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Identifying the Musculoskeletal disorders reported by Physical and Occupational Therapists and the relation to the level of Over-Commitment and Work Factors

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Abstract - To determine the prevalence of work-related musculoskeletal disorders among OTs and PTs in Saudi, as well as to identify the factors that increase the likelihood of developing such a condition in the course of one's career, researchers conducted a cross-sectional study to collect data on the number of injuries experienced by these professionals. The questionnaires were created using two previous instruments that had been used with physical therapists in the past. There were a total of 19 questions on the questionnaire, ranging from basic biographical data to specifics on musculoskeletal diseases in the workplace and the physiotherapy methods that may be used to treat them. Statistical Package for the Social Sciences, version 16, was used to analyze the collected data. Study findings suggest that OTs and PTs have an elevated risk of WRI or WMSDs.

Keywords – Musculoskeletal Disorders, Physiotherapist Occupational Therapist, Work-Related Injuries.

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INTRODUCTION

The term "Occupational Health" refers to a field of study and practice that recognizes the office as a unique setting in which to address issues of occupational safety, health promotion, and risk management. The World Health Organization (WHO) cites the promotion of working conditions that guarantee the highest quality of life at work as one of the primary goals of Occupational Health Service. Other goals include the protection of workers' health, the enhancement of workers' psychological and social well-being, and the mitigation of potential risks associated with workplace injuries and illnesses. Physically demanding activities are being replaced by fundamentally sedentary ones as a result of new technology' revolutionary impact on modern social and professional life. Professional practices have shifted as a result of technological development, with more emphasis placed on the use of computing and communication and information technology.[1]

The workplace has become integral to the day-to-day operations of several businesses. While the introduction of digital technology has improved working conditions, it has also increased the prevalence of certain health issues, most of which manifest themselves in the musculoskeletal system. With this in mind, the European Agency for Workplace Safety and Health has newly promoted a campaign for Healthy Workplaces 2023-2025 titled "Safe and healthy work in the digital age," the primary goal of which is to increase public understanding of the ways in which the advent of new digital technologies has altered the nature of work and the workplace, along with the attendant dangers and opportunities for improving workers' health and safety. Workers that spend the majority of their time sitting and using computers are classified

as "office workers" (CWS). It has been hypothesized that being sedentary raises one's chances of contracting a variety of chronic illnesses.[2-3]

Musculoskeletal symptoms (MSS) might show up everywhere from the hands and shoulders to the back and neck, depending on the nature of the job. Work-related musculoskeletal condition is a subset of MSS that occurs when an individual suffers from pain in their MSS as a direct result of or while engaging in professional activities in an occupational setting. Other important factors that may contribute to the emergence of work-related musculoskeletal disorders include I individual factors, like low physical fitness, age , or obesity; (ii) external conditions, including such environments to inadequate lighting, temps, noise, but also work environments not tailored to the requirements of the worker; and (iii) organizational factors, such as lack of awareness or training in the prevention of work-related musculoskeletal disorders. [4]

Work may have negative effects on employees' health in many ways, including their physical well-being, their emotional well-being, their relationships with supervisors and coworkers as a result of high expectations, their workload, and their evaluations of their performance. Physical exercise is only one of several therapy methods that may be utilized to lessen MSS symptoms (PA). Any time your muscles waste energy, you are engaging in physical activity, as defined by the World Health Organization. However, the majority of MSS patients are not physically active on a consistent basis, according to the research. Time constraints, long work weeks, and a lack of drive were cited as the most common explanations. When people engage in more PA, they are able to spend less time sitting, which is beneficial to their physical and mental health. Physical activity (PA) is widely regarded as an effective tool for warding off cognitive decline, anxiety, or depression, as well as for preventing and controlling chronic, non-communicable illnesses.[5]

Increased physical activity may be a health promotion approach with beneficial impacts on quality of life, and it is important for workers' well-being to be prioritized at the workplace (QoL). The World Health Organization (WHO) defines quality of life as an individual's assessment of their situation in life in relation to their values, priorities, hopes, and fears in the larger context of their culture and society. A pandemic of COVID-19 was proclaimed by the WHO in December 2019 and has persisted to this day. Because of the forced lockdown implemented in 2020 to stop the spread of the SARS-CoV-2 coronavirus, businesses had to be restructured because of the widespread adoption of homeworking policies. Because of the confinement, people's habits and routines had to shift drastically, which had serious consequences for their health. Movement restrictions and outdoor exercise prohibitions disrupted patterns, decreased levels of physical activity, or increased the probability of sedentary lifestyle, anxiety, or sadness, all of which pose health risks. [6-7]

