

RATINGS OF VISUAL- AND NECK/SHOULDER DISCOMFORT DURING DEMANDING SIMULATED NEAR WORK

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Introduction

Visual discomfort and neck/shoulder discomfort is often reported among people using computers in their work. Correlation between these two symptoms categories are reported in cross-sectional studies (Wiholm et al. 2007). One aim of this laboratory study was to investigate how self reported visual- and neck/shoulder discomfort develop during periods of simulated demanding near work among participants with long-term neck pain

Methods

Thirty-three participants with neck pain (median age 37, range 20-47) did a lab based experimental viewing task four times. Each viewing task consisted of seven minutes focusing a zebra striped pattern on a computer screen with different trial lenses (-3.5 D, +3.5 D and 0 D, randomized order). Throughout the experiment, the participant sat leaned back and relaxed in an office chair with neck support. At baseline and after each viewing task, participants rated visual- and neck/shoulder discomfort with Borg CR-10.

Results

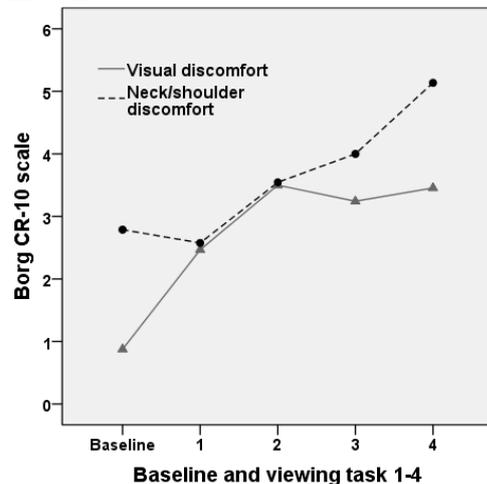


Figure 1. Visual and neck/shoulder discomfort.

Wilcoxon signed rank test was used to analyze differences between the tasks within symptom (visual- and neck/shoulder discomfort). Visual discomfort increased from baseline until after task two ($p < 0.01$), and then remained at the higher level - figure 1. Neck/shoulder discomfort decreased slightly (non significant) from baseline until after task one, and then increased during the remaining tasks – figure 1. The increase in neck/shoulder discomfort was significant between task one and two, and between task three and four ($p < 0.01$). There was a correlation between visual- and neck/shoulder discomfort (Spearman rho = 0.473, $p < 0.01$).

Discussion and conclusion

Both visual- and neck/shoulder discomfort increases during periods of simulated demanding near work. The reason for the increased neck/shoulder discomfort can either be the demanding near work or the static posture that participants had to maintain. Further analysis is needed to determine the cause of increased symptoms.

Wiholm, C., Richter, H., Mathiassen, S. E. & Toomingas, A. 2007. Associations between eyestrain and neck-shoulder symptoms among callcenter operators. *SJWEH suppl*, 3, 54-59.