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PREVALENCE OF WORK-RELATED MUSCULOSKELETAL DISORDER AND ITS ASSOCIATION WITH MENTAL HEALTH AMONG CLINICAL PHYSIOTHERAPIST: A CROSS SECTIONAL STUDY.

Physiotherapy

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ABSTRACT

Background: Given that physiotherapists receive education on injury prevention and body mechanics as part of their entry-level training, it might be expected that their rates of work-related musculoskeletal disorders (WRMSDs) would be lower compared to other professionals who perform patient handling tasks, such as nurses and massage therapists. Previous research has shown that psychosocial working conditions significantly affect mental distress and overall well-being.[10] Based on the literature, occupational stress has been identified as having a detrimental impact on the development of work-related musculoskeletal disorders (WRMSDs), with these cases posing substantial risks to both physical and mental health. Therefore, this study was undertaken to investigate the prevalence of WRMSDs and their correlation with mental health. **Methodology:** Subjects were qualified physiotherapists those who were based on the inclusion & exclusion criteria and participants who willingly wants to participate. 2 Questionnaire was used in this study for the outcome measures were: (1) Nordic musculoskeletal questionnaire to assess the WRMSD, (2) General health questionnaire (GHQ-12) for the assessment of the mental health. The form was administered through Email or WhatsApp to physiotherapists across the city. **Results:** There is 67% prevalence of musculoskeletal disorders among physiotherapists and there is perfect negative correlation with WRMSD with their mental health. **Conclusion:** WRMSDs are exacerbated by patient handling and demanding work conditions, not only affect physical health but also impact therapists' mental well-being. Despite the significant prevalence, many therapists do not seek timely treatment or take necessary breaks, potentially exacerbating their conditions. Addressing ergonomic practices, reducing repetitive tasks, and enhancing support systems are crucial steps in mitigating WRMSDs and promoting overall occupational health in the physiotherapy profession.

KEYWORDS

Musculoskeletal disorders, Physiotherapists, Mental Health, Nordic Musculoskeletal Questionnaire, Working Posture

INTRODUCTION

Background

According to the World Health Organization, work-related musculoskeletal disorders (WRMSDs) are defined as injuries encompassing a broad spectrum of inflammatory or degenerative diseases and disorders that lead to pain or functional impairment.[1] These disorders affect the muscles, tendons, ligaments, joints, peripheral nerves, and supporting blood vessels.[2] They include clinical conditions like tendon inflammations (such as tenosynovitis, epicondylitis, bursitis), nerve compression disorders (like carpal tunnel syndrome, sciatica), and osteoarthrosis. Additionally, they cover less well-defined conditions such as myalgia, low back pain, and other regional pain syndromes that cannot be attributed to known pathology.[3]

Physiotherapists have already taken advantage of opportunities to take on new responsibilities, including more advanced and initial practitioner roles. While they are well-positioned to tackle future healthcare challenges, there is a need for unified support within the profession to embrace significant changes in practice, including a reassessment of their role. Healthcare workers who have direct contact with patients experience the highest rates of work-related diseases, attributed to the demands of their profession and the physical positions they must maintain throughout the day.[4]

The main risk factors associated with WRMSDs include repetitive tasks, uncomfortable postures, and high levels of force. Physiotherapists frequently undertake tasks like transferring dependent patients, assisting with mat activities, and lifting heavy equipment, which increase their susceptibility to both acute and chronic work-related musculoskeletal disorders (WRMSDs).[5] A considerable number of physiotherapists suffer from work-related musculoskeletal disorders, with upper back pain, lower back pain, and hip pain being the most common issues they face.[6]

According to the results of a longitudinal study investigating the effects of musculoskeletal pain on work performance, regular musculoskeletal discomfort was associated with decreased performance. Work-related factors contributing to this include job dissatisfaction, job strain (involving psychologically demanding tasks with time pressure and low job control), time constraints, high mental pressure, relationships with coworkers, support at work, and overall stress levels [7,8].

