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Comparison of Work-Related Musculoskeletal Disorders Among Working Women and Housewives

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ABSTRACT

Background: Musculoskeletal conditions are the most common cause of physical and functional limitations among both working and nonworking population. A 45% increase has been observed over 20 years in these conditions due to changes in lifestyle and activities. Nearly 25% of the overall population in under developed countries complain of MSK symptoms which decrease their functional capacity by restricting them with pain.

Objective: To find out the prevalence of musculoskeletal disorders and compare them between housewives and working women.

Methodology: This study was conducted on 57 females aged between 23 to 35, women with primary gravida; both housewives as well as working women were included for the study. Any participants with musculoskeletal/neurological/ psychological/ psychiatric / dermatological/ deficit or disorders that can affect the study were excluded. For the collection of the data, standardized Nordic Questionnaire was used. An informed consent was taken from the study participants. SPSS 25 was used for data analysis.

Results: The overall mean age of the participating women was 28.97 years. Among the total population, 22 (46.4%) were housewives and 35 (53.6%) were working women. Among the working women, 12 (25.0%) worked part time (5-6 hours), 15 (20.4%) worked full time (8-10 hours) and 8 (6.1%) worked other hours.

Conclusion: The upper limb regions were more commonly affected among the working women with neck region (64.4%) being the most affected followed by the shoulder and upper back area. Whereas among the housewives, musculoskeletal symptoms were more frequently reported in the shoulder region (71.5%) followed by increased symptoms in the lower back, ankle/feet and the knees.

Keywords: Musculoskeletal Disorders, Female Health, Housewives, Working Women, Workplace.

INTRODUCTION

Musculoskeletal conditions are the most common cause of physical and functional limitations among both working and nonworking population. The complications may occur due to over work, specific work demands that require prolonged posture maintenance and health factors. Musculoskeletal (MSK) disorders are reported by 1.7 million individuals globally and come fourth among health effecting

variables. A 45% increase has been observed over 20 years in these conditions due to changes in lifestyle and activities.[1] Nearly 25% of the overall population in under developed countries complain of MSK symptoms which decrease their functional capacity by restricting them with pain.[2] MSK related issues are frequently reported and are observed to occur at a rate of 11% to 60% in developed or under developed states. The occurrence of musculoskeletal issues among women in United States is around 79%. While they occur at a rate of 50% among Canadian women.[3,4] About 35.9% of the housewives in India complain of musculoskeletal symptoms with lower back pain being the most commonly occurring symptom in 10.7% of the women and 7.9% of them having pain in the upper back.[5]

The MSK disorders are more common among females as compared to males. The difference in incidence is thought to be due to the skeletal, hormonal and physical, postural and other work-specific changes among the women. The prevalence increases with age, weight and BMI.[6] The musculoskeletal disorders among women is 3 times more as compared to men in the regions of upper limb and is observed 1.5 times more frequently in neck, pectoral and upper back area, as compared to men.[7] The prolonged working hours, static maintenance of postures for longer times, poor ergonomic setups in office jobs, incorrect ways of lifting in certain jobs, work over load and shorter recovery durations all contribute to the MSK complications that increase gradually with time and work. All these factors collectively lead to a poor quality of life and decreases efficiency at work. It may even lead to functional limitations with time and further restrict the individuals.[8,9] Working women consist of 40% of the total work population. As they are more under added physical, functional and psychological stresses, it puts them at the risk of deteriorating health and increased chances of musculoskeletal symptoms. The over loading factors and the nature of their responsibilities, put them at a greater risk of developing early MSK complaints as compared to males.[10] The working women are slightly more susceptible than the housewives due to the additional work load to the usual household chores as well. Of all the MSK conditions, 33% are occupation- specific and occur among the working women.[11] The increasing rate of work-related MSK conditions leads to more off days from work which reduces the productivity levels of the women.[12] The most common work-related MSK disorders among women are either upper extremity issues due to static improper posture or work-related low back pain. Some women also report symptoms of carpal tunnel syndrome and leg pain due to varicose veins.[13] MSK issues among the housewives cannot be ignored. The daily chores of a housewife including household work and taking care of the children and other family members require a lot of energy expenditure and physical and functional activation which puts these women at a risk of developing complications.[14] An early onset of Osteoarthritis and Low Back Pain are more common among housewives. Pain due to varicose veins and carpal tunnel syndrome are also being observed among these women due to various household chores that require standing and wrist turning movements daily. The aim of this study was to observe the comparison of work-related musculoskeletal disorders among working women and housewives. Previous studies included women between ages of 25 to 35 years. The present study identifies the musculoskeletal complaints among women in different occupations and includes women from a younger age group of 23 to 35 years. According to the researcher's knowledge, previous studies have been conducted among teachers, nurses and doctors, whereas the current study also includes women doing part time jobs and who are freelancers.

