



## A REVIEW

# Work related musculoskeletal disorder of housewives at home

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**Abstract :** The Indian families are generally and probably the most diversified societies in the world. There are millions of houses in our country and the duty to complete household tasks is anonymously related to women in our country as performing housing duties are only intended to be borne by women only. This can lead to having many work related injuries and musculoskeletal disorders which could be injuries in wrist, neck, back, shoulder and ankles or feet. Musculoskeletal (MSK) pain is very common in both developed and developing countries with estimates of prevalence ranging from 11-60%. Musculoskeletal conditions affect more than 1.7 billion people worldwide and have the 4th greatest impact on the overall health of the world population, considering both death and disability. Ergonomic assessment of the housewives should be executed in order to understand the work related musculoskeletal disorder. Ergonomics is the theoretical and fundamental understanding of human behavior and performance in purposeful interacting socio-technical systems, and the application of that understanding to design of interactions in the context of real settings. It is an assessment of a people to ensure correct working postures and possible outrage and finding solutions to reduce a person's exposure to physical hazards such as: Uncomfortable postures and repetitive tasks.

**Key Words :** Ergonomics, Housewives, Household work, Musculoskeletal pain, Women

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## INTRODUCTION

Housework is traditionally a labour performed by women. It involves routine and compulsory household maintenance tasks (cleaning, cooking, purchasing, etc.) and family care duties (child rearing and other care giving responsibilities) that require substantial physical, emotional and intellectual. Studies have found that housework can be more energy intensive than some types of paid work and is a source of hazards comparable to other occupational settings. Research has also found associations between housework and upper extremity and lower back disorders

A housewife is a woman that employed her main occupation as taking care and managing her home, educating her children, perform cooking and storing goods, washing and cleaning of the housing area, washing and ironing clothes for the family, buying grocery for the needs of the family (Tulika Srivastava, 2017). The duty of the housewife is to take care of the day-to-day chores within the home. Housewives having high risk to suffer various problems which related to their occupations that cause injuries to their muscles and skeletal system (Tulika Srivastava, 2017). Proven that housewives have more incidence of suffering work-related musculoskeletal

disorders. Those work-related musculoskeletal disorders are related with a group of painful disorders of muscles, tendons and nerves. Work-related musculoskeletal disorders are also one of the major factors which related to increased compensation and health costs, reduced productivity of work and lower quality of life (Yan *et al.*, 2017). In addition, work-related musculoskeletal disorders can progress from mild to severe disorders. Thus, early treatment must be taken from mild disorders in order to avoid deterioration of the condition.

### **Risk factor work-related musculoskeletal disorders :**

The source of work-related musculoskeletal disorders development is repetitive, vigorous and awkward movements on body parts of bones, joints, ligaments and other soft tissues. Work-related musculoskeletal disorders always a leading source of disability and affect the productivity of workers in the workplaces. A journal from Kim (2015) with the title of Ergonomics and Musculoskeletal Disorders supported that work-related musculoskeletal disorders are one of the leading types of occupational injury. Those work-related musculoskeletal disorders provoke the greatest costs to workers' compensation. The consequences of any body parts of work-related musculoskeletal disorders could be long term and can affect every aspect of a worker's life.

The number of painful areas and level of pain also increased with obesity level of housewives. The amount of force on a weight bearing joint is found to be increased with excess weight of a person. Among middle age and elderly housewives, finding shows increasing of weight will cause shoulder, heel and hip pain. Another study supported that 31% of 495 housewives who suffered from musculoskeletal pain are having a higher body mass index Bihari *et al.*, (2013). As weight and age are the risk factors for work-related musculoskeletal disorders, others potential risk factor should be clarified among housewives in Malaysia. In 2018, Sallehuddin *et al.* (2018) aim to assess the variation in body pain among overweight and obese Malaysian housewives. The musculoskeletal pain (MSP) that determined was according to the site and severity of injured body regions. The study indicated that overweight and obese considered as a high-risk group for getting musculoskeletal pain. Moreover, they suggested that older obese housewife had a higher risk of getting musculoskeletal disorders to compare to a

young obese housewife.

### **Work-related musculoskeletal disorders among housewives in lower back region:**

Effects of potential risk factors like family structure, socio-economic status and educational level of housewives and social burden should study a give a better understanding of the problem. Furthermore, lower back pain should not be the only musculoskeletal disorder that studies among housewives. Every part of the body that might have the probability in getting musculoskeletal disorder should be studied among housewives. Gupta and Nandini (2015) study to evaluate the prevalence of low back pain in non-working rural housewives and the impact of social burden on low back pain (LBP). A sample of 301 non-working rural housewives of Kanpur which aged between 30 and 70 years was selected. Analysis of data found that both recent and yearly prevalence of low back pain in rural housewives was 83%. The study also showed more than 50% housewives have a severe disability due to their low back pain. Prolonged duration of working hours without sufficient rest periods, poor posture, improper techniques of lifting and carrying loads also contribute to their back pain as physical factors. The back pain was highly prevalent among the study participants. The housewives suffered from such problems might be because of adopting forward bending and squat sitting postures for long time. In uprooting job, they were compelled to twist their trunk frequently. The spinal rotation may cause chronic strain as when the housewives twist their waist during work.

