Psychosocial work factors and musculoskeletal pain among Swedish flight baggage handlers

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1. Introduction
Flight baggage handlers are employed by handling companies engaged in sorting, loading and unloading luggage, cargo and mail, so called ramp service work. After check-in, luggage are transported through a sorting area and further out to the ramp. This transportation involves manual handling by baggage handlers at several stages, using conveyor belts, carts and trucks for transport. In addition to these tasks, baggage handlers are also engaged in communicating with air traffic controllers directing air traffic on the ground, towing aircrafts to gates and serving them with auxiliary power units, brakes and light. Baggage handling services are similar in all larger airports, and so baggage handlers perform similar tasks all over the world. In Sweden the handlers’ union claimed a high prevalence of low back and shoulder pain and a dissatisfying psychosocial work environment, but systematically collected empirical data were not available, and the literature was surprisingly sparse, considering that the occupation is global. Thus, a comprehensive project initiated by the Vocational Training and Working Environment Council, TYA, in Sweden - a council formed by employers’ and employees’ organizations in the transportation sector - was conducted at 14 handling companies in six Swedish airports between 2010 and 2012. The project aimed to document the physical and psychosocial work environment and to contribute to the development of ergonomic interventions within this occupation, which could, eventually, lead to better health among the employees. The present study was part of this project, in aiming at documenting psychosocial exposures and musculoskeletal disorders (MSDs) in the flight baggage handler population, and at determining possible associations between exposures and disorders.

2. Method
A questionnaire addressing MSDs (Standardized Nordic Questionnaire) [1] and psychosocial factors (Copenhagen Psychosocial Questionnaire, COPSOQ) [2] was handed out to baggage handlers during company visits and collected by the research team at the same occasion. The questionnaire could also be returned to the researchers in a sealed envelope. In addition to retrieving descriptive statistics on exposure and MSDs, we used the combined domains Work organization and job content and Interpersonal relations and leadership in COPSOQ as independent variables in a logistic regression against the two dependent variables Pain intensity (PINT) and Pain interfering with work (PIW).

3. Results
Of 806 eligible baggage handlers 525 answered the questionnaire (response rate 65%). Low back pain (LBP) and shoulder pain (SP) was reported by 67\% and 55\%, respectively. The prevalence of pain interfering with work was higher for LBP (30\%) than for SP (18\%), and intense pain occurred slightly more in the low back (18\%) than in the shoulders (14\%). Lower ratings of Work organization and job content were significantly associated with Pain interfering with work (LBP, OR 3.60 (CI 1.69-7.65); SP, OR 2.62 (CI 1.10-6.25)), while less satisfaction with Interpersonal relations and leadership was associated with both Pain interfering with work (LBP, OR 2.46 (CI 1.24-4.89); SP, OR 2.48 (CI 1.08-5.72)) and intense pain (LBP, OR 2.49 (CI 1.11-5.55); SP, OR 4.94 (CI 2.15-11.37)).

4. Discussion
For the first time in Sweden, and with a possible extension to other countries and airports considering the universal character of ramp work, we have documented the prevalence of low back and shoulder pain and
psychosocial work conditions in the baggage handling occupation. The one year prevalence of low back and shoulder pain were similar to reports from other occupations requiring heavy manual work [3-5]. While we were able to show that low ratings in the domains Work organization and job content and Interpersonal relations and leadership were associated with pain, any extension to causal relationships must be made with caution due to the cross sectional design of the study. However, our results indicate that psychosocial factors may be involved in explaining pain among baggage handlers and should be considered when planning for interventions in order to improve health.

References:


