



THE PREVALENCE OF MUSCULOSKELETAL DISORDERS AMONG BANKERS

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ABSTRACT **BACKGROUND** Several studies have determined the prevalence of work related musculoskeletal disorders (WRMD) among teachers and computer users. However the prevalence rate of WRMD among bankers in North Haryana is still untouched.

OBJECTIVE To determine the prevalence of work-related musculoskeletal disorders among bankers.

Study Design: Cross sectional survey study design. Then the scoring of the questionnaires was done and the data was pooled to retrieve the prevalence of musculoskeletal disorders in bankers in Chandigarh.

Methods: 90 middle aged i.e. 30-50 years bankers (both female, male) fulfilling the inclusion and exclusion criteria were recruited in the study. Orebro musculoskeletal pain questionnaire were given to them and were asked to fill the same.

Results: The study found that the prevalence rate of pain was highest in lower back (50%), followed by neck pain (48.9%), shoulder (36.7%), leg (35.6%), others (30%), upper back (15.6%) and least in arm i.e only 12.2%.

Conclusion: Study observed that age, gender and bad working posture contributes to increase in musculoskeletal disorders in bankers. It is recommended that proper work posture; healthy working conditions must be provided which can make the work easier and more relaxed. Awareness programs must be organized to reduce the incidence of musculoskeletal disorders.

KEYWORDS : WRMD, Bankers

INTRODUCTION

Musculoskeletal disorders are widespread in many countries.¹ These are caused by wide range of inflammatory and degenerative conditions affecting the muscles, tendons, ligaments, joints, peripheral nerves and supporting blood vessels.^{2,3} Musculoskeletal disorders are causing an increased number of human resources and economic losses which is of major concern.³ The body regions most commonly involved are low back, neck, shoulder, arm, upper back and lower extremities.¹

The repetitive strain of the musculoskeletal system associated with inappropriate ergonomic equipment used during daily work is named work-related musculoskeletal disorders.⁸ Musculoskeletal disorders are often characterized as work related disorders that affects the workers in many occupations.¹⁵ These are defined as multifactorial, where the working environment and the work performance contribute significantly, leading to causation of disorder and affecting working capacity. The condition generally developed over periods of weeks, months or years.^{3,4}

It has been reported that about 58 percent of the world's population over the age of 10 years spent one third of their life span at work.⁹ Approximately 30-50 percent of the population is exposed to physical occupational hazards. Globally about 68 to 157 million new cases of occupational diseases are reported annually in addition to about 120 million occupational accidents and 2,00,000 fatalities.⁹ The population at a high risk include nursing facilities, computer workers, bankers, dentists.¹ Available data has shown that musculoskeletal disorders accounted between 42% and 58% of all work-related illnesses and are the most frequent cause of all health-related absence from work. Thus, musculoskeletal disorders cause not only individual suffering but also pose a considerable financial cost to the individual, industry and society at large.¹¹

Rapid technological development in the use of electronic data has affected the both employees and work place. In recent years rapid use of computers has changed the work environment drastically. It is observed that the musculoskeletal disorder is very common among computer user's bank office employees.¹⁰ Electronic data are mainly displayed on visual display terminals, improper body posture and prolong sitting in front of these terminals can lead to many health hazards, including eye strain, muscle fatigue, and other musculoskeletal discomforts.¹¹

Approximately 76% of bankers from India reported musculoskeletal discomfort in various epidemiological studies. Long working hours,

static posture, poor office ergonomics, and repetitive nature of work were identified as some of the risk factors leading to pain and discomfort.¹²

In early stages of musculoskeletal disorders symptoms are often intermittent and episodic but the treatment and recovery is good. But, when the symptoms are chronic the prognosis is poor.¹³ Common problems faced by bankers are mechanical low back pain, herniated disc, neck and shoulder pain, leg pain.⁷

Previous studies have showed that low back pain is most common ailment in bankers.⁵ Akrouf et al. reported that musculoskeletal disorders are the most common occupational health problems.⁶

AIM AND OBJECTIVE OF STUDY:

To determine the prevalence of work-related musculoskeletal disorders among bankers.

STUDY DESIGN:

Cross sectional survey study design

SAMPLING:

Sample size: 90 bankers were included according to the inclusion and exclusion Criteria.

Sampling method: Convenient random sampling

Source of data collection: Subjects were taken from: Various banks of North Haryana.

INCLUSION CRITERIA:

- Both Males and females within the age group of 30 to 50.
- At least two year of work experience as a banker.
- A banker whose job requires spending a minimum of eight hours a day in the sitting position.

EXCLUSION CRITERIA:

- History of physical trauma.
- Polio/Amputation of lower limb.
- Pregnant women.
- Congenital limb or spine problem.

