

## Prevalence of Mechanical Low Back Pain in Housewives

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### Abstract

**BACKGROUND:-** Low back pain is the fifth most common reason for physician visits, which affect nearly 60-80% of people throughout the lifetime. Females and housewives tend to do most of the work around the house. This may demand them to sit, stand or bend for long periods of time or to lift heavyweights. Prevalence of this study is helpful to find out the cause of low back pain further and is helpful in correcting faulty posture and to maintain ergonomics. **AIMS AND OBJECTIVES-** To find the prevalence of mechanical low back pain (MLBP) in housewives and To find out the intensity of pain using numeric pain rating scale (NPRS). **METHODOLOGY:-** Housewives of Wardha district were randomly selected as per inclusion and exclusion criteria (n=150) and intensity has been calculated with NPRS. Observational study was conducted with mixed type of questionnaire. Descriptive statistical analysis was done and focused with graphs and tables. **RESULT:-** The study revealed that 66.67% of population suffered from mechanical low back pain. According to data view, intensity of pain was highest in between 36 to 40 years of age. Study involved that varied and prolonged standing work activities were more prone to back pain. **CONCLUSION:-** There is less problem of MLBP as showing mild pain is more than moderate and severe. Proper health care measures should be provided to enhance education about good posture ergonomic measures and health schemes.

**KEYWORDS:-** low back pain, numeric pain rating scale, posture.

### INTRODUCTION-

Low back pain (LBP) is one of the most common symptoms experienced by people throughout the world (Charoenchai et al., 2006)[3] and according to WHO (2003).

Low back pain (LBP) is the fifth most common reason for physician visits, which affects nearly 60-80% of people throughout their lifetime[4][5].

LBP is responsible for a major portion of people staying away from work or visiting a medical practitioner.

LBP occurrence at an early age can cause disease progression, resulting in chronic LBP that has the potential to decrease an individual's quality of life.

Females and housewives tend to do most of the work around the house. This may demand them to sit, stand, or bend for long periods of time, or to lift heavy weights.

Mechanical Low Back Pain (MLBP) has become a costly burden to women's society and leading cause of disability and loss of productivity.

MLBP is defined as discomfort in lumbo-sacral region of back that may or may not radiate to legs ,buttocks and hips and which occur during any mechanical activity like bending, walking, lifting etc.[2]

**NEED FOR STUDY**-Study helps to find out the prevalence of mechanical low back pain and the severity as well as the risk factor responsible for developing the mechanical low back pain.

#### **AIMS AND OBJECTIVES:-**

- 1) To find out the prevalence of Mechanical low back pain in housewives.
- 2) To find out the intensity of pain using numeric pain rating scale(NPRS)

#### **MATERIALS AND METHODOLOGY-**

Ethical clearance was obtain from institutional ethical committee. All the participants were explained about the study and there queries were solved by the principal investigator in detail and a written informed consent was taken.

Study was conducted with mixed type of questionnaire design. Random samplings were taken between age group of 20-40 years.150 participants were taken who fulfill the inclusion and exclusion criteria.

- 1) **Study design**- Observational cross-sectional study
- 2) **Study setting**- 3 villages were taken from Wardha district
- 3) **Sampling technique**- Random
- 4) **Sample size**- 150 participants
- 5) **Study duration**- 1 year
- 6) **Tools used**- . NPRS consist of whole number (0-10) integers best reflect intensity of pain and can be administered verbally and graphically for self completion. It was also helpful to know the cause of MLBP by examining their posture during household work activities. During interview, pen, paper, written questionnaire and file were used.

#### **Inclusion criteria-**

- 1) Those who are willing and able to give full consent
- 2) Physically fit and healthy women under the age group of 20-40 years.

#### **Exclusion criteria-**

- 1) No past medical history (spinal surgery, fracture, malignancies, drug usage, inflammatory spinal disease, neurological conditions)
- 2) No suspected or confirmed serious spinal pathology or any degenerative conditions
- 3) No suspected or confirmed pregnancy

7) **Data analysis**- Statistical analysis was done by using descriptive and inferential statistics using chi-square test and software used in the analysis were SPSS 22.0 version and Graph Pad Prism 6.0 version and  $p < 0.05$  is considered as level of significance.

**8) Limitations** - The sample was collected from selected area and the sample size was too small to reflect the whole population. So, there was slight increase in the sample population in order to make the study more accurate.

**RESULT:-**

Among all, 66.67% (n=100) participants had been suffered from mechanical LBP and 33.33% (n=50) participants had not been suffered from mechanical LBP.

Analysis of data reveals that 19% of sample populations were in the age group of 20-25 years, 20% were in the age group of 26-30 years, 28% were in the age group of 31-35 years, 33% were in the age group of 36-40 years. According to data view, the prevalence of MLBP was highest in between 36-40 of age group.

According to NPRS, mild pain (1-4) was present in 57%; moderate pain(5-7) was present in 38% and severe pain (8-10) was present in 5% of women.

Statistically significant difference was found in age group and NPRS score of patient.

41% population constituted in varied work activities, 31% in standing work activities,9% in sitting activities,12% in walking and 5% in bending work activities most of the time during activities in daily living(ADL).

The study found that participant whom are involved in varied as well as standing work activities had more positive relations with mechanical low back pain (MLBP).

**DISCUSSION:-**

The observational study was used in order to find out the prevalence of mechanical low back pain(MLBP) in housewives.

Survey was conducted and data has been collected with mixed type of questionnaire with inclusion and exclusion criteria and intensity has been calculated with NPRS.

1)The study revealed that prevalence of mechanical LBP in housewives is 66.67%.

Chinese study claimed that the 1-year prevalence of LBP was 64% [8]

Another study done in Nigeria, Bello et al., states that 12 month prevalence of LBP ranged from 32.5% to 73.53% which supports the study.

2) The result showed that the housewives in 36-40 years of age groups were more prone to MLBP.

An epidemiology community health study stated that the most affecting age group for developing low back pain was 30 to 39 aged people [10]

According to Charoenchai et al., (2006) study, it states that prevalence of LBP increases with age.

3) The study revealed that the percentage of intensity of mild pain is more than moderate and severe pain in the housewives.

The study done by Sunam Kumar Barua et al., revealed that most of the housewives are associated with the problems of mild pain.

Another study showed 66% of their respondents experienced moderate pain, 34% of them had severe pain [9].

4) The study found that participant whom are involved in varied as well as standing work activities had positive relations with mechanical low back pain(MLBP).

5) Study found that the low back pain problems started due to lifting activities in maximum number of participants.

According to study by Bener et al., (2002),Sikinur and Hanif 2010. Heavy weight lifting influenced development of LBP and show it as one of a risk factor.

Another study by Koley et al.,(2008) reported that manual handling improper style of lifting objects harm the spine due to abnormal stress and strain imposed on spine.

### **CONCLUSION:-**

The finding of study concludes that prevalence of low back pain among housewives is 66.67%.It also shows that the percentage of intensity of mild pain is more than moderate and severe.

In order to rule out these problems better health care measure should be taken as well as proper ergonomic measures should be advised.

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