

Highlighting the shoulder problems towards Physical Therapists Clinicians of Rawalpindi/Islamabad.

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ABSTRACT

Background: Pain is such a feeling or suffering that affects the mind or body by a deeply felt or a noxious stimuli. Shoulder pain is quite common around the world. Shoulder pain affects males, females and people of all ages. Shoulder is the most easily injured and physically harmed joint in body.

Objective of the Study: The study aims to determine the frequency of shoulder pain among physical therapists of twin cities i.e. Rawalpindi and Islamabad.

Methodology: Cross sectional survey of 200 physical therapists of both gender i.e. male and female was conducted having clinical experience of greater than or equal to at least one year. All physical therapists related to academic side were not included. The data was collected through a purposive sampling technique. A questionnaire was organized in a particular way to collect data. Shoulder pain and disability index (SPADI) used as an assessment tool and before that pilot study was done. Data was collected within 6 months through questionnaires filled by physical therapists from different rehabilitation centers and hospitals of Rawalpindi and Islamabad. I gave questionnaires to the physical therapists personally they filled it and returned me back. Data was analyzed on SPSS 21.

Results: In a sample size of 200 physical therapists, study shows that majority of therapists are male i.e. 60.5% and remaining are females i.e. 30.5%. Study shows that 16.5% of therapists work 6 hours per day, 81% of therapists work 8 hours per day, whereas 2.5% of therapists work 12 hours per day. The study shows that 39 % of therapists feel pain in right shoulder, 26% of therapists feel pain in left shoulder, and 7% of therapists feel pain in both shoulders, whereas 28% of therapists do not have pain in any of the shoulder. The study also shows that 38.5 % of therapists have referred pain whereas 61.5% of therapists do not have any referred pain.

Conclusion: It is concluded that majority of the physical therapists were male working 8 hours per day. Majority of therapists feel pain in flexion and most commonly in right shoulder because of its dominancy.

KEY WORDS: SPADI, shoulder pain, physical therapist having pain.

INTRODUCTION:

Shoulder joint is a multiaxial synovial ball and socket type. Shoulder joint is a kind of boggling shaped by combination of glenoid cavity of scapula with humeral head. Different bones which assume a vital part are acromion process of scapula, the clavicle, and a snare like coracoid process rising up out of the scapula. Shoulder is most versatile joint in the body. It gives furthest point with extraordinary scope of movement, for example, extension, flexion, external rotation, internal rotation, adduction, abduction and 360° circumduction in sagittal plane. Additionally, shoulder considers scapular depression, elevation, retraction and protraction. The extensive variety of movement likewise makes it an insecure joint. This is made up for rotator cuff muscles, labrum, ligament and tendon. Rotator cuff muscles are fundamentally the combination of 4 muscles and their individual tendons which wrap around shoulder and give them bolster and permit extensive variety of movement. The bursa is small fluid filled sac which secures the tendon of rotator cuff muscles furthermore go about as safeguards. The glenoid labrum is really the container made up of ligaments which serves to legitimately fit humeral head in glenoid cavity.⁽¹⁾ The shoulder girdle is built up by bones in a way that interface furthest point to pivotal skeleton. Clavicle and scapula are two bones support the shoulder joint.

Shoulder pain may be the cause of extrinsic or intrinsic disease of glenohumeral articulation, pathology in the periarticular tissues or originate from the distant spine, chest or visceral diseases which produce referred pain. Clinical diagnosis of shoulder pain is made from history, type and distribution of pain, and from the physical examination. Apart from acute traumatic lesions, such as fractures, dislocation, contusions, sprains and ruptured tendons, frozen shoulder, chronic or acute tendinitis, bursitis and musculotendinous lesions plays the major part constituting 85 to 90 percent of shoulder disabilities with pain.⁽²⁻⁴⁾

