

Risk Factors, Clinical Features and Outcome of Treatment of Work Related Musculoskeletal Disorders in On-Site Clinics among IT Companies in India

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INTRODUCTION

Work related musculoskeletal disorders (WRMSD's) are a constellation of disorders common in (but not exclusive to) computer users which involves muscle, fascia, tendon and/or neurovascular structures of neck and upper limb; but any part of the body may be affected. The prevalence of WRMSD in Indian computer professionals is estimated to be 75% out of 35,000 computer professionals evaluated in Bangalore, Hyderabad and Delhi.

OBJECTIVE

To determine the outcome of on-site employee health clinics in the early detection, treatment, risk factor identification and follow up of work related musculoskeletal disorders (WRMSD) in Indian Information Technology (IT) companies.

METHODOLOGY

Design and Subjects:

Prospective study conducted among 4069 consecutive computer professionals working full time in IT Companies and who attended the on-site employee health clinic in their company.

Setting and Duration:

Conducted at on-site employee health clinics of various IT Companies in Bangalore, Delhi and Hyderabad (India) during the years 2005 to 2010.

Procedure:

Informed consent was taken from the employees prior to the treatment. Employees with a diagnosis of WRMSD were included in the study. The employees with other musculoskeletal disorders or history of trauma were excluded.

Risk factors, clinical features and diagnosis based on assessment by a Rehabilitation Physician, Physical Therapist and Ergonomist were recorded. According to the severity of their symptoms employees received the treatment using a sequenced protocol. Initial data was collected prior to the first treatment follow up data's were collected 2 weeks, 8 weeks and 12 weeks after the initial visit. Data recorded were analysed for statistical significance.

Measurement Tools:

- Visual analogue scale for subjective pain
- Physicians record for diagnosis, clinical features and progress
- Pain body diagram chart
- Ergonomic workstation evaluation report
- Patient feedback questionnaire (completely recovered, partially recovered, not recovered)

RESULTS

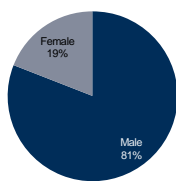


Figure 1. Gender distribution

Table 1. Demographic data of the subjects

Population (N) – 4069	Mean ± SD
Mean age group	29 ± 5.28 years
Desktop users	52.1%
Laptop users	47.9%

Table 2. Common Diagnosis

Condition	Percentage
Myofascial Pain Syndrome (MPS)	48.3%
Thoracic Outlet Syndrome (TOS)	24.00%
Fibromyalgia Syndrome	06.9%
Cubital Tunnel Syndrome (CTS)	0.17%
Wrist tendinitis	02.10%
Complex Regional Pain Syndrome (CRPS)	0.13%

Myofascial Pain Syndrome or MPS (48.3%) was the commonest diagnosis, followed by Thoracic Outlet Syndrome or TOS (24%), Fibromyalgia or FMS (6.9%), Wrist Tendinitis (2.10%), Cubital Tunnel Syndrome or CTS (0.17%), and Chronic Regional Pain Syndrome or CRPS (0.13%).

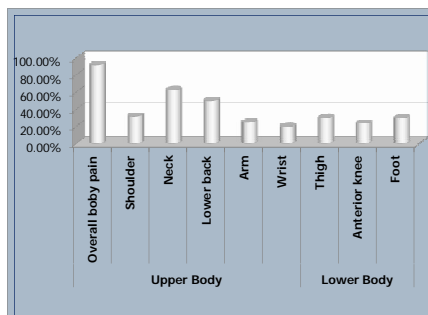


Figure 2. Regional Pain distribution

Table 3. Identified Risk factors

Ergonomic risk factors	Percentage
Poor office ergonomics	53.5%
Lack of keyboard tray	30%
Lack of mouse tray	40%
Lack of foot rest	50%
Improper monitor height	75%
Other personal risk factors	Lack of breaks (64%), Stress (37%)

Analysing the data regarding the outcome of treatments, 95% of employees recovered completely, while 5% recovered partially and still had mild discomfort and pain.

DISCUSSION & CONCLUSION

The advantages of on-site clinics includes convenience of employees in saving time, earlier reporting of symptoms, better follow up regarding recovery and work, on-site workstation assessment for risk factor identification and modifications, monitoring posture, breaks and exercises, more effective co-ordination with members of Human Resources, Facilities, Health and Safety team and improved awareness levels regarding Ergonomics among Management and Employees. On-site employee health clinics are recommended for the effective management of WRMSD in view of the high prevalence of successful outcomes seen in this study.

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