

PREVALANCE OF MUSCULOSKELETAL DISORDERS IN MIDDLE AGE HOUSEWIVES

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ABSTRACT

BACKGROUND: Every women has to play a role of housewife whether she is working or non-working. While managing the whole house and family she faces lot of physical and mental problems one such problem is musculoskeletal disorders.

OBJECTIVES: This study was designed to find the prevalence of musculoskeletal disorders in housewives.

METHODS: An observational study was carried out to find out the prevalence of Musculoskeletal disorders (MSDs) among urban housewives(n=136) aged 25-55years by purposive sampling. Prevalence of pain, its association with activities of daily-living, acute and chronic pain and their self-awareness about pain were assessed using Nordic musculoskeletal questionnaire(NMQ). Housewives of various areas of Ahmedabad were approached according to inclusion and exclusion criteria and asked various problems they faced during household work.

RESULTS: The study analysis showed high prevalence of MSDs among housewives due to constant working in awkward positions, in ergonomically unfriendly surroundings, specially in weight-bearing areas like spine and knee followed lowback, wrist/hand, ankle/feet, elbow, upperback, hips/thighs and shoulder.

CONCLUSION: Housewives face musculoskeletal disorders due to householdwork. This prevalence of MSDs in housewives can be used to understand the problems faced during house-holdwork, their cause by which in future an ergonomic protocol for housewives can be designed and address their problems in detail.

KEYWORDS: Housewives, Physical problems in housewives, Ergonomics.

BACKGROUND

Musculoskeletal disorders(MSDs) are caused by several factors at work, especially heavy physical work and improper manual handling, improper work environment with increased aging accelerate joint degeneration. These disorders are chronic, and symptoms usually occur only after exposure to work-related risk factors for many years. A work-related risk factor is one among several factors that cause, provoke or aggravate a latent disorder and one of such risk factor is household work.^{[1][2]} Due to continuous repetition, often forced, and first of all, the speed of movements, faulty posture and the lack of time for muscle to recover strain makes them dangerous.^[3] In a study conducted to find out the prevalence of musculoskeletal disorders in Indian housewives it was found that the severity of MSDs last 12 months respondents indicated that they were prevented from carrying their normal activities with Lower back (60%), Shoulder (42 %), Upper back (38%), Neck (35%), Wrist/hand (29%), Ankle/Feet (26%), Knee & Thigh/Hips/Buttocks (20%) and Elbow (18 %). The high prevalence of MSDs among housewives could be due to some essential biomechanical parameter and features of housework such as child care, care-giving, food preparation and cleaning on improper heighted kitchen-platform.^[4]

Housewife is the nucleus of family, working constantly in faulty position with prolonged standing, twisting, bending, turning while doing various household work like cutting, cleaning, cooking, dusting, etc puts extra-load on body.

NEED OF THE STUDY

Almost every house requires a female person in their house to manage the whole house and take-care of people inside the house. With a healthy and active female the whole house can be managed effectively. By knowing their problems in a detailed way is the first step towards addressing their problems.

AIM

To find the prevalence of musculoskeletal disorders in middle-age housewives.

OBJECTIVES

- ▶ To find out whether housewives gave priority to musculoskeletal pain and consulted physician or not(self-awareness).
- ▶ To find out how whether pain interfered with normal activities.
- ▶ To find how many how much percentage of housewives had pain since 12months.
- ▶ To find out how many housewives had acute pain since 7days.

MATERIAL AND METHOD

This observational study was conducted after obtaining ethical clearance from hospital ethical committee. Prior consent was taken from participants and study procedure was explained. Housewives from various urban areas of Ahmedabad were approached according to inclusion and exclusion criteria. Total 136 housewives were included after screening 234 housewives.

INCLUSION CRITERIA

- ▶ 1). Middle-age housewives(40-60 years age group).
- ▶ 2). Women willing to participate.
- ▶ 3). Women of urban areas of Ahmedabad were included.