Musculoskeletal disorders of the shoulder are relatively common in the general population but are considered to be usually short lived and not incapacitating.' However, measuring the prevalence of shoulder disorders is difficult given that estimates are highly dependent on the precise definition used. In the Survey I of Nutrition and Health examination, conducted in United States, a prevalence estimate for shoulder symptoms of 7% was derived from a sample of 6913 adults with a definition of "at least one month of musculoskeletal pain in the shoulder".⁽⁵⁾⁽⁶⁾

Considerably higher chances of the presence of shoulder pain symptoms have been found in studies of occupational groups. Researchers studied 574 workers in six manufacturing plants in the United States and reported a prevalence of 33% for shoulder or neck pain "presenting greater than once or resisting since last 2 years more than a week".⁽⁷⁾ Similarly high estimates have been found in other occupational settings. Occupational factors relate both aspects of pain physically as well as psychosocially regarding work and also working environment consociating signs and symptoms of shoulder related musculoskeletal pain. Aspects of work thought to exaggerate the degree of hazard to musculature include physically heavy work, overhead activities of shoulder, reiterative motions of arms, and lack of sufficient rest. Occupations which are monotonous, involve time pressure, or high workload with little personal autonomy have also been found to have an increased prevalence of musculoskeletal symptoms.⁽⁸⁾

Below the age of 50 years occurrence of shoulder pain is very high ranging up to 6% to 11% in the general population but this ratio considerably increases in elderly people up to 16%–25%. Unable to work, lack of production and unable to perform work of daily living activities will be considered as a load for community as well to patient and family.⁽⁹⁾ Almost eighteen percent of total paid sick leave spent on shoulder or neck pain according to data shown by Sweden insurance company, this data also shows similar results to those of low backache. Same cost of sick paid leave utilized for low backache as that of neck and shoulder pain.⁽¹⁰⁾

The wide variety of physical work load factors were grouped into the following categories: heavy physical load (14 studies); awkward postures, including twisted postures, working with forward flexed trunk, and working with arms above shoulder level (13 studies); repetitive movements (eight studies); conducting the same activity for a prolonged period—such as typing or driving a car (five studies); vibration (six studies); and duration of employment (10 studies).⁽⁸⁾

Physiotherapists are more commonly affected to develop Work-related musculoskeletal disorders (WRMDs). Around the globe musculoskeletal disorders termed as most ignominious and common causes of severe long-term pain and physical disability that affect hundreds of millions of people. In the work place, health care professionals are vulnerable to sustaining musculoskeletal disorders during the course of their work routine.⁽¹¹⁾ Some authors and different studies reported that physiotherapists develop more chances to get shoulder pain related to stress at workplace and work acquired muscular issues just because of nature of their profession.⁽¹²⁾

Literature has indeed suggested that physiotherapists are particularly susceptible to WRMDs because of the nature of their profession which is often repetitive, labour intensive and involving direct contact with patients. However, researcher emphasized the complexity of attributing musculoskeletal disorders to work while other authors submitted that work only partly contributes to the occurrence of musculoskeletal disorders.⁽¹³⁾

The life time prevalence of WRMDs among physiotherapists has been reported to be 68% in the United Kingdom, 55% and 91% in Australia, and 85% in Turkey.⁽¹⁴⁾ Low back pain is the most common WRMD among physiotherapists with career and annual prevalence of low back pain among physiotherapists in the United Kingdom being reported as 68% and 58% respectively.⁽¹⁵⁾

Rotator cuff is generally composed of four tendons i.e. tissues connecting muscles to bone, shoulder achieves its range of motion by the help of rotator cuff. Any injury or inflammation to the rotator cuff tendons will result in painful overhead activities and to move shoulder around normal ranges. Sports activities, heavy load of physical work or such activities require repetitive motions will lead to shoulder injury. Sometimes other organs of body such as heart, liver, gall bladder or cervical spine problems refer pain to the shoulder. Cervical radiculopathy refers pain to shoulder.

