

Effect of break time on the upper extremity musculoskeletal disorder development among intensive computer users in Malaysia

ABSTRACT

Upper Extremity musculoskeletal disorder (MSD) has become a common problem among office workers in Malaysia. Studies have shown that an appropriate work-rest schedule can reduce fatigue and MSDs among office workers. In Malaysia, there has been an increase in the occurrence of MSDs, especially in work that require intensive computer use. Operators who used computers continuously for more than 4 hours a day have shown to develop CTDs. Studies on the effect of break time on the performance of office workers in Malaysia are still lacking. As such this study was aimed to evaluate effect of work rest schedule on the discomfort, performance and muscular load levels of computer users in Malaysia. The effect of break time starting with no break, one minute and 30 seconds break interval were carried out on the 15 subjects. EMG was measured for each task given. Performance which was calculated by multiplying speed and accuracy (WPM) showed 30 seconds break was 13.5% higher than 1 minute break and 20.14% higher than schedule with no break. EMG analyses showed 30 seconds have lowest mean AEMG which was 0.035 for flexor carpi ulnaris and 0.0331 for radialis muscles. It also recorded least discomfort scale for upper extremity muscles compared to the other two schedules. This study showed that more frequent microbreaks can improve performance of office workers and reduce MSD problem from occurring.

Keyword: MSD; EMG; Microbreaks; Intensive typing; Work rest schedules