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Injury Prevention among Construction Workers: A Case Study on Iranian Steel Bar Bending Workers

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Abstract : Nowadays, the construction industry is growing, especially among developing countries. Iran also has a critical role in these industries in terms of workers disorders. Work-related musculoskeletal disorders (WMSDs) account for 7% of the whole diseases in the society, which makes some limitations. One of the main factors which causes WMSDs is awkward posture. Steel bar bending is considered as one of the prominent performance among construction workers. In this case study, we aimed to find the major tasks of bar benders and the most important risk factors related to it. This study was carried out among twenty workers (18-45 years) as our volunteer samples in some construction sites with less than 6 floors in two regions of Tehran municipality. The data was gathered through in depth observation, interview and questionnaire. Also postural analysis was done by OWAS method. In another part of study we used NMQ for gathering some data about psychosocial effects of work related disorders. Our findings show that 64% of workers were not aware of work risks, about 59% of workers had troubles in their wrists, hands, especially workers who worked in steel bar bending. In 46% cases lower back pain was in prevalence. Considering gathered data and results, awkward postures and long term tasks and their duration are known as the main risk factors of WMSDs among construction workers, meaning that work-rest schedule and tools design should be reconsidered to make an ergonomic condition for the mentioned workers.

Keywords : bar benders, construction workers, musculoskeletal disorders (WMSDs), OWAS method
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