Towards better understanding of ergonomics through risk assessment

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Abstract

Students who use visual display units in offices and at home from one up to four hours daily were studied. The respondents were classified on the basis of daily worked hours and the number of complaints. Only those who worked at offices from one to three hours daily had three complaints, others had less complaints. Discomfort of the eyes was mentioned as complaint by 52.2% of respondents working in offices and by 35.9% of those working at home. The respective figures for musculo-skeletal discomfort were 41.6% and 33.3%. In some cases risk assessment revealed up to eleven errors with respect to the visual and postural ergonomic situation at workstations with displays. Students found out that ergonomic standards have to be followed at work as well as at home.

Background

This study deals with students of the Faculty of Economics of Tallinn Technical University who assessed their own workstations with a VDU (Visual Display Unit). Part of them work regularly as employees in offices and some of them use a VDU regularly at home. The study also tries to put a first step in the direction of specifying the phrase “a significant part of the working day” as used in the 90/270/EEC directive. Further focus of study is the Estonian ordinance of working with VDUs and to find out how the length of the working time with display influences the users’ health.

Method

At present, we are updating our methods of teaching ergonomics and the knowledge we disseminate through lectures and practical training. One component of practical training is homework. The purpose of homework is to increase ergonomics knowledge and make students aware of the actual risks in work situations through risk assessment. Risk assessment has two subcomponents: risk estimation (risk analysis - making estimates of the likelihood of risk and its possible consequences) and risk evaluation (making an over-all judgement on the importance of a risk, e.g. in terms of its acceptability).

A checklist for systematic analysis of workplaces with a display unit was compiled from the point of view of postural and visual ergonomics. The checklist also