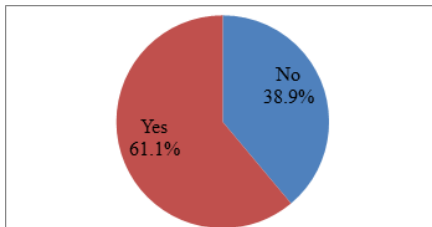
PROCEDURE:

A total of 130 Orebro musculoskeletal pain questionnaires were distributed to the different banks in North Haryana of which 123 were returned. Out of 123 however, 90 questionnaires only were used in the data analyses and 33 questionnaires were excluded because of

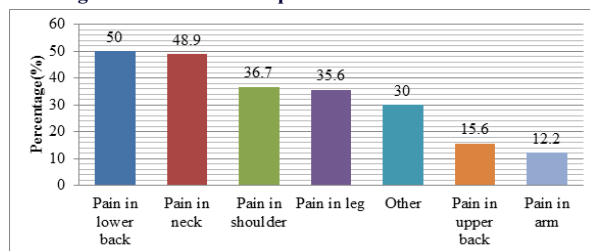
incomplete data and on the basis of inclusion and exclusion criteria. Then the scoring of the questionnaires was done. From these completed questionnaires, the data was pooled to retrieve information about the prevalence of musculoskeletal disorders in bankers.

RESULTS

It was found that 38.9% subjects had no pain where as 61.1% subjects were complaining of pain. According to the findings majority 33.3% patients have age 41-50year, followed by 46-50yrs(26.7%), 36-40yrs(20%), 31-35yrs(15.6%), 46-50yrs(26.7%) and 25-30yrs(4.4%) respectively but there was non significant association (Chi-square value=1.50,p>0.05) between prevalence of pain and age among different age groups .



Showing the Prevalence of the pain in bankers



Showing the prevalence of pain in different body parts.

The study also determined that the prevalence rate of pain was highest in lower back (50%), followed by neck pain (48.9%), shoulder (36.7%), leg (35.6%), others (30%), upper back (15.6%) and least in arm i.e only 12.2%.

Although the pain prevalence was higher among the males as compared to females but the difference is not significant. It was found that there was non significant association (Chi-square value=0.37,p>0.05) between male and female .

DISCUSSION

Out of the total sample of 90 bankers , more than half of them had pain. The prevalence of musculoskeletal disorders among bankers was 61.1%. This result corresponds with a previous study by Albedu et al (2012) found that the psychological distress was positively associated with musculoskeletal disorders. The exact mechanism through which psychosocial stress factors at work related to musculoskeletal disorders is not known. However, it well recognized that high mental and psychological stress may increase muscle tension and decrease micro pauses in muscle activity. This may lead to muscle fatigue, even in cases of low loads due to continuous firing of low threshold motor units, which are triggered not only by low level physical loading but also by mental loading. The central nervous system response to job stress may amplify painful sensations resulting in a higher prevalence of musculoskeletal disorders.

High prevalence of WRMD in males is supported by the study of Buttner et al who confirmed the hypothesis that characteristics attributed to successful entrepreneurs were more commonly ascribed to men than to women. On the dimensions of leadership, autonomy, risk taking, readiness for change, endurance, lack of emotionalism and low need for support, bank loan officers rated women as significantly less like successful entrepreneurs compared to men. While gender differences on the remaining three dimensions failed to reach statistical significance, women were never rated as closer to successful entrepreneurs than were men.

Our study showed that lower back pain (50%), neck pain (48.9%), shoulder (36.7%) and leg pain(35.6%) were the common symptoms indicating musculoskeletal disorders were defects resulting from prolonged posture. The less affected body parts were the upper back

(15.6%), arm (12.2%) and others (30%). Sulaiman SK et al agreed that the commonest regional musculoskeletal disorders and associated disabilities were observed in the lower back, neck, shoulder, upper back, wrist and hand.

In the study it was found that female bank workers were less likely to report musculoskeletal symptoms than males. Out of total samples 62.9% males are suffering from pain and 43.6% females are suffering from pain. This is supported by a study done by Moom RK et al who was concluded that Males were more likely suffered from musculoskeletal disorders as compare to women. It is recommended that proper work posture; healthy working conditions must be provided which can make the work easier and more relaxed. Awareness programs must be organized. To get more accurate results larger sample size can be taken up.

Exercises have a very integral role in strengthening the musculature and thereby if the muscles are adequately strengthened then the occurrence of work related musculoskeletal disorders is hence reduced to a minimum.

Therefore work related musculoskeletal disorders bankers work life in more than one factor. Adequate preventive and appropriate management strategies should be recommended to minimize work related injuries in bankers which may help in improving their work performance. Awareness among bankers will ultimately lead to an improvement in their productivity and quality of life.

CONCLUSION

Work related biomechanical considerations have been found to form important health risk factors for musculoskeletal disorder among bankers. The study showed a high prevalence of disorders in the low-back, neck, shoulder, leg etc. In the present study it was observed that age, gender and bad working posture also contributes to increase in musculoskeletal disorders in bankers. Males were more likely suffered from musculoskeletal disorders as compare to women. It is recommended that proper work posture; healthy working conditions must be provided which can make the work easier and more relaxed. Awareness programs must be organized. To get more accurate results larger sample size can be taken up.

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