EXCLUSION CRITERIA

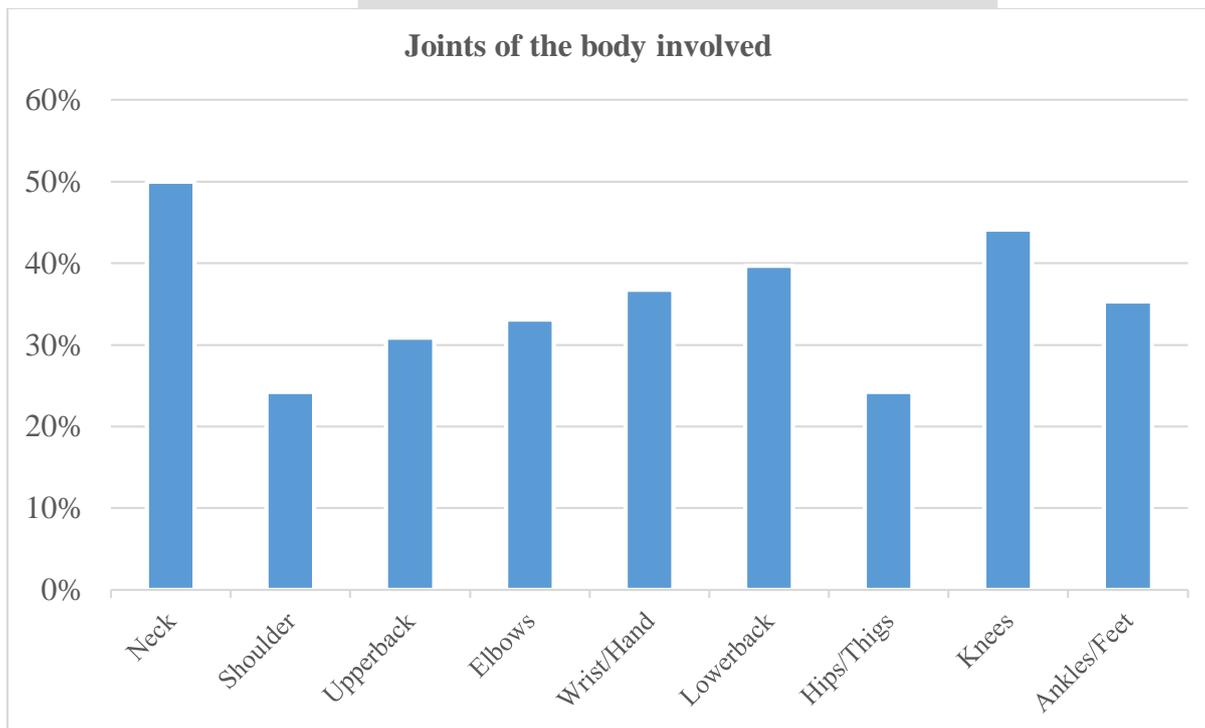
- ▶ 1). Any surgical history or postoperative history of musculoskeletal disorders.
- ▶ 2). Working women, pregnant women were excluded.
- ▶ 3). Women unable to comprehend.

