir Ganga Ramm Hospital, Lahore from March to October 2017 on fifty office workers working at various workstations. Various computer users which include students and office workers are present in the study. Information for this study was assembled by mean of the questionnaire. **Results:** The result indicated a powerful connection between the use of a computer for longer duration and neck pain ($p=0.001$). less pain is observed in those people who took rest during their working in the computer. The connection of neck pain with both types of chair and type of system was not observed valuable. Total prevalence of neck pain with serious pain [5]. The functioning of cervical extensor muscle is retorted and more performance of upper trapezius is observed in computer abuser with pain in the neck, relative to those who are working but without pain in the neck [6]. The extent of pain in the neck can be a lesson by taking mini-breaks or micro-break of 30 seconds after the work of 20-40 minutes. This will help in effective reduction of neck pain and yield of workers is not influenced by these breaks [7]. Moreover, using a computer in the proper way can also reduce the chance of neck pain.

Corresponding author:**Dr. Iqra Amin,**

Fatima Jinnah Medical University

QR code



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INTRODUCTION:

There is an obvious association between neck pain with the use of a computer. It is so because people spend much time in position while using a computer. Due to this, neck muscle could not stretch. The computer is being used either for amusement or for work. This eventually leads to pain in the neck. If the computer is used for much time, the neck is tilted in the forward position. Due to this tilting, anterior muscles of the neck will grow shorter and tighter with the passage of time whereas, there will a longer and fragile growth of muscle in the back of the neck. The pain of the neck is the results of these alternations.

Objective: The study includes many goals. These include to check out the connection between kinds of a chair being used in prolonged use of computer and incidence of neck pain, the occurrence of neck pain in use of a computer, the influence of rest during prolonged work and the relationship between sitting in the wrong position during a long period and neck pain.

Methodology: This observational study was carried out at Sir Ganga Ramm Hospital, Lahore from March to October 2017 on fifty office workers working at various workstations. Various computer users which include students and office workers are present in the study. Information for this study was assembled by mean of the questionnaire.

Results: The result indicated a powerful connection between the use of a computer for longer duration and neck pain ($p=0.001$). less pain is observed in those people who took rest during their working in the computer. The connection of neck pain with both types of chair and type of system was not observed valuable. Total prevalence of neck pain with serious pain [5]. The functioning of cervical extensor muscle is retorted and more performance of upper trapezius is observed in computer abuser with pain in the neck, relative to those who are working but without pain in the neck [6]. The extent of pain in the neck can be a lesson by taking mini-breaks or micro-break of 30 seconds after the work of 20-40 minutes. This will help in effective reduction of neck pain and yield of workers is not influenced by these breaks [7]. Moreover, using a computer in the proper way can also reduce the chance of neck pain.

Awareness should be given to people related to the correct way to use the computer. This includes management of height of the monitor, suitable chairs and support, eliminate neck flexion with use of document stands and suitable position of the neck [8].

PATIENTS AND METHODS:

This observational study was carried out at Sir Ganga Ramm Hospital, Lahore from March to October 2017

on fifty office workers working at various workstations.

Sampling Techniques: Irregular techniques were used for sampling. This technique was meaningful and satisfactory

Sample Selection Criteria: The people selected were between 20-45 years of age.

Those people were chosen who were choosing a computer for more than 3 hours daily.

Exclusion Criteria: Those people were not mentioned in the study whose cervical spine was affection due to any other particular medical situation. Those people were also expelled from the study who were not in completing the criteria which are stated above.

Methodology: All the data was assembled through question are related to the use of computer and neck pain. It included:

1. The frequency of rest from sitting.
2. The time period of work in a sitting position.
3. Surrounding aspect of work.
4. Person's demographic features
5. Position care.

Statistical Analysis:

Information was assembling and assessed by means of software SPSS. For an illustration of information, the suitable graph was made. The continuous variable was shown as mean S.D. On the other hand frequency table and percentage were used for the expression of categorical variables. The relationship between variables was checked through Chi-square test. Normality of quantitative data was checked through histogram. Significant value of p was taken less than 0.05.

RESULT:

the outcomes of the study based on 3 months are as follow:

1. 72% was the occurrence of pain in the neck in users of computers.
2. The age bracket of the participant was between 20-45 years. These people were using the computer for more than 3 hours daily.
3. Total 50 people were selected for this study. Among this, 50 % were using the computer for more than 5 hours.
4. The people who use a computer without any rest were fifty-two percent.
5. Extra support of head is observed in 8% while chair with back support was used by 92%.
6. Localized pain in the neck was observed in 72.3% and radiating pain in

- 27.7%.
- 7. The association of neck pain with long-term use of the computer was significant(p=0.001)
- 8. The relationship of a chance of neck pain with the type of use in long term working was not significant (p=0.889).
- 9. 8% of people were observed with the extra support of head while chairs with back support were used by 92.
- 10. Laptops were used by 24% and desktop computers were used by 76%.
- 11. The relation of neck pain and not taking any rest was significant (p=0.076). A valuable relationship was concluded between long-term use of computer and neck pain by the value of p as the value of p is less than 0.05. no valuable association was found between type of computer being used and neck pain. It is indicated by the value of p greater than 0.05.

