Does age matter in predicting MSD risk?
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1. Background
Musculoskeletal disorders are a major issue in working populations. With increasing pressure to extend working lives, a greater understanding of the role of workplace predictors of MSDs is needed. In particular, identification of predictors for different age groups is needed to support the development of effective risk management strategies across the whole working life. In addition we analysed the changes in psychosocial and physical hazards associated with MSDs risk for different age groups.

2. Methods
The study was conducted in 2005 and 2009 in a Finnish food processing company. A total of 734 workers completed a questionnaire, which covered a range of psychosocial and physical hazards, work ability, general health, job satisfaction, lifestyle variable and MSD risk. MSDs risk in four different area of body was measured on a scale of 0-10 and calculated as a continuous score of 0-40. Predictors of MSD risk were compared across 3 age groups (20-35, 36-49, 50 plus) using linear regression modeling. Changes in psychosocial and physical hazards measures were created by subtracting variables collected in 2005 from 2009.

3. Results
The relationship between physical hazards and MSD risk was significantly different depending on the age group of the employees. For psychosocial hazards the relationship was less clear. For younger workers physical hazards were not associated with MSD risk. In contrast, for those aged 36-49 repetitive movements (β = 1.76, \( p < 0.001 \)) and awkward postures (β = 1.30, \( p = 0.02 \)) were significantly associated with increased MSD risk. For the older workers environmental hazards (noise and temperature etc.) were positively associated with MSD risk (β = 0.37, \( p = 0.03 \)). In addition, job satisfaction for the older workers was positively associated with MSD risk (β = 1.69, \( p = 0.003 \)). Whilst for younger workers workplace culture was significantly associated with MSD risk (β = -2.4, \( p = 0.03 \)).

Physical hazards increased and psychosocial hazards decreased significantly over the 4-year period. In examining the change in predictors of MSD risk over time, the following were found to be significant: for younger workers physical and environmental hazards, for the middle aged team support, and for the older age group physical hazards.

4. Conclusions
The relationship between workplace hazards and MSD risk varied across the different age groups. In addition, there were differences in how predictors contributed to MSD risk across the 4 year time periods. For workplace professionals managing MSD risk, the key message is to identify the important factors for all workers and make decisions based on accurate data that relates to the specific organisation. These findings highlight the important need for hazard surveillance data that is workplace specific.