

Awareness among computer operators about work relate musculoskeletal disorders among computer user's of Isra University Sindh

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Abstract – Background:

Most of the times repeated work in same posture can cause musculoskeletal injuries which are commonly known as work related musculoskeletal disorders. Nowadays computer operators can also suffer from such injuries. These injuries can affect the life style of computer users. There are most of the subjects in the province of which are still not yet been reported.

OBJECTIVE:

To determine awareness of work related musculoskeletal disorders among computer users of Isra University, Sindh.

Design

A Cross-sectional study design was applied on this study.

Methodology:

Computer users of the Isra University, Sindh received a self administered questionnaires with consent form. Questionnaire was filled after the consent form regarding the questionnaire was attained. The questionnaire involved information on individual characteristics and workhistory included questions on age, gender, level of education, duration of employment. Questions on physical work load, and working postures in which the neck is bent ortwisted, prolonged sitting during a regular work day. Also questions to evaluate knowledge and practices of participants. The questionnaire classified in to the five sections, designed to achieve the goal of the study.

Results

Out of 100 participants 65 (65%) were males and 35 (35%) were females. participants who suffered from neck pain has the percentage of 40% with the frequency of 40 out of 72. Those respondents who were sometime had the neck pain has 32% with the frequency of 32 and 28% are those respondents who did not have the neck pain with the frequency of 28 out of 100. 31.9% are those whose pain started in stress with the frequency of 23 out of 72. Some participants were said that pain increases and has the percentage of 59.7% and frequency was 43 out of 72. 8.3% respondents shown that stress was not related to the pain and has frequency of 6 out of 72.

Conclusion

The research study accomplished to facilitate that, risk factors which developed neck pain may be reduced by encouraging ergonomically design workstation for working staff of Isra University, Sindh.

Keywords: Work-related musculoskeletal disorders, Computer operators, Pain

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1 INTRODUCTION

Pain is explained as the hidden characteristic of uneasiness in any region of the body. It is the internal experience which cannot be accessed directly; evaluation of pain based on person's self complain, pain is a multi-dimensional phenomenon⁹. The characteristics of pain can be understood by communication of behavioral, psychological and physical components⁷. Neck pain is most ordinary complain in our region. It is the perception of restlessness in the region of neck⁸. Multiple factors are contributing in the development of neck pain and arm pain which includes physical and mechanical factors, psychosocial factor, and duration of sitting and working environmental factors, these factors may proceed individually or in the form of mixture¹². Poor workstation design result in adapting the bad or awkward posture, unnecessary exposure of heat enhances the general fatigue of overall systems, although exposure to prolong cold working environment also result in spasm around the neck region. Headache, muscular spasm and tenderness are also common⁵. The type of work or nature of job is the key factors for developing musculoskeletal problems, load of the work can vary according to the responsibilities and the requirement of the job, repetitive nature of task or excessive amount of work in relation with the limited time period or have no proper command over the responsibilities performed are also the factors which effect overall MSK system. The prolong use of computer, head and neck posture is the main reason of discomfort in the neck region and shoulder among the computer users⁷. During the regular use of computer in daily office routine one can ignore the proper positioning of their sitting style, computer screen, keyboard and mouse and adopted awkward position which is the cause of occurrence of musculoskeletal problems³. Spend job hours in sitting position can generate the static weight on muscles of neck this condition get worse when the working station was not properly designed according to workers. Static loading of weight can increase the tone of muscle in result development of neck ache².

2 METHODOLOGY

The target population of this study was the computer users of Isra University, Sindh. The time duration of study was six months. The study was supported by the cross sectional study design which was scrutinizing the component which causes the occurrence of neck pain in the working environment. The Cross-sectional surveys give the clear picture of the prevalence of a disease or others characteristics which are related to the health in the specific population at a given point in time. Prevalence of work-related risk factors for neck pain among Computer users of Isra University, Sindh, were done which included the 100 participants, selected from Isra university of Sindh. Participants included in this study were young adult and middle aged and aged between 17 to 45 years, participants included in study who had a working experience more than a year. Participants who suffers with chronic illness before the job are excluded from the study. A self-constructed questionnaire was used in this study. The

questionnaire was filled by face to face interview of each participant. The data was entered in Statistical Package for Social Sciences (version 20.0). Descriptive statistics were applied to analyze the data

