

INVESTIGATION OF WORK RELATED HEALTH HAZARDS PREVALENT AMONG METAL FABRICATION WORKERS IN NIGERIA

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ABSTRACT

The consideration of facility engineering principles in the design of sustainable workstations in manufacturing industries remains inadequate with the increasing intensity of observed misfit between facility arrangement and human demand for comfort, safety and effective operation of work system. Associated with these inadequacies are the problems resulting from improper workplace design, ill structured jobs, chaotic workplace, adverse environment, poor human-machine system design and inappropriate management programmes. This study investigates the work related health hazards among fabrication workers in Nigeria. Participatory Ergonomic Intervention Approach (PEIA) and analytical method were employed to drive the investigation towards achieving a safe, productive and ergonomic workstation which provides significant shift in the existing paradigm in metal fabrication industry. Poor work posture such as bending, twisting, over reaching, kneeling, under hazardous environment of heat, noise, smoke, dust and optical radiation were identified as hindrances to effective operation. Likewise, health related issues as pains on the neck, back, wrist, knee, elbow, shoulder, wrist, as well as leg muscle cramp assumed significant prevalence accounting for 29% of the workforce. The study therefore suggests the development of standard anthropometric dimensions for the construction of assembly workstation for metal fabrication industry. Such workstation is capable of boosting workers' morale, reduced Work Related Musculoskeletal Disorder (WRMD) and enhanced productivity with the support of enforced legislative instrumentality.

Keywords: WRHH, facility engineering, work place, productive system, anthropometry.