

ORIGINAL ARTICLE

Prevalence of Musculoskeletal Disorders among Housewives in Lahore: Cross Sectional Study

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ABSTRACT

Housewives are always at high risk of musculoskeletal disorders due to their daily life activities. Musculoskeletal disorders commonly experienced by housewives can affect their health and well-being.

Aim: To find out the prevalence of musculoskeletal disorders among housewives in Lahore.

Study Design: Cross sectional study.

Methodology: A questionnaire survey was carried out among 179 housewives through convenient sampling technique residing in Lahore. The Nordic questionnaire was used for data collection. Data was collected through a semi structured questionnaire including closed ended questions regarding pain and disability.

Statistical analysis: The collected data was analyzed by using SPSS version 25.

Results: There was high prevalence musculoskeletal problems in last 7 days and 12 months, at least one region of the body's involved in musculoskeletal disorders. Housewives in the age range of 31 to 40 were mostly (57%) overweight faced the severity of pain in neck (54.2%), lower back (45.3%), hips (21.8%), knees (30.7%), and in ankle (30.7%). The severity of functional impairment in last 12 months was more in lower back region (60.3%). While in the neck region was 45.8%. **Conclusion:** It was concluded that prevalence of musculoskeletal disorders was higher in one or more than one region in last 7 days and 12 months than functional impairment in last 12 months.

Keywords: Nordic questionnaires, Musculoskeletal Disorders, Prevalence and Housewives.

INTRODUCTION

Musculoskeletal disorders (MSDs) are injuries and diseases of the delicate tissues like muscles, ligaments, tendons, joints and ligament¹. The Clinical conditions like ligament irritation and associated diseases, and nerve pressure problems, as well as standard conditions such as myalgia, lumbar torture, and other provincial painful conditions with unknown pathologies. The most commonly included body parts are the waist, neck, shoulders, forearms and hands, although recently more attention has been paid to the lower limit².

Global Burden of Disease study in 2010 shows effect of musculoskeletal problems is the second most prominent reason for disability in all districts of the world^{3,4}. Musculoskeletal disorders are the main cause for poor quality of life and decreased productivity⁵.

Housekeeping is occupations that have assortment of physical and mental burden⁶. Working task like making beds, cleaning trucks, lifting and bringing down loads, cleaning washrooms, vacuuming, tidying and cleaning and rubbish expulsion and lift the furniture⁷. Repetitive movements, uncomfortable postures and forces of high impact are the three primary risk factors for WRMSD's. The WRMSD's developed due to being in these factors for long period of time⁸. Housewives performing the hard work can deal with the musculoskeletal symptoms by bringing modification in their working techniques with the help of the body and posture techniques⁹. Previous studies showed that women have more prevalence of musculoskeletal pain in comparison to men. Data showed that injuries prevalence among females in USA and Canada were 79% and 50% respectively¹⁰. Musculoskeletal disorders was prevalent but in Pakistan no as such research has done before to know prevalence among housewives hence current study was planned.

Objectives: To find out the prevalence of musculoskeletal disorders among housewives in Lahore.

METHODOLOGY

A prevalence study was conducted on a target population that included housewives residing in Lahore. A sample size of 179 housewives was taken. Participants aged between 20 to 40 and who do all their household work without any maid to help completed the validated questionnaire. After the approval of synopsis the study was finalized in 4 months. The present study was done from Jul 2021 to Nov 2021 by selecting sample of housewives in Lahore. Housewives with any history of trauma, musculoskeletal, psychological disorders and pregnancy were excluded from present study. Questionnaire were distributed among those housewives who were willing to participate. A Nordic questionnaire used to find out which area is more affected by pain. The questionnaire was send through online form to housewives and also gathered through questionnaire from housewives nearby areas who were easy to deliver the information and available easily in Lahore. The Standard Nordic Questionnaire (SNQ) was created by a group of Nordic scientists coordinated to make a straightforward normalized poll that could be utilized for the screening investigations of musculoskeletal issues¹¹. This poll contains nine screening questions, covering a year and week predominance of musculoskeletal issues in various body regions. By the use of Standardized Nordic questionnaire (SNQ). Part 1 included the demographics of age, working hours, height and weight. Part 2 included the nine questions of body regions in 3 sections asking about the MSDs pain in the last week, last year, functional disability.