Since everyone was confined at the same time, residences served as workplaces, classrooms, and recreation centers. Although teleworking has numerous benefits, including greater productivity, the blurring of boundaries between work and personal life, long hours, and a lack of company support may take a toll on employees' physical and emotional well-being and reduce their quality of life. In this setting, studies on the impact of exercise on worker health have shown a beneficial effect on musculoskeletal pain symptoms, such as those associated with the neck and lower back. Researchers found that exercising often improved immune response throughout the epidemic. Healthcare providers will have a significant task in encouraging more PA among their staff, since this is a proven method for lowering MSS. Consequently, creating health-promotion activities in a work setting will be a great way to encourage exercise.[8]

LITERATURE REVIEW

DGS (2018)[9] When the workplace is safe and healthy, it has a beneficial effect not just on the workers' health and well-being but also on the health and well-being of their coworkers, their families, their communities, or society at large.

Ammar (2020)[10] conduct is quite common, suggesting that CWS spend the vast majority of their time sitting while going about their daily activities. Excessive usage of the musculoskeletal system from holding this posture without a break may lead to pain, exhaustion, and even injuries, as well as a higher risk of developing related ailments.

Arslan (2019)[11] The danger of acquiring chronic illnesses and, by extension, the chance of having one's quality of life diminished, increases in such workplaces as those characterized by repetitive labor gestures and prolonged periods of sitting.

Robroek (2019)[12] These employees' quality of life may suffer as a result of their increased vulnerability to chronic illnesses brought on by their sedentary lifestyles and the repetitive nature of their job gestures. According to the available research, the incidence of such consequences is linked to the modification of other mental health risk factors, including elevated anxiety, sleep issues, and general weariness.

EU-OSHA (2019)[13] Factors that contribute to a decline in mental health include prolonged periods of time spent in front of a computer, pressing job deadlines, a heavy workload, and a large amount of responsibility. All of these have a role in determining an employee's quality of life. Dangers are linked to the manner in which work is performed, organized, and managed, as well as the economic and social

setting, contributing to an increase in stress and a decline in physical and mental well-being.

Mayer (2018)[14] Among the many variables mentioned in the literature that protect against illness is leading an active life. Strength training, including strength training, has been demonstrated to be an effective means of both avoiding and alleviating pain, as stated.

Calonge Pascual (2022)[15] Regular exercise is suggested for the treatment of MSS, as was previously mentioned. However, reports from several research suggest that most patients with MSS do not engage in PA on a consistent basis. In this regard, the majority of research simply examine socioeconomic variables, although recommended a multi-dimensional approach to studying PA-related adherence determinants in accordance with the WHO's five-dimension adherence model.

Ryde (2020)[16] It will be difficult to improve PA with the goal of decreasing MSS, but health-promotion interventions may and should be developed with consideration of the workplace setting. It is important to examine how employees feel about PA and MSS in this setting, and doing so requires a multidisciplinary strategy. This is important because it may influence people's perspectives and lead to the development of effective physical activity programs that prioritize health.

MATERIAL AND METHODS

Therapists in Saudi who were active users of the social networking site Facebook were given a link to an online questionnaire developed by the study's researchers. Few survey questionnaires were sent out to OTs and PTs. The gathered data was analyzed using spss16, and the results were drawn.

Sample:

The research included 60 people, 21 of whom satisfied the inclusion criterion (minimum 2 years of clinical experience).

The research strategy used in this study was cross-sectional. Self-reported WRIs, MSS, aNDs WMSDs were the primary variables of interest, along with MSD/WMI characteristics, MSD/WMI prevalence, MSD treatment, MSD prevalence, and MSD prevalence due to position or practice change.

