

## ORIGINAL RESEARCH

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## WORK RELATED MUSCULOSKELETAL DISCOMFORT (WRMSD) AMONG PHYSIOTHERAPISTS

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## ABSTRACT

**Background:** Physiotherapists are known to incline work related musculoskeletal distress. In work put, the health awareness experts are defenseless against supporting the musculoskeletal issue amid the course of their work schedule, present study was a cross-sectional study completed among the physiotherapists in and around the Nellore town during 2010-2011.

**Methods:** A two-page poll with shut finished inquiries is utilized as the information gathered technique. Inquiries included word related history of physiotherapists and musculoskeletal side effects, exceptional regions, assignments, occupation related danger elements, damage counteractive action methods, and reactions to harm. Poll distributed to 40 physiotherapists in and Nellore region, among them 28 respondents returned their inquire form. Of them 20 faced work related musculoskeletal discomfort (WRMSD). Then the data was collected and analyzed.

**Results:** The result of present study showed high prevalence of injuries in physiotherapists. Prevalence of WRMSD's is higher among women (55%) compared to men (45%). The Physiotherapist respondents reported the highest level of work related musculoskeletal injury in the low back region. And next to the low back, most of the respondents reported the neck region and next to the neck, upper back, thorax, wrist and hands are affected.

**Conclusion:** Training and continuous professional development, physiotherapist still report on a high incidence of work related injuries during their professional practice. Therefore in workplace specific interventions to reduce work related musculoskeletal discomfort (WRMSD) developed and adequate prevalence and appropriate managing strategies are to be recommended to minimize the work related musculoskeletal discomfort (WRMSDs) in the practice.

**Keywords:** Work related musculoskeletal discomfort (WRMSD), Physiotherapists, Prevalence, Musculoskeletal injury, Work

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## INTRODUCTION

Physiotherapy is a health care profession which aims the physical treatment and management of diseased condition which enables people to reach their maximal potential. A work-related musculoskeletal discomfort (WRMSD) is defined as a musculoskeletal injury that results from a work-related event. This may result in lost work time, work restriction, or transfer to another job.<sup>1</sup> We acknowledge the significance of precise ergonomics in present workplace. With the fast revelation of computers, a growing reckon of populate are operation in offices for extensive hours in relatively immovable posture, execute repetitious movements. This sign of duty is accompanying with healthfulness problems such as aches and distress in the neck, and upper limb segments.

Work related problems are a common occupational hazard for physiotherapists, with their prevalence second to back/neck pain<sup>2</sup> (Glover 2002) and associated with work activities, particularly techniques that repeatedly compress the joints (Armstrong et al 1993, Bork et al 1996, Cromie et al 2000, Gordon et al 1995, Kumar 2001, Snodgrass and Rivett 2002, Snodgrass et al 2003, Wajon and Ada 2003, West and Gardner 2001). While the prevalence of Work related problems in some groups of Australian physiotherapists has been investigated (Caragianis 2002, Cromie et al 2000<sup>3</sup>, Wajon and Ada 2003, West and Gardner 2001)<sup>4</sup>, to date there has not been a truly national Survey in India. Additionally, there is only limited research regarding the risk factors for Work related problems in physiotherapists and their impact on physiotherapist's careers (Snodgrass et al 2003). Physiotherapists are primary health professionals who diagnose and treat individuals of all ages, from newborns with very oldest, who have medical problems or other health related conditions, illness, or injuries that limit their abilities to move and perform the functional activities as well as they would like in their daily lives. Physiotherapists were exposed to many of occupational risk factors leading to work related problems, especially the musculoskeletal disorders like low back pain, neck pain, thumb pain etc. International research suggests that physiotherapists are susceptible to work related musculoskeletal disorders because of nature of work.

