

Pen and paper based observational method to assess postural problems: a review

ABSTRACT

Posture is one of the most important factor that need to be considered in any postural analysis. Awkward, extreme, and repetitive postures can increase the risk of musculoskeletal disorders (MSDs). As observational methods are more widely used than instrumentation-based methods to assess postural problems, this study reviews and assesses the scientific literature of observational methods and focused on pen and paper based specifically. In order to identify the published methods, a list of English or Malay articles dating as far back as 1990 was compiled from PubMed, Science Direct and Google Scholar. The keywords were ergo*, posture*, method*, observational*, postural problems*, pen and paper*, posture analysis*, indirect* and macro-ergo*. In addition, a secondary search was also performed using bibliography of retrieved articles so that additional papers for conducting review and evaluations can be collected. A total of 121 articles that assessed postural problems in working activities were found. However, after intensive screening process only 6 articles were selected to be further analyzed. Posture of upper arms/shoulder, lower arms/ elbow, wrist, neck, back/trunk and leg were highlighted in this study. The limitations and the strengths of the published pen and paper based observational method focusing on those postures were also discussed. The finding of this review will benefit researchers in the process of understanding unsafe posture in workplace. It could also provide to researcher on how to improve the current pen and paper based observational method for assessing postural problems.

Keyword: Posture; Observational method; Pen and Paper based