

# Patologia da sovraccarico biomeccanico degli arti superiori: studio retrospettivo di coorte in tre grandi aziende del mobile imbottito

S. NICOLETTI, D. CONSONNI\*, M. CARINO\*\*, G. DI LEONE\*\*, G. TRANI\*\*, N. BATTEVI\*\*\*, DANIELA COLOMBINI\*\*\*, L. AMBROSI\*\*\*\*

Scuola di Specializzazione in Medicina del Lavoro, Università di Foggia

\* Dipartimento di Medicina del Lavoro, Clinica del Lavoro L. Devoto, Università di Milano

\*\* Medicina del Lavoro, Dipartimento di Prevenzione, ASL di Bari

\*\*\* IRCCS Fondazione Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, EPM-CEMOC, Milano

\*\*\*\*IRCCS Fondazione Maugeri, Cassano Murge

## KEY WORDS

Upper limb musculoskeletal disorders; cohort study; upholstered furniture industry; incidence rate

## SUMMARY

**«Upper limb work-related musculoskeletal disorders (UL-WMSDs): a retrospective cohort study in three large factories of the upholstered furniture industry».** **Background:** *The epidemiological evidence of work-related musculoskeletal disorders (UL-WMSDs) due to repetitive strain and movements in the various industries has been collected in the literature mainly through cross-sectional surveys. In particular there are no contributions so far regarding the upholstered furniture industry with a longitudinal design.* **Objectives:** *The aim of the study was to evaluate the incidence rate of WMSDs such as hand-wrist and shoulder tendonitis, carpal tunnel syndrome, and epicondylitis in exposed workers of three large companies of the upholstered furniture industry in a large geographic area of southern Italy.* **Methods:** *The OCRA method, recommended by international standard ISO 11228-3 and EN 1005-5, was used for risk assessment. The following work tasks were considered: filling preparation workers, leather-cutting operators, sewing and upholstery-assembly workers. A total population of 5.278 subjects (exposed n=2927, controls n=2351) was investigated. The person/year at risk parameters were calculated from 1 January 2000, or from the date of engagement if later, until the first diagnosis of WMSD or, in absence of disorders, until the end of the study, i.e. 31 December 2004. Disorders occurring after the first were not considered. A multiple regression analysis was used to evaluate relationships between rates.* **Results and Conclusions:** *Incidence rates correlated with risk classes of the OCRA index. An incidence rate of WMSDs higher than 1.2 cases per 100 person/year may be considered as a threshold value to suspect an occupational exposure to repetitive strain and movements warranting further investigation. The analysis of single factors did not show a greater predisposition of the female gender, with the single exception of the carpal tunnel syndrome (RR 2.92; 95% CI 1.57-5.43). Shoulder disorders affected mainly male leather-cutting operators (RR 4.97; 95% CI 2.03-12.16) and among all the factors influencing risk (frequency, force, posture, additional risk factors, pauses) posture seems to play a significant role.*