RESULTS

Table 1.1: Gender of Respondents

Gender	Frequency	Percent
Male	65	65%
Female	35	35%
Total	100	100%

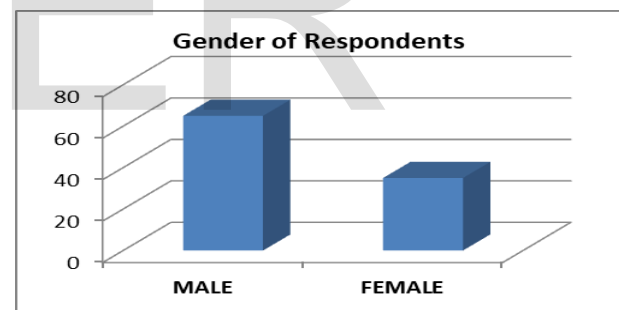


Table 1.2: Educational Level

Education level	Frequency	Percent
Diploma	2	2%
Bachelor degree	37	37%
Master	61	61%
Total	100	100%

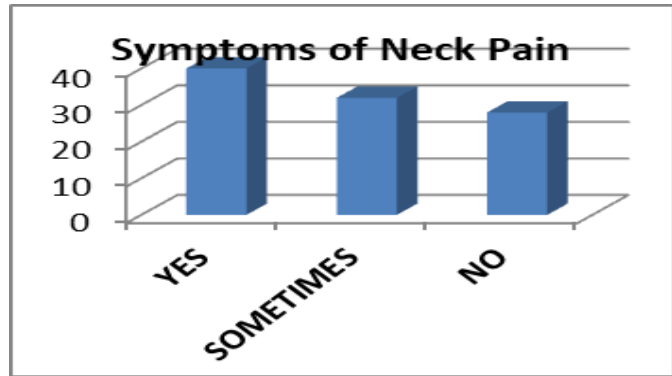
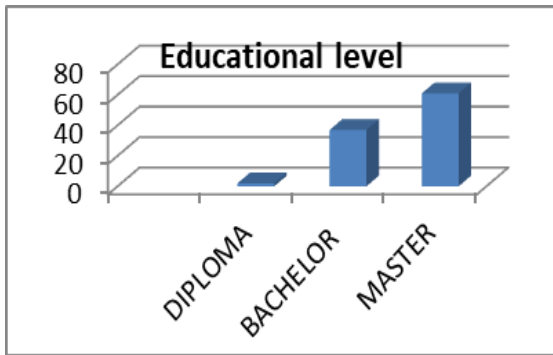


Table 1.3: Type of Job

Type of Job	Frequency	Percent
Academic	31	31%
Administraive	37	37%
Both	32	32%
Total	100	100%

Table 1.5: Knowledge of Correct Sitting Posture on Desk

Knowledge of posture	Fre-quency	Percent
Yes	42	42%
No	58	58%
Total	100	100%

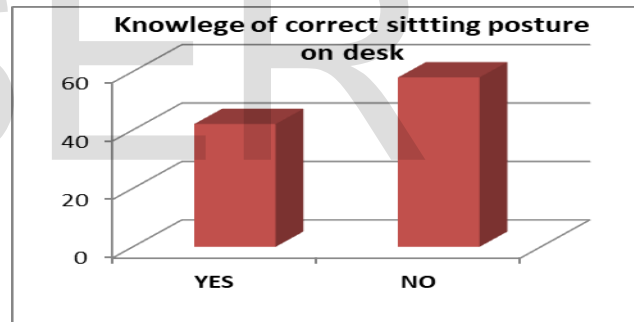
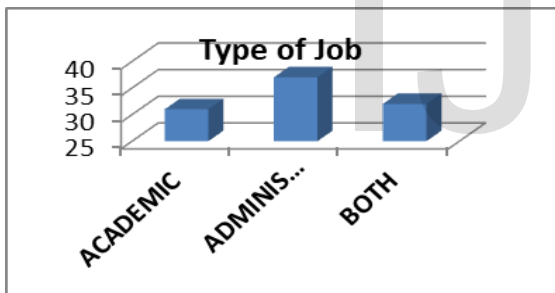