Table – I: Age Distribution

Mean ± SD	23.5±3.52
Minimum	20
Maximum	40

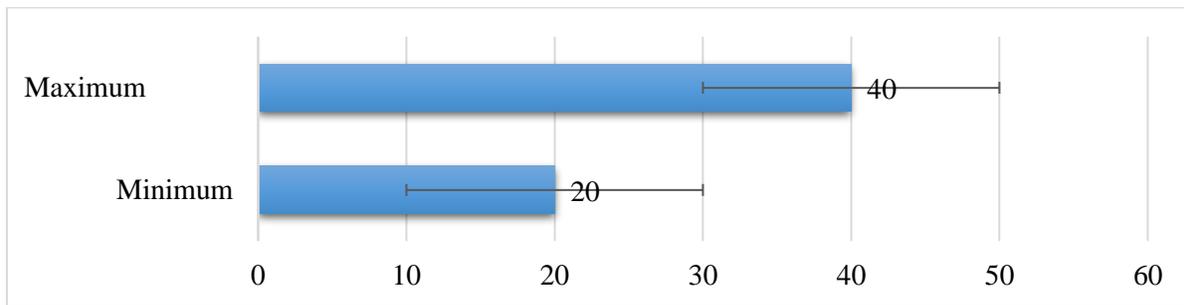
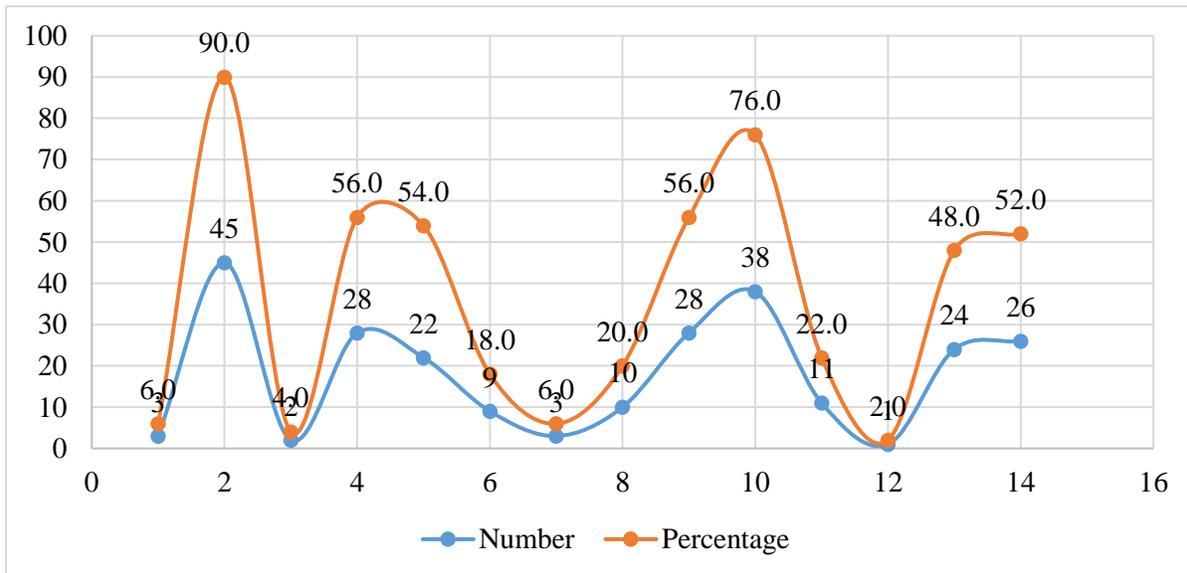
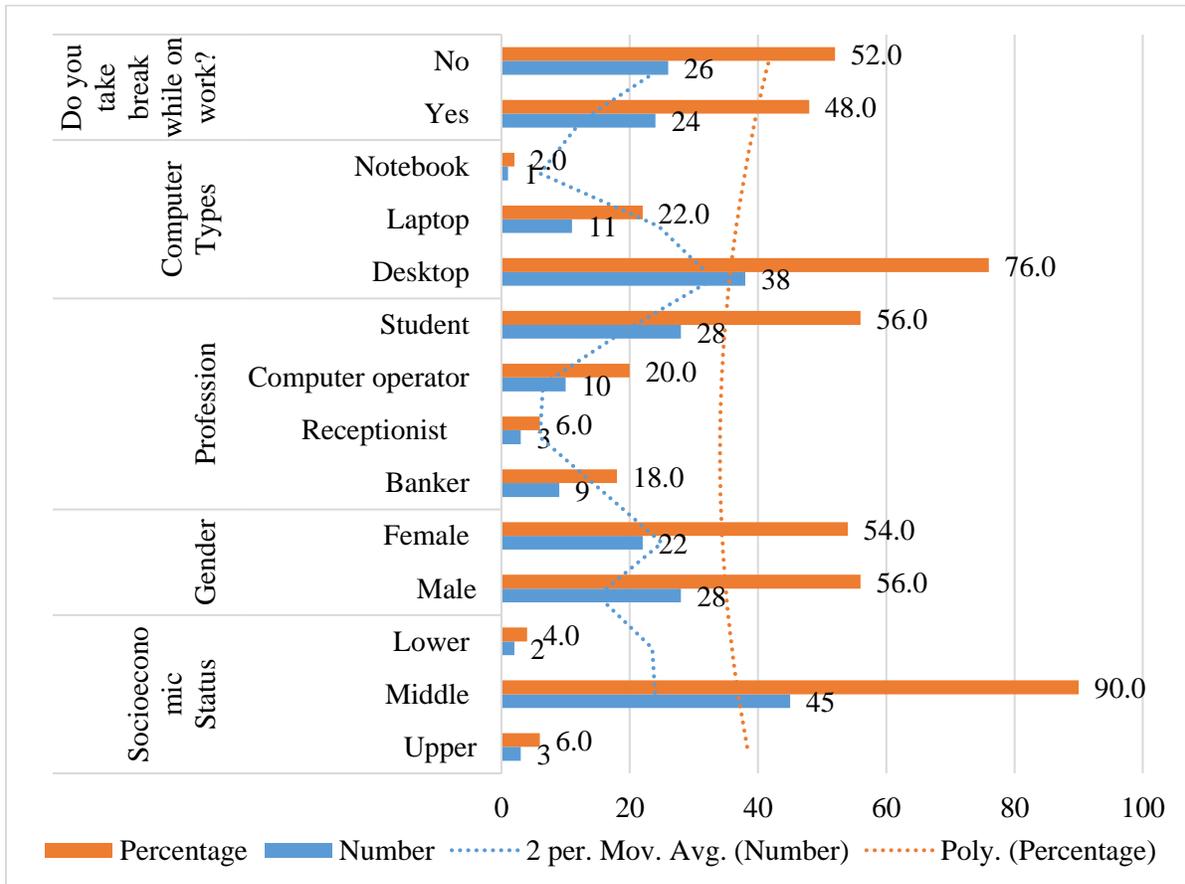


