



COMPARITIVE FREQUENCY OF MUSCULOSKELETAL SYPTOMS IN CLINICAL AND ACADEMICIAN PHYSICAL THERAPISTS; A CROSS SECTIONAL SURVEY

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ABSTRACT

Background: Work related disorders have been top reasons of being on leave, early retirement, and job switches. Now when work environment has been changed altogether due to technology, certain professions are still considered at risk of these occupational disorders such as physiotherapy profession. This profession currently is seen divided two main domains, academics and clinical. Studies have been conducted figuring out musculoskeletal disorders for physiotherapy clinicians but there is less literature regarding such studies for physiotherapy academicians, although, there is huge literature available on academicians in general.

Objective: The objective was to determine the work-related musculoskeletal disorders in clinical and academic physiotherapists.

Methods: This was a cross sectional survey conducted among 98 academic and 52 clinical physiotherapists contacted through convenience sampling technique. The data was collected using questionnaire comprised of demographics and extract of Nordic Questionnaire. Statistical Package for Social Sciences, SPSS 20.0. was used to analyze data. Frequency and percentages were calculated against different affected areas, in general and based on primary job domain i.e., academics or clinical.

Results: Distribution of responses based on work domain showed that 63.5% physiotherapists linked with clinical practice while those of 93.9% physiotherapists linked with academics were having neck pain. Ratio for other regions showed 51.9:35.7% for back pain, 80.8%, 89.8% for low back pain, 75.0%, 45.9% for shoulder, 50%. 30.6% for elbow, 88.5%, 43.9% for wrist pain. 76.9%, 61.2% for hands, 19.2%, 8.2% for hip pain, 23.1%, 76.6% for knee pain and 15.4%, 22.4% for ankle pain.

Conclusion: The study concluded that musculoskeletal disorders are highly prevalent in both clinical and

academic physiotherapists while the areas reported by majority were neck, back, shoulder and knees.

Keywords: Musculoskeletal Disorders, Physiotherapists, Clinicians, Academicians

INTRODUCTION

The degenerative or inflammatory sort of disorders that cause functional impairment and pain mainly due to a specific occupation are termed as work related musculoskeletal disorders. Work would not be sole cause of these musculoskeletal disorders, but the work-based activities or situation may greatly contribute to development or exacerbation. Constant or fixed body postures for longer durations, repetitive movements, and force to body surface mismatch or work pace that is too fast or slow to work efficiently and other such situations lead to work related musculoskeletal disorders.(1-4)

Musculoskeletal diseases and pain are usually treated by Physiotherapists. These types of continuous work put these professionals on risk for various types of injuries. Now a day's physiotherapists work in a versatile range of domains ranging from clinical to academics and managerial positions. Repetitive nature of tasks, demand of high forces and postures are considered among top risk factors for physiotherapists. The physiotherapists working in clinical domains have to deal with undue forces required during transfers and handling of patients in wards and ICUs, bed and mat activities and lifting equipment in outpatient door. These put physiotherapists at risk of acute or chronic disorders.(5, 6)

The Nordic Musculoskeletal Questionnaire (NMQ) was developed from a project funded by the Nordic Council of Ministers. The Nordic Musculoskeletal Questionnaire can be used as a questionnaire or as a structured interview. The authors concluded this was acceptable in a screening tool [10%. Cromie et al. (2000) reported that 1 in 6 physical therapists changed settings or left the profession due to Work-related Musculoskeletal

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Disorders [4%. Glover et al. (2005) reported that 32% of physical therapists with Work-related Musculoskeletal Disorders lost work time. The rate of prevalence of these injuries in Australia, America, Britain, Europe and some parts of Middle East like Kuwait was reported.(7, 8)

Nordic Musculoskeletal Questionnaire, which was originally developed by project of Nordic Council, can be used as screening tool for broad range of musculoskeletal disorders and can fit for any kind of professional or an individual. This has been used previously by many researchers to detect work related disorders among physiotherapists. The findings of these studies showed a moderate prevalence and it was revealed there is minor number of physiotherapists who leave their job due to these musculoskeletal disorders, however, prevalence of these disorders varies in Europe, Britain, America, Australia and other part of world including Middle East.(9, 10)

There have been various studies in Pakistan as well regarding these issues, however, there is gap of time and due to rapid shift in working parameters the evidence is being considered outdated. Current physiotherapists are comparatively young and use manual therapy more frequently. So this study was planned, main aim of which was to increase awareness regarding body areas which are at risk and prevention planning for these incidents.(9-13) The objective was to determine the work related musculoskeletal disorders in clinical and academic physiotherapists.

