EFFECTIVENESS OF ONSITE OCCUPATIONAL HEALTH CLINICS IN MANAGEMENT OF WORK RELATED MUSCULOSKELETAL DISORDERS IN 10,850 INFORMATION TECHNOLOGY PROFESSIONALS

Introduction
Onsite clinics play a crucial role in the provision of occupational health services. However, the effectiveness of onsite clinics in the management of work related musculoskeletal disorders (WRMSD) is an under studied area. This study reports the outcome of onsite occupational health clinics in Information Technology (IT) companies in the management of WRMSD over a 10 year period.

Methods
A prospective study was conducted from 2006 to 2016, covering 10,850 employees of IT companies in different cities in an Industrially Developing Country. The employees (6990 males and 3860 females, between the ages 20 to 60 years), were diagnosed by an experienced occupational health physician (OHP) to have a WRMSD in specific regions following extensive usage of desktop and/or laptop computer. All the employees entered an ergonomic workplace analysis and protocol based rehabilitation for the WRMSD by specially trained occupational physiotherapists. The employees were reviewed by the OHP monthly and at the completion of rehabilitation.

Result
Most employees were software and application engineers, followed by managers and technical support staff. A total of 62% of the employees worked for at least 5–9 hours per day and 38% for 10–14 hours per day. The predominant symptoms were low back pain (for males) and neck pain (for females). Nearly, 55% were diagnosed to have Myofascial Pain Syndrome and others with Thoracic Outlet Syndrome, Fibromyalgia, Tendinopathies and Type 1 Complex Regional Pain Syndrome. After the rehabilitation, the VAS scale showed significant reduction in pain levels (p<0.01). 78% had reported reduced productivity due to the WRMSD, which improved markedly after the rehabilitation. 93% of workers reported complete resolution of symptoms and 7% reported partial resolution of symptoms but could work without restriction.

Discussion
Onsite occupational health clinics are effective in the management of WRMSD in IT companies.
objective of this study was to evaluate the risk factors that predispose IT professionals to the development of WRMSD.

**Methods** A prospective analysis of 7280 employees of a single IT company in an Industrially Developing Country was conducted. Among them, 5210 were males and 2070 were females, between the ages 20 to 60 years. The employees were evaluated by a detailed questionnaire consisting of demographic data, job details, health status, physical risk factors, short-form Work Style Questionnaire and Nordic Musculoskeletal Pain Questionnaire. The data were extracted and statistical analysis was done.

**Result** The mean age of the employees was 32.5 years. 58% of the employees were diagnosed by an experienced occupational health physician (OHP) to have a WRMSD, which predominantly included myofascial pain syndrome of the neck, upper and lower back. Age, Body Mass Index (BMI), working hours and work-style were positively correlated ($r<0.01$) with the presence of WRMSDs, as higher the age and BMI, increased working hours and higher work-style score showed higher prevalence of WRMSD. On the other hand, rest breaks during work, regular exercises and formal ergonomics training were negatively correlated ($r<−0.01$) with the presence of WRMSDs, as more frequent breaks, regular exercises and ergonomics training showed lower prevalence of WRMSD. Also, the presence of co morbidities like diabetes, hyperthyroidism and osteopenia/osteoporosis had a positive influence on the prevalence of WRMSDs in the study population. Other specific factors like work experience, hand dominance, type of computer used also had an influence on the development of WRMSDs.

**Discussion** The risk factor analysis gives an insight to the appropriate areas of ergonomic interventions among IT professionals.

**Abstracts**

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**OCCUPATIONAL MUSCULOSKELETAL DISORDERS AS A RISK FACTOR FOR USING HYPNOTICS: AN STUDY BASED ON 2013 BRAZILIAN NATIONAL HEALTH SURVEY (PNS)**

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**Introduction** Hypnotics are one of the most prescribed drugs in the world and are related to several morbidity and mortality outcomes. Some risk factors such as sex, age, marital status, and also chronic pain and mental disorders have been described in medical papers. However, there are restrict data concerning the influence of occupational factors in the use of sleep drugs. Therefore this study aimed to evaluate the association between MSD and use of hypnotics in the Brazilian population.

**Methods** Cross-sectional study with secondary data from the PNS 2013. We used descriptive statistics to present exposure and outcome variables. Chi-square was proceeded to test differences between groups and Logistic Regression controlling for covariates was made to analyse the main association.

**Results** The general prevalence of hypnotics use was 7.1%. The prevalence was higher in women and in elder people, increasing according to the age. The general prevalence of MSD was 1.9%. Individuals with MSD presented 2 times higher prevalence of hypnotics use compared to controls, even after adjusting for covariates.

**Discussion** When we consider the problem of the use of medication to sleep, it should be attempted to MSD as a possible risk factor and focus of intervention. New researches are necessary to better elucidate the role of musculoskeletal disorders in the hypnotics use.