

A Pilot Research Assessing the risk of Musculoskeletal Discomforts among Physiotherapists caring for Patients with Neurological Conditions

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Abstract- Background: Physical interactions that are vigorous and lengthy are often necessary for physiotherapists to play a key role in the rehabilitation of patients with neurological disorders. **Aim:** This study aims to assess the risk of musculoskeletal discomfort among physiotherapists engaged in the care of patients with neurological conditions. **Methods:** A thorough survey was carried out among physiotherapists in a range of healthcare environments to gather information on ergonomic practises, work-related issues, and self-reported musculoskeletal discomfort. **Results:** Results show that musculoskeletal pain is rather frequent among physiotherapists, with the neck, shoulders, and lower back being the most commonly affected areas. Awkward postures, insufficient breaks during patient care sessions, and repetitive activities are some of the factors that lead to these discomforts. Workplace adjustments and ergonomic interventions are mentioned as viable tactics to reduce these risks. **Conclusion:** This study emphasises the significance of physiotherapists' musculoskeletal issues in order to protect their health and, in turn, the standard of care given to patients with neurological problems.

Keywords - Musculoskeletal discomforts, Physiotherapists, Risk, Neurological conditions

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INTRODUCTION

The neuro-paediatric department of S undertook an observational pilot research. One of the most prevalent complaints relating to employment is musculoskeletal diseases (MSDs). They cost companies billions of euros and have an impact on millions of workers throughout Europe. Managing MSDs raises productivity and enhances quality of life. Having physiotherapy sessions with specialised physiotherapists is one of the most popular practises.^[1] Despite a substantial body of research on the effects of multiple sclerosis (MSDs), the need to address them, and strategies for doing so, there appears to be a research vacuum about MSDs that physiotherapists encounter. There is a very broad writing accessible about MSDs in the medical care area however minimal accessible information explicitly for the calling of physiotherapists, while no comparable review has at any point been acted in Greece.^[2]

Nonetheless, there are a few clear hardships in carrying out such a groundwork. It has been accounted for that physiotherapists tend not to report their wounds through the laborers' pay framework. Besides, countless those are working in a confidential work on, underrating their own gamble factors.^[3-5] In that sense, official measurements don't give an

unmistakable image of word related injury in physiotherapists.

Past exploration has recognized high occurrence paces of MSDs to physiotherapists. For example, Chung et al., (2013)^[6] played out an overview among physiotherapists in the province of Victoria, Australia and found that business related torment or distress had been capable by 91% of respondents,^[6] recognized a frequency of 61% of business related outer muscle issues among exercise based recuperation moves on from the College of Iowa, USA.^[6]

Most business related MSDs foster over the long run. As a rule, there is no single reason for MSDs; in any case, different elements work in blend^[7-11]. As indicated by the European Organization for Wellbeing and Wellbeing at Work (OSHA) the most widely recognized actual causes and hierarchical gamble elements of MSDs incorporate^[12-14]:

- Load Handling , especially when bending and twisting
- Repetitive or forceful movements

- Awkward and static postures
- Vibration, poor lighting or cold working environments
- Fast-paced work
- Prolonged sitting or standing in the same position

Accordingly, the utilization of manual treatment procedures, [15] for example, rub was related with wrist and hand side effects. Age is likewise thought to be as an element. [16] tracked down that more seasoned respondents (north of 50 years of age) had the most minimal pace of business related wounds. [17-20] found that most respondents' side effects showed up before the age of 30 81 and in somewhere around five years of graduation.

Employers bear significant expenditures from musculoskeletal problems due to worker's compensation, higher health care, disability, and absenteeism, as well as decreased productivity. Cases of MSDs are more serious than the typical nonfatal sickness or injury [21-25].

- For all nonfatal injury and sickness cases in 2001, the median duration of absence from work due to MSDs was 8 days, whereas the median duration for occupational skin disorders such dermatitis, eczema, or rash was 6 days.[26]
- Three age categories—those in the 25–34, 35–44, and 45–54 year old ranges—accounted for 79% of instances.
- A greater proportion of white, non-Hispanic workers were impacted than female workers.
- 58% of the MSD cases were related to workers, operators, fabricators, and laborers as well as those in technical, sales, and administrative support professions.
- Together, the industrial and services business sectors were responsible for almost half of all occurrences of mental illness.
- In the US, musculoskeletal diseases are responsible for around 70 million physician office visits each year and an estimated 130 million overall health care contacts, including hospital, ER, and outpatient visits [27]
- In 1999, around a million individuals missed work to treat and recuperate from musculoskeletal discomfort or upper extremity or low back function impairment connected to their jobs.\
- The Institute of Medicine estimates that the yearly economic cost of WMSDs, as determined by missed earnings, compensation expenditures, and productivity losses, is between \$45 and \$54 billion [28]
- Lifting, pushing, tugging, holding, carrying, or tossing an item are examples of overexertion injuries, which cost employers \$13.4 billion annually, according to Liberty Mutual, the

biggest workers' compensation insurer in the US [29]

The purpose of this research is to look at the likelihood that physiotherapists who treat patients with neurological disorders may experience musculoskeletal pain.

