



PREVALENCE OF OCCUPATION RELATED MUSCULOSKELETAL INJURIES IN HOUSEKEEPING PERSONNEL'S

Healthcare

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ABSTRACT

Occupation related musculoskeletal injuries are very common in developed as well as developing countries. These Injuries causes loss of working hours, poor quality of life and reduction in productivity. Housekeeping workers do a lot of manual labor which could cause injury to the muscles. Awkward movements, poor posture and improper lifting techniques are the major reasons for the injuries in housekeeping professionals. Cross-sectional survey which involves 103 housekeeping personnel's in an Institutional campus. Nordic musculoskeletal questionnaire was used to collect the data from all the participants and the data were analyzed using the descriptive statistics. The study analysis concludes that Low back pain is the most common pain in these workers followed by the Knee and Hip. The hypothetical reason may be due to long standing hours, twisting activities and repetitive tasks could cause the Low back pain. This study concludes that most of the housekeeping personnel's were suffering with various musculoskeletal injuries and further this study also analysis the management methods adopted by them.

KEYWORDS

House Keeping Personnel's, Occupation related musculoskeletal disorders. Low back pain, Nordic musculoskeletal questionnaire.

INTRODUCTION

Occupation related musculoskeletal disorder (ORMD) is the second largest cause of short term or temporary work disability after common cold¹. Occurrence of ORMD has risen four times since 20 years. They are the most common cause of work related or work aggravated disorders during the last days. It becomes worsen due to long working hours and working conditions². It has become one of the important occupational related problems with the huge expenses of health costs, reduction of productivity and reduced quality of life³.

ORMD occurs as a result of repetitive movements to the extremities and spine with extreme movements in the upper limbs, postural problems contributes the various musculoskeletal injuries. Maintain the muscles in an abnormal position, tight or rigid for a longer duration result in muscle injury⁴. Injury will be a minimal in the initial stage of injury later it will become developed injuries which later affect the function. Tightness in the muscles cause restriction of the blood flow to the body parts, diminished oxygen supply to the muscle region which intend the accumulation of waste and metabolites which result in pain and further injury. There is continuation of exposure to rapid, repetitive and forceful movement which may lead to localized muscle fatigue with ischemia and metabolic changes that impairs muscle enzyme function⁵.

Women in India shares major role in the management of family resources, they are the resource person in the family as well as in society. Women are becoming the leaders in many companies and they work sincerely and efficiently. Multiple studies has shown that female is predominant in musculoskeletal pain, but the mechanism is poorly described⁶. Hypothetically explaining the phenomenon is by women is more vulnerable than men to develop musculoskeletal pain and the report of injury was mostly addressed by women than men⁷.

Housekeeping profession is considered as the major workforce in any industry. It ranks second largest occupation, comprises of 26% of all employment. Housekeeping in the college campus does variety of job tasks which includes cleaning, washing, disposal of waste materials, shifting the tables and itineraries and standing for a longer time⁸. Mostly women were employed in the housekeeping area in the colleges when compared to the males.

In India occupational health is not integrated with primary health care, and it is the mandate of the Ministry of Labor, not the Ministry of Health. There are no strong evidences exists on the muscular injuries in these housekeeping workers. This study aims to identify the prevalence of various musculoskeletal injuries in the housekeeping individuals and to analyze the various co morbid factors for the same.

METHODOLOGY

This study was designed as cross-sectional survey as this design help to determine the prevalence of musculoskeletal symptoms in the housekeeping personnel's. The study was done in the housekeeping staffs of KG campus. A clear instruction was given to all the housekeeping staffs and their consent was obtained before enrolling

them to this study. This study was approved by Institutional ethical committee. The participants were selected with the age group of 35 and above, who has more than 5 years of experience, works for at least in the same organization for at least 5 years continuously without any medical complaints, without any history of fever or viral infections, and without any musculoskeletal injuries. 145 housekeeping personnel's were evaluated and 103 were included in the study as per the inclusion criteria.

Nordic musculoskeletal questionnaire was used for this study, this questionnaire consist of two sections. Section A (i.e. socio demographic data and working details) and Section B (i.e. self-reported MSDs symptoms). The participant's height, weight, BMI and the other co morbid factors were included in the demographic analysis. Section B consist of the following three questions for nine different anatomic body regions (neck, shoulder, elbows, wrist/hands, upper back, lower back, hip/thigh, knee, ankle/ feet): "Have you at any time during the last 12 months had trouble (ache, pain, discomfort, numbness)?" , "Have you at any time during the last 12 months been prevented from doing your normal work (at home or away from home) because of the trouble?" , and "Have you had trouble at any time during the last 7 days?". The average time for respondents to complete the survey is about 25 minutes.

The data collection was done in the seminar hall which had separate entrances and only college researchers, participants, and survey administrators were allowed to enter, to ensure anonymity. The survey administrators were college students. They all received half-day training from college researchers. The questionnaire was translated to the local language so that everyone can answer better. People who are illiterate were guided by the survey administrator. Every day around 5-7 participants were evaluated and instructed them not to speak about the survey to others. Completion of the survey took 2 weeks. Completed surveys were collected by college researchers.

