Prevalence of Musculoskeletal Dysfunction in Clinical Physiotherapist

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Absract

Objectives : Objectives of this study was to find out musculoskeletal pain or dysfunction in clinical physiotherapist. On the basis of questionnaire rating the scale pain assessment was done. The ratings was graded by work related musculoskeletal disorders (WMSDs) questionnaire.

Methodology : There were total 150 subjects , out of which 120 subjects were participates of this study. This was a study of musculoskeletal dysfunction in clinical physiotherapist. Here we evaluated scoring of pain by the work related musculoskeletal disorders (WMSDs) quessionnaire

Result : There is various musculoskeletal joint pain present in clinical physiotherapist. Musculoskeletal joint dysfunction more found in males than females. Shoulder joint pain and knee pain is common in clinical physiotherapist due to standing posture.

Conclusion : There is prevalence of musculoskeletal dysfunction in clinical physiotherapist.

Keywords: *Musculoskeletal dysfunction in clinical physiotherapist.*

Introduction

Low back pain is defined as pain in lower back area that can relate to problems with the lumbar spine, the discs between the vertebrae , the ligaments around the spine , the spinal cord and nerves, muscles of the low back , internal organs of the pelvic and abdomen , or the skin covering the lumbar area[1.] Incidence of low back pain in general and working population has been focused on various investigation. There are 62% to 80% of the population will suffer from LBP. The lifetime incidence of LBP vary from 50% to 80% with average incidence of 60%. As reported by anderssson (1998) women and men have similar prevalence and in most of the studies , highest prevalence rate is seen in 40 to 60 year age group.

The incidence of low back pain appears to be age related. Physiotherapist they are also exposed to many of the same occupational risk factor leading to work related musculoskeletal problem especially with regard to the lower back. The purpose of the present study was to determine the incidence of work related LBP and other musculoskeletal problem among physiotherapist and to determine common personal and professional characteristics of physiotherapists reporting work related musculoskeletal problem. We hypothesized that musculoskeletal problem are related to occupational stress in physiotherapists(1) . Low back pain including lost productivity and expense of medical , rehabilitation and surgical intervention and cost of disabling pain and limited daily function.(7)

Cervical joint dysfunction : The presence of painful upper cervical joint dysfunction is diagnostic criterion for cervicogenic headache. Cervicogenic headaches arise from dysfunction in cervical musculoskeletal system. Dysfunction should be located within upper three cervical joint . Detecting the presence of relevant painful upper cervical dysfunction is therefore a vital part of diagnostic decision making to. Identify cervicogenic headache the physical examination method to detect joint dysfunction are active movement examination and manual passive segmental examination. The detection of symptomatic joint dysfunction by manual examination method has been used in a number of studies. This is perform by a manual examination of the upper cervical segment C0-1 , C1-2 , and C2-3(2)

Shoulder pain : Spinal and shoulder dysfunction are common in orthopedic conditionfound in elderly people. As increasing in age there are changes in spine and shoulder are generally cause kyphosis , spinal sagittal imbalance and limited shoulder range of motion[5]. Neck and shoulder painwas significantly higher for workers with shorter working duration , lower limb for pain was significantly higher for worker with longer duration [6] .

Sacroiliac dysfunction: The confusion and lack of awareness of sacroiliac joint .chronic spinal pain is multifactorial disorder with many possible etiology.the structure responsible for pain originating in the spine and affects on low back and lower extremity include sacroiliac joints and nerve root, spinal cord , spinal muscles and ligaments. [3]

Neck pain : Posture control is a complex task that requires vision, vestibular and somatosensory inputs from all over body assess the position and motion of the body there is ability to generate forces to control body position.[4]

Knee pain : In epidemiological studies have associated prolonged standing at work with lower extremity pain or discomfort. Alternate from sitting to standing its varies mobility during standing. [5]

As far as our knowledge very few studies have been conducted on cluster of musculoskeletal dysfunction in clinical physiotherapists. Hence this study is undertaken.

Methodology

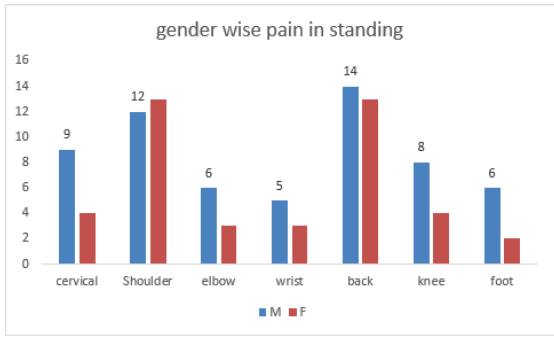
- Type of study- Observational study.
- Place of study - Krishna college of Physiotherapy, Karad.
- Sample size – 150
- Sampling method – convenient sampling.
- Study duration – 6 month

Materials

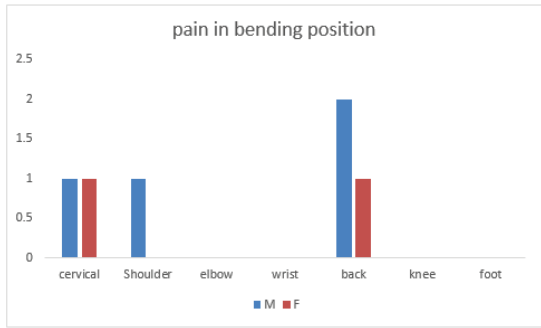
- Question Paper
- pen
- Data collection sheet

Mean± standard deviation	3.447
t value	0.10
p value	<0.442
Interference	Extremely significant

(1) **Pain in standing position**



(2) Pain in bending position



Interpretation :

In this graph shows that physiotherapist are affecting during standing position. There are male and female both are considered in this study. Blue colour shows male and red colour shows female. So for cervical pain 9 male and female 4, shoulder pain male 12 and female 13 , elbow pain male 6 and female 3, wrist pain male 5 and female 3 , back pain male 14 and female 13, knee pain male 8 and female 4 , foot pain male 6 and female 2.