Using two published tools that had been used with physiotherapists in the past, we created a survey. Almost all of the items on the questionnaire are multiple-choice (Appendix). The demographics section of the questionnaire was created to collect basic data, such as respondent's gender, age, weight, height, years of work experience, employment setting, state, and patient contact hours. The remaining questions in the survey focused on musculoskeletal injuries sustained on the workplace. Participants who had experienced an injury were questioned about the nature of their wounds and the area of the body that was hurt, the nature of the task being performed just at time of the incident, the nature of the workplace, and whether or not they had reported the incident and sought medical attention. Respondents were also questioned as to whether or not the injury resulted in missed work time, the recurrence of symptoms, and the modification of work habits, reduced patient hours, or a change in job situation. To identify therapists who claimed no injuries but felt pain, researchers employed a strict case definition of a WMSD based on the work of Campo et al. (2008). The purpose of the criteria was to single out WMSDs severe enough to disrupt work while leaving out lesser complaints. Pain of at least 4 on an analogue scale (from 0-10) that persisted for more than a week or occurred at least once a month was used as the defining criterion for WMSD.

Data Analysis

The SPSS 16 software, which is part of the Statistical Package for the Social Sciences, was used to analyse all of the surveys. Age, height, weight, year of experience, and weekly hours of direct patient care were collected from all respondents, and the mean, standard error, and range were computed for each variable. Injury location, injury category, injury-inducing activity, self-care, symptom worsening, restricted activity, and other frequency data were extracted. Formula was used to determine the incidence rate of WMSD. The percentage of therapists who suffered an injury during the year is calculated as follows: the annual exposure rate divided by the total number of therapists who were injured throughout the year.

Demographics

Out of the 60 people who took part in the survey, 35 claimed to have been injured on the job during the previous year. Based on the stated criteria, 21 therapists were judged to have WMSD. The average age was 35, and the average body mass index was 25.

Table.1 Recent injuries

	Frequency	Valid Percent	Cumulative Percent	Percent
NO	25	41.6	100.0	41.6
YES	35	58.3	58.3	58.3
Total	60	100.0		100.0

Table 2. Zones with the highest participation rates

	Frequency	Valid Percent	Cumulative Percent	Percent
East zone	20	33.3	98.1	33.3
north zone	8	13.3	13.8	13.3
Central zone	2	3.3	100	3.3
West zone	1	1.6	95.1	1.6
South zone	29	48.3	59.9	48.3
Total	60	100		100

The 21 participants who tested positive for WMSD were subjected to further testing. Researchers determined that the prevalence of WMSD was 35.29 percent. There were 76.6% more men affected with WMSD than females (23.3%).

Table 3. Participation Count

	Frequency	Valid Percent	Cumulative Percent	Percent
Female	14	23.3	100.0	23.3
Male	46	76.6	76.6	76.6
total	60	100.0		100.0

Table 4. The number of people with WMSD who took part in the study

	Frequency	Valid Percent	Cumulative Percent	Percent
Female	5	23.8	100	23.8
Male	16	76.1	76.1	76.1
total	21	100		100

Table 5. Category of Damage

	Frequency	ValidPercent	umulativePercent	Percent
Musclestrain	12	57.1	74.6	57.1
undiagnosed	2	9.5	100	9.5
ligamentous	2	9.5	13.2	9.5
tear	1	4.7	85.5	4.7
neuropathy	1	4.7	78.4	4.7
Vertebraldiscinvolvement	3	14.2	96.6	14.2
Total	21	100		100

The greatest response rate of 24.2% was seen in reports of injuries produced by maintaining a posture for an extended amount of time or engaging in a manual treatment exercise.

Table 6. Going to the Physician

	Frequency	Valid Percent	Cumulative Percent	Percent
NO	12	57.1	100.0	57.1
YES	6	28.6	28.6	28.6
Total	21	100.0		100.0

Table 7. To Treat Oneself or to Be Treated by Colleagues

	Frequency	Valid Percent	Cumulative Percent	Percent
NO	4	19.0	100.0	19.0
YES	17	80.9	80.9	80.9
Total	21	100.0		100.0

Table 8. Despite Your Injury, Keep Working

	Frequency	Valid Percent	Cumulative Percent	Percent
YES	Yes	Yes	Yes	Yes
NO	No	No	No	No
Total	Total	Total	Total	Total

Bending and doing manual treatment tasks were mentioned by 77.8% of respondents as the activities most likely to worsen their symptoms.

