

# Prevalence of Work Related Low Back Pain Among Clinical Physical Therapists

RIDA AZIZ<sup>1</sup>, MEHWISH NIAZ<sup>2</sup>, AQSA ASHRAF<sup>3</sup>, SAMINA PARI<sup>4</sup>, RAMSHA ALI<sup>5</sup>

<sup>1,3-5</sup>Demonstrator, Physiotherapist, CMH Medical College, Lahore

<sup>2</sup>Associate Professor, Physiotherapist, CMH Medical College, Lahore

Correspondence to: Mehwish Niaz, Email: mehwishniaz2011@hotmail.com, Cell: +923234284700

## ABSTRACT

**Background:** Previously presented literature (research work) had demonstrated the work-related low back pain, poor posture responsible for low back pain. In this study we are seeking to evaluate the prevalence of work related low back pain among clinical physical therapists.

**Objective:** To determine the work related back pain among clinical physiotherapist.

**Methodology:** A sample size of 200 clinical physiotherapist participants were all working in clinical setting more than 2 years having age among 25-40 years. Validated questionnaire (Oswestry low back pain disability questionnaire) for pain measurement was used as a tool for data collection.

**Results:** In this study 63.3%therapist reported with low back pain in which 69.3%were females and 30.7% were males. **Conclusion:** 10 variables are used in this research in which most significant variables are pain intensity, lifting and standing. Prevalence of low back pain is high among clinical physical therapist.

**Keywords:** Low back pain (LBP), physical therapists, Prevalence, Oswestry low back pain questionnaire.

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## INTRODUCTION

Low back pain is the most common cause of disability in adults less than the age of 45 and secondary to degenerative changes between the ages of 45-65 years. At least 85% of people usually experience low back pain at some stage during their life span [1]. Low Back Pain (LBP) is frequently defined as pain, muscle tension or stiffness localized below the costal margin and above the inferior gluteal folds with or without leg pain. When five vertebrae (L1-L5) joined together they formed lumber spine [2]. Low back pain is mostly nonspecific or mechanical in nature. Mechanical low back pain basically develops from spine, related soft tissues and intervertebral discs [3]. The primary risk factors for low back injuries in PTs include: transferring (30%), lifting (25%) and responding to a patient's anticipated or sudden movement (24%) [4].

The occupation-related risk factors<sup>5</sup> are divided into 6 ranks : (i) activities (ii) postural factors(iii) workload issues (iv) risk factors relating to the repetitive treatment activities and time management issues (v) personal factors (vi) risk factors related to physical work capacity, health conditions, and knowledge [5]. Physical therapists are usually involve in patient lifts and transfers which put greater physical efforts in the hospital organization [6].

A greater percentage (61%) of physical therapists experienced work related musculoskeletal problems. The risk factors described by most of the physiotherapists who were treating huge number of patients in a day, acquiring persistent tricky postures, manual therapy techniques and carrying the patients during their services in prevention and treatment of musculoskeletal disorders. It had been noticed that, individuals who experienced work related low back pain issues results in multidimensional disruptions, which could put impact on their occupations [7,8].

Further education should provide information for the prevention of work related injuries as well as blocks sequential pain. Equipment such as slide boards, sit to stand frames, suspension frames, and height adaptable beds should be promptly available for patient care. Proper ergonomic practices could decrease the severity of

musculoskeletal disorders [9,10]. PT's should take intervals between patients and proper body mechanics during transfers and handling tasks require proper tactics to minimize load [11].

In 2016 a study was conducted by Saravanan Prerana , Murugan Saravanan , Lad Krunal , Ramani Krishna , Vododarariya Ruchi under the topic of prevalence, job risk factors and coping strategies of work related musculoskeletal disorders among physiotherapists. Purpose of the study was to investigate prevalence of work related musculoskeletal disorder, job risk factors commonly involved and tackling strategies used among Physiotherapists in India. The semi-structured questionnaires were distributed to physical therapists with response rate of 86%. The result showed that lower back region was most commonly affected (65.3%) [12].

A cross-sectional study was conducted by Rajan Balakrishnan, Nur Asyikin Binti Moh Naib in 2015 under the topic of prevalence of work related musculoskeletal disorders among physiotherapists in Sabah .70% responses were collected back and injuries mostly have been occurred in low back region (44%). They concluded that there is high prevalence of work related musculoskeletal disorders in physiotherapists. Respondents notice that a change of work habits was required to reduce the risk of low back pain [13].

A study was conducted by Muaidi, Qassim I. ,Shanb, AlsayedAbdelhameed in 2016 under the topic of prevalence, causes and impact of work related musculoskeletal disorders among physical therapist. A cross sectional study of physical therapists using a valid and reliable questionnaire was conducted. Lower back pain (46.5%) was most commonly encountered. Results shows that physical therapists are especially vulnerable to work related musculoskeletal disorders with a prevalence of 47.7%. Avoidance of poor work habits, increased ergonomic awareness and safety measures are essential to prevent work related musculoskeletal disorders [14].