(2) **Pain in bending position**

Interpretation

In this graph shows pain during bending position. In this study

Neurophysiotherapist have pain in bending position. Both male and female physiotherapist participate in this. Cervical pain male 1 and female 1, shoulder pain male 1, and back pain male 2 and female 1.

Pain experience in 5 year

Table no.1 :

5 years	cervical	shoulder	elbow	wrist	back	knee	foot
sum	143	149	124	48	173	39	46
average	5.1	5.32	4.42	1.71	5.96	1.39	1.64

Interpretation :

Pain experience in 5 years in total physiotherapist are as followings . There is total pain in sum and average of all physiotherapist : cervical pain experienced by 143 and its average is 5.1 , shoulder pain by 149 and its average is 5.32 , elbow pain by 124 and its average is 4.42, wrist pain by 48 and its average is 1.71 , back pain by 173 and its average is5.96, knee pain by 39 and its average is 1.39 , foot pain by 46 and its average is 1.64.

Pain experience in 6 years

Table no.2 :

6 years	cervical	shoulder	elbow	wrist	back	knee	foot
sum	21	26	19	11	31	6	4
average	6.2	5.2	3.8	2.2	6.2	1.2	0.8

Interpretation :

Pain experience in 6 years in total physiotherapist are as followings: cervical pain experienced by 21 and its average is 6.2 , shoulder pain by 26 and its average is 5.2 , elbow pain by 19 and its average is 3.8, wrist pain by 11 and its average is 2.2 , back pain by 31 and its average is 6.2, knee pain by 6 and its average is 1.2 , foot pain by 4and its average is 0.8.

Pain experience in 7 years

Table no.3 :

7years	cervical	shoulder	elbow	wrist	back	knee	foot
sum	11	12	6	3	14	7	1
average	5.2	6	3	1.5	7	3.5	0.5

Interpretation :

Pain experience in 7 years in total physiotherapist are as followings: cervical pain experienced by 11 and its average is 5.2 , shoulder pain by 12 and its average is 6 , elbow pain by 6 and its average is 3, wrist pain by 3 and its average is 1.5 , back pain by 14 and its average is 7, knee pain by 7 and its average is 3.5 , foot pain by 1 and its average is 0.5.

Result

The result analyzed for gender,duration of work and duration of constant posture.The prevalence of neck

pain was substantially higher in men (75%) and female (66.67%), which is not in relation with study by B. Cagnie et al[1] which suggests that women had almost twofold risk compared to male. Often holding the neck flexed in a single posture for a prolonged period of time leads to neck pain, though the pain varies with angle of neck flexion. . In 7 year of experiences there is more low back pain and knee pain. There is increasing in age muscles get affected . This study conclude that there is increase in back pain as increase in age position back pain is more due spinal mobility.as increasing in age increase there is more low back pain.in standing and knee pain . The result may be varying because of selection bias due to approaching time limit in the office to the subjects. The result showed $p < 0.05$ which is significant.

Discussion

The current study aimed to find the various musculoskeletal dysfunction in clinical physiotherapist .Physiotherapist are work in most of in standing position .As they increase their year of experience, they may have increase in the pain. Most common problem seen in cervical, shoulder , knee and most common is back pain . continuous standing while treating and assessing affect spinal muscle because of which physiotherapist may develop pain in lower back . In this study we noticed pain increases of year of work increases in clinical physiotherapist. Physiotherapist also have to work in standing , bending and constant sitting position most common position is standing position most of all musculoskeletal and neurological techniques are given in standing position . one of the professional an occupation an dysfunction is musculoskeletal pain. There are mens physiotherapist are affected more than womens physiotherapist as increasing in age they developed knee pain along with back pain. In clinical Neuro-physiotherapist and paediatric physiotherapist they treat patient in bending position. These therapist are treating in low plinth so they may also develop cervical pain and shoulder pain. As this study we noticed pain in increasing as increasing in experience of year in clinical physiotherapist .Physiotherapist have to work in standing , bending and sitting position.

The present study showed that we calculated all over pain by VAS scale . 0 is no pain 5 is minimum pain and 10 is unbearable pain. In this study we calculate all over pain of all physiotherapist and add them and average it . In 5 year experience it seen increase in back pain avg is 5.96,.cervical 4.42, shoulder 5.1. In 6 year back 6.2 in avg and shoulder 5.2. In 7 year shoulder 5.2 ,knee pain is increased in 3.5 back 7 in avg. cervical pain is 5.2 in average. In bending position seen back pain is increased. in men than women. There is increasing in age and increasing in age of experience there is musculoskeletal dysfunction is seen in clinical physiotherapist . female physiotherapist are more affected than male physiotherapist. Common seen conditions are low back pain , knee pain in lower limb . in upper extremity cervical pain and shoulder pain are commonly seen .During mobilization there physiotherapist have to maintain that position then after that session they feel the pain. They given glides to the patients then after that they feel pain in the joint and the mucle.

Conflicts of Interest: There were no conflicts of interest in this study.

Ethical Clearance: Ethical clearance was taken from institutional committee of Krishna institute of medical sciences.

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