Ergonomic Intervention Improves in Productivity, Health and Safety of Unorganized Sectors at India

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Large portion of the workforce in India is found to be employed in the unorganized sector.
In the present study, 100 male workers were randomly selected from three unorganized sectors of sand core worker, goldsmiths and carpenter from West Bengal, India. Physical parameters of the workers of this study were measured. A detailed questionnaire study on discomfort feeling was done by the modified Nordic questionnaire. The existing workstations were assessed by the measurement of work areas. Analysis of body posture was done to evaluate the work stress during their job. A new ergonomic intervention was introduced to the unorganized sectors with their active suggestions. Subjects were interviewed at the end to ascertain intervention acceptance.
The study revealed that all these three unorganized sectors jobs are performed in awkward postures, with the potential risks of musculoskeletal disorders primarily affecting the low-back region.
The modified process at sand core process enhanced productivity in both types of core making processes. Blowing Pipe activity of the goldsmiths increases the fatigue of facial muscles. An ergonomic intervention (hand air pipe) eliminate the hazards of manual Blowing Pipe activities of the goldsmiths. As indicated by RULA action levels, most of the postures adopted by carpenters with existing handle are awkward and non-liner in nature. Ergonomically modified handles of hand saw reduce the fatigue of hand muscles and improve the carpenters health during work.

Keywords
Intervention, Productivity, Health, Safety, Unorganized Sectors

Biography

Dr. Tirthankar Ghosh is an Associate Professor in Physiology in Department of Osteopathy in Sri Sri University, India. He earned MSc in Physiology (Specialization in Ergonomics) from University of Calcutta and PhD in Physiology (Occupational Ergonomics) from University of Calcutta. He has published articles in various journal and conference papers. He has developed Intervention designs and analysis the impact of modifications on the workers, in which Improvement in Productivity, Health and Safety of the workers were significant. In addition to his research, teaches in various Medical Colleges of India, China, and Nepal for last 14 years. He is member of ICOH, IEA & PSI.