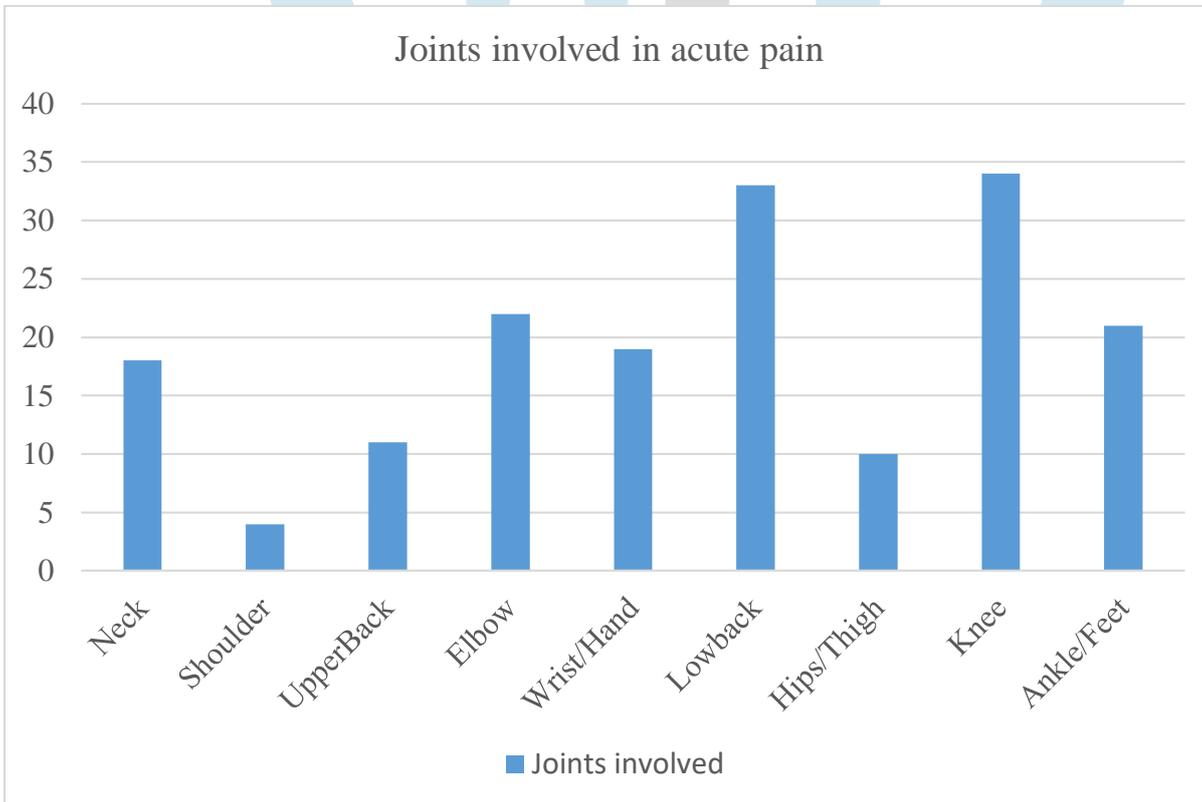
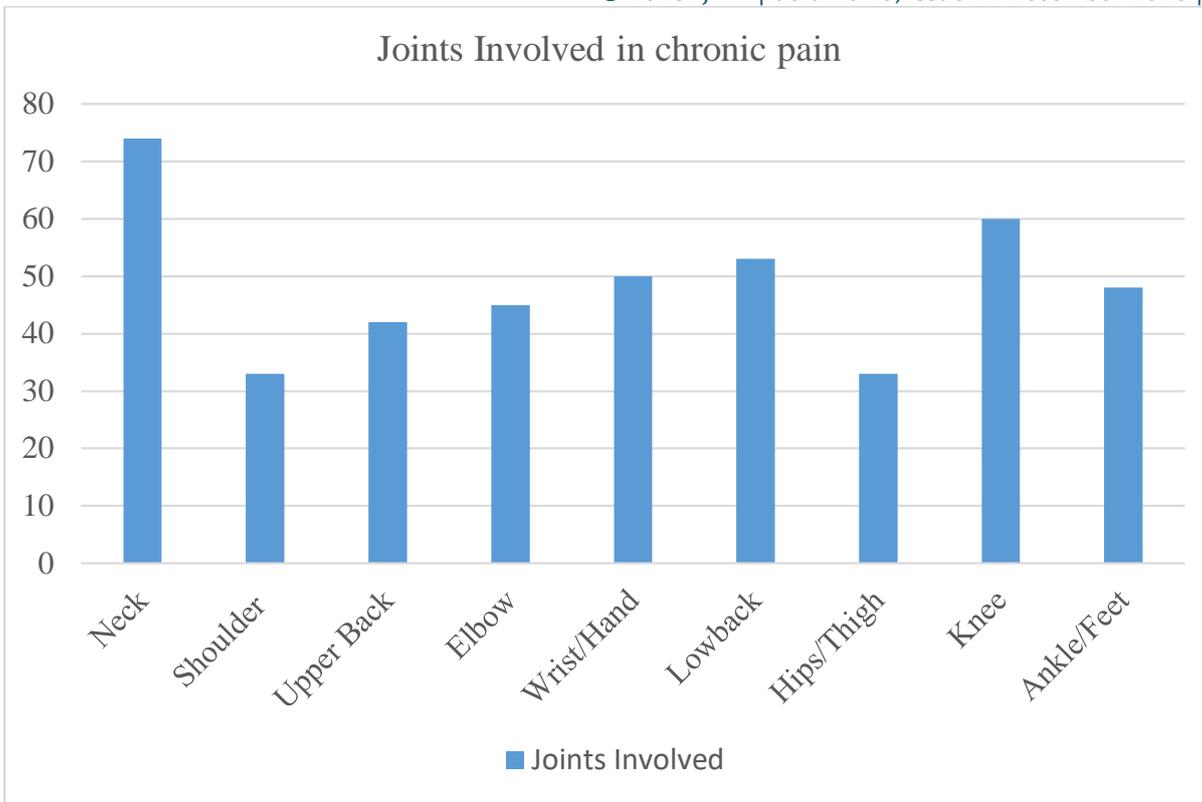
After screening 136 housewives Nordic musculoskeletal questionnaire(NMQ) was applied on them to find out prevalence of musculoskeletal disorders. They were asked questions regarding various musculoskeletal joint problems, which joints were involved and what issues they faced with various joint involved, for how long the problem existed, did the problem interfered with the activities of daily living, acute and chronic issues, were they self-aware about addressing their problems and what issues they faced while doing their routine-work, which work they could not continue or working in which position was difficult. This data was scaled according to NMQ.



