CONSEQUENCES DUE TO THE PRESENCE OF WORK-RELATED MUSCULOSKELETAL DISORDERS IN THE AREA OF THE LOWER BACK AND CERVICAL SPINE AMONG PHYSIOTHERAPISTS

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Abstract: The purpose of the article is to present the consequences due to the presence of work-related musculoskeletal disorders in the area of the lower back and cervical spine among physiotherapists in Montenegro.One hundred twenty-seven physiotherapists performed the general questionnaire and modified Nordic survey questionnaire. Statistical analysis was performed using the IBM SPSS Statistics version 20. The significance level was set up to $p < 0.05$.
The most frequent painful region among physiotherapists was the lower back (66.1%), followed by the cervical spine (58.3%). Due to the presence of symptoms in the area of the lower back, 54.8% of respondents took therapy, 50% of respondents reduced their activities, 10.7% of respondents missed one or more working days, while 3.6% of respondents changed their workplace. Due to the presence of symptoms in the area of the cervical spine, 60.8% of respondents took therapy, 35.1% of respondents reduced their activities, 6.8% of respondents missed one or more working days, while 1.4% of respondents changed their workplace.
The results of our research showed the consequences due to the presence of work-related musculoskeletal disorders in the area of the lower back and cervical spine among physiotherapists in Montenegro. This includes taking therapy due to the presence of symptoms, reducing activity due to the presence of symptoms, missing one or more working days due to the presence of symptoms, and changing workplaces due to the presence of symptoms.
It is recommended to apply a prevention strategy that should be formed simultaneously on 3 levels: valid legal regulations and guidelines for organizing the work environment of physiotherapists, by adjusting the organization and ergonomics of the workplace and education of physiotherapists.
Keywords: lumbar spine, cervical spine, musculoskeletal disorders, physiotherapists, work related

1. INTRODUCTION

In the occurrence of musculoskeletal disorders related to work, three basic groups of risk factors can be taken into account: physical, psychosocial and individual factors. Physical factors are prolonged or inappropriate positions, repetition of the same movements, strong efforts, vibrations of the hand and arm, vibrations of the whole body, mechanical compression and cold. Psychosocial factors are work pace, autonomy, monotony, work/rest cycle, task demands, social support from colleagues and management, and job insecurity. Individual factors are age, sex, professional activities, sports activities, household activities, recreational activities, alcohol/tobacco consumption and previous musculoskeletal disorders. The risk factor that affects all risk factors is duration. Numerous studies show a high prevalence rate of work-related musculoskeletal disorders among healthcare workers. Physiotherapists are often exposed to a high risk of developing work-related musculoskeletal disorders, because they are mostly involved in physically demanding and intensive, repetitive tasks in their practice. Patient handling, transfer of dependent patients, lifting, repositioning and performing manual therapy, with frequent flexion and rotation of the trunk, as well as awkward positions when performing tasks, increase the risk of musculoskeletal disorders related to the work of a physiotherapist. Musculoskeletal disorders related to work are caused or aggravated by the performance of a certain activity. Risk factors, such as constant non-physiological positions and vigorous repetitive tasks, which are often the result of poor ergonomic design of workspaces and instruments and manifest themselves as insidious pain that can result in temporary or permanent work incapacity. Work-related musculoskeletal disorders are still very widespread in Europe, despite significant efforts to prevent them such as the "Healthy Workplaces Lighten the Load 2020-22" campaign launched by the European Agency for Safety and Health at Work.
By evaluating musculoskeletal disorders related to work and precise ergonomic assessment of the risk factors of these disorders, as well as by using appropriate methods and instruments and training workers on the principles of ergonomics, the workplace can be improved, reducing the risk and consequences of the development of these disorders. Health protection and safety at work take on an increasing role and importance every day. Primary

prevention refers to the prevention of musculoskeletal disorders and control of risk factors, and secondary prevention refers to the prevention of the consequences of musculoskeletal disorders through their early detection and treatment. Ongoing education is required in knowing the safe and effective implementation of practical, technical and clinical skills associated with the various concepts and approaches used in physiotherapy practice.

