



PREVALANCE OF MUSCULOSKELETAL DISORDERS IN HOME-MAKERS DURING THE PERIOD OF COVID 19 LOCKDOWN.

Physiotherapy

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ABSTRACT

Background: Home-makers have to do all the household activities like cleaning and grooming the house, washing clothes and utensils, cooking, while doing these activities they do not care or look after their posture, instead they adopt themselves according to the demand of their work, and during the lockdown phase they might have been working for longer duration of time, which would have led to musculoskeletal changes in them. Hence the study aim to check the musculoskeletal disorders in home-makers during the period of covid-19 lockdown.

Aim: Incidence of musculoskeletal disorders in home-makers during the period of covid 19 lockdown.

Material and Methods: Permission was taken from institutional ethical committee. 100 home-makers were assessed who were in the range of 21-60 years using Nordic Musculoskeletal Questionnaire.

Results: Data was analyzed and according to the study, the highest incidence of pain was found in low back 78% followed by 40% of neck pain.

Conclusion : The study concluded that increase in workload during the period of Covid-19 lockdown had led to overall musculoskeletal changes in her body. The highest incidence of pain was found in low back 78% followed by 40% of neck pain.

KEYWORDS

Covid-19, Corona virus, Home-makers, Musculoskeletal disorders, Lockdown, Nordic musculoskeletal questionnaire

INTRODUCTION

Coronavirus is a cluster of unexplained pneumonia which has been reported in Wuhan, China in 2019. Coronavirus is a group single stranded RNA virus. This virus affects respiratory, enteric, hepatic and neurological systems. [1] the transmission mode of the virus is human to human and transmission route is via close contact and droplets, 5 days is the mean incubation period, which ranges from 1-14 days [1]. The clinical symptoms of Covid-19 varied from being asymptomatic to acute respiratory distress syndrome to multiple organ dysfunction. The common clinical features included sore throat, fever, fatigue, headache, dyspnea and conjunctivitis. The condition could be as mild as it could be recovered at home and as severe that it can be fatal. The classical feature can be drop in oxygen level as this virus entraps the lungs, the patient feels breathless while performing minimalistic activity or even at rest.

People with conditions like - diabetes, HTN, chronic respiratory disease, CVD are more prone for the affection of this virus. RT-PCR is the only diagnostic method to identify the presence of virus in one's body and in patient with severe breathlessness HRCT of chest is done to identify which lobe is affected and its extent. As close contact and droplet is the transmission route for the spread of the virus, use of mask properly covering our nose and mouth, and proper sanitization of hands were the protective measures for one's safety.

On 11th March 2020 in India WHO declared lockdown all over the country. During this lockdown phase where each and everyone of us were at our home, living an absolutely sedentary lifestyle with minimal or no work at all. All of us were on a vacation mode or on leave, sparing the population of house-wives, because they were the ones who were working more than their usual work time, without being aware of their posture nor they were aware of the adverse effects of the increased workload in them. They all have been doing their house-hold activities like washing clothes, sweeping, cleaning the floor, cooking, washing utensils, cleaning mirrors and beds which could have led to contact with variety of physical stress and overload pressure of work would have led to many musculoskeletal changes, MSK disorders includes conditions that affect muscles, tendons, nerves, ligaments, joints and supporting blood vessels [2] leading to poor quality of life and decreased productivity. The prevalence of MSK disorders is more common in woman than in men [3].

Studies have shown that when women have exposure to repetitive jobs and carry work by awkward posture have complain of neck and shoulder pain more than men. Different anthropometric characteristics between men and women are another factor that can lead to differences in prevalence and incidence of MSDs between two genders. Otherwise, the threshold of pain among women is lower than men.

These condition can cause women to get MSDs more than men [4]

Home-makers do all the home chores but cannot go home and relax, as they are the one's who work constantly Women's work more than their capacity to meet their family needs, ignoring their diet, overburdening themselves, neglecting their health and adverse effects of overload on them. Hence this survey based study is done to check the musculoskeletal changes in housewives and educate them regarding the adverse effects of overload on their body.