Mushfika Akter conducted a study in February 2012 under the topic of prevalence of low back pain among the

clinical physical therapists at CRP. Data was collected by mixed type of questionnaire. In percentage 80% of participants suffered from low back pain and 20% were not suffered by low back pain. This study concluded that low back pain is a common health problems [15].

**METHODOLOGY**

Study design was cross-sectional survey research. Study was conducted in different hospitals within six months of synopsis approval. The estimated calculations are approximately 500. And according to this the anticipated population proportion is P=0.01 with 95% confidence interval, and absolute precision d=0.05 was taken and calculated sample is n=218 .

Non-probability convenient sampling technique. Young physical therapists having minimum 1 year of clinical experience, Age between 25 to 45 years, Physical therapists suffering from low back pain, Physical therapists who were willing to participate in the study are included in the study. Exclusion criteria involves, Pregnant female physical therapists, Physical therapists with low back pain due to trauma, Physical therapists with low back pain due to different pathologies, Post-operative low back pain, Age <25 and >45 years. Data was analyzed by using SPSSV-20 software. Data was collected by distributing a validated questionnaire. (Oswestry low back pain questionnaire).

**RESULTS**

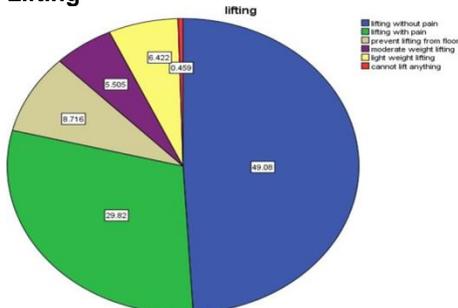
Out of 218 physical therapists, 151 (69.3%) physical therapists were females and 67 (30.7%) physical therapists were males.

**Pain Intensity**

Table 1: Table shows that 36.7% had no pain, 37.6% had mild pain, 19.7% had moderate pain, 3.2% had fairly severe pain, 2.3% had severe pain, 0.5% had worst pain.

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
no pain	80	36.7	36.7	36.7
mild pain	82	37.6	37.6	74.3
moderate pain	43	19.7	19.7	94.0
fairly severe Valid pain	7	3.2	3.2	97.2
very severe pain	5	2.3	2.3	99.5
worst pain	1	.5	.5	100.0
Total	218	100.0	100.0	

**Lifting**



Pie chart no:1 shows that 49.08% were lifting without pain and 29.82% were lifting with pain. STANDING

Data was collected from both government and private hospitals. 63.3% therapists reported low back pain which includes 37.6% physical therapists with mild pain, 19.3% with moderate pain, 5.5% with severe pain. Result of study showed that participants who do not adopt proper body posture and positioning while handling patients have high prevalence of work related low back pain.

Table 2: shows that 55.5% were standing without pain , 33.5% had pain on standing, 7.8% had pain on more than 1hour standing, 1.8% had pain on more than 30 mints standing , 1.4% had pain on more than 10 mints standing.

	Frequency	Percent	Valid Percent	Cumulative Percent
standing without pain	121	55.5	55.5	55.5
pain on standing	73	33.5	33.5	89.0
pain on more than 1 hour standing	17	7.8	7.8	96.8
Valid				
pain on more than 30 mints standing	4	1.8	1.8	98.6
pain on more than 10 mints standing	3	1.4	1.4	100.0
Total	218	100.0	100.0	

**DISCUSSION**

This study focused on the “prevalence of work related low back pain among clinical physical therapists”. This topic has a great importance as there is little research conducted on this topic in Pakistan, so the focus will enable the physical therapists to become aware of work related low back pain while treating patients, which greatly affects efficacy of the therapists. The results of this study reveal that the occurrence of low back pain in physical therapists is high due to inadequate positioning and improper techniques used during treatment sessions. Our study shows that out of all the 10 variables mainly 3 variables such as pain intensity, lifting and standing is mostly effective during the manual work( exercises) and abnormal positioning(posture).

In 2019, Shahul Hameed Pakkir Mohamed et.al; studied that out of 28 physical therapists 36% therapists had low back pain and in this study out of 218 physical therapists 63.3% of the therapists had low back pain associated with difficulty in lifting and standing with the percentage of 50.9% and 44.5%, respectively. The results of this study shows the need of incorporating the proper techniques and positioning of the therapists while handling the patients.[16]

This study had 218 participants of which 63.3% had work related low back pain. According to pain intensity variable 37.6% participants had mild pain, 19.7% had moderate pain and 5.5% had severe pain. This study is comparable to the study of SIN HO CHUNG et.al; in 2013, in which out of 180 participants 53.5% were suffering from pain.[17]

**CONCLUSION**

Further studies are needed in Pakistan to find the prevalence of work related low back pain among clinical physical therapists after adopting proper body positioning and using appropriate techniques during treatment session. The limitations of our study were short duration of time and limited resources.

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