Table 1.4: Symptoms of Neck Pain

Symptoms of Neck Pain	Frequency	Percent
Yes	40	40%
some time	32	32%
No	28	28%
Total	100	100%

Table 1.6: Application of Correct Practices: Right Way to Use Chair

Right way to use chair	Frequency	Percent
Always	2	2%
Some time	57	57%
No	41	41%
Total	100	100%

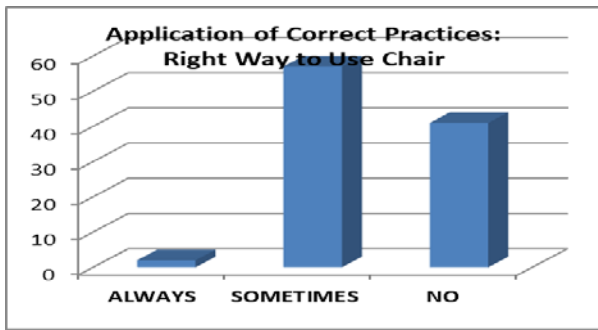


Table 1.7: Application of Correct Practices:
Variation of Work Tasks

Variation of work tasks	Frequency	Percent
Always	2	2%
some time	39	39%
No	59	59%
Total	100	100%

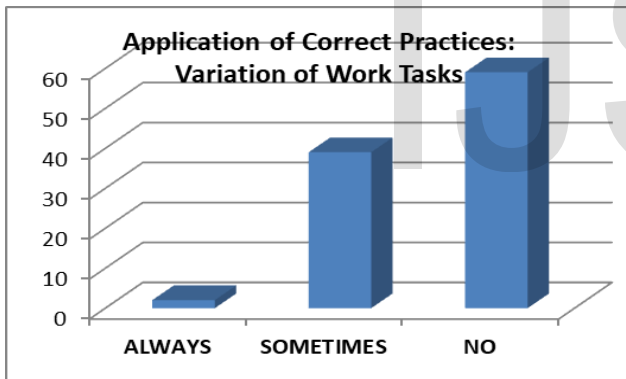


Table 1.8: Application of Correct Practices:
Taking Rest during Work Time

Taking rest during work time	Frequency	Percent
Some times	81	81%
No	19	19%
Total	100	100%

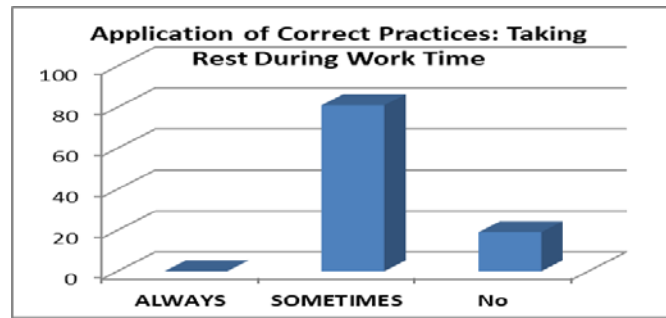


Table1.9: Application of Correct Practices: Exercise During Work
to Relax Body muscles

Exercise during work	Frequency	Percent
Some times	38	38%
No	62	62%
Total	100	100%

