

Work related musculoskeletal disorders among physiotherapists

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Abstract. The main aim of the study was to review the current literature in order to know various measurement tools used, ergonomic risk factors and other finding related to work related musculoskeletal disorders (WRMSD) among physiotherapists. A systematic review was done using MEDLINE by the keywords “physiotherapists”, “ergonomics” and “musculoskeletal disorders”. Articles were reviewed by two reviewers and studies which were not adequate and inappropriate were excluded. Prevalence of WRMSD in the selected studies was reported to be more than 80%. Working in rehabilitation centers was associated with an increased prevalence of lower back or shoulder symptoms, whereas work in out-patient clinics was associated with an increased prevalence of thumb or wrist symptoms.

Keywords. Physiotherapists, Ergonomics, WRMSD, Risk factors

1. Introduction

Work related musculoskeletal disorders (WRMSD) affect the body's muscles, joints, tendons, ligaments and nerves. Physiotherapists are often at high risk of developing WRMSDs as they are mostly involved in physically demanding and intense, repetitive tasks in their practices. WRMSD are one of the most common problems physiotherapists treat. But in spite of possessing the knowledge of the condition, Physiotherapists often end up developing WRMSDs themselves. Studies report that the physiotherapists who worked in general medicine, paediatrics, elderly care, psychiatry and outpatient burns had a 46% greater likelihood of getting WRMSD during the course of their work

2. Methods

A systematic review was done using MEDLINE by the advanced search and articles were found using the keywords “physiotherapists”, “ergonomics” and “musculoskeletal disorders”. The limits were set for all the articles, published in the years from 1995 to 2013. A total of twenty one articles were found and was reviewed by three reviewers. 14 studies were considered for further review. Studies which were not adequate and inappropriate were excluded. A final review was done based on inclusion and exclusion criteria and the articles which did not fit the criteria were excluded from the systematic review. The following features of the study were taken into review: study design, type of data collection, assessment tools and outcomes obtained in the respective study. Table 1 shows the results of the review

3. Results

Table 1: Results of all the articles reviewed.

Author & Year	Sample Size	Method	Risk factor investigated
Darragh et al, 2009	3,297	Questionnaire	- Gender, Weight, Age, Years of experience, Hours worked per week
Passier et al, 2011	66 PT 46 OT	Questionnaire	- Work postures and movements, Lifting or carrying, Repetitive tasks
West et al, 2001	Male – 39 Female – 178	Questionnaire	- Static postures, Repetitive actions, more patient load, Working while injured, manual therapy
Salik et al, 2004	Male – 28 Female – 92	Questionnaire	- Lifting , Static posture, Performing repetitive tasks, Transferring patients
Nordin et al, 2011	81	Questionnaire	- Mobilizations, Manipulations and massaging, Lifting or transferring activities
Adegoke et al, 2008	126	Questionnaire	- Patient load, Static posture, Lifting/transferring, manual orthopedic techniques, Bending or twisting, Repetition
Cromie et al, 2002	824	Questionnaire	- Electro physical agents
Cromie et al, 2001	NA	Survey	- Postural & Environmental
Bork et al, 1996	1160	Questionnaire	- Manual Therapy, Repetitive movement, Awkward postures, High force levels
McMahon et al, 2006	961	Questionnaire	- Hyper mobility of thumb joint, Repeated weight transmission
Glove et al, 2002	NA	Review	- Lifting or transferring patients, Younger age
Glover et al, 2005	3661	Questionnaire	- Young age, Repetition, Static posture, Large number of patient in a day
Wajon et al, 2007	129	Questionnaire	- Alignment of thumb
Alrowayeh et al, 2010	222	Questionnaire	- Gender, Physical load, Psychosocial load, General health status

4. Discussion

Most of the published studies were of survey type and the commonly used measuring tools were self reported questionnaires. Overall the prevalence of WRMSD among physiotherapists was found to be more than 80%. The review analysis indicated that manual contact and repetitive force were the commonest risk factors for musculoskeletal symptoms among physiotherapists. The most commonly affected areas was the lower back, followed by wrist, fingers, upper back and neck. The initial episode of back pain most often occurred in physiotherapists between the ages of 21 and 30 years. This age of onset was comparatively lesser compared to other healthcare professionals. Female physiotherapists reported a higher prevalence and severity of WRMSD compared to male physiotherapists.

5. Conclusion:

Specific educational and coping strategies should be developed among physiotherapists to reduce the risk of WRMSD in the practice of physical therapy and to prevent potentially disabling conditions.