There is substantiation that work-related musculoskeletal discomfort (WRMSD) has a noteworthy effect on physical consultant. In former studies, physical specialists reported taking debilitated time, changing practice propensities, changing work settings, or leaving the calling

because of work-related musculoskeletal discomfort WRMSD. Cromie et al<sup>5</sup> reported that one in six physical specialists changed settings are going away the calling because of WRMSDs. Glover et al<sup>5</sup> reported that 32% of physical advisors with WRMSDs lost work time. Molumphy et al<sup>1</sup> reported that 18% of physical specialists with WRMSDs of the low back changed their work setting and that 12% of the physical advisors diminished their patient role forethought. Present study provides data related to work related musculoskeletal discomfort in physiotherapists in Nellore region.

## METHODS

### Study Design:

A cross-sectional design used in an effort to determine what the physiotherapists thought caused and prevalence of their occupational injuries. A self-administered, 2 page questionnaires that adapted from the Nordic Musculoskeletal Questionnaire (NMQ),<sup>6</sup> with closed end questions used to assess work related discomfort.

The questionnaire made of two sections, individual and word related. The individual allotment got some information about general attributes, including sex, age, weight, and tallness. The word related share asked about years of experience, work setting, and number of hours of contact with patients for every week. This area additionally asked whether the subject encountered any work related musculoskeletal discomfort (WRMSD). In the event that the response was yes, the individual requested to state the sort from damage, the body part influenced, particular exercises created on word related harm, the work setting in which the damage happened, whether the harm accounted for or a doctor was counseled, and what kind of treatment was connected. They were asked whether they lost work time as an aftereffect of the damage, what exercises brought on manifestations to repeat, and whether the harm created the respondent to change his or her work propensities, lessen hours with patients, or change vocation settings. The beginning survey focused around a writing audit and then it reviewed by a panel of 3 experts with 5 or more years of working experience. Revisions made, based on the recommendations by Ethical Committee.

### Subjects:

Our survey forms diversified to forty physiotherapists in and around Nellore vicinity. Totally 28 physiotherapists responded our retrospect and return back the form. Through our respondents twenty of them undergone Work related musculoskeletal discomfort, and those included in our study.

**Inclusion & Exclusion Criteria:** We mainly included the respondents who started their career in physiotherapy with a professional degree and the respondents who have participated voluntarily in the study. Respondents if undergone any surgeries, any traumatic injuries recently, and undergoing any other medical treatment have excluded from the study.

**Data Analysis:**

The consequences for the general data are presented by using the descriptive statistics; the arithmetic mean and the standard deviation. The solvent for the line of work is expressed as percentages. The preponderance measured by split

the number of answerer with injuries of categorical anatomical reference by the phallus reporting the injuries.

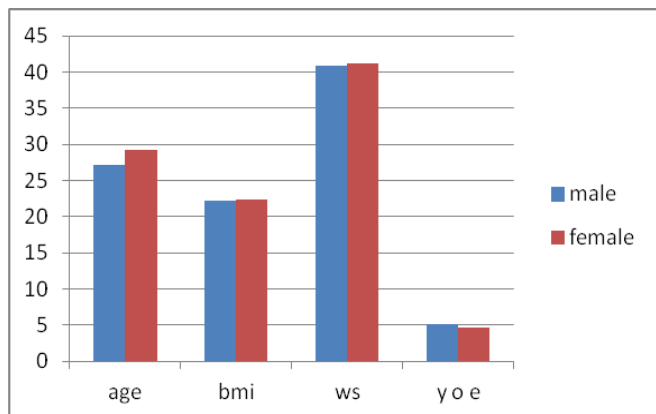
**RESULTS**

The information collected among 20 answerers, who included 11 men and 9 women. Their mean age was 28.15. The aggregate response is 71% (men 55%, women 45%). The questionnaire indicates that the respondents got 1-15 years of work experience spent a norm of 20-50 senses of hour per week in direct patient care. The following table showed that the general information about the groups.

