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WORK-RELATED MENTAL DISORDERS: DATA FROM THE FRENCH NATIONAL OCCUPATIONAL DISEASE SURVEILLANCE AND PREVENTION NETWORK

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Introduction Even though the number of recognised cases by the national health insurance system is improving in France (number of yearly recognised cases >300 since 2014), it is far from reflecting the reality of psychosocial risk at work. Data issued from health monitoring networks help to bring out these occupational health issues and to set priorities for prevention.

Our aim was to describe the main characteristics of work-related mental diseases (WRMD) from data provided by the French national occupational disease surveillance and prevention network (RNV3P).

Methods The RNV3P is constituted by 31 occupational disease centres in French university hospitals and 10 occupational health services. Cases were collected from the RNV3P database between 2001 and 2015. The classifications used were ICD-10 for diseases, ISCO-88 for occupations and NAF93 (edited by the French National Institute for Statistics) for occupational sectors. For exposure, we used a specific thesaurus adapted for psychosocial risk factors. Cases included are mental disorders for which the causal link between work and disease was estimated at least possible.

Results Between 2001 and 2015, 28 697 cases of WRMD (32% men, 68% women) were collected. The disorders most frequently diagnosed were anxiety disorders (38.4%), depressive episode or recurrent depressive disorders (33.3%), reaction to severe stress and adjustment disorder (17.2%). The main occupational risk factors were factors related to management and work organisation, experienced bullying, violence, conflict and relational difficulties in work, and low decisional latitude. Consulting women worked mainly in health and social sector (20.2%), services (17.3%), trade (14.8%) and administration (10.8%); consulting men mainly in industries (19.7%), services (16.0%), trade (14.6%), and administration (8.7%). Significant temporal trends will be presented.

Discussion The RNV3P provides important data to assist in the recognition of work-related mental illnesses and to carry out preventive actions in the sectors and enterprises most concerned.

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TRENDS IN DISABILITY RETIREMENT DURING ECONOMIC GROWTH AND RECESSION

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Introduction Musculoskeletal diseases and mental disorders have remained the two leading causes of disability retirement in the Western countries for decades. Some evidence exists on the detrimental effect of economic recession on mental health. Previous findings suggest considerable differences in morbidity between occupational groups. Whether the economic recession widens occupational differences in work disability retirement due to the leading causes is largely unknown.

Methods We used nationwide register data on Finnish residents aged 30–64 years. We examined occupational differences in full disability retirement due to musculoskeletal diseases (MSD) and mental disorders during 2005–2013.

Result Between 2005 and 2013, the one-year cumulative incidence of full disability retirement due to MSDs and mental disorders decreased in both genders across all occupational groups. Occupational differences in disability retirement due to MSDs widened during the economic recession among women but not among men. However, the magnitude of excess risk for disability retirement due to co-occurrence of MSD with mental disorder (as compared to professionals as a reference group) for men in lower non-manual and manual occupations tended to increase. Occupational differences in disability retirement were reduced after controlling for occupational restructuring, the changing of employment patterns and sociodemographic factors during the follow-up period.

Discussion Occupational differences in disability retirement due to MSDs and mental disorders, that are widened during economic recession, could be attributed to occupational restructuring and changes in employment patterns.

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OCCUPATIONAL CLASS, INDUSTRIAL SECTOR, AND CAUSE-SPECIFIC SICKNESS ABSENCE TRENDS IN 2005–2013 IN FINLAND

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Introduction Low occupational class predicts work disability, but less is known of changes in the cause-specific associations over time or of further variation between industrial sectors. We examined trends in cause-specific sickness absence by occupational class and industrial sector.

Methods We used large representative register data on Finnish wage-earners aged 25–59 years and repeated logistic regression to estimate the annual risk of sickness absence (≥two weeks).

Result Between 2005 and 2013, the proportion of employees with sickness absence decreased. The change was smallest among lower non-manual employees and the overall level highest among manual workers. In musculoskeletal diseases and injuries, the level differences between the occupational classes were particularly large, but decreased over time. In mental disorders, the level was highest among lower non-manual employees with an increasing difference between the occupational classes over time. Among the non-manual classes, the overall absence levels were highest in the health and social work sector. Among manual workers and particularly in musculoskeletal diseases, the level was highest in the manufacturing sector, where a temporary decrease in absences nevertheless occurred during the economic recession in 2009. Among the lower occupational classes, the decreases in absences due to musculoskeletal diseases and/or injury were smallest in the trade sector. Overall, socioeconomic and employment factors, particularly education, income, and employment sector (public vs private), somewhat explained the level differences in sickness absence.

Discussion Particular attention should be paid to both mental and physical work ability among lower non-manual employees in the health and social work sector and to physical work

ability among those with lower grade occupations in the manufacturing and trade sectors.