Table – II: Variables Stratification

Variables		Number	Percentage
Socioeconomic Status	Upper	3	6.0
	Middle	45	90.0
	Lower	2	4.0
Gender	Male	28	56.0
	Female	22	54.0
Profession	Banker	9	18.0
	Receptionist	3	6.0
	Computer operator	10	20.0
	Student	28	56.0
Computer Types	Desktop	38	76.0
	Laptop	11	22.0
	Notebook	1	2.0
Do you take a break while on work?	Yes	24	48.0
	No	26	52.0



DISCUSSION:

To check the possibility of neck pain in computer user was the aim of this study. To highlight the relation of neck pain with use of a computer, rest

during work, type of system and type of chair in use was also included in the objective of this study.

The computer is a very useful device for students and office worker. It is used in every field of life. The

association of work with neck pain was observed in the researchers conducted in the past. These studies indicate that the risk of neck pain is elevated because of staying passive in free time. By taking rest for 30 seconds after every 20 to 40 minutes, risk can be reduced. He also does not effort performance of work. The chances of the pain of neck can be reduced. It also does not effort performance of work. The chances of the pain of neck can be reduced by being physically active during free time. Mechanical and metabolic process are also enhanced by physical working. Prevention measures should be taken in order to reduce the pain of neck. Firstly, taking rest during work, use of the suitable chair, adjusting screen height and use of stand can reduce the risk of neck pain. Awareness is created regarding above mentioned through computer workstation. Secondly, people who have the disease yet not identified avoid the above-mentioned factors. Thirdly, people with an indication of disease made an effort to reduce the risk of neck pain through prevention measures. The factor that lead to neck pain can be reduced by doing the exercise of neck muscles. Exercise may be helpful in recovery. Neck pain and associated factor may be eliminated through giving ergonomic guidance to computer users.

CONCLUSION:

The incidence of neck pain is increasing due to long-term usage of the computer.

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Data Collection Performa Format:

1. Study Serial No _____
 2. Date of Assessment _____
 3. Name _____
 4. Age _____
 5. Gender _____
 6. Address _____

 7. Contact No _____
 8. Socioeconomic Status
(i) Upper (ii) Middle (iii) Lower
 9. Occupation
(i) Banker Receptionist (ii) Computer Operator (iii) Student
 10. Which type of system is in use?
(i) Desktop (ii) Laptop (iii) Notebook
 11. Number of hours daily computer use:
(i) 3 – 4 (ii) 4 – 5 (iii) 5 – 6
 12. History of neck pain:
(i) Yes (ii) No
 13. Nature of pain:
(i) Localized (ii) Radiating
 14. Any knowledge of posture care and precautions:
(i) Yes (ii) No
 15. If yes, then do you practice that?
(i) Yes (ii) No
 16. Any other thing related to this problem?
(i) Yes (ii) No
 17. If yes, please specify _____
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