

PREVALENCE OF WORK RELATED UPPER BACK PAIN AMONG PHYSIOTHERAPISTS OF LAHORE

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ABSTRACT

Objective: To find out the prevalence of work related upper back pain among physiotherapists of Lahore.

Materials and Methods: It was a cross sectional study. Data was collected by 140 physiotherapists from different physiotherapy setups and hospitals of Lahore over a period of six months from January 2019 to June 2019. Physiotherapists with rheumatoid arthritis and congenital disorders were excluded. Data was collected by modified Nordic based questionnaire to evaluate the upper back pain among physiotherapists. SPSS version 21 was used to analyzed the data.

Results: Out of 140, 22(15.7%) physiotherapists had upper back pain and 109 (77.86%) had no upper back pain.

Conclusion: Physiotherapist had significant prevalence of work related upper back pain, which is mainly due to their work pattern of prolonged standing, faulty posture and physical demanding nature of their work.

Keywords: Musculoskeletal disorders, prevalence, upper back pain.

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INTRODUCTION

Work related musculoskeletal disorders are describe as the most common and notorious cause of chronic pain and physical disability that effects millions of people around the world.¹ In work related musculoskeletal disorders, pain is the most common symptom and it is due to some musculoskeletal injuries like joint stiffness, muscle tightness, swelling or redness of the affected area. While some workers also feel numbness, changes in skin color and decreased sweating of the hand.² Previous researches shows that physiotherapists and occupational therapists are at the higher risk of musculoskeletal disorders.³ The studies also shows that the 91% of physiotherapists have work related musculoskeletal disorders.⁴ The physical demanding nature of work in physiotherapy is the common cause of musculoskeletal injuries among physiotherapists.⁵ Most common areas which are involved in the

musculoskeletal disorders among physiotherapists are low back and neck. Usually, physiotherapists don't pay attention on their ergonomics and posture, which leads them to different musculoskeletal problems. Work tasks which may lead the physiotherapists to musculoskeletal injuries are lifting and carrying the patient which are dependent, having worked in the same posture for a long period of time, treating too many patients for the whole work day, maintaining the restrictive posture during manual therapy techniques, and performing same task multiple of time in same posture including maintaining and twisting of the trunk.⁶

The life prevalence of work related musculoskeletal disorders among physiotherapists which was reported as 68% in United Kingdom¹ 91% in Australia⁴ and 85% in turkey². Upper back pain among physiotherapists is one of the most common problems which usually physiotherapists complaint. It may happen due to musculoskeletal injuries like muscle tightness or muscular spasm in the area of upper back. Thoracic cage play an important role to holding the body in upright position. The vast majority cases of upper back pain among physiotherapists are due to poor posture, muscular irritation and joint dysfunction. Upper back pain happens mostly due to lack of muscle

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strength or maybe due to repetitive injuries like repetitive motions. In physiotherapy, mostly the work load of the patient is on the body of therapist. Physiotherapists ignore the ergonomics and did not maintain their posture while treating the patients. Because of faulty posture of physiotherapists, their body muscles lead to spasm and due to over work in bad posture it further leads to musculoskeletal injuries. As the upper back pain among physiotherapists was common so the aim of this research was to evaluate the prevalence of upper back among physiotherapists in Lahore (Pakistan). By finding the prevalence of upper back pain from this study one can introduce prevention strategies to overcome the prevalence in future.

MATERIALS AND METHODS

It was a cross sectional study. Data was collected from both Government and Private setups of Lahore-Pakistan. The duration of this study was six months from January 2019 to June 2019, after the approval of synopsis. Sample size was 140 which was collected by using formula $(n = z^2 p(1-p)/e)^2$. Convenience sampling was done. Physiotherapists who were included in this study were those who had at least 12 months of clinical experience, less than 40 years in age, both male and female work at least 36 hours in a week. Physiotherapists who were not included in this study were those who were not working in clinical setups, more than 40 years of age and had any accidental or trauma injury. Data was collected by modified Nordic questionnaire to check the prevalence of upper back pain. The questionnaire was given to 140 physiotherapists and there response was 100%. (The physiotherapists could be male or female and having at least 12 month of experience). Before given the sheets all the information about the sheet and the study was given. The questionnaire took 5 minutes to be completed and was return back immediately after completion. After receiving each sheet was examined to check any error and mistake. The questionnaire was based on 1 sheet with demographic characteristics about the prevalence of upper back pain. (The study populations of 140 physiotherapists were qualified and also currently working physiotherapists). For data entry and analysis, SPSS 21 software was used. SPSS 21 software also used for analysis of qualitative variables percentage, frequency and also make charts for desired variables results. The correct results were formed using SPSS 21 software in form of Table, Percentage (%) and Bar charts. Using tools like SPSS 21 results

were drawn from the analysis of the data and discussion were made to summarize and conclude findings.

RESULTS

In this study the total no. of participant were 140. 51 were Male with percentage of 36.43% and 89 were female with percentage of 63.57%. In this study 131 physiotherapists were those whose age lies in between (20-30) and their percentage was 93.6% and 9 were those whose age lies in between (31-40) and their percentage was 6%. Those who works 36hr/week their frequency was 57 and their percentage was 40.7%.

Those who work 42hr/week were 15 and there percentage was 10.7%. Those who work 48hr/week were 68 and their percentage was 48.6%. 118 replies (no) to this question and their percentage was 84.3% percent and 22 replies (yes) and their percentage was 15.7%.