A Literature has highlighted that high-level workplace stress can negatively impact both the body and mind, leading to reduced productivity, absenteeism, job changes, and exhaustion. Stress arising from pain or discomfort can also affect an individual's mental well-being and quality of life. [9] According to Karasek's model, which has been prominent in research on WRMSDs, four key work-related psychosocial factors high psychological job demands, low decision-making authority, inadequate social support, and job insecurity—contribute to psychological strain. This strain increases the likelihood of stress-related health issues.[12]

Methodology

Study Place

Government and private hospitals and clinics of Gandhinagar and Ahmedabad

Study Duration

1 Year

Study Design

A Cross sectional Study

Inclusion Criteria

1. Willing to participate
2. Clinical working Physiotherapist
3. Age group (25-55 years)
4. Both male and female
5. Minimum 5-6 hours of working
6. Physiotherapist with minimum 6 months - 1 year of clinical work experience

Exclusion Criteria

1. Physiotherapists who are in the administrative duty
2. Academics or performing non-clinical work

3. Female physiotherapists who are pregnant
4. Recent trauma or surgery
5. Physiotherapists who have full time working assistants

Materials required

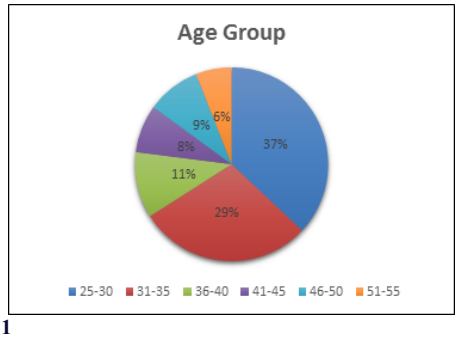
1. Mobile Phone
2. Consent form
3. Assessment form

METHOD

- Subjects were qualified physiotherapists those who meet inclusion and exclusion criteria and who are willing to participate.
- The consent was taken from all the subjects and detailed explanation of the study was also given to the subjects.
- 2 questionnaire was used in the study for the outcome measures were:
- Nordic Musculoskeletal Questionnaire (NMQ) to assess the WRMSD
- General Health Questionnaire (GHQ-12) for the assessment of the mental health
- The 1ST questionnaire consists of 2 parts. In the first part each subject were required to fill the assessment form consisting of question regarding their basic demographic details, professional details such as job/position, experience, weekly working hours and health information and the second part will consist of questions to measure the existence of musculoskeletal pain using modified Nordic musculoskeletal questionnaire.
- The 2nd questionnaire was GH-12 to assess the Mental Health. The General Health Questionnaire (GHQ-12) comprises 12 items, each evaluating the severity of mental issues over recent weeks using a 4-point scale (ranging from 0 to 3). Scores from these items are totaled to produce a score ranging from 0 to 36, where higher scores indicate more severe conditions.
- The form was administered through email or WhatsApp to physiotherapist across the city.
- A total of 410 physiotherapists were invited across Gandhinagar and Ahmedabad, among whom 276 responded. These data were analyzed based on eligibility criteria, and a total of 156 physiotherapists participated in the study.

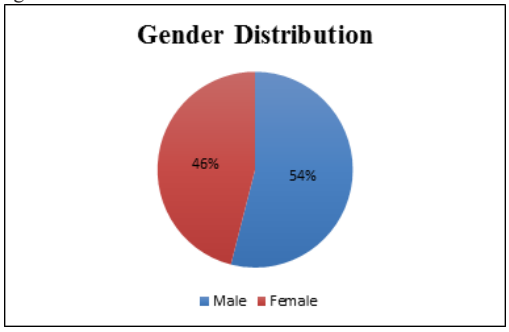
RESULTS

The analysis was done using excel.Total 156 physiotherapists are taken for the study



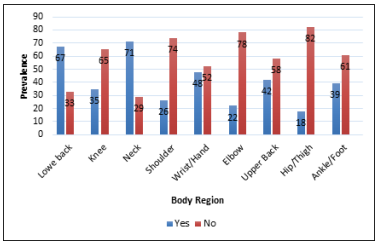
Graph 1

Graph 1 shows the age group of subjects were between 25-55 years and among them 37% were between 25-30 years, 29% were between 31-35 years, 11% were between 36-40 years, 8% were between 41-45 years, 9% were between 46-50 years and 6% were between 51-55 years. Among them 54% were female and 46% were male



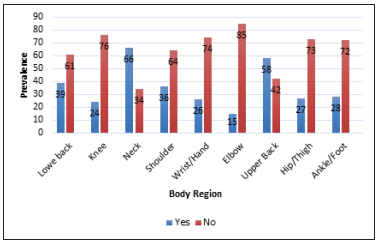
Graph 2

Graph 2 shows the gender distribution of males and females, among them 54% were male and 46% were female.