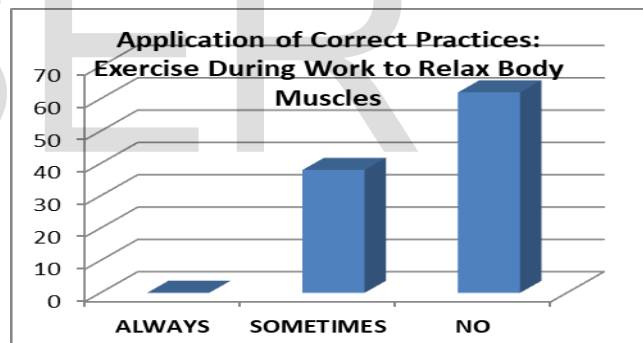
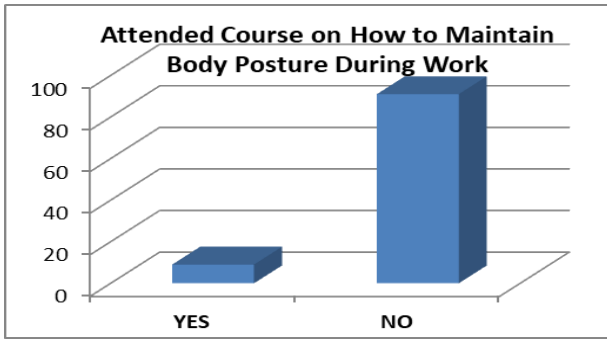


Table 1.10: Attended Course on How to Maintain Body Posture
during Work



Attending course on Posture	Frequency	Percent
Yes	9	9%
No	91	91%
Total	100	100%

Table 1.11: Complaint to Boss about Uncomfortable Furniture in Office

Complain about furniture to boss	Frequency	Percent
yes	17	17%
No	83	83%
Total	100	100%

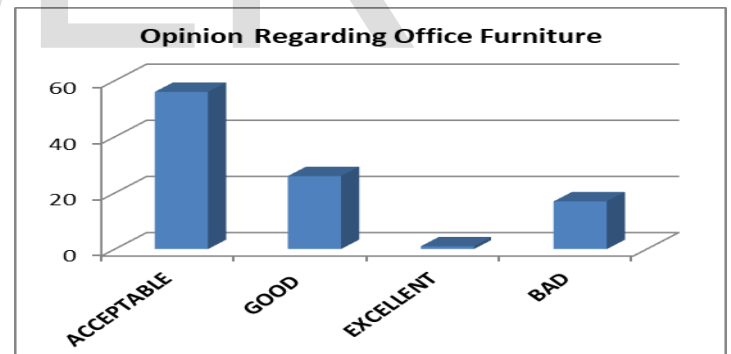
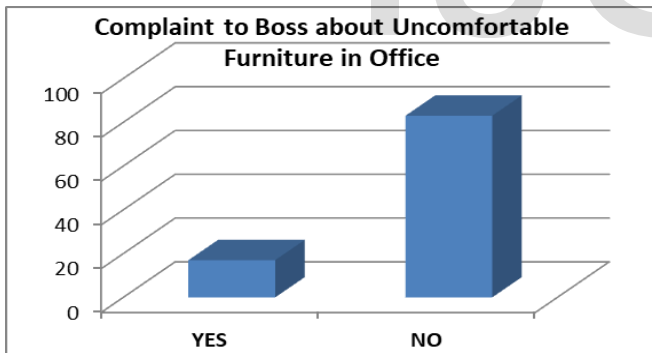


Table 1.12: Suitability of Office Furniture

Opinion about position of computer in office	Frequency	Percent
Acceptable	61	61%
Good	29	29%
very good	1	1%
Excellent	1	1%
Bad	8	8%
Total	100	100%

Opinion about office furniture (Suitable)	Frequency	Percent
Yes	42	42%
No	58	58%
Total	100	100%