Table 1: Frequency and percentage of gender.

Gender	Frequency and %ages
Male	51(36.4)
Female	89(63.6)
Total	140(100.0)

Table 2: Frequency and percentage of age.

Age	Frequency and %ages
20-30	131(93.6)
31-40	9(6.4)
Total	140(100.0)

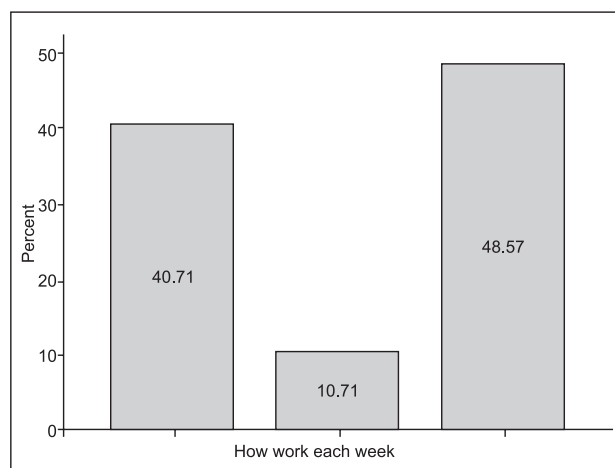


Figure 1: How many hours do you work each week?

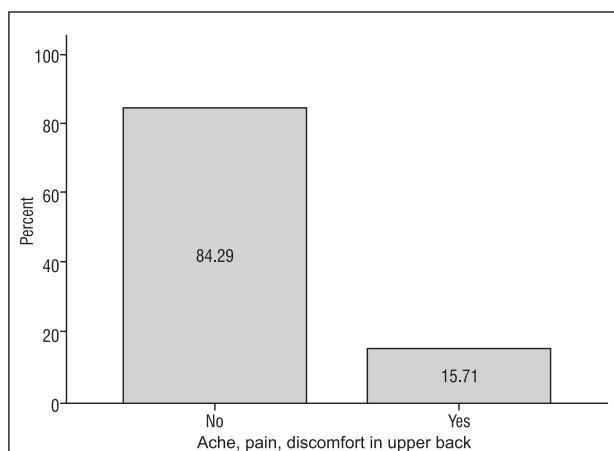


Figure 2: Have you at any time during last 12 month had trouble (ache, pain or discomfort) in upper back.

DISCUSSION

The study aim was to evaluate the prevalence of work related upper back pain among physiotherapists of Lahore who had minimum 12 months of experience in the clinical field. 140 physiotherapists participate in this study. Out of them 22 reply that they had work related upper back pain in the last 12 months of experience and the percentage was 15.7%. A cross-section study was held in Rawalpindi and Islamabad by Madiha et al. In this study the prevalence of upper back pain was 0.9 percent. As comparing this result with our study the prevalence in Lahore was 15.7%. There was a great difference among these cities as it may be due to increase demand of physiotherapists in Lahore or may due to more patients as compare to the Rawalpindi/Islamabad.⁷ A cross-section survey was conducted in Nigeria (2008) by Babatunde et al. The prevalence of upper back pain was 14.3%. In our study the percentage of upper back was 15.7%. This study shows similar results with our study.³ A literature-review and pilot study on physiotherapists was conducted by E Bork et al (1996). The prevalence of work related upper back pain among physiotherapists was 28.7%. In our study the percentage of upper back was 15.7% and by comparing this study we found the difference of 13%.⁶

A cohort study was conducted by Marc Campo et al (2008) on 1-year follow-up. Those who had work related upper back pain were 2.4% in one year follow-up. In our study the no. of physiotherapists who had worked related upper back pain were 22 and the percentage was 15.7% because the sample size varies.⁸ A survey was conducted by Campo M et al. (2008) to find out work related musculoskeletal disorders in physical therapists. 12.2% having work related upper back pain. In this study the percentage of upper back pain was 15.7% and it's close to this

study, which was 12.2%.⁸ A research was conducted by Nicole L et al. (1999) on PTs and PTAs. The prevalence of upper back pain was 23% in PTs and 28% in PTAs. In our study the prevalence of upper back pain was 15.7% and it shows that it was also one of the most common injuries which were associated with physiotherapists in relation with their work.⁹ A study was conducted by Rugelj (2003) in which the prevalence of upper back pain was 6.0%¹⁰ by comparing the percentage of this study was 15.7% which shows the high prevalence of upper back pain. A study was conducted by Al-Eisa (2012) on Saudi physiotherapists, where the prevalence of upper back pain was 29.3%¹¹. This shows that upper back pain was a common factor. Edge ramos et al (2016) which gave a systemic review in which Cormie et al show 11.1% of upper back pain disorders among physiotherapists. As show that it was also a big problem in physiotherapists.¹² Wilhelmus et al (2011) Shows that percentage of upper back pain which was 20.8% as in our study it was 15.7% by comparing it shows that upper back pain was also highly prevalent among physiotherapists.¹³ Glover et al. (2005) had 23.0% of upper back pain percentage in his study so it means that the upper back pain commonly hit physiotherapists like other occupational injuries¹

CONCLUSION

Physiotherapist had significant prevalence of work related upper back pain, which is mainly due to their work pattern of prolonged ,standing, faulty posture and physical demanding nature of their work.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under

Khan U: Data analysis, Discussion

Fasih M: Data Collection, Literature review

Ahmad A: Final Proofreading.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.