

Ergonomics Principles: It's Not Only about Physical Factors but also Other Factors

Harshal Tukaram Pandve*

Department of Community Medicine, Smt. Kashibai Navale Medical College, Narhe, Pune, India

*Corresponding author: Harshal Tukaram Pandve, Associate Professor, Dept. of Community Medicine, Smt. Kashibai Navale Medical College, Narhe, Pune, India, Tel: +91-9860404835; E-mail: dr_harshalpandve@yahoo.co.in

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Editorial

The work capabilities not only depend on physical conditions only but also other important aspects like mental, social as well as psychological. According to International Ergonomics Association Ergonomics is defined as "it is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance". Ergonomics help in harmonizing things that may interact in terms of workers abilities, limitations and needs [1].

The factors related to physical discomfort or risk or harm can be easily identified. For example high forces and difficult postures can be observed and effective actions can be taken. Another aspect of ergonomics like social, mental as well as psychological factors need to be addressed appropriately. Poor workstation design can lead to increasing the amount of psychological stress placed on an individual at work. Stress can also arise from the factors like poor design of controls and displays that make it difficult for the operator to interpret information. Stress may have a direct effect on worker's behavior. Studies have shown that prolonged stress can lead to a decrease in cognitive function and human performance. Therefore while assessing ergonomic risk, consider not only the physical, but also the psychological impact on your workforce [2].

Wahlstedt et al studied psychosocial factors and their relation to musculoskeletal disorders. Their review of literature mentioned psychological factor as one of the risk factor monotonous work, time pressure, poor work content, high demands and low support from colleagues and superiors, high perceived work stress and nonwork-

related stress, poorly experienced psychosocial work environment, low job satisfaction [3].

According to International Ergonomics Association Cognitive ergonomics is concerned with mental processes, such as perception, memory, reasoning, and motor response, as they affect interactions among humans and other elements of a system. Relevant topics include mental workload, decision-making, skilled performance, human-computer interaction, human reliability, work stress and training as these may relate to human-system design. This should be applied universally [1]. Pandve et al suggested application of qualitative research methods to address issues related not only to physical factors as well social, mental and psychological factors related to worker's wellbeing [4].

To conclude, as World Health Organization (WHO) defines health as state of complete physical, mental and social wellbeing and not merely absence of disease or infirmity, on similar grounds Ergonomics principles should also consider and properly address physical as well as mental, social and psychological factor for better workplace.

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