

Musculoskeletal Disorders among Housekeeping Staff in Hospitals of Lahore

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ABSTRACT

Background: Repetitive injuries are among the top most musculoskeletal problems in present day lifestyle, among these upper extremities are the most vulnerable.

Aim: To determine the prevalence of musculoskeletal disorders among housekeeping staff in hospitals of Lahore.

Study design: Cross sectional study.

Methodology: Total of 260 participants were included. Data was collected from General and Jinnah Hospitals of Lahore. A modified Nordic Musculoskeletal Questionnaire (NMQ) was used for assessing the prevalence of musculoskeletal disorders. The collected data was analyzed by using SPSS version 25. Chi square were applied with P-value < 0.05 as significant.

Results: The result showed that 159 (61.25%) were males and 101 (38.8%) were females. Majority of housekeeping staff did not missed their duty during the previous week in spite of musculoskeletal pain.

Conclusion: It was concluded that overweight and obese workers were more prone to had musculoskeletal pain thus this affected their quality of life.

Keywords: Musculoskeletal Disorders, Pain and Quality of Life.

INTRODUCTION

Musculoskeletal disorders (MSDS) is a medical condition that affects various tissues and organs of body that include muscles, tendons, nerves, ligaments, joints or spinal discs. Diseases like rheumatoid arthritis, musculoskeletal weakness or fractures due to traumatic incidents such as RTAs and assaults seek attention globally.^{1,2} These deformities are real emergencies like crush injuries that require first aid immediately worldwide. According to an estimate, in USA, these disorders are the 2nd most common reason for visits to the doctor while infectious diseases being the first. Repetitive demands of work-related activities result in such injuries and defects. One study, estimated RSIS cause around 56% of all occupational injuries in USA³. According to WHO, MSDS as a work-related disease is referred as a "new epidemic"⁴.

One previous study estimated the mortality (2.34 million/year) due to work from an occupational injury or disease while RTAs account for account even higher numbers (350,000 deaths/year)². According to one study, there are factors like recreational as well as daily activities that put stress over the body of any individual that result in fractures. Most common scenarios encounter by victims of MSD include outdoor games, gardening and general household activities globally³.

These disorders not only affect an individual financially but whole system thus put an extra burden economically. At present era, most important problem encountered by pupils is MSDS in the workplace worldwide as reported by a study.⁵ Reasons like physical, ergonomic and psychosocial factors contribute towards this disorder. Moreover, workers who have excessive repetition, awkward postures, and heavy lifting suffer more from skeletal disorders globally. Previous study documented that work-related absence from employs at their work place is mainly due to MSDS that serves as a high proportion of days lost reason in developing countries especially. However, it has detrimental effects on society not only on individual as it adds a burden on the health system, economy of country and mental health of an individual to deal with its consequences⁶.

Assessment of any individual efficacy and output in its working environment should be done only if design at the workplace is relaxing, comfortable and equal for all as literature has shown that working atmosphere affects attitude and efficacy big-time. Some of these musculoskeletal efforts are inherent to the nature of the work thus proper ergonomic design of workplace can reduce such morbidities. On the other hand it will improve work efficiency and productivity⁷.

Manual handling, lifting, holding, putting down, pushing, pulling, carrying or movement of a load is the largest cause of injury. These are described as the non-traumatic maladies of the muscles, tendons, ligaments, joints, nerves, and supporting structures such as the

intervertebral disc⁸. Although, the work-related etiologies for soft-tissue disorders are multifarious and intricate, however, work activities such as repetitive forced motions, awkward postures, and use of vibrating tools or equipment or by manual handling of heavy, awkward loads are commonly implicated⁹.

According to an estimate, main workforce at hospitals is comprised of housekeepers (26%)¹⁰. More importantly, it is the second-largest occupation in health systems. Housekeeping workers have social contact with patients but for a brief period. Duties assigned to them include cleanliness and hygiene maintenance in hospitals by implementation of washing, disposal of waste materials and lifting of objects¹¹. Nature of their duty makes them prone to what is known as musculoskeletal disorders.

Various therapies by physiotherapists help its victims to come over this disorder. Various physical exercises include yoga, stretching, running, bending forward, spinal mobilization, massage and functional activities education contribute in a positive way to overcome this health issue. However, McKenzie exercise along with the electrophysiological agents in the form of heat was used conventionally and has shown to produce nice and warming effect on body. Thus they reduce stiffness and pains associated with skeletal defects.¹²

One study reported that housekeeping demands more physically activity and is therefore burdensome. They found that as the demands of housekeeping is rising in modernism, their workload is getting strong association with musculoskeletal weakness and defects. They usually present clinically with symptoms like LBP, tendonitis, shoulder injuries, bursitis of the knee and carpal tunnel syndrome. According to an estimate, cleansing work is mainly manual (80%), by using non-powered tools while mopping acquires 30%.¹³ Mopping involves a long handled mop in a figure eight pattern across a floor while slowly walking backwards. Although, housekeeping workers are more prone to work-related MSDS but this health issue that remained untouched in our society but it's a common health issue that needs investigations. This issue affects QOL among workers of hospitals. In the light of above description, present study was done in-order to see effect of this disease on lower staff at hospitals.