As people getting older after age 60 musculoskeletal problems moving towards worst side as natural process of degeneration and wear and tear occurs around soft tissues of the body. Among all these shoulder problem is most common. Physiotherapy, medication and surgery sometimes required for treating musculoskeletal disorders.⁽²⁾

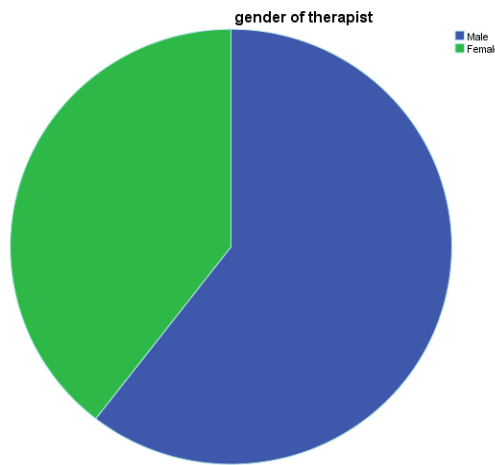
METHODS AND MATERIALS:

A cross sectional survey with sample size of 200 physiotherapists was selected using convenient sampling technique. Both Male and female were included in the study. Data was collected from individuals who fulfill the inclusion and exclusion criteria. Participants were excluded within academics or having prior shoulder related surgery. Written informed consent was taken and then the procedure was verbally explained to each participant. Histories were taken and physical examinations were performed. A semi structured questionnaire was designed for collection of data. Shoulder Pain and Disability Index (SPADI) used as an assessment tool and NPRS for pain. Data was analyzed by SPSS version 21 using descriptive statistics.

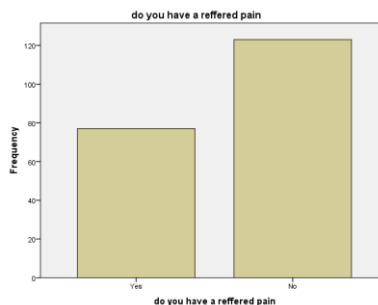
RESULTS

In a sample size of 200 physical therapists, study shows that majority of therapists are male i.e. 60.5% and remaining are females i.e. 39.5%. Study shows that 16.5% of therapists work 6 hours per day, 81% of therapists work 8 hours per day, whereas 2.5% of therapists work 12 hours per day.

The study shows that 39 % of therapists feel pain in right shoulder, 26% of therapists feel pain in left shoulder, and 7% of therapists feel pain in both shoulders, whereas 28% of therapists do not have pain in any of the shoulder. The study also shows that 38.5 % of therapists have referred pain whereas 61.5% of therapists do not have any referred pain. Study shows that 20.5% of the therapists feel pain during flexion whereas 79.5% of therapists do not feel pain during flexion. The study proved that 34.5% of therapists feel pain while performing extension whereas 65.5% of therapists do not feel any pain while performing extension. 1.5% of therapists feel pain in adduction whereas 98.5% does not feels any pain in adduction. 11% of therapists feel pain in abduction whereas 89% does not have any pain in abduction. 14.5% of therapists feel pain while performing internal rotation whereas 85.5% does not feel pain while performing internal rotation. The study showed that 16% of therapists feel pain while performing external rotation whereas 84% does not feel any pain performing external rotation. Study shows that 5% of therapists feel pain while performing retraction whereas 95% does not feel pain while performing retraction.

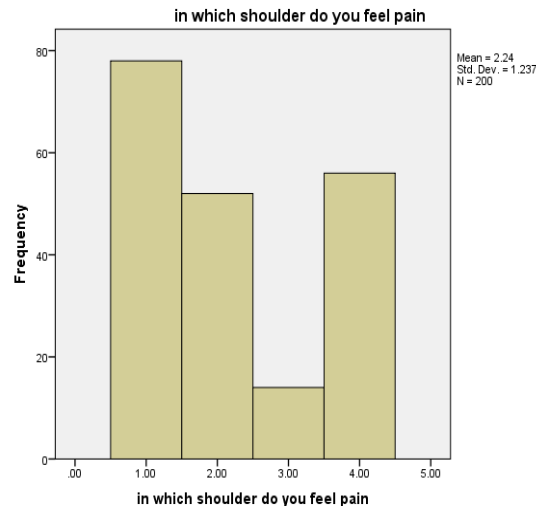


Graph 1: Gender of the therapist



Graph 2: Referred pain

It shows that 38.5 % of therapists have referred pain whereas 61.5% of therapists do not have any referred pain