**Table-1:** Descriptive information of respondents.

	Total number	Range	Mean	S.D
<b>Age</b>				
	20	20-55	28.15	3.40
<b>B.M.I</b>				
Underweight	0	< 18.5	0	0
Normal	15	18.5-25	21.26	1.79
Obese	5	> 25	26.2	1.30
<b>Years of experience</b>				
	20	1-15yrs	5.45	3.99
<b>Hours of patient contact</b>				
	20	20-50/week	34.45	11.14

**Figure: 1** Mean value of descriptive information

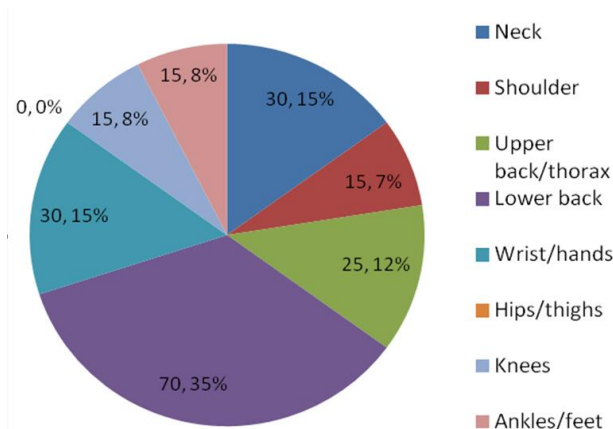


The Physiotherapist respondents reported the highest level of work related musculoskeletal injury in the low back region. And next to the low back, most of the respondents reported the neck region and next to the neck, upper back, thorax, wrist and hands are affected. This report revealed that less commonly affected areas are shoulders, knees and ankle, feet. The incidence of the work related musculoskeletal injuries was higher in females compared to males. The lower back was commonly injured the body part with the highest frequency of occupational injury (70%), and wrist-hand (30%), neck (30%), upper back (25%), and shoulder (15%) were other sites frequently affected.

**Table-2:** Frequency of body parts affected

Body part	No of respondents affected(N)	% of affected
Neck	6	30
Shoulder	3	15
Upper back/thorax	5	25
Lower back	14	70
Wrist/hands	6	30
Hips/thighs	0	0
Knees	3	15
Ankles/feet	3	15

**Figure-2:** Frequency of body parts affected in %



The respondents who suffered work related musculoskeletal discomfort (WRMSD) reported they used their own occupational knowledge, rest, medications, and exercise to treat the problem. N=6 of the respondents affected with work related musculoskeletal discomfort (WRMSD) indicate that they reduced their patient-contact time as a result of their injury, and N=5 said, they altered the way of treatment after sustaining the injury. Most of the physiotherapists (N=9) who suffered with work related musculoskeletal discomfort (WRMSD) indicate that they would not consider a job change because of their injury or due to the risk of sustaining another injury. In the present study, it considered the response of respondents that specified factor or activity caused an injury. This particular list of risk factors taken from the result of the survey made by BORK et-al (1996). This shows the number of persons responding that specified factor or activity caused an injury. Performing the same task over & over, working in same positions for a long period, assisting patients during gait activities, treating a large no of patients per day, not enough rest breaks, unanticipated sudden falls by the patients work scheduling, inadequate training in injury prevention etc.<sup>7</sup>

## DISCUSSION

Musculoskeletal framework issues associated with word related conditions are normal among health awareness specialists. The expenses of these are significant, both as far as cash and regarding work time lost. Physiotherapists have a high predominance of work related musculoskeletal discomfort (WRMSD).<sup>8</sup>

In this study, we gathered demographic and work related musculoskeletal discomfort (WRMSD) information from twenty physiotherapists in and around the Nellore region and broke down rates of harm, danger components and locales, and post-damage administration. We asked to finish the self-managed the poll on the off chance that they had any work related musculoskeletal discomfort (WRMSD) because of their practice. Therefore, reaction rate of poll dissected in our study. The overview responses uncovered that 70% of the respondents encountered low spinal pain as work-related musculoskeletal discomfort. A study describes that junior physiotherapists have a higher predominance of musculoskeletal problems narrated to occupational circumstances. Another study scrutate lumbago in physiotherapists, and found an occurrence of 66% in liable between 20 to 40 age group.<sup>9</sup>