Table 9. Exacerbating Factors in a Patient's Condition

	Frequency	Percent	Valid Percent	Cumulative Percent
Lifting	2	9.5	9.5	57.6
N.A	3	14.3	14.3	14.6
Maintaininga position for aprolonged period	1	4.7	4.7	62.1
Bending	6	28.6	28.6	45.4
Transferringapatient	1	4.7	4.7	100
Performingmanual the rapytask	5	23.8	23.8	84.3
Performing repetitivetask	3	14.3	14.3	93.4
Total	21	100	100	

Half of those surveyed said that they had reduced their time spent in direct patient care as a result of their injury, and an additional 84.3% agreed that they had somehow adjusted their working habits as a result. The majority of workers (71%) prefer to sit at their desks all day, while almost a quarter (28.6%) prefer to stand during the day.

Table 10. Activities With a Unique Procedure

	Frequency	Percent	Valid Percent	Cumulative Percent
Changeworkposition frequently	6	28.5	28.5	51
N.A	2	9.5	9.5	9.5
Changework schedule	3	14.3	14.3	64.1
Avoidlifting	2	9.5	9.5	22.3
Increase administrative time	2	9.5	9.5	84.3
Decrease manual techniques	1	4.7	4.7	68.7
Take more rests and breaks	4	19.0	19.0	100
Encourage patient responsibility	1	4.7	4.7	74.2
Total	21	100	100	

Half of the participants who were asked said they had reduced the scope of their practice because of their injury, and 4.7 percent said they were considering a career change as a result.

RESULT AND DISCUSSION

Findings from this research suggest that OTs and PTs have an elevated risk of WRI or WMSDs. WRIs were reported by 60.78 percent of respondents, whereas the WMSD incidence rate was determined to be 35.29%. Approximately 40.3 percent of occupational therapists and 27.5 percent of physical therapists who took part in the research were diagnosed with WMSD. A large majority of injured therapists reported working in a rehabilitation setting, followed by individuals who worked in hospitals. This study's findings indicated that the low back is the most prone to damage, followed by the neck. Of those diagnosed with WMSD, 38.9% also suffered from low back problems. One of the major causes of injury is holding unsuitable postures during treatment. Due to the high importance placed on generosity in the clinical culture, it may be difficult for healthcare workers to confess when they have caused harm to a patient. Respondents having injuries and WMSDs alike reported worsening symptoms as a result of clinical employment; many continued to work despite pain and discomfort, and many also claimed that their conditions hindered their ability to care for patients. Injured workers missed barely half a workday on average, and 83.3% of those polled acknowledged to continuing to put in hours despite their pain. The vast majority of injured workers surveyed reported feeling compelled to make adjustments to their routines after concluding that clinical work had exacerbated their injury symptoms. Despite suffering discomfort as a result of the profession, only 50% of respondents said they are restricting their field of practice, and just 5.6% said they preferred changing occupations. It is possible that therapists are not reporting injuries because they are able to treat themselves, identify the early signs of damage, and seek advice from their professional colleagues. Some research suggests that since therapists are experts in patient handling and mobility, they may blame themselves for the injury. Therapists also have a role to play in making sure their coworkers don't become sick on the job. In many hospitals and clinics, occupational therapists and physical therapists perform complementary functions. Occupational therapists or physical therapists, for instance, are often tasked with instructing hospital workers on how to properly care for patients by using safe body mechanics.

CONCLUSION

One potential stumbling block is that they may not want to report an injury that they help others avoid. Body mechanics play a crucial role in protecting therapists from harm. This conclusion is supported by biomechanical studies, which has shown that there is no safe method to raise a helpless patient. With a mild, cooperative patient, spinal loading might surpass tissue thresholds during a transfer. Many hospitals now offer no-lift or minimal-lift programs, and therapists are being asked to educate nurses on how to utilize the new tools and incorporate lifting limitations into their daily work. Physical therapists may avoid sustaining musculoskeletal injuries and diseases by using mechanical lift devices or other forms of minimal-lift technology, but they still need to figure out how to help their patients become as self-sufficient as possible.

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