OCCUPATIONAL HEALTH AND SAFETY: ITS EFFECT ON WORKING POSTURES AND MUSCULOSKELETAL SYMPTOMS ON FEMALE FACTORY WORKERS

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Work-related musculoskeletal disorders (WMSD) are one of the occupational safety and health problems reported at the Plant 1 & Plant 2 of a semiconductor manufacturer. During the study session, about 48 female operators located at eight departments were interviewed with more than 200 operators were observed in Plant 1. For Plant 2, more than 36 operators were interviewed, and around 95 female operators were observed and measured. Detailed observational methods were used to quantify the task distribution, repetitiveness of hand and upper waistline exertions respectively, work postures and existence of stressors. Risk assessment code and the Rapid entire body assessment method were used to estimate the hazards and risks levels respectively.

Awkward posture includes repeated reaching, prolonged standing, twisting and bending posture are major risk factors found on these operators. Three approaches are needed to address the existence of ergonomics risks. First, there needs to improved workstation designs (examples include four tiers oven, diffusion station and CBSM) to reduce high body pains symptoms. Second, improved techniques and training methods for existing and newer operators. Third, needs to improve the awareness regarding safety and health for an improved working environment.

WMSD syndromes are highly found at Plant 1 and Plant 2 respectively. This in turn, has made the operators to suffer from several bodily pains including back pain, hips pain, legs, arms and shoulder pains, respectively. Various ergonomics counter-measures are proposed to minimise the impact of WMSD at the plants.