Integrating Ergonomics and Rehabilitation Engineering for Posture Correction and Productivity Enhancement in the Automotive Industry

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Abstract:
This study examines the importance of posture correction in the automotive industry using Rapid Upper Limb Assessment (RULA) approach from a public health standpoint by combining physical and cognitive ergonomics with a motive to improve the productivity and working environment. It emphasizes on implications of posture correction while working in the shop floor taking psychosocial behaviour, productivity, and employability by addressing ergonomic concerns in context to, India with a global perspective. The data was systematically collected at working hours taking an account of postural health risks and psychosocial behaviour with skilled trainers in the field to extensively understand worker posture by using RULA score. The postural assessment in RULA involves taking readings of the arms and wrists, which were analysed. As continuous assessment in working hours at end 14 percent participants have problems sustaining good posture during working hours at workplace. Assessment of productivity was conducted before and after RULA. It highlights the importance of RULA score during training programs in providing employees with the necessary knowledge and abilities to reduce postural health risks and enhance their productivity at work place.

Keywords:
Public Health. Rapid Upper Limb Assessment (RULA), Posture correction, Training, Psychosocial behaviour, Ergonomics, Automobile Industry.