### **Prevalence and risk factor of work-related musculoskeletal disorders among housewives:**

Kalra and Bhatnagar (2017) aims to investigate the prevalence of musculoskeletal disorders (MSDs) of housewives in Delhi and Noida. 100 housewives which aged 25-35 years with no pregnancy were selected to participate in the study. The study indicated those 100 % housewives were affected by musculoskeletal disorders in one or more body region. Housewives suffer pain with lower back (60%), shoulder (42 %), upper back (38%), neck (35%), wrist/ hand (29%), ankle/ feet (26%), knee and thigh/ hips/ buttocks (20%) and elbow (18 %) were prevented from perform their normal activities. The high prevalence of musculoskeletal disorders among housewives suggests that housework could be an independent risk factor that caused to develop

musculoskeletal disorders among housewives. Another reason could be due to some physical stress and features of household activities such as taking care of family members, cooking for meals and cleaning at home.

Increased hours of unpaid work at home and performing certain daily activities, such as frequent lifting of objects or children over 10 kg, can be correlated with low back disorders, socio-psychological stress at home can be suggested to be associated with LBDs as well as psychosomatic strain Habib (2010).

The study of Suthar and Kaushik (2011) supported that 76.66% of women reported neck pain and 46.66% of women reported shoulder pain. The reported work-related musculoskeletal disorders was because of performed all the activities in an awkward posture and prolonged duration without sufficient rest period. 76.66% of women also reported back pain and their long term work activities were engaged in standing and bending postures. A total of 46.66% women reported pain in the upper arm due to the static position of hands and onset of fatigue in upper arm muscles during their work.

Another study done by Anita *et al.* (2014) indicated that awkward posture was related to work-related musculoskeletal disorders. Workers that having 87.0% of high and 97.2% of very high Rapid Upper Limb Assessment (RULA) risk level are reported to suffer from musculoskeletal disorders. The awkward posture of housewives during household activities would increase the RULA risk level.

Housewives who perform a multitude of tasks from household activities that will cause physical stress as well as exhaustion of muscle groups that result of work-related musculoskeletal disorders Hossain *et al.* (2018).

Essential biomechanical parameter and features of housework such as child care, care-giving, food preparation and cleaning that paid for doing them at home, the results are in accordance with study done by Babak Fazli *et al.* (2015) on Iranians' Housewives which also suggests that the prevalence of MSDs in Iranian housewives is very high and ergonomic training and informing the housewives about the risk factors of MSDs could prevent and postponed the occurrence of these disorders.

Besides than physical factors, a literature review and epidemiological studies have shown that there are other two sets of risk factors can be considered in the genesis of the work-related musculoskeletal disorder Nunes and Bush (2011). Firstly, individual factors

including age, ethnicity, household activities, sports activities, domestic activities, recreational activities, alcohols, and tobacco consumption. Those suggested individual factors are related to work-related musculoskeletal disorders Burgel *et al.* (2010). Next, psychosocial factors that could cause work-related musculoskeletal disorders are the work place, stress level, rest cycle, task demands and social support.

According to the National Institute for Occupational Safety and Health, musculoskeletal disorder (MSD) is a damage that affects the musculoskeletal system of the human body, especially at bones, spinal discs, tendons, joints, ligaments, cartilage, nerves and blood vessels. Such injuries may result due to repetitive motions, forces, and vibrations on human bodies during executing certain job activities. Previous injuries, physical condition, heredity, pregnancy, lifestyle, and poor diet are the factors that contribute to the musculoskeletal symptoms Memon, (2019).

### Conclusion:

It could be concluded from the study that homemakers engage in a large number of hours of housework, involving them in repetitive hand movements, bending, kneeling and squatting. These postures and movements are associated with MS pain. The musculoskeletal symptoms are also related to psychosocial and individual factors. Also, It is believed that job is one of the most effective factors on women's quality of life, the matter of fact is that a woman's level of education and her employment status are expected to be positively related to women's empowerment and thus affecting her quality of life .

The prevalence of work related musculoskeletal disorders among housewives is as high compared to other occupations. Awareness and medical attention for housewives regarding work related musculoskeletal disorders must be highly concerned and emphasized. Better health-care measures to enhance housewives education about good posture, ergonomic measures, health schemes, health awareness, and activity pacing could help. The potential risk factors should be highly avoided to scale down the risk of work-related musculoskeletal disorders. Future interventions and policies might intervene in communities, targeting families with messages that emphasize the health costs of excessive housework and the need to share household tasks among family members.

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