METHODOLOGY

This study was conducted to observe the comparison of work-related musculoskeletal disorders among

working women and housewives.

The sample size of 57 was calculated from the formula; with Epitool at 95% confidence interval. Non-probability purposive sampling technique was used. Inclusion criteria was set to be age range of 23-35, working women as well as housewives and married women with prim gravida were included. Participants having any systemic or diagnosed musculoskeletal disorder or any neurological deficit or pregnant women were excluded. Written consent was taken from the participants before filling the questionnaires. For data collection, Standard Nordic Questionnaire (SNQ) was used. The questionnaire consists of questions divided into

different regions of the body and whether the participants have experienced musculoskeletal symptoms during a span of previous 7 days, few weeks or 12 months. This study focused on recent symptoms of 7 days. Data was entered and analysed using IBM SPSS 25. Frequencies with percentages were calculated for categorical variables.

RESULTS:

The overall mean age of the participating women was 28.97 years. In the total population, 22 (46.4%) were housewives and 35 (53.6%) were working women. Among the working women, 12 (25.0%) worked part time (5-6 hours), 15 (20.4%) worked full time (8-10 hours) and 8 (6.1%) worked other hours. Body pains increased with increased hours of work, but also entirely depended on the type or nature of work. 35 (51.0%) women did their house chores themselves and 22 (49.0%) had house help. Women with house help had relatively less body pains than the ones with no house help.

DISCUSSION

According to a study conducted by S Kalra et al. in 2017, the Standard Nordic Questionnaire (SNQ) was used to analyse the prevalence of musculoskeletal symptoms among housewives in India. Women of ages between 25 to 35 years with no pregnancy at the time of collection of data were included. While women with any diagnosed neurological or musculoskeletal deficits were excluded from the study. Overall, the lower back was most affected region followed by upper back and shoulders.[14] Similarly, according to the results of the present study; the SNQ was used to observe musculoskeletal symptoms among nonworking and working women of ages between 23 to 35 years. Women with diagnosed musculoskeletal, neurological or any other disorder that might affect the study were put under the exclusion criteria. In this current study musculoskeletal symptoms were most commonly reported in the neck, shoulder and lower back region among both working and non-working women overall. According to a study by Prawit J. et al., which was conducted on both male and female office workers, the prevalence of musculoskeletal symptoms in the past 12 weeks, in 9 regions of the body was observed by using Standard Nordic Questionnaire (SNQ). The most affected region was the neck (42%), 16% people had pain in their shoulders, 20% people had pain in the wrist and hand area, 34% reported lower back pain while 28% had upper back symptoms. The lower limb regions such as the hip, thigh, knees, ankle and foot were least effected.[15] According to the results of present study, which was conducted among women population only and used SNQ to analyse symptoms in 9 body regions for the past few days. Most commonly the neck region in (64.4%) was affected among the working women. (63.5%) of the women reported pain in shoulder area while upper back was more affected (47.3%) than the lower back (45.4%). The lower extremity regions were comparatively more affected in the current study. According to a study by M. Javed Sheikh mozafari et al., conducted on housewives, due to the nature of their

repetitive routinely household chores, lower back pain and pain in the knees and elbows was more frequently observed among them.[16] Which was contrary to the results of a recent study by Nazish et al., in 2020 according to which shoulder region is the most common area of musculoskeletal complaints among housewives.[17] According to the results of present study, shoulder region was the most affected area in majority (71.5%) of the women. After which symptoms were more frequently reported in both lower back and ankles/feet by (65.10%) of the women.

CONCLUSION

The upper limb regions were more commonly affected among the working women with neck region (64.4%) being the most affected followed by the shoulder and upper back area. Whereas among the housewives, musculoskeletal symptoms were more frequently reported in the shoulder region (71.5%) followed by increased symptoms in the lower back, ankle/feet and the knees.

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