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Prevalence of Musculoskeletal Disorders among Women Pediatric Physiotherapist in Surat

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Abstract: ***Background: Work-related musculoskeletal disorders were the most significant issues in worldwide. Physiotherapists are known to be prone to work-related musculoskeletal disorders but its prevalence among paediatric physiotherapists in Surat city has not yet been reported. Aim of the study: To determine current prevalence of MSDs among women paediatric physiotherapists in Surat. Materials and methods: A cross-sectional survey were collecting 126 samples but after screening considered 116 samples of paediatric physiotherapists to find out musculoskeletal problems among them. Nordic questionnaire were given to PTs from different region of Surat city that detect the musculoskeletal disorders. Data were analysed using Excel database 2007. Result: The study reported that there was high prevalence of musculoskeletal disorders among women paediatric physiotherapist in neck pain was 41.37%, upper back pain was 31.03% and lower back pain was 31.03%. Musculoskeletal injuries are considered one of the largest health problem among paediatric physiotherapists, because the nature of the work that therapists expose themselves to have a high risk of pain. Age, work experience and work hours are the main factors considered in this study. Conclusion: There was high prevalence of MSDs among women paediatric physiotherapists in Surat. Further research is required to boost up effective preventive measurement of disorders and correct ergonomics.***

Keywords: Work-related musculoskeletal disorders, Physiotherapists

1. Introduction

Musculoskeletal disorders (MSDs) is defined as a musculoskeletal strain reported by an individual as a neck, shoulder, lower back, or other skeletal pain or strain. [1] This may result in lost work time, work restriction, or transfer to another job. These types of injuries are common among physiotherapists (Cromie et al., 2002). [2]

Apart from the nature of the job of therapists, working in certain specific clinical specialties in physiotherapy is also reported to contribute to injuries during work.[3]

Work-related pain may affect clinical longevity. Research has indicated that 31% of physical therapists with work-related pain considered changing jobs or changed jobs because of their condition (Darragh et al., 2009).[4]

The Standardized Nordic Musculoskeletal Questionnaire (NMQ) is four part self-administered questionnaire part one collect the participant's personal characteristics and included questions about age, gender, family history and exercise habits. Part two collect information on the participant's education and current work history. Part three assess occurrence of musculoskeletal complaints using a standardized Nordic questionnaire. Part four address consequences of working with WRMDs. [5]

2. Methodology

This was a cross sectional descriptive study. The study was conducted on Paediatric physiotherapist working in clinical hospital and working as a paediatric physiotherapist in Surat with a population of 116.The study was conducted among Female of age group 24 to 40 years and several OPD and whoever doing working as physiotherapist treated paediatric patients more than 1 year and 2 to 3 shift in a week were included. Subjects, who had major accident or major surgery recently in any part of the body, may cause pain or any discomforts in any part of the body which may not be WMRD and have any congenital defects were excluded. Ethical approval was taken and Informed consent was taken to prior to start of the study. Socio demographic data was collected with the help of predesigned Questionnaire. The following scale Nordic Musculoskeletal Questionnaire (NMQ) is four part self-administered questionnaire was used in the study to asses WMRD.

3. Statistical Analysis

Data analysis was analysed by Excel Database 2007.Descriptive statistic included mean, standard deviation, minimum and maximum range and median was calculated. For all statistical test the p value was to be <= 0.05.

Table 1: Shows Basic Characteristics

Variables	Age	Work Experience	Duty of hours	BMI
Mean	27.86	2.62	7.06	22.12
SD	3.71	2.46	2	2.57

Table 2: Nordic Musculoskeletal Questionnaire Wise Pain in Last Week

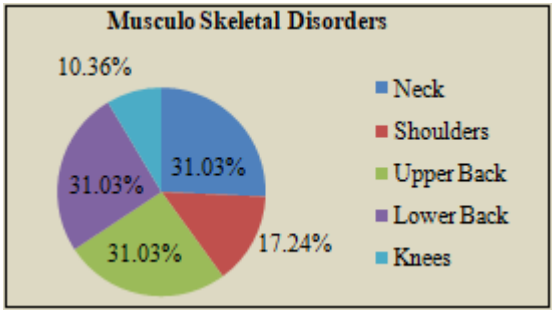
Variables	Neck	Shoulder	Upper back	Lower back	Knee
No. of percentage	41.37	17.24	31.03	31.03	10.34

Table 3: Nordic Musculoskeletal Questionnaire Wise Pain in Last 12 Months

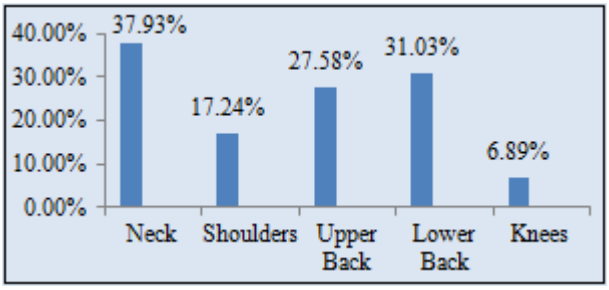
Variables	Neck	Shoulder	Wrist/ Hand	Upper back	Lower back	Knee	Leg
No. of percentage	55.17	34.48	6.89	31.03	51.72	13.79	3.44

