Symposium   Observational Risk Assessment Methods

Mikael Forsman\textsuperscript{a,b}, Kristina Eliasson\textsuperscript{a,c}, Ida-Märta Rhén\textsuperscript{a,b}, Teresia Nyman\textsuperscript{a,b,c}, Katarina Kjellberg\textsuperscript{a,b}

\textsuperscript{a}IMM Institute of Environmental Medicine, Karolinska Institutet, Stockholm, SWEDEN;  
\textsuperscript{b}Centre for Occupational and Environmental Medicine, Stockholm County Council, SWEDEN;  
\textsuperscript{c}School of Technology and Health, KTH Royal Institute of Technology, Huddinge, SWEDEN

Background

Work-related musculoskeletal disorders (MSDs) are still frequent, inducing large costs for societies, all over the world. In order to identify risk occupations, branches and jobs, for interventions as well as planning of new jobs and work stations, there is a need for valid, reliable and useful methods for risk assessment of biomechanical exposure.

Many researchers and company ergonomists have worked with this question, and many methods, especially observational methods, have been proposed in the literature. It is still a popular and interesting field which is indicated by the fact that the observational methods review article by Takala et al. (Takala, Pehkonen et al. 2010) have been cited about 60 times in other scientific publications. In that review, the authors identified 30 eligible observational methods. Of these, 19 had been compared to one or more methods. Intra- and inter-observer repeatability was reported for 7 and 17 methods, respectively. The methods are generally constructed based on epidemiologic findings, but their ability to predict future MSD (predictive validity) is very little studied.

Although there are many methods available, often ergonomists in the field, for different reasons, e.g. lack of time and/or lack of knowledge of adequate methods, use their own knowledge and experience, when performing risk assessments. In order to increase their interest and usage of systematic methods, we need to know more of the characteristics of the methods. In this symposium we aim to address the major aspects of these methods, and their dissemination to professional ergonomists:

- Validity. It is very hard to define a gold standard for the risk level of a specific job. Here risk levels of different methods will be compared. The hypothesis is, since the methods aims at describing the risk that different methods, when describing the same risk, should arrive at similar risk estimates.
- Inter- and intra-observer reliability (agreement). We address reliability in two of the cases: 1, when ergonomists use their own knowledge to estimate the risks, and, 2, when ergonomists use one well-known method (OCRA for which very few reliability tests have been published).
- Usability. Ergonomists' ratings of different aspects of different methods will be presented.
- Dissemination of observational methods. The evaluation of a new pedagogic model will be presented.

List of planned presentations (affiliations as listed above)

- Short ingress to this symposium  
  Mikael Forsman
- Comparisons of six observational methods for risk assessment of repetitive work - results from a consensus assessment  
  Katarina Kjellberg
- Reliability in twelve ergonomists' three-category risk ratings in ten video recorded work tasks  
  Mikael Forsman
- OCRA inter- and intra-ergonomist rating reliability in ten video recorded work tasks  
  Ida-Märta Rhén
- Usability of six observational risk assessment methods  
  Kristina Eliasson
- A proposed web-based model for teaching risk assessment methods  
  Teresia Nyman
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Reference