MATERIAL AND METHODOLOGY

Participants : 100 home-makers

Inclusion Criteria

- Female home-makers
- Age group 21-60 years
- Home-makers who are willing to participate in this study

Exclusion Criteria

- Female home-makers who were working, work from home
- Home-makers with any history of neurological, musculoskeletal, psychological, dermatological deficit
- Un-cooperative subjects

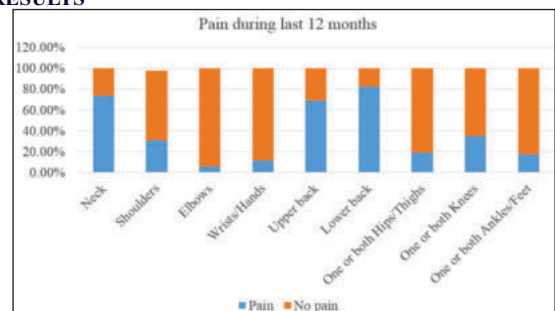
Outcome Measures

Nordic musculoskeletal questionnaire

OBJECTIVES

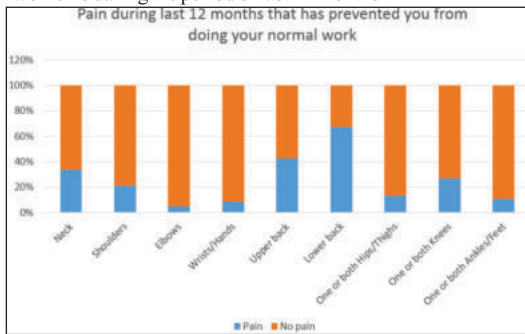
1. To find out musculoskeletal problems in housewives using Nordic questionnaire
2. To create awareness about ergonomics during household activities in the population of home-makers

RESULTS



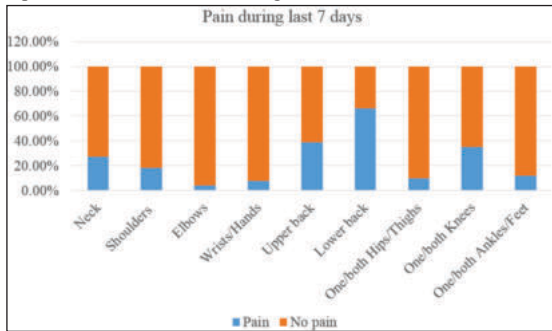
Graph No – 1 interprets that

- 73.8% of women's are having Neck pain, 31.1% has Shoulders pain, 5.8% has Elbows pain, 1.7% has Wrists/hand pain, 68.9% has Upper back pain, 82.5% has Lower back pain, 19.4% has pain in both Hips/Thighs, 35% has pain in both the Knees, 17.5% has pain in both the Ankles/Feet pain has been experienced by the women's during the period of last 12 months



Graph no – 2 shows that

- 34% of Neck pain, 21.4% of Shoulder pain, 4% of Elbow pain, 7% of Wrists/Hands pain, 42.7% of Upper back pain, 67% of Lower back pain, 13.6% of one/both Hips/Thighs pain, 27.2% of one/both Knees pain, 10.7% of one/both Ankle/feet pain, has prevented women's from doing their normal work.



According to Graph No - 3

- 27.2% of Neck pain, 18.4% of Shoulders pain, 45% of Elbows pain, 7.8% of Wrists/Hands pain, 38.8% of Upper back pain, 66% of Lower back pain, 9.7% of One/both Hips/Thighs pain, 35% of Knees pain, 11.7% of One/both Ankles/Feet pain, had experienced in the last 7 days.