4. Result

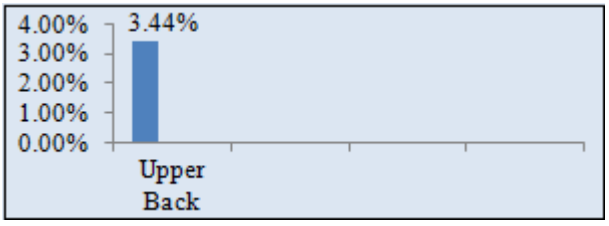
Body segment wise prevalence of MSD in percentage according to Nordic questionnaire



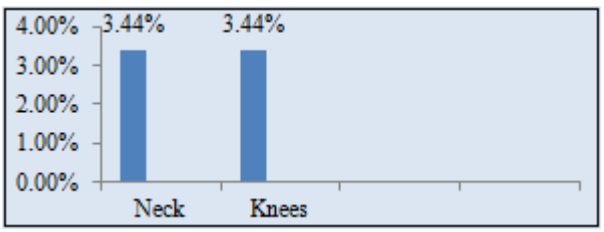
Age wise prevalence of MSD in percentage according to Nordic questionnaire: 21 to 30 years



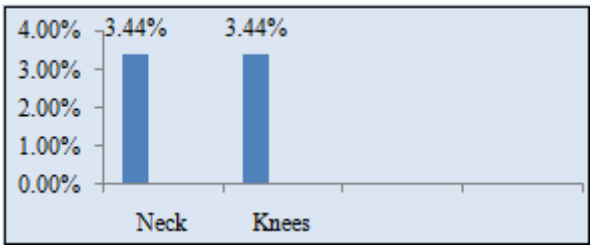
Age wise prevalence of MSD in percentage according to Nordic questionnaire: 31 to 40 years



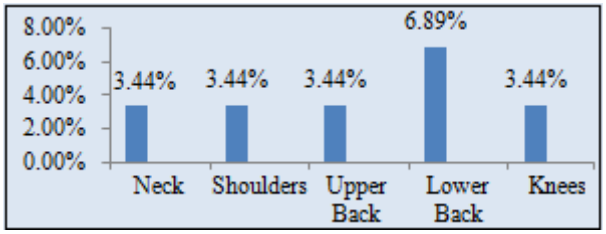
Age wise prevalence of MSD in percentage according to Nordic questionnaire: 41 to 50 years



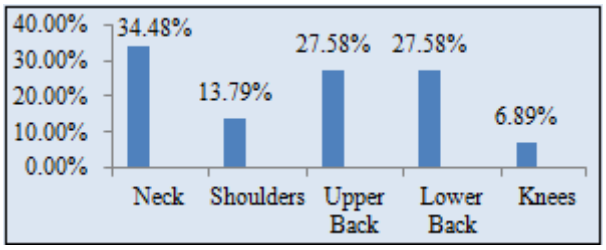
Experience wise prevalence of MSD in percentage according to Nordic questionnaire: 1 to 3 years



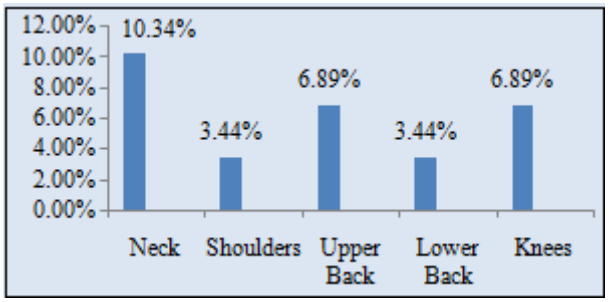
Experience wise prevalence of MSD in percentage according to Nordic questionnaire: 4 to 6 years



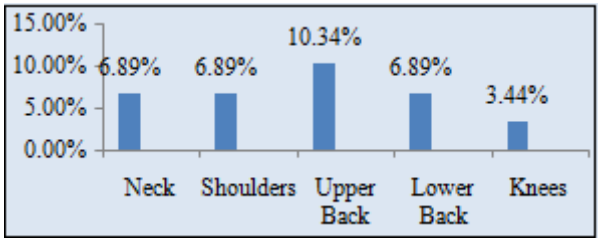
Experience wise prevalence of MSD in percentage according to Nordic questionnaire: 7 to 9 years



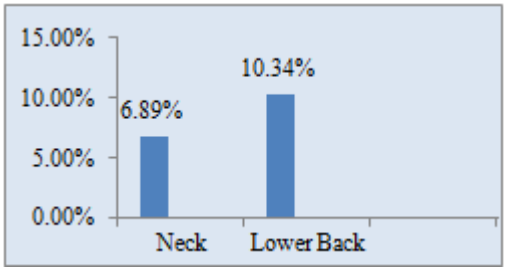
Working Hours wise prevalence of MSD in percentage according to Nordic questionnaire: 3-4 hours