MATERIAL AND METHODS

It was observational cross-sectional survey. The study was conducted among physiotherapists working in academic and clinical setups. The study was compiled at university of Lahore. It was completed in six months from March 2018 to August 2018. The duration taken in synopsis approval was excluded, which also was around two months. Convenient sampling, the form of non-probability sampling technique was employed.

The sample size calculated by online sample calculation while the parameters were confidence level 95%, confidence interval 5, assumed proportion 0.3, and the sample estimated to be 142 or more.

The physiotherapists from both teaching and clinical sector, public and private, either gender age ranging from above 20 and less than 40 years were included the physiotherapists having hereditary disorders, traumatic

injuries, degenerative or rheumatic diseases, pregnancies, recent fractures or systematic diseases such as hypertension, diabetes or any infectious diseases were excluded.

The data was collected through questionnaire. Physiotherapists were approached at their work setting and were requested to fill in questionnaire after signing an informed consent. Questionnaire were collected back on spot as hand out questionnaire. Questionnaire consisted of basic demographics and questions extracted Nordic.

All physiotherapists were taken an informed written consent, explaining objectives and their rights of withdrawal, or knowing the findings at any level. Furthermore, they were assured regarding secrecy of their personal information or information related to their profile. The frequency and percentages were collected by Statistical Package for Social Sciences, SPSS 20.0. Frequency represented prevalence of respective region. Chi Square was used to see association based on various attributes such as gender, work domain clinical/academic and sector. Ethical approval was taken from Institutional Review Board of University of Lahore, relating to University Institute of Physical Therapy.

RESULTS

Distribution of responses based on work domain showed that 63.5% physiotherapists linked with clinical practice while those of 93.9% physiotherapists linked with academics were having neck pain. Ratio for other regions showed 51.9:35.7% for back pain, 80.8%, 89.8% for low back pain, 75.0%, 45.9% for shoulder, 50%. 30.6% for elbow, 88.5%, 43.9% for wrist pain. 76.9%, 61.2% for hands, 19.2%, 8.2% for hip pain, 23.1%, 76.6% for knee pain and 15.4%, 22.4% for ankle pain.

DISCUSSION

Musculoskeletal problems are often related to occupation, this study highlighted that physiotherapists, clinical and academic, are also victim of occupational related MSK issues. A series of studies has been conducted on this issue various countries like, China, Saudi Arabia, India, Iran etc. and also a topic of great consideration in European and western countries. But in Pakistan there is growing literature such issues specially the occupation requiring manual work such as physiotherapists.

With advancement in academics in Physiotherapy, a large number of physiotherapists are engaged in



physiotherapy teaching. There is a great need of such researches so that MSK problems related to this profession can be found out. There is also a need of awareness about causes, risk factors, ergonomic training and precaution related to MSK problems in teaching versus clinical staff.

So this study was done to see the prevalence of different MSK problems including different body regions like neck, upper back, lower back, shoulders, elbows, wrist and hand, hip/thigh, knees, ankle/feet. Main sites of pain were identified. Physiotherapists related to both domains complain of acute and chronic MSK problem and these have been noticed. MSK problems causing increase functional limitation in daily activities were found out. Result obtained from this study was also analyzed to find out that instead of shoulder pain which is more prevalent in clinicians, MSK problems related to back was much more common than the other extremity joints pain. Pain causing increase visit to physician were also identified in physiotherapists, clinical and academic. The study has included 150 physiotherapists from clinical and academic, while majority belonged to academics.

Much research on preventive measures, postural education of physiotherapists, clinical and academic, and healthy lifestyle has been conducted in other countries. Such research should also be published in Pakistan as a large number of populations is involved in this profession, a problem in this population would affect the education system or country.

All sites of body are vulnerable to be involved but shoulder and spine are at greater risk. More comprehensive research is needed to explore the causative factors either environmental, occupational or psychological. Risk factors should also be identified. Researches should also be done on ergonomic and bio-mechanical factors which make this teaching population a victim of occupational related health problems. (8)

Furthermore, awareness programs or seminars should be organized to educate people about their health and lifestyle. Lectures on diet, healthy life style, postural education and ergonomic training should be delivered to teaching staff to cope up with this increased risk of MSK pain in this population.

CONCLUSION

The study concluded that musculoskeletal disorders are highly prevalent in both clinical and academic

physiotherapists while the areas reported by majority were neck, back, shoulder and knees.

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