Graph 3: Involved shoulder

DISCUSSION:

Shoulder joint is very complicated joint but pain in shoulder is quite common in world and it is difficult to study for research purpose. A cross sectional survey conducted to assess frequency of shoulder pain among physical therapists of twin cities Rawalpindi and Islamabad. A semi structured questionnaire and numeric pain rating scale was used to measure pain; shoulder pain and disability index score used as a tool to measure functional capacity and shoulder range of motion. The percentage response of study was 60.5% which relates to various similar studies from Australia 53% and Turkey 59% and reported lower than 74% in United Kingdom by Glover et al and in United States 80% by Bork et al.⁽³⁵⁾

As the results were analyzed, we found that male physiotherapist constitutes most of the portion of our population and majority of them suffer from shoulder pain than females, these findings were consistent with previous studies.

There were 60.5% male and 39.5% females in our study which reveals that shoulder pain is experienced by almost two of every three individuals at some period during lifetime⁽¹⁶⁾

Another study favor our research work that shows Researchers studied 574 workers in six manufacturing plants in the United States and reported a prevalence of 33% shoulder pain "occurring greater than once or lasting above one week in last two years".⁽⁷⁾

The study survey reveals that male physiotherapists are more prone to shoulder pain than females. Some previous studies reflect opposite findings to our findings that females are more vulnerable to shoulder pain. The physiotherapy profession in Pakistan is male dominated. However there are a large number of registered male physical therapists than females in Pakistan. This shows great contribution from male physical therapist in the profession of physiotherapy. There are 37.7 registered female physiotherapists whereas rest of majority was male physiotherapist. Physiotherapists most commonly affected by musculoskeletal problems due to nature of job. Shoulder pain commonly affects those exposed to overhead activities or repetitive movements.

A w. Ben kibler research shows the shoulder is at higher risk exists. All the factors responsible for increasing risk are not known. Continuing to adhere to known biomechanics, researchers and

clinicians can continue to identify and develop interventions to improve the shoulder's capability of responding to the high demands of the overhead throwing motion which favor's Our study in sense that 39 % of therapists feel pain in right shoulder, 26% in left shoulder, and 7% in both shoulders, 28% do not have pain in any of the shoulder and 38.5 % have referred pain ,shows shoulder were at high risk.⁽¹⁷⁾

A cross sectional survey was conducted by Rajan Balakrishnan and their colleagues to find out the prevalence of musculoskeletal problems related to work among physiotherapists in Sabah. They conclude, rate of WRMDs among physiotherapists has been found to be high due to their work factors and prolong working hours, which favor our study.⁽¹⁸⁾ young H BAE and his collogue study were determine closely associated reports of musculoskeletal issues related to work, quality of life (QoL), and stress factor at working place among physical therapists of South Korea. They conclude that shoulder complaints records higher percentage than other joint problems related to work (23.3%), QoL were affect those persons who had 6-8 years of professional experience, worked in general hospitals. Our study responds higher frequency of shoulder pain among physiotherapists, negatively affecting both quality of life and stress at workplace.⁽¹⁹⁾

CONCLUSION:

Shoulder pain is very common all over the world affecting men, women and children. It is common in working population. Work related musculoskeletal disorders WRMDs rate is very high among physiotherapist because of their working posture and work stress. In the study it is concluded that majority of male physical therapist suffer from shoulder pain as compared to female physical therapists.

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