DISCUSSION

The present study was conducted to find the incidence of musculoskeletal changes in home-makers during the period of Covid-19 lockdown. In the present study, 100 home-makers were assessed according to the inclusion and exclusion criteria, which included home-makers between the age group of 21-60 years. This survey based study was done to check the prevalence of musculoskeletal disorders in home-makers during the period of Covid-19 lockdown. MSK disorders includes conditions that affect muscles, tendons, nerves, ligaments, joints and supporting blood vessels^[5] leading to poor quality of life and decreased productivity. All the subjects were given and explained about the Nordic Musculoskeletal Questionnaire.

Graph No-1, shows that 73.8% of homemakers were having Neck pain, 31.1% had Shoulders pain, 5.8% had Elbows pain, 1.7% had Wrists/hand pain, 68.9% had Upper back pain, 82.5% had Lower back pain, 19.4% had pain in both Hips/Thighs, 35% had pain in both the Knees, 17.5% had pain in both the Ankles/Feet pain has been experienced by the women's during the period of last 12 months The highest prevalence of pain was found to be in the back region (51.33), followed by neck (51) and shoulder (41.5) and least at wrist (40.5).. Ergonomic stressors were also associated with pain in the back and upper and lower extremities. Women engage in a large number of hours of housework that, alongside other factors, were associated with high prevalence of musculoskeletal pain.^[5] According to Graph No-2, 34% of Neck pain, 21.4% of Shoulder pain, 4% of Elbow pain, 7% of Wrists/Hands pain, 42.7% of Upper back pain, 67% of Lower back pain, 13.6% of one/both Hips/Thighs pain, 27.2% of one/both Knees pain, 10.7% of one/both Ankle/feet pain, has prevented women's from doing their normal work Women were found to have increased incidence of shoulder pain (mopping task) and upper back pain

(mopping and stirring task) .Kitchen platform tasks performed in an awkward repetitive posture, over an improper work surface height are associated with increased incidence of MSDs.^[7]

Graph No-3, depicts that 27.2% of Neck pain, 18.4% of Shoulders pain, 45% of Elbows pain, 7.8% of Wrists/Hands pain, 38.8% of Upper back pain, 66% of Lower back pain, 9.7% of One/both Hips/Thighs pain, 35% of Knees pain, 11.7% of One/both Ankles/Feet pain, has been experienced by the home-makers in the last 7 days. According to the study the maximum number of home-makers had back pain, that is because of the repeated activities they have to do, which requires twisting, bending, pulling movements of the spine, contributing to increase in the chance of low back pain.

Neck pain is another complain which maximum number of home-makers complained about, as they have to perform the activities, like cleaning the ceiling or fan, which is at height, chopping the vegetables which requires neck bending for longer duration, contributes to neck pain .The number of hours of housework per week was also positively associated with MS pain^[7] Women working 46–65 h were 2.5 times more likely to report pain than those working less than 46 h (CI = 1.09–5.65), while spending 66–84 h increased the likelihood substantially (OR: 4; CI = 1.34–11.89). However, there was not a significant finding for women who worked at home more than 84 h.

In this study to check the musculoskeletal disorders in them, Nordic Musculoskeletal Questionnaire was used which was divided into three sections 1. Pain during last 12 months 2. Pain during last 12 months that has prevented you from doing your normal work 3. Pain during the last 7 days .The present study was also done to educate the home-makers regarding ergonomics and its importance.

Good posture may be defined as one in which destabilizing moments are minimized and the posture is maintained by resistance of relatively incompressible bones^[6] Ergonomics is defined as the study and practice of improving the way people move and function within their daily life. Like while lifting the weight from the ground she shouldn't bend from the back, instead has to squat and then lift the object. This would prevent and protect her from back pain.

As a physiotherapist making the homemakers aware regarding their posture and giving them ergonomic advice is the aim. Maintenance of correct posture during work, and the awareness regarding the bad posture and adverse effect of overload of work on the body was brought into their vision.

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