RESULTS

Data was scaled according to NMQ and prevalence of musculoskeletal disorders was calculated by percentage. Highest prevalence of MSD was found in Neck followed by knee, low-back, wrist/hand, ankle, elbow, upperback, shoulder and hips-thigh that was mainly chronic. Most of the housewives did not consult a physician which indicates lack of awareness, self-concern and care.^[4] Most the chronic pain interfered with activities of daily living. Acute pain was seen less common than chronic pain.





TABULAR DISTRIBUTION OF PAIN IN VARIOUS REGIONS

REGION INVOLVED	PAIN DURING LAST 12MONTHS	PAIN INTERFERING WITH ADL	PAIN DURING LAST 7DAYS	WOMEN WHO CONSULTED DOCTOR
NECK	74%	56%	18%	60%
SHOULDER	33%	21%	4%	27.27%
UPPERBACK	42%	18%	11%	45.23%
ELBOW	45%	31%	22%	62.22%
WRIST/HAND	50%	38%	19%	44%
LOWBACK	53%	47%	33%	64.15%
HIPS/THIGH	33%	24%	10%	48.48%
KNEE	60%	48%	34%	68.33%
ANKLE/FEET	48%	39%	21%	56.25%

DISCUSSION

The findings of this study indicate that major weight-bearing areas like spine and knees have high prevalence of MSDs. The reason for such findings could be that even in a dynamic activity, the faulty longterm standing posture may put static strain on the muscles that may contribute to the occurrence of pain in the lower limbs. Regarding WMSDs, as risk factors in observed domestic work, the repetitiveness of ante-flexion and spine twist and dynamic work in long standing position of the lower limbs creates pain and discomfort.^[5] Working in faulty positions for longterm could be a reason for chronic pain being more prevalent. Reason for highest prevalence in neck pain can be forward head posture long with continuous neck flexion while cooking, cleaning, mopping, chopping vegetables.^[6] All this superimposed with constant physical and mental stress and lack of self-concern and care leads to more musculoskeletal problems. Menopause along with these effects leads to hormonal imbalance leads to more musculoskeletal issues in housewives. Postural stress during various activities like sweeping floors, washing dishes (with two sub-tasks of cleaning dishes and placing dishes in the sink basket), cooking, washing clothes with a washing machine (including two sub-tasks carrying a basket of clothes and loading and unloading the washing machine), house cleaning, and ironing exposes housewives to more MSDs.^[7] The high prevalence of musculoskeletal disorders suggests that kitchen work like chopping, stirring, and lifting utensil were found to be complex activities, requiring multiple changes in posture and it could be a risk factor contributing to the development of musculoskeletal disorders among women if carried out in faulty ways.^[6]

CONCLUSION: House-holdwork exposes housewives to a lot of musculoskeletal disorders which affects their work ability.

CLINICAL IMPLICATION

Problems of the housewives should be studied and self-awareness should be spread for the same.

FUTURE RECOMMENDATIONS

This study can be considered a first step towards designing an ergonomic protocol for housewives.

REFERENCES

[1]. Tanaka S, J MD. A heuristic dose-response model for cumulative risk factors in repetitive manual work. In: Karwowski W, International encyclopedia of ergonomics and human factors. 2nd ed, Boca Raton: CRC press; 2001. p. 2646–2650.

[2]. Peereboom K, Langen ND. Prolong static sitting at work : health effects & good Practice Advices. EU-OSHA. 2021.

[3]. European Agency for Safety & Health at Work - Information, statistics, legislation and risk assessment tools [Internet]. Europa.eu.

[4]. Kalra S, Bhatnagar B. Prevalence of musculoskeletal disorder among housewives. International Research Journal of Engineering and Technology (IRJET) e-ISSN. 2017:2395-0056.

[5]. Domingos P, Souto BG. Musculoskeletal risk related to housework. Revista Médica de Minas Gerais. 2018;28:e-1928.

[6]. Norouzi, S., Tavafian S.S., Cousins R. et al. Understanding risk factors for musculoskeletal disorders in Iranian housewives. Development of a comprehensive health promotion behavior model. BMC Public Health 23, 617 (2023).

[7]. Norouzi S, Tavafian SS, Cousins R, Mokarami H. Evaluation of postural stress and risk factors for developing work-related musculoskeletal disorders among full-time women homemakers. Sport Sciences for Health. 2024 Aug 6:1-8.