RESULT:

The study results were analyzed using the descriptive statistics. The table I shows the demographic data of the participants.

Table I

Characteristics	Mean	S.D
Age		
30—40 years	37.81	1.71
41—45 years	43.08	1.38
46—50 years	47.72	1.35
51—55 years	52.79	1.36
> 55 years	57.22	0.972
Food Habits		
Vegetarian	47.47	6.99
Only Egg	43.89	6.42
Non Vegetarian	45.57	5.95

Education		
Literate	43.38	6.09
Illiterate	48.40	5.93
Experience		
5—7 years	39.66	3.37
7—11 years	41.6	3.41
11—15 years	49.12	3.14
> 15 years	53.54	3.48
Working Hours		
8--9 hrs	44.5	6.34
10--12 hrs	46.63	6.84
12--15 hrs	47.79	1.97
>15 hours	45.13	9.93

Table II shows the musculoskeletal injuries which was identified in the participants. The majority of the participants complains of pain in the hip joint and following that the pain in the knee and back is more predominant regions.

Table II

Characteristics	Mean	Percentage
Musculoskeletal Complaints		
Ankle & Foot	9	9%
Hip	18	17%
Knee	19	18%
Lower back	31	30%
Neck	6	6%
Other	5	5%
Shoulder	13	13%
Wrist & Hands	2	2%
Common Management		
Medical	22	21%
OTC medicine	33	32%
Physiotherapy	14	13%
Oil massage	6	6%
Ayurveda	6	6%
Home Remedies	12	12%
No Treatment	10	10%

DISCUSSION

Work related musculoskeletal injuries are a contemporary problem accounts about 51% of occupational illness. Multiple studies has published that employers suffer from impairment and their general wellbeing or the symptoms. Multiple muscle disorders which develop pain and functional impairments this may develop over the time as a result of frequent sustained and repetition movements⁵.

This study has 103 participants and the questionnaire was used to analyze their musculoskeletal problems. 26 participants works for 5—7 years with the mean age of 39.66±3.37, 28 participants works for 7—11 years with the mean age of 41.60±3.41, 25 participants works for 11—15 years with the mean age of 49.12±3.14 and more than 15 year 24 participants working in the organization with the mean age of 53.54±3.48. Although there was different age group was found in the experience of the work but there was no significant relationship obtained with the number of years of work with the musculoskeletal complaints.

On analyzing the working hours in these participants 46 participants work for 8—9 hours with the mean age of 44.50±6.34. 35 Participants' works for 10—12 hours with the mean age of 46.63±6.84 Participants' works for 12—15 hours with the mean age of 47.79±1.97 Participants' works for more than 15 hours with the mean age of 45.13±9.93. There was difference in the working hours with the participants with the difference in the working schedules, however this study doesn't identify the relationship between the working hours and the musculoskeletal injuries.

The study results were identified that Low back pain ranks first in the complaints when compared with other regions. The percentile evaluation of the musculoskeletal injury was analyzed for each component, in which the Low back pain was 30%, which means that about 31 out of 103 participated complains of problem in the back. Knee problems like pain around the knee and early morning stiffness are the major complaints and around 18% of the participants complains about it which is 19 participants complaining of knee problems.

Hip problems are the other most complaint by the participants and those who do a variety of tasks like lifting heavy objects, standing for a

longer duration which cause 17% of participants complain with back related problems. And around 17 participants from 103 were complaining of low back problems. 13% of shoulder problems were noted in the participants and they does lot of overhead activities like cleaning, gardening and dusting related job tasks. 9% of participants complain of ankle & foot related problems, 6% complains of neck related problems.

Common management adopted by these participants includes medications which were bought by over the counter prescription, which is the common remedial measure they opt. 32% of the participants were selected this as their management. Long term pain participants could consult medical doctor and got prescriptions from them which are 21%. Physiotherapy management was adopted by 13% of the participants. 10% doesn't take any medications or treatment and 12% take home remedies.

Housekeeping is a manual material handling job that requires bending, lifting, carrying, pushing, and pulling repetitively throughout the day--often in awkward postures. Each housekeeping task carries certain risk factors. When these factors occur together during the work shift there is an increased risk of work-related musculoskeletal disorders (WMSDs). Hypothetical causes which may be like forward bending, frequent lifting, repetitive bending and frequent twisting of the body and working in awkward postures that lead to various biomechanical stress on muscles, ligaments, tendons spinal nerves and disc.

CONCLUSION

This study identifies that prevalence of various musculoskeletal injuries are more common in Housekeeping individuals. Hip pain is predominant in the musculoskeletal injuries. More detailed study is needed to identify the biomechanical aspect of the hip problems.

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CONFLICT OF INTEREST : NIL

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