Statistical analysis: Data was analyzed by using SPSS v.25. Demographic parameters were presented as

frequency. Chi square test was used to assess the association between BMI and age. A p-value ≤ 0.05 was taken as significant.

RESULTS

Out of 179 participants, 61(34.1%) were in 20-25 age group, 42(23.5%) were in between 26-30 years of age and 38(21.2%) between 31-35 years of age and 38(21.2%) between 36-40 years of age. The working hours of housewives were 90(50.3%) had worked for 6 hours and 89(49.7%) worked for less than 6 hours. Out of 179 housewives 83(46.4%) were Healthy weight range, while 81(45.3%) were obese and 15(8.3%) were underweight.

Prevalence of Musculoskeletal disorders: It was concluded that mostly respondents were affected from the different body regions of the body including neck region, right and left shoulder, right and left elbow, upper back area, lower back area, hip region, knee and ankle region.

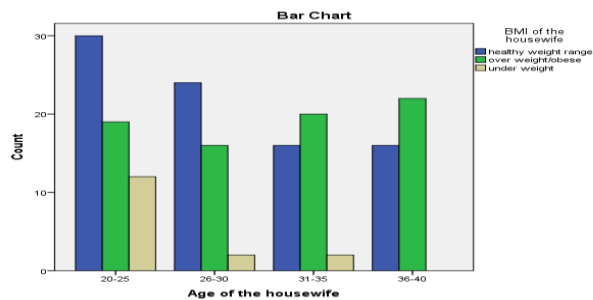


Figure 1: Association of BMI with age

The severity of the musculoskeletal disorders in last 12 months and in last 7 days was almost same in most of the regions. The severity of pain, numbness and tingling in last 12 months and last 7 days which was responded by housewives who has ever pain in their body region (table-1).

Pain in body regions in Last 12 months: The severity of pain in neck was (54.2%). In the shoulder 92(51.4%) have responded having no pain in shoulder while 32(17.9%) responded pain in the right shoulder, 14(7.8%) in the left shoulder, and 41(22.9%) in both shoulders. In the elbow

region 146(81.6%) were having no pain, 21(11.7%) were having pain in the right elbow, 5(2.8%) in the left elbow and 7(3.9%) respond in both elbows. In the hand region 114(63.7%) respondents were having no pain in that region while 38(21.2%) respondents were having pain in the right hand, 6(3.4%) in the left hand and 21(11.7%) respondents were having pain in both hands. In upper back 61(34.1%) respondents were having pain while 118(65.9%) were having no pain in upper back. In lower back region 81(45.3%) were suffering from pain while 98(54.7%) were not having pain in that region. In the ankle region 55(30.7%) respondents were having pain in ankle while 124(69.3%) were not having pain in ankle region.

Functional Disability in Last 12 months: The prevalence of the functional disability from the last 12 month which prevented them from doing any normal activity in housewives. It was found that 82(45.8%) respondents were having functional disability while 97(54.2%) were having no functional disability at neck region. In the shoulder 103(57.5%) respondents were having no functional disability, while 29(16.2%) were having functional disability in the right shoulder, 10(5.6%) were having functional disability in the left shoulder, 37(20.7%) were having functional disability in both shoulders. In the Elbow 152(84.9%) respondents were having no functional disability, 19(10.6%) were having functional disability in the right elbow while 3(1.7%) were having functional disability in the left elbow and 5(2.8%) were having functional disability in both elbows. In hand region 126(70.4%) respondents were having no functional disability, 33(18.4%) were having functional disability in the right hand, 5(2.8%) were having functional disability in the left hand and 15(8.4%) were having functional disability in both hands. In upper back region 42(23.5%) respondents were having functional disability while 137(76.5%) respondents were having no functional disability. Functional disability in lower back was 108(60.3%) while 71(39.7%) were not having functional disability. Functional disability In Hip was 79(44.1%), Functional disability knees 55(30.7%) and in ankle 55(30.7%) functional disability was responded by the housewives.

