

Prevalence of Low Back Pain in Computer Users of Lahore, Pakistan

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Abstract:

Low back pain is the most occurring body disorder and most important reasons of disability in the advanced states. Numerous structures in the backbone may cause low back pain which includes ligaments that join vertebral column, outer fibers of the annulus fibrosis, facet joints, vertebral periosteum, paravertebral musculature and fascia.

Objective:

To find the prevalence of low back pain among computer users of Lahore, Pakistan.

Methods:

Cross-sectional study design was conducted and JOA back pain evaluation questionnaire was used to collect data. Questionnaire was completed by 94 participants through non-probability convenient sampling. Results were analyzed on SPSS version 21.0.

Results:

Total 94 participants were asked out of which 69% (65) of participants were having pain whereas, 30.9% (29) of participants were having no pain. There were 27 male and 42 females out of which 64% of female and 34% of males were having pain.

Conclusions:

Low back pain was the most common condition in computer users. Overall many factors contribute to low back pain but working longer in faulty positioning unsuitable ergonomics, aging and lack of exercises resulting in sloppiness of ligaments were major causes of low back pain.

Keywords:

Low back pain, Prevalence, Computer users, Posture, Pain

Introduction:

Low back pain (LBP) can be defined by hurt, aches, toughness, spasm, contraction, distress, tenderness or annoyance in the lumbar spine. LBP included from twelfth rib to the buttock region and thus restricted to this zone¹. LBP is the most frequent body disorder and most important reasons of disability in the advanced states². LBP results in important stages of incapacity, creating important limitations on typical action and contribution, such as an incapability to work³. Several ecological and individual aspects effect the beginning and sequence of LBP⁴. LBP is the 2nd main mutual reason causing incapacity in adults of United States and is a general source of lost effort days⁵. LBP is the peak dominant musculoskeletal disorder and the most mutual source of incapacity in established states⁶. Use of heat by heating pads or intense blankets is a self-attention choice for temporary relief of severe LBP^{7, 8}. In patients with long-lasting LBP, firm beds are less expected than a normal-firm bed to lead to development^{9, 10}. Prescriptions in numerous classes have been shown to have reasonable, mainly temporary benefits for persons with LBP existing for less than four weeks, occasionally assembled with sub-acute LBP as signs existing for less than three months. Long-lasting LBP existing for greater than three months^{11, 12}.

A study was conducted on 3485 school children (71.2%), and the prevalence of back pain was 11.5% respectively¹³. Freeburg JK *et al.*, found a disturbing rise in the occurrence of long-lasting LBP from 1992 -2006 in North Carolina. This study found that incidents of severe LBP (defined as aching that restricted usual actions

for minimum one day but lesser than three months or fewer than twenty five events of LBP that restricted actions) in the last few year rise from 7.3 percent to 10.5 percent.⁵ Fry Moyer *et al.*, conducted a study on 1221 males aged between 18 to 55 years. Participants filled a questionnaire about record of LBP, related symptoms in lower limbs, resulting incapacity, types of management, definite work-related features, contact to vehicular shaking, and athletic deeds. Study concluded that 368 patients (30.1%) had no LBP, 565 (46.3%) had reasonable LBP, & 288 (23.6%) had severe LBP¹⁴. Ortiz-Hernández L *et al.*, conducted a study on office workers at a newspaper Occupational conditions, use of computer, and ergonomic and psychosocial aspects were considered as liberated variables. The study concluded that computer users has increased developing LBP¹⁵. The primary motive of this study was to find out the prevalence of LBP among computer users of Lahore Pakistan. It was very important in computer users because it effects their activities and working life. The responsible factors may be corrected through education in order to reduced it in society.

Methods:

Cross-sectional study was conducted using JOA back pain evaluation questionnaire was used to collect data. Questionnaire was completed by 94 participants through non-probability convenient sampling and sample size was calculated by Epitools sample size calculator. Data were collected from different offices, software houses in 3 months. Data were analyzed through SPSS version 21.0. Both males and females with LBP with age between 20-40 years were included. Subjects having recent injury; spinal injury or pregnant female were excluded from the study.

Results:

Among the total 94 respondents 65 were having LBP, out of which 23(35.4 %) were males and 42 (64.6 %) were females, Table 1.

Gender	Frequency	Percent
Male	23	35.4
Female	42	64.6
Total	65	100.0

Table1: Descriptive statistics of gender

According to Table 2, 42 (64.62%) of respondents were having difficulty in standing up from a chair and 23 (35.38%) of respondents didn't.

Difficulty in standing up	Frequency	Percent
Yes	42	64.6
No	23	35.4
Total	65	100.0

Table 2: Difficulty in standing up from chair

44 (67.69%) of respondents were having difficulty in turning over bed because of low back pain and 21(32.31%) of respondents had no pain.

Difficulty in turning over bed	Frequency	Percent
Yes	44	67.7
No	21	32.3
Total	65	100.0

Table 3: Difficulty in turning over bed

Table 4 shows out of 65 respondents ,33(50.8%) participants were having sleep disturbance and 32 (49.2%) were having no low back pain.

Sleep disturbance	Frequency	Percentage
Yes	33	50.8
No	32	49.2
Total	65	100.0

Table 4: Sleep disturbance due to LBP

Discussion:

According to the current study there were 35.38% males and 64.62% females. A similar

study was conducted in Isfahan to evaluate different musculoskeletal disorders among computers users with rapid office strain assessment (ROSA) method. According to the results musculoskeletal disorders were in region shoulder (62.1), neck (54.9) and back (53.1). Also results of that study showed that musculoskeletal disorders in computer users was high in region the shoulder, neck, wrist and back¹⁶. The current study also showed that low back pain was very common among computer users. frequency of low back pain was 69.15% among computer users of Lahore, Pakistan. Mirzaei R *et al.*, also found in study that non-neutral positions of the shoulder (flexion and abduction) had been linked with musculoskeletal indication of the neck, back and upper limbs in computer users, the most common musculoskeletal disorders was in the shoulder, lower and upper back which confirmed the findings of the present study¹⁷. According to Ghanbary A and Habibi E, the prevalence was significantly higher among women¹⁷. The results of present study also showed that low back pain is very much common in female computer users as compared to males. According to current study 64.62% females were having low back pain among computer users. Marcus M *et al.*, reported that the highest prevalence of occupational musculoskeletal problems were related to neck, upper back and lower back in office workers of China¹⁸. In contrast to that present study showed that among all musculoskeletal disorders LBP was most frequent in computer users. The prevalence ratio of low back pain was very high as compared to other musculoskeletal problems. Constant computer use for the complete work day and recurring computer work, such as data entry, have been linked with an enlarged risk of developing symptoms associated to musculoskeletal disorders¹⁹. Similarly in present study bad working posture among computer user was main factor of causing LBP. According to present study high frequency of respondents

marked to change their posture to relieve LBP. According to the study of Marty M *et al.*, Sleep disorders were greater when the impact of LBP on daily life was greater [$P < 0.0001$]. The sleep of the patients with LBP was significantly altered compared with that of the healthy control²⁰. The current study showed 33 (50.8%) participants were having sleep disturbance.

Conclusions:

The study concluded that, occurrence of low back pain among computer users of Lahore was high and low back pain was more common in females as compared to males and effect their activities of daily life.

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