719 ESTIMATING DISEASE BURDENS AND HEALTH CARE COSTS OF WORK-RELATED MUSCULOSKELETAL DISORDERS IN TAIWAN

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Introduction Musculoskeletal disorders (MSDs), encompassing low back pain, inter-vertebral disc disorders, carpal tunnel syndromes, disorders of muscle ligament and fascia, sprains and strains of joints and adjacent muscles, are common among working people. While many occupational factors are known to increase the risks for MSDs, there is little information about the disease burden and healthcare costs of work-related MSDs.

Methods Healthcare utilisation data was extracted from the database of National Health Insurance (NHI), which is a compulsory healthcare insurance program covering up to 99% of residents of Taiwan. Numbers of outpatient visits and hospitalisation with a primary diagnosis of MSDs and their healthcare costs among the beneficiaries aged 20–65 years old were analysed. Prevalence of self-reported MSDs and exposure prevalence of major ergonomic risk factors by employment sectors were derived from a national representative survey of working people conducted in 2013.

Results The one-year prevalence of self-reported MSDs among working men and women were 58.9% and 65.9%, and exposure prevalence rates of any type of ergonomic risk factors among working men and women were 41.2% and 35.4%, respectively. Annual healthcare expenditures for MSDs were over 158 million USD. Preliminary analyses of disease burden estimated that up to 8500 men and 7000 women developed work-related MSDs that required outpatient treatments or hospitalisation in one year. In contrast, only 434 cases of MSDs were recognised and compensated by the workers' compensation insurance in the same year, suggesting a severe under-recognition of work-related MSDs.

Discussion Work-related MSDs constitutes a major occupational health concern with substantial disease burden and healthcare costs. While it is important to prevent work-related MSDs, it is equally important to readjust financing strategies to ensure that employers take responsibility for healthcare costs due to occupational factors.

735 RETURN TO WORK AND WORK RETENTION IN CANCER IN FINLAND – SEVEN MOST COMMON CANCERS

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Introduction Recent report by EU-OSHA reviews research on rehabilitation and return to work after cancer (Tikka, *et al.*, 2017). About half of the annual 3.2 million new cases of cancer occur in working-age individuals. Further, in Europe in

2012, over half of the overall cancer burden was due to breast, colorectal, prostate, and lung cancer.

Methods Our study was based on nation-wide register information on ill-health benefits as well as employment and unemployment periods for 2005–2009 in Finland. Eligible subjects had the first full-time sickness absence (fSA) due to cancer diagnosis (prostate/breast, lung, colon, bladder, non-melanoma skin, melanoma, non-Hodgkin lymphoma), were 18–57 years of age and employed on the last day of the index sickness absence spell. They were followed from the first day of fSA until the first return to work (RTW) or other event (partial work disability, rehabilitation, fSA, full work disability retirement [fWDR], unemployment, or exit from labour force).

Result Altogether 9162 eligible subjects (2839 men; 6323 women) were identified. For several common cancers, ≥80% of male and female patients were able to return to work. In lung cancer, with low survival rates, only around 25%–30% returned to work. After RTW, in prostate cancer and breast cancer, 70% were at work after 48 months. As to time spent in different statuses, 80%–85% of prostate cancer patients returned to work in 4–5 months, with fWDR and unemployment emerging eventually at 5%–7% level. Similarly, for breast cancer, 80% of the subjects returned to work in 10 months, with around 7% with fWDR from that onward.

Discussion Overall, for most common male and female cancers, around 80% of subjects were able to return to work within the first 4–12 months and 50%–60% were at work at the end of follow-up, with the exception of lung cancer, a fatal disease.

785 OCCUPATIONAL EXPOSURE TO MERCURY IN A SMALL SCALE GOLD MINING WORKERS AND FAMILIES IN HANDENI, TANZANIA

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Introduction Mercury is a highly dangerous neuro-toxicant. High exposures in artisanal gold mining have significant health and environmental impacts. We aimed to determine mercury exposure levels and to assess the health effects among the artisanal gold miners and their families

Methods A cross sectional descriptive study was conducted on 292 miners and their families. Interviews and medical examinations were conducted. A sample of 30 participants with history of mercury use had mercury analysis performed on their hair, urine and blood by Inductively Coupled Plasma Optical Emission Spectrometry. Data analysis was done using Epi-Info.

Result The mean mercury levels in urine and blood were 46.3 µg/L and 14.5 µg/L respectively, with a maximum of 74.7 µg/L for urine and 56.7 µg/L for blood. Out of 21 urine samples, 10 (47.6%) exceeded the maximum World Health Organisation (WHO) acceptable level of 50 µg/L. Out of 25 blood samples, 13 (52%) exceeded the WHO normal range of 5–10 µg/L. All hair samples were below the detection limit of 0.01 ppm. Miners engaged in amalgamation and burning of amalgam had higher mean mercury levels in urine (54 µg/L, $p=0.03$) and blood (14.3 µg/L, $p=0.9$) than others. Tremor of the eyelid (30%) was significantly higher ($p<0.005$) in miners than non-miners. Miners recorded blue line in gums (34%),