Table 1: Nordic Questionnaire Results

Body regions	Pain in Last 12 months				Pain in Last 7 months				Functional Disability			
	Yes		No		Yes		No		Yes		No	
	N	%	N	%	N	%	N	%	N	%	N	%
Neck	97	54.2	82	45.8	97	54.2	82	45.8	82	45.8	97	54.2
Shoulder	87	48.6	92	51.4	87	48.6	92	51.4	76	42.5	103	57.5
Elbow	33	18.4	146	81.6	33	18.4	146	81.6	27	15.1	152	84.9
Hands	65	36.3	114	63.7	65	36.3	114	63.7	53	29.6	126	70.4
Upper back	61	34.1	118	65.9	61	34.1	118	65.9	42	23.5	137	76.5
Lower back	81	45.3	98	54.7	81	45.3	98	54.7	108	60.3	71	39.7
Hips	39	21.8	140	78.2	39	21.8	140	78.2	79	44.1	100	55.9
Knees	55	30.7	124	69.3	54	30.2	125	69.8	55	30.7	124	69.3
Ankle	55	30.7	124	69.3	39	21.8	140	78.2	55	30.7	124	69.3

DISCUSSION

A study was conducted by Babak fazli et al. in 2016 to track down the musculoskeletal problems and its indicators among Iranian housewives. After the investigation it shows that the complete predominance of musculoskeletal

disorders was 53% and that was not distinctive in three urban areas. The most prevalence of pain was discovered in the back area (51.3%), neck area (51.1%) and shoulder area (41.5%) and least at wrist (40.5%). Taking everything into account study showed that the commonness of

musculoskeletal disorders in housewives of Iran is high (12). The results of above-mentioned study coincided with the results of this study as the highest prevalence of pain was found to be in neck (54.2%) region, followed by shoulder (48.6%), lower back (45.3%), hands (36.3%) and least in elbows (18.4%), In ankle (30.7%) in last 12 months and (21.8%) in last 7 days.

Another research was conducted by Nabeela Nazish et al. concluded that there was a significant difference between different category of shoulder pain and groups hence house wives were more prone for shoulder pain than working women. According to above-mentioned study the highest prevalence of pain was in shoulder neck and lower back⁸.

Another study was conducted by Sumit Kalra¹ et al. 2017 that showed the severity of MSDs for last 12 months respondents had pain at Lower back (60%), Shoulder (42%), Upper back (38%), and Elbow (18%)². The results of above mentioned study was prevalence of functional impairment in last 12 months was high in lower back region (60.3%) than other regions of the body. Our results were in line with above study and hence concluded that housework activities expose housewives to muscular pains involving whole body especially lower back. Results showed that housewives of the Lahore were affected from musculoskeletal disorder in one or more regions.

Another study evaluated the prevalence of MSDs in housewives in a single locale of Tehran. In this observational cross sectional examination, 120 housewives haphazardly were assigned from one of the complete 20 regions of Tehran. Approve Persian form of Nordic MSDs poll utilized for information assortment. It came about that MSDs in housewives were more predominant in low back, knees and shoulder regions. With expanding old enough, MSDs were altogether expanded in neck, shoulders, elbows, and pelvis and knees regions^{12,13}. The present study showed that the severity of the musculoskeletal disorders in last 12 months and in last 7 days was almost same in most of the regions, but, there was minor change in knee and ankle region from the last 12 months and 7 days.

Limitations: It was a single centre study and we did not perform genetic workup among patients in-order to find the genetic cause. There was less follow-up and it was carried out on small sample size.

CONCLUSION

It was concluded that prevalence of musculoskeletal disorders was higher in one or more than one region in last 7 days and 12 months. While severity of functional disability in last 12 months showed a larger variation in

lower back. Severity of musculoskeletal disorders pain and discomfort is higher than functional impairment.

Author's contribution: MS&MJ: Conceptualized the study, analyzed the data, and formulated the initial draft.

NZ&ZA: Contributed to the histomorphological evaluation.

HR: Contributed to the analysis of data and proofread the draft.

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