2. MATERIALS AND METHODS OF WORK

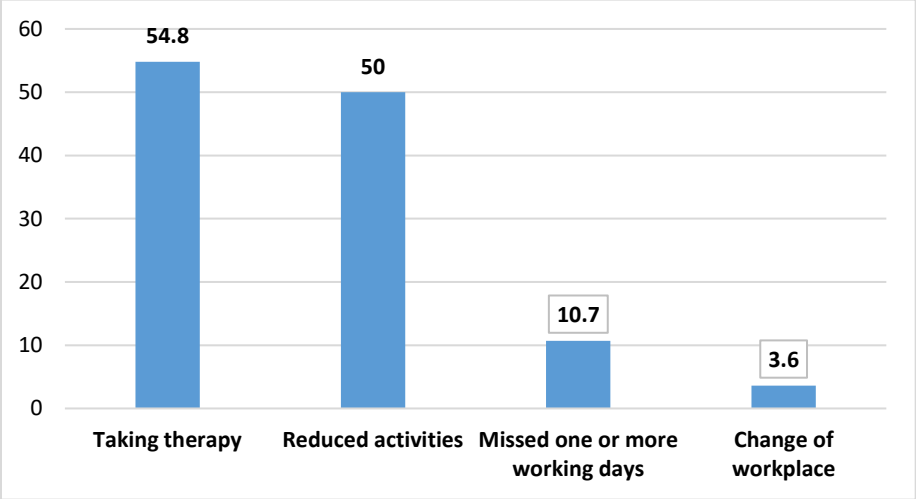
One hundred twenty-seven physiotherapists performed the general questionnaire and modified Nordic survey questionnaire. Statistical analysis was performed using the IBM SPSS Statistics version 20. The significance level was set up to $p < 0.05$.

3. RESULTS

By analyzing the gender structure of the total number of respondents, we came to the result that there were 25.2% male respondents, while there were 74.8% female respondents. Using the chi-square test, a statistically significant difference was found in the gender structure of the respondents, and that the sample was dominated by women, $\chi 2 = 31,252$; $p = 0.001$.

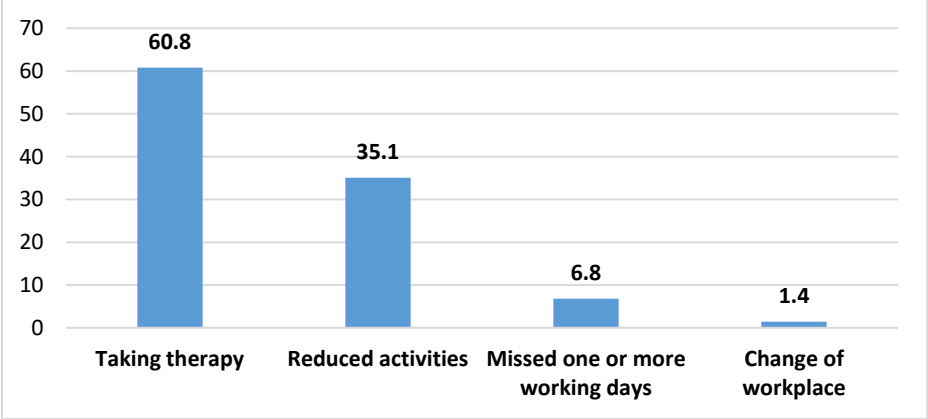
The most frequent painful region among physiotherapists was the lower back (66.1%), followed by the cervical spine (58.3%).

Graph 1. Consequences due to the presence of symptoms in the area of the lower back



Due to the presence of symptoms in the area of the lower back, 54.8% of respondents took therapy, 50% of respondents reduced their activities, 10.7% of respondents missed one or more working days, while 3.6% of respondents changed their workplace.

Graph 2. Consequences due to the presence of symptoms in the area of the cervical spine



Due to the presence of symptoms in the area of the cervical spine, 60.8% of respondents took therapy, 35.1% of respondents reduced their activities, 6.8% of respondents missed one or more working days, while 1.4% of respondents changed their workplace.

4. DISCUSSION

Alperovitch-Najenson et al. conducted a study involving 26 physical therapists, 57.7% of respondents reported work-related musculoskeletal disorders in the neck, and in a study conducted by Rahimi et al. involving 319 physical therapists, 57.4% reported musculoskeletal disorders related to work in the neck. The results of these two studies correlate with the results of our study.

Rahimi et al. conducted a study in which 319 physiotherapists participated, and 65% of respondents reported musculoskeletal disorders related to work in the lower back, in the research by Preran et al., 271 physiotherapists participated, and 65.3% of respondents reported muscular -work-related musculoskeletal disorders in the lower back, Vieira et al. conducted a survey of 121 physiotherapists, with 66% of respondents reporting work-related musculoskeletal disorders in the lower back, Khairy-Bekhet et al. research in which 501 physiotherapists participated, and 68.80% of respondents reported musculoskeletal disorders related to work in the lower back. The results of these researches are correlated with the results of our research.

5. CONCLUSIONS

The results of our research showed the consequences due to the presence of work-related musculoskeletal disorders in the area of the lower back and cervical spine among physiotherapists in Montenegro. This includes taking therapy due to the presence of symptoms, reducing activity due to the presence of symptoms, missing one or more working days due to the presence of symptoms, and changing workplaces due to the presence of symptoms.

RECOMMENDATIONS

Based on the results of our research, it is recommended to apply a prevention strategy that should be formed simultaneously on 3 levels: valid legal regulations and guidelines for organizing the work environment of physiotherapists, by adjusting the organization and ergonomics of the workplace and education of physiotherapists for safer work in recognizing the limits of their practice and knowledge.

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