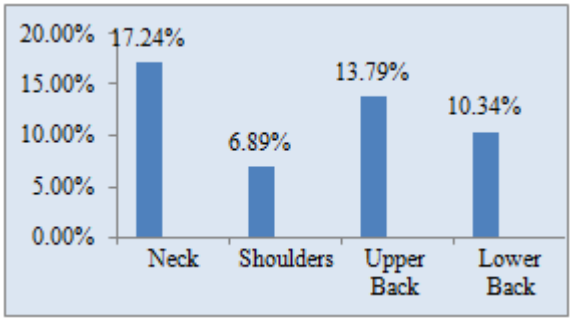
Working Hours wise prevalence of MSD in percentage according to Nordic questionnaire :5-6 hours



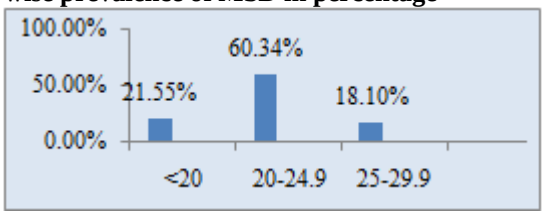
Working Hours wise prevalence of MSD in percentage according to Nordic questionnaire: 7-8 hours



Working Hours wise prevalence of MSD in percentage according to Nordic questionnaire: 9-10 hours



BMI wise prevalence of MSD in percentage



5. Discussion

This study was done to determine the prevalence of work-related musculoskeletal disorder in women paediatric physiotherapist at Surat. In this study, we found high prevalence of musculoskeletal disorders in neck, upper back and lower back. Musculoskeletal injuries are considered one of the largest health problem among paediatric physiotherapists, because the nature of the work that therapists expose themselves to have a high risk of pain. Age, work experience and work hours are the main factors considered in this study.

The study results shows that there is high risk of musculoskeletal disorders more in neck, upper back and lower back. In the age group of 21-30 years the ratio of musculoskeletal disorders in neck was (37.93%), in shoulder it was (17.24%), in upper back it was (27.58%), in lower back it was (31.03%) and in knees it was (6.89%). In the age group of 31-40 years the ratio of disorders in upper back was (3.44%) and rest of the body parts were not affected. In age group of 41-50 years the ratio of disorders in neck and knees was (3.44%).

During the work experience of 7-9 years the ratio of disorders in neck was (34.48%), in shoulder it was (13.79%), in upper back it was (27.58%) and in knees it was (6.89%). During 4-6 years the ratio of disorders in neck was (3.44%), in upper back it was (3.44%), in lower back it was (6.89%) and in knees it was (3.44%). During 1-3 years the ratio of disorders in neck was (3.44%) and in knees it was (3.44%).

The ratio of disorders during work hour of 3-4 hours in neck was (10.34%), in shoulder it was (3.44%), in upper back it was (6.89%), in lower back it was (3.44%) and in knees it was (6.89%). During the work hour of 7-9 hours the ratio of disorder in neck was (17.24%), in shoulder it was (6.89%), in upper back it was (13.79%) and in lower back it was (10.34%). During the work hour of 5-6 hours the ratio of disorders in neck was (6.89%) and in lower back it was (10.34%) and rest of the body parts were not affected. During the work hour of 9-10 hours the ratio of disorders in neck was (6.89%), in shoulder it was (6.89%), in upper back it was (10.34%), in lower back it was (6.89%) and in knees it was (3.44%).

The ratio taken for the last week in neck was (41.37%), in shoulder it was (17.24%) in upper back and lower back it was (31.03%) and in knees it was (10.34%).

The highest musculoskeletal disorder was found in the age group of 21-30 years with the ratio of neck (37.93%), upper back (27.58%) and lower back (31.08%). In consideration with the second factor work experience, the highest musculoskeletal disorder was found between 7-9 years with ratio of neck (34.48%) and upper back (27.58%). In third factor working hours, the highest of musculoskeletal disorders was found between 9-10 hours with ratio of neck (17.24%), upper back (13.79%) and in lower back (10.34%). And during the last week it was highest in ratio in neck (41.37%), upper back and lower back (31.03%).

Surprisingly, comparing to our study that reported the same highest prevalence of pain site among our physiotherapists whereas, another study in Egypt 68.3% has complained with shoulder pain that was the maximum appearance in their study reported indeed.

From the other study the author Doaa Tammam Atia, concluded that the highest of musculoskeletal disorders in paediatric physiotherapist was found in lower back with ratio of (67.9%).[6]Low back pain is common condition found in paediatric Physiotherapist. It can occur due to increase fatigability of trunk muscle, reduce trunk muscle endurance and repetitive movement of spine.

6. Conclusion

From this survey it is concluded that there was high prevalence of musculoskeletal disorders in paediatric physiotherapist and the most common body segments affected was neck followed by upper back and lower back.

Conflict of Interest: There is no conflict of interest.

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