The objective of the study was to determine the prevalence of musculoskeletal disorders among housekeeping staff in hospitals of Lahore.

METHODOLOGY

After IRB permission, this cross sectional study enrolled total of 260 participants who suffered musculoskeletal pain with age ranging from 20-40 years. Data was collected from General and Jinnah Hospitals of Lahore. A modified Nordic Musculoskeletal Questionnaire (NMQ) was used for assessing the prevalence of musculoskeletal disorders. Those having history of fracture, any inflammatory disease such as osteoarthritis and rheumatoid arthritis or had any musculoskeletal surgery were excluded. Informed consent was taken.

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Statistical analysis: Data was analyzed by using SPSS v.25. Quantitative variables were presented as frequency and percentage. Chi square were applied with P-value< 0.05 as significant.

RESULTS

The result showed that 159(61.25%) were males and 101 (38.8%) were females housekeeping staff in hospital in Lahore. Other parameters related to musculoskeletal pain were presented as frequency and percentage in table-1.

Table-1: Parameter Of All Subjects (n=260)

Variables	Groups	Frequency	%age
Gender	Males	159	61.25
	Females	105	38.8
Lower back pain	Yes	45	17.3
	No	215	82.7
Pain in Last 12 Month in Neck	Yes	21	8.1
	No	239	91.9
Pain in Shoulder in last 12 month	Yes	27	10.4
	No	233	89.6
Pain in 12 month in elbows	Yes	16	6.2
	No	244	93.8
Pain in 12 month in hands	Yes	27	10.4
	No	233	89.6
Pain in hips	Yes	36	13.8
	No	224	86.2
Trouble during the last week in knees	Yes	58	23.1
	No	200	76.9
Trouble during last week in legs	Yes	64	24.6
	No	196	75.4

There are no significant relationship between the BMI and low back pain with p-value of 0.363 as shown in table-2.

Table-2: BMI of participant

BMI	Pain in lower back	
	No	yes
undrweight less than 18.5	37	6
Normal	85	13
Overweight	62	17
Obese	31	9
Total	215	45

P value 0.363

DISCUSSION

The main aim of this research turned into to appraise and spot the musculoskeletal disorders among housekeeping staff in the hospitals. This research was conducted on both females and males. After analyzing the results, it was concluded that our results complete our theory concerning the prevalence of musculoskeletal disorders among housekeeping staff in the hospitals of Lahore.

Literature review revealed that body parts like knees, lower back, lower leg, and thigh are more frequently affected in such disorders. Most likely reason for such a high incidence of lower body involvement includes climbing and descending of stairs, bending and extending at household work primarily followed by poor nutrition and low calcium intake diet especially among females.¹⁴ Our results were similar to above mentioned studies thus indicating lower limbs deformity as a bulk of MSD.

A previous study indicated that injuries to the lower back were most prevalent followed by ankles and knees¹⁵. It concluded that awkward working posture followed by repetition of such postural mistakes lead to stress fractures. Our study also showed that lower back faces stress fractures more due to abnormal positioning among housekeeping staff at hospitals.

Another study revealed that lower back pain and early morning stiffness are the major complaints followed by stiffness in shoulders and neck.¹⁶ In present study, incidence of neck pain was low while lower body pain was high secondary to job work among staff especially house keepers. One study showed that musculoskeletal symptoms in their study involved shoulders (50%), upper back (43%), and neck and lower back (37.2%) among cleaning and sanitary workers¹⁷.

Limitations: This study lacked genetic workup among patients in-order to find the genetic cause with limited resources and financial constrains. Other major limitations included only two government hospitals. Thus more studies at multiple-centers and of long duration will be required to establish accurate incidence regarding this health problem.

CONCLUSION

It was concluded that overweight and obese workers were more prone to had musculoskeletal pain thus this affected their quality of life. In the light of above discussion, one can find that need of an hour is to have workshops on proper positioning of workers while doing cleaning stuff and lifting heavy loads in order to lessen a risk of injury to body.

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Authors' Contribution: AA&ZH: Conceptualized the study, analyzed the data, and formulated the initial draft, **SA&KS:** Contributed to data collection, **SK, Z &WL:** Proof read the final draft and analyzed data

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