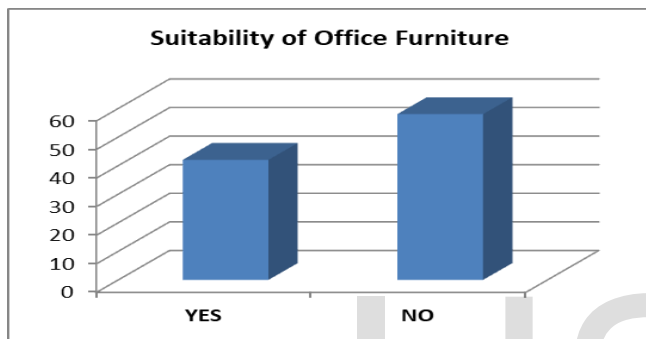
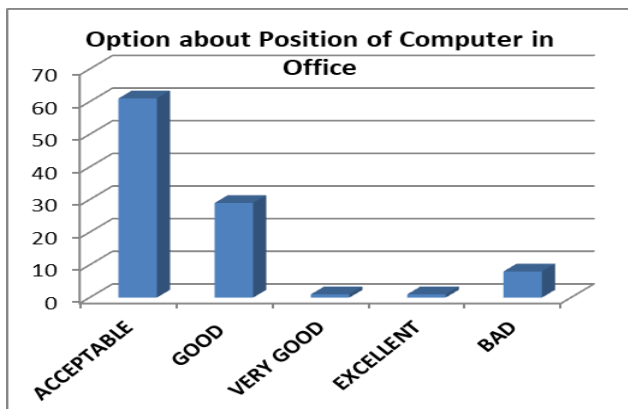


Table 1.13: Opinion Regarding Office Furniture

Table 1.14: Option about Position of Computer in Office



Opinion about office furniture	Frequency	Percent
Acceptable	56	56%
Good	26	26%
Excellent	1	1%
Bad	17	17%
Total	100	100%

DISCUSSION

Work-related risk factors for neck pain among Computer users of Isra University, Sindh, were done which included the 100 participants, selected from Isra University of Sindh. Participants included in this study were young adult and middle aged and aged between 17 to 45 years. Gerret *al*⁶. in (2002) presented a prospective study on computer operators; in this study they the incidence of percentage on neck shoulder, arm. This study showed that 50% of

computer users experienced shoulder, arm and neck ache during the year after starting the job. The study found from the Ranasingheet *al*¹⁰. (2011) worked on the complaint of neck, shoulder and arm pain among office computer users in Sri Lankan citizens. In computer office workers, the ratio of occurrence of neck shoulder and arm pain is increasing day by day. The result showed that the occurrence of neck shoulder and arm pain is 63% and individual focus on neck region pain is 36%. In our study according to data collection 40% participants suffered with neck pain and only 2% participants had a complain of shoulder pain. Another analysis of prevalence of neck pain indicates the prevalence of pain in adulthood due to psychosomatic stress. Chiu *et al*⁴. (2002) they found a significant association among individual factor, psychosocial factor, job environment and neck pain. It was found that 46.7% of neck pain occurs in academic members. Andersen *et al*¹. in (2007) presented the two years prospective research study regarding the risk factors and their association in developing musculoskeletal complaints in general population they indicated that the low job satisfaction and job stress cause occurrence and neck and shoulder pain, repetitive task cause occurrence of upper limb pain and prolong standing and lifting cause occurrence of back pain. According to our data collection 23% participants think that there is a relation of stress and neck pain. A study shows the relationship of neck pain and sitting posture. In 1996 this study conducted by Skov *et al*¹¹. this study disclose the positive relation between the sitting posture and neck ache; the positive relation means as long participant use to sit the chance of neck pain increases as in this study the employers who sit more than 95% time in sitting during their working hour they

are at high risk of developing neck ache. In this study he found the effect of sitting position in working hour with complain of neck pain. Spend job hours in sitting position can generate the static weight on muscles of neck this condition get worse when the working station was not properly designed. In our study we found 71% participants who spend their most working hours while sitting and downs with musculoskeletal pain.

CONCLUSION

The main conclusion arises from this study can be summarized as:

- About 40% participants of this study suffered from neck pain. Most of the participant showed relation of pain with their working hours and environment.

- Most of the participants of study were not working in specially designed workstation. Some participants were using ergonomically designed work place but mostly were not working with ergonomically designed work place So the complaints of neck pain among computer users in universities of sindh is much higher as compared to the other research studies.
- Most of the participants who have improved furniture with special desk have not proper guidance and knowledge about the good sitting posture. 58% participants did not have any idea about how to sit correctly.

The results of this study suggest that the prevalence of neck pain can be reduced by providing some knowledge about the posture and encourage them to follow the guidance.

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