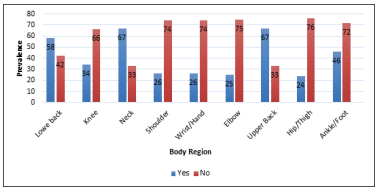
Graph 3

Graph 3 shows the prevalence in 67% suffered from lower back pain, 35% suffered from knee pain, 71% suffered from neck pain, 26% suffered from shoulder pain, 48% suffered from wrist/hand pain, 22% suffered from elbow pain, 42% suffered from upper back pain, 18% suffered from hip/thigh pain and 39% suffered from ankle/foot pain region among Physiotherapists in the last 12 months



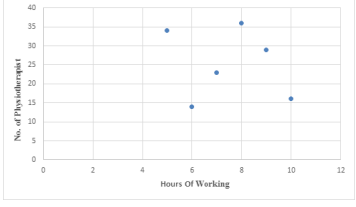
Graph 4

Graph 4 shows the prevalence in 39% suffered from knee pain, 24% suffered from lower back pain, 66% suffered from neck pain, 26% suffered from shoulder pain, 26% suffered from wrist/hand pain, 15% suffered from elbow pain, 58% suffered from upper back pain, 27% suffered from hip/thigh pain and 28% suffered from ankle/foot pain region among physiotherapists which prevented them last 12 months.



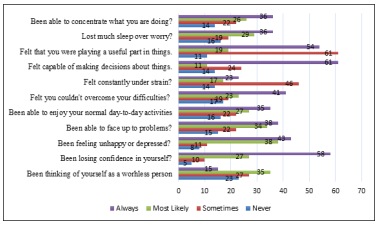
Graph 5

Graph 5 shows the prevalence in 58% are suffered from lower back pain, 34% suffered from knee pain, 67% suffered from neck pain, 26% suffered from shoulder pain, 26% suffered from wrist/hand pain, 25% suffered from elbow pain, 67% suffered from upper back pain, 24% suffered from hip/thigh pain and 46% suffered from ankle/ foot pain region among last 7 days.



Graph 6

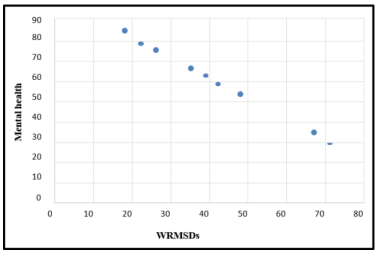
Graph 6 shows that 34 physiotherapist works for 5 hours, 14 works for 6 hours, 23 works for 7 hours, 36 works for 8 hours, 29 works for 9 hours and 16 physiotherapist works for 10 hours per week.



Graph 7

Graph 7 shows the responses of the question asked to the physiotherapist to assess the mental health related to the occupation and workplace with the help of General Health Questionnaire-12 (GH-12)

Graph 8



Graph 8 shows perfect negative correlation of Work-related musculoskeletal disorders and affection of mental health.

DISCUSSION

This study was focused on physiotherapists to investigate the prevalence of Work-related Musculoskeletal Disorders (WRMSDs) and their connection to mental health. It found that many physiotherapists, dealing with patient overload and poor posture, frequently suffer from these disorders, which can also affect their mental well-being. Out of 156 respondents, 102 physiotherapists reported experiencing work-related musculoskeletal issues, resulting in a prevalence rate of 67%. All participants completed standard Nordic Questionnaires and were interviewed about their work hours. Interestingly, despite experiencing WRMSDs, many therapists did not seek treatment, take time off work, or seek evaluation. Most therapists worked 7 hours or more daily, with some making home visits nearby. Female therapists reported more musculoskeletal problems than males, possibly due to their height and leverage issues during manual therapy. The most affected areas were the neck, lower back, and upper back, attributed to handling numerous patients, lifting dependent individuals, and working despite injuries.

The study also examined how these musculoskeletal disorders correlate with mental health, revealing a significant negative impact likely linked to their professional demands. Some therapists had developed coping strategies to manage these challenges. Psychosocial factors were also explored, revealing dissatisfaction with their profession, lack of team cooperation, poor interaction with physicians, and inadequate support from supervisors, although these associations were not statistically strong. Nonetheless, the study confirmed a 67% prevalence of musculoskeletal disorders among physiotherapists. It underscores the importance for physiotherapists to follow ergonomic guidelines, reduce repetitive tasks, or consider alternative treatments to alleviate the effects of WRMSDs.

CONCLUSION

WRMSDs are exacerbated by patient handling and demanding work conditions, not only affect physical health but also impact therapists' mental well-being. Despite the significant prevalence, many therapists do not seek timely treatment or take necessary breaks, potentially exacerbating their conditions. Addressing ergonomic practices, reducing repetitive tasks, and enhancing support systems are crucial steps in mitigating WRMSDs and promoting overall occupational health in the physiotherapy profession.

Limitations

Despite the insightful findings, it is important to acknowledge several limitations in this study Firstly, the relatively small sample size. Other factors not for affection of mental health were not taken into consideration.

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