

Research Paper :

## Prevalence of musculoskeletal disorders in masonry workers

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### ABSTRACT

The National Institute for Occupational Safety and Health (NIOSH) has identified that WMDs are one of the leading occupational health problem of construction workers. To collect the relevant data, simple multistage random sampling technique was used and total 50 respondents having the age above 30 years and experience of minimum five years were interviewed. It was found that most of MSD symptoms were reported in hand / wrist followed by knee/leg and back among mason workers. Forcefulness of muscle repetition of work and posture were most existing risk factor of MSD with highest mean value in upper extremities whereas statistic standing posture for lower extremities and standing working posture for back was found to be most existing risk factor of MSD among the mason workers.

**Key words :** Musculoskeletal disorders, MSD symptoms, Risk factors.

Work related musculoskeletal disorders constitute a major source of employee disability and lost wages. Early symptoms of MSDs are referred to as unpleasant sensation or discomfort associated with fatigue, perceived exertion and poor posture (Kuorinka, 1983). At the beginning, these discomfort symptoms may be transient and occur mostly at night. As the discomfort develops, they become more persistent and painful. Musculoskeletal pain arises from injuries, irritation of inflammation and may be considered as condition affecting the soft tissues (Caillict, 1988). Construction activities are considered as high risk of causing work related musculoskeletal disorders (WMDs). The study was planned to assess the prevalence of work related musculoskeletal disorders and existing risk factors causing MSDs among mason workers.

### METHODOLOGY

A simple multistage random sampling method was used. Out of 12 zones of the Lucknow city, five zones have been selected randomly. From each zone, 10 mason workers were selected having the age above 30 years and experience of minimum five years as mason worker. Total 50 respondents were selected for the study. Three point rating scale *i.e.* "severe", "moderate" and "not at all" with score 3, 2 and 1, respectively was used to assess the prevalence of MSD among mason workers. To know the risk factors of MSDs again a three point rating scale *i.e.* "strongly exist", "exist" and "absent" with score 3, 2 and 1, respectively, was used. Mean and average mean were analyzed to interpret the data.

### FINDINGS AND DISCUSSION

The results obtained from the present investigation are presented below:

#### *Prevalence rate of MSD:*

Prevalence rate of MSD symptoms were analyzed in Table 1 where the highest mean value of pain (2.6), numbness (1.48) and locking (2.08) were found in back whereas, the feeling of burning sensation (1.48), tingling (1.84) and swelling (1.52) were found highest in hand/wrist. The lowest mean value of pain (1.64) and locking (1.4) were found in ankle/feet whereas, lowest mean value for burning sensation (1.06) and swelling (1.08) were found in hips/thigh. The elbow/ upper arm showed lowest mean value for numbness (1.36) and tingling (1.12).

Most of the MSD symptoms were found in hand/wrist with mean value 1.69 followed by knee/leg (1.66) and back (1.63). The lowest MSD symptoms were observed in ankle/feet (mean 1.41) followed by elbow/upper arm (mean 1.44) and neck (mean 1.47). Among all, the MSD symptoms pain was found as most prevalent symptom with mean value 2.18 followed by locking with mean value 1.79. Pachal and Sastri (2000) also reported in their study among welders steel industry that 42.6 per cent workers had pain and 52.6 per cent had other forms of MSD. The burning sensation with mean value 1.20 was identified as least prevalent symptom in mason workers followed by numbness, tingling and swelling with mean value 1.44, 1.35 and 1.32, respectively.