

## **Prevalence of Musculoskeletal Disorders and Postural Risks among Workers in Small Scale Industries – A Case Study**

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### **Abstract**

Ergonomics is the study of the interaction between workers and equipment and the factors affecting their interaction like work environment. Several factors play an important role in ergonomics, and these factors determine the safety, health, comfort and efficient performance of workers at the workplace. Work-related musculoskeletal disorders (WMSDs) are the most common problems in manual work in small scale industries, accompanied by postural risks. The present study is a compilation of several individual studies taken up in the small-scale sector (i.e. brick making, saw mill, stone quarry, dall mill, oil ghan and puffed rice industry). More than 200 workers from these industries participated in the study. The study includes administering a musculoskeletal questionnaire to determine the level of MSDs among the workers. The workers are subjected to awkward postures like bending, twisting, heavy load carrying, etc. Evaluation of these postures was carried out using ergonomic assessment tools Rapid Upper Limb Assessment (RULA) and Rapid Entire Body Assessment (REBA). It can be concluded from the study that 32% of the postures adopted by workers are in high risk according to RULA and 36% are in high risk according to REBA assessment tools and need to be changed urgently. It is recommended to improve the working postures by ergonomic controls and interventions, and encourage the use of PPEs in order to improve the efficiency of the workers and overall productivity.

### **Keywords**

Ergonomics, Postures, RULA, REBA, work-related musculoskeletal disorders