METHOD

Research Design

The Saudi Arabian neuro-pediatric division oversaw an observational pilot research. Since the school does not support morality, the Chief's permission was obtained to spearhead the review. For the evaluation, a total of fifteen licensed physiotherapists who often treated patients with neurological tests were recalled. The members were asked for their oral consent before being included in the research. While treating patients, powerful cell cameras captured pictures of their positions. The Quick Whole Body Appraisal, or REBA, sheet was used to break down these positions. The best moment to support a lone position was noticed, as well as the occasions it was reiterated.

Procedure for the analysis

The REBA sheet provides insight into the risk factors that might lead to external muscle disorders in business. Together, the inspector may analyze the neck, trunk, upper, and lower limit poses. The bodily components are divided into two separate segments on the REBA sheet: segment B (arm and wrist investigation) and section A (examination of the neck, trunk, and legs). The sum of the attributes in the first section plus a power/load score is the total. Furthermore, the coupling/grasp score is added to the absolute of the attributes in section B. Score C is the sum of the absolute scores of segments An and B. To get the final REBA score, postures that are maintained and extra dreary actions (many times per instant), rapid, vast reach stance adjustments, or unstable bases added point C.

Data analysis

Using a REBA sheet, the likelihood of evaluating outer muscle issues was examined. The findings were divided into several groups based on the assumption that the score falls into the following ranges: 2-3 (low risk), 4-7 (medium risk), and 8-10 (high risk).

RESULT AND DISCUSSION

The positions resulting to scoring were organized into low to high bet of making business related external muscle issues.

Table 1: Participant’s Categorization into REBA different category

REBA Scoring	Participants in category Total=15
2-3 Change may be needed (Low risk)	2
4-7 Further investigation change soon (Medium risk)	7
8-10 Investigate & implement change (High risk)	7

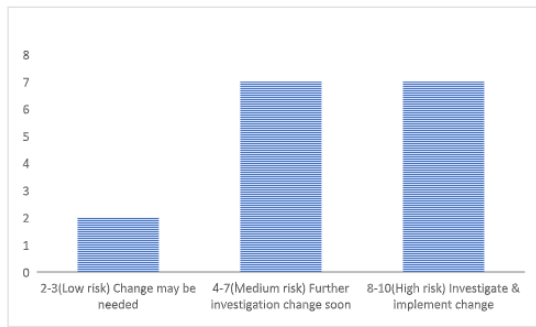


Figure 1: Participant’s Categorization into REBA different category

In this review, complete 15 members were available (6 male and 9 females), with a mean time of (24.00 ± 0.866).

Table 2: Gender of the Participant

Participant	Participants in category Total=15
Male	6
female	9

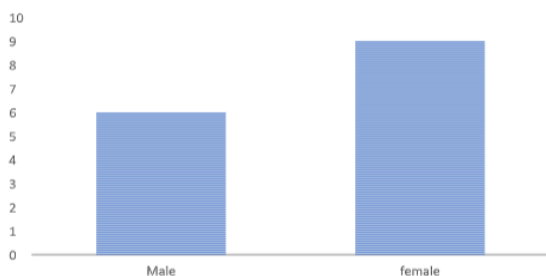


Figure 2: Gender of the Participant

The data were analyzed using the REBA sheet, which was completed with evaluation and calculation based on the body posture. Based on district-specific data, the amount of probability for the following areas is reviewed: neck location (44.4%), trunk (22.2%), legs (22.2%), upper arm (11.1%), lower arm (55.5%), and wrist (22.2%). As seen in Figure 3 and Table 3.

Table 3: REBA Scoring

REBA SCORING	No. of participant	Percentage
Negligible risk	0	0
Low risk	2	11
Medium risk	7	45
High risk	6	40
Very High risk	1	4

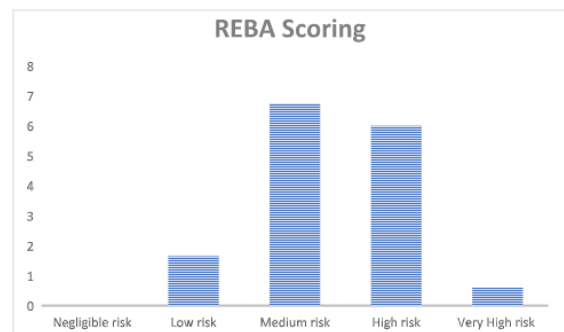


Figure 3: REBA Scoring

CONCLUSION

The evaluation of outer muscle distress among physiotherapists really focusing on patients with neurological circumstances uncovers a huge word related wellbeing concern. The pervasiveness of distress in basic regions highlights the requirement for proactive measures to shield the prosperity of these medical care experts. Execution of ergonomic mediations, including legitimate gear and work area changes, arises as a pivotal technique to relieve the gamble of outer muscle issues. Also, tending to variables, for example, dull developments and deficient breaks during patient consideration meetings is fundamental for forestalling and overseeing inconvenience.

Guaranteeing the actual strength of physiotherapists isn't just fundamental for their work fulfillment and life span in the calling yet in addition straightforwardly

influences the nature of care gave to patients. Wellbeing establishments and policymakers ought to focus on the formation of steady workplaces, giving assets and preparing to improve ergonomic practices. Future examination ought to dive further into the drawn out impacts of outer muscle uneasiness on the vocation directions of physiotherapists and investigate creative answers for additional limit word related gambles in this urgent medical care area.

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