

Effectiveness of onsite fitness programme among information technology professionals in prevention of work related musculoskeletal disorders

Mathankumar MOHANDOSS, Deepak SHARAN, Jerrish A JOSE, Rameshkumar RANGANATHAN

RECOUP Neuromusculoskeletal Rehabilitation Centre, Bangalore, India.

Abstract. Work Related Musculoskeletal Disorders (WRMSD) are common in computer users. Ergonomic risk factors (i.e. lack of breaks, static loading) and psychosocial risk factors (i.e. stress) are considered to be the commonest risk factors for WRMSD among information technology (IT) Professionals. An Onsite Fitness Programme was developed at an IT company considering three factors (lack of breaks, static loading and stress) that may be associated with the development and exacerbation of WRMSD. This fitness programme was designed to help IT professionals to relax through some exercises which in turn may prevent the development and exacerbation of WRMSD. The aim of the study was to evaluate the effectiveness of the onsite fitness programme in preventing WRMSD and to know the level of satisfaction, productivity and fitness of the clients. Methodology: An experimental study was conducted among 100 consecutive IT professionals. Outcome measures included a self evaluation questionnaire which measured the samples subjective view about satisfaction, productivity and fitness level following the fitness programme and was taken before and after intervention. Statistical analysis was done. Results: According to the self evaluation questionnaire 95% people were satisfied with the fitness programme.

Keywords. Fitness programme, Information Technology, WRMSD, Ergonomics.

1. Introduction

Work related musculoskeletal disorders (WRMSD), constitutes a spectrum of musculoskeletal disorders that are acquired by the individual by virtue of the work they perform. This is an evolving area of concern worldwide as more than 30 percent of the musculoskeletal disorders are work related. WRMSD are common in computer users especially in the information technology (IT) industry. Approximately, 76% of computer professionals from India reported musculoskeletal discomfort in various epidemiological studies (Talwar et al., 2009, Bhandari et al., 2007, Sharma et al., 2006). The nature of work, which the individual performs in IT, forms the basis of acquiring WRMSD. Ergonomic risk factors (i.e. lack of breaks, static loading) and psychosocial risk factors (i.e. stress) are considered to be the commonest risk factors for WRMSD among IT Professionals. India has been forefront in the IT sector with about 2,236,614 professional working in it (NASSCOM Fact sheet, 2009). As a proportion of the National GDP, the IT sector revenues have grown from 1.2% in 1998 to an estimated 7.5% in 2012 (NASSCOM Strategic Review, 2012). From this information, it can be seen that the number of professionals using computers in the IT industry is increasing leading to an increase in exposure to computer related risk factors. IT professional, due to the nature of their work in front of the computers, are particularly susceptible to the development of musculoskeletal symptoms, with prevalence as high as 50% (Gerr and Marcus, 2002). Several strategies

have been proposed to prevent WRMSD among IT professionals. The aim of this study was to evaluate the effectiveness of an onsite fitness programme in preventing WRMSD and to know the level of satisfaction, productivity and fitness of the IT professionals.

2. Methods

An Onsite Fitness Programme was developed at an IT company, considering the following three factors: lack of breaks, static loading and stress, which may be associated with the development and exacerbation of WRMSD. This fitness programme was designed to help IT professionals to take time and relax in between their working time by performing some exercises, which in turn could prevent the WRMSD. An experimental study was conducted among 100 consecutive IT professionals. They were given the Onsite- fitness programme, which included group exercise activities such as breathing, free hand and whole body stretching exercises, in the supervision of a physiotherapist was given for 6 weeks. Each session lasted 15 to 20 minutes, with one session per day for 5 days a week. The daily exercise routine varied slightly to retain the interest and involvement of the participants. Outcome measures included a self evaluation questionnaire which measured the participants' subjective view about satisfaction, productivity and fitness level following the fitness programme was taken before and after intervention. Data were collected and statistical analysis was made. Permission to conduct was obtained in the IT company where the programme was implemented along with the Informed consent from the participants.

3. Results & Discussion

All the participants completed the programme and no adverse effects were reported by the participants. According to the analysis of the self evaluation questionnaire, 95% of the participants were satisfied with the fitness programme. 75% of the participants reported that their productivity levels had improved, and among these the average was 8.5 out of 10, which meant that their fitness level had improved. This onsite program was found to be more effective when compared to previous interventions done by Strijk et al., 2012 and Berkel et al., 2013. The improvements can be attributed to better general health, less bodily pain and better physical health as supported by Boot et al., 2013 and Dewa et al., 2000. However, the limitation of this study was a small sample size and that there was no control group. A subsequent study using a randomized control trial is planned with a larger sample size.

4. Conclusion

The study concluded that an effective onsite fitness programme in IT companies increased the satisfaction and fitness levels of the employees and thereby may prevent WRMSD and improve worker productivity.