An investigation of Australian physiotherapy students via Nyland uncovered that the 20-21 years

of age gathering had the most astounding recurrence of low-back pain<sup>10</sup>. The normal age of the physiotherapists in our study was 30.4 years. This mean age relates to different discoveries in the writing, and affirms that physiotherapists have a tendency to encounter work related musculoskeletal discomfort (WRMSD) at adolescent age. Such wounds in more youthful physiotherapists may be connected with the absence of expert experience, and the lower learning and aptitude levels individuals have a tendency to have in the early years of this career. In the present study, based on the results analyzed, most of the respondents affected by work related musculoskeletal discomfort (WRMSD) were also young generation from 20-30 years of age, and with an experience of less than 5 years.

Concerning destinations of musculoskeletal injury amid expert exercises, the most noteworthy frequency is in the low-back region.<sup>11</sup> Biomechanical studies demonstrated that physical stacking components, for example, body forward flexion, turning and weight stacking, assume a part in this.<sup>12</sup> Cromie found that the rate of work-related low-back agony was 48%. Other creators uncovered different rates of this issue in physiotherapists: Bork 45%, Holder 62%, Molumphy 29%, Scholey and Hair<sup>13</sup> 38%, Mierzejewski<sup>14</sup> 49.2%, Rugelj<sup>15</sup> 73.7%, and Nyland 69%. In the current survey, the rate of low-back agony is 70%. Interestingly, this figure is close to different rates reported in a few writings.

Investigations of work related musculoskeletal discomfort (WRMSD), in the health services experts distinguished the lower back as the most ordinarily included region of the body, emulated by neck and upper limb segments. Examinations of physiotherapists in the present study also uncovered comparative results. Bork and Holder and et al. witness the areas which most usually confined musculoskeletal impair as the lower back, hand-wrist, and neck, particularly among physiotherapy professionals.

A chew over accompaniment by Cromie in 2002 search whether physiotherapists usage their own cognition to intercept work related musculoskeletal discomfort (WRMSD), the creator found that this was constant for most of the physiotherapist's scrutinize. In our consideration, of the physiotherapists who experienced in work related musculoskeletal discomfort (WRMSD), 40% above-mentioned they necessity their professional skilful and 30% before-mentioned they look readiness to overcome the damage. Individuals who endure wounds at work may be treated with prescription, rest and activity. Physiotherapists have crucial

learning about ergonomics and biomechanics, and utilizing this information may change, relying upon expert information and skills.<sup>16</sup>

## CONCLUSION

Our survey reveals that the work related musculoskeletal discomfort (WRMSD) in physiotherapists in Nellore region is similar to rates reported in other parts & countries. Physiotherapists in our country suffer similar work-related injuries as their counterparts elsewhere. Work related musculoskeletal disorders are the most common cause of chronic pain and physical disability that affect the contemporary work forces. Physiotherapists used different strategies to reduce the risk of work related musculoskeletal disorders, including altering practice techniques. Respondents recommended administrative and ergonomic changes in the working place. Therefore in work place specific interventions to reduce work related musculoskeletal disorders in physiotherapists should be developed. Adequate prevalence and appropriate management strategies are recommended to minimize the work related injuries in physiotherapy practice. Further research has to understand the needs and experiences of physiotherapists.

Our review would have been more educational on the off opportunity that we gathered information for the amount of day by day treated patients. We likewise did not ask about the physiotherapists' drive levels. This would have been important information, as sports and recreational activities may influence work related musculoskeletal discomfort (WRMSD) recurrence. . Further studies might be extremely helpful in the event that it examine pervasiveness of work related musculoskeletal discomfort (WRMSD) in physiotherapists who have utilized diverse working conditions

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