Postural Risk And Upper Body Pain And Discomfort In Heavy VDT Users Before And After Moving To New Stand/Sit Work Stations

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Background: Poor posture and organizational stressors are thought to contribute to the chronic pain and discomfort experienced by some heavy VDT users (those keyboarding for 4 or more hours per day). A total of 42 individuals in a large Canadian banking industry, who were classed as heavy VDT users, served as subjects for this study. Subjects were all telephone banking employees that were slated to move to a new work environment that included stand/sit adjustable work stations. The old work environment had 10 year old dated work stations. Methods: Phase I data were collected just before subjects moved to the new environment. The 42 subjects were assessed using the following variables; 'risky working postures (James et al., 1997)', chronic 'pain and discomfort (Kramer, 2001)', 'organizational stress', 'job satisfaction' and 'perceived quality of life'. Two months after the move, we reassessed the aforementioned variables in Phase II. It was expected that the 2 months allowed stabilization of variables to take place while workers adjusted to the new environment. In addition, immediately after the move, all workers received a 15 minute educational session on how to ergonomically adjust their new workstation to create an optimum fit between themselves and their workstations

Results: There were no differences between Phases I and II in 'organizational stress', 'job satisfaction' or 'perceived quality of life'. There were differences in 'risky posture' and 'pain and discomfort' between Phases. A significant (p<0.001) difference was observed in the 'risky postures' between the phases with Phase II showing less 'risky postures' for subjects compared with Phase I. In addition there was significantly less (p<0.001) pain and discomfort' found in Phase II. The 'pain and discomfort' was however not eliminated in Phase II. We found no correlation between upper extremity 'risky postures' compared with 'pain and discomfort' in either Phase I or Phase II. At least one half of the workers still used risky postures due possibly to habitual postures that were not eliminated by the ergonomic adjustments of the new equipment. It was perceived that some workers 'chose' to use these 'risky postures' even though they had been taught how to ergonomically adjust the fit between themselves and their new workstation to be close to optimal.

Conclusion: To conclude, it was possible to reduce the 'risky posture' and 'pain and discomfort' felt by heavy VDT workers with new, better ergonomically designed workstations and an ergonomic education session. Organizational stress factors did not seem to play a role in the present study.

References