

Abstracts

Precarious employment

188 FREQUENT AND LONG-TERM ABSENTEEISM AS A RISK FACTOR FOR DISABILITY PENSION AND JOB TERMINATION AMONG EMPLOYEES IN THE PRIVATE SECTOR

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Objectives: Frequent and long-term absentees were monitored over a period of 4 years after their absence with regard to the risk of disability and job termination.

Methods: Based on their absenteeism in the reference year 53 990 employees, working at three large Dutch companies, were distinguished into the following cohorts: 4126 frequent absentees (four times or more absent), 3585 long-term absentees (duration more than 6 weeks), 979 frequent and long-term absentees, and a reference population consisting of 45 300 employees.

Results: In the next 4 years frequent absentees had a higher disability rate – defined as 1 year of incapacity for work – amounting to 2.5 in men and 4.2 in women per 100 employee years as compared to the reference population (0.8 in men and 2.2 in women). Long-term absent men have a disability rate of 6.7 and women of 9.1 per 100 work-years. Frequent and long-term absentees have a disability rate of 8.1 in men and 10.4 in women. The risk of terminating employment is higher in former absent groups (range 20%–25% in men and 31%–37% in women) as compared to the reference population (18% in men and 24% in women). Females, older employees, employees on lower salary scales and employees working in urban regions are more at risk for disability and job termination. In men, absence due to malignant disease (OR 3.8), mental disorders (OR 1.5) or respiratory disorders (OR 1.4) gives an increased disability risk as compared to musculoskeletal disorders. There was no differential increase in disability risk by diagnosis in women. Being long-term absent due to injuries lowers the disability rate in both sexes. In men, malignant disease (RR 2.9) or mental disorders (RR 1.3) gives a higher risk of job termination and in women neurological diseases (RR 2.1). In both sexes, the type of mental or musculoskeletal disorder is not associated with the risk of job termination.

Conclusion: High risk groups (former frequent and/or long-term absenteeism) show a higher disability rate in a 4-year follow-up period as compared to the reference population. They also have a higher risk of (involuntary) job termination.

Key words: disability; job termination; frequent and long-term absenteeism

189 MORTALITY PATTERNS FOLLOWING LAY-OFFS FROM A LARGE INTERNATIONAL AIRLINE

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Objectives: There are a relatively small number of studies on the health effects due to involuntary unemployment, and results are contradictory. We sought to compare mortality among involuntary and voluntary leavers at a large airline.

Methods: We have studied the mortality through 2002 of 13 370 employees of a large airline who were born before 1940 and whose personnel files were available after the company's bankruptcy in 1991. The cohort was divided into those who left work voluntarily (55%), involuntarily (39%) and because of illness (6%).

Results: The mean year of first employment was 1962, the mean year of last employment was 1986, and the mean age at leaving the company was 55. Of those who left involuntarily, 56% left at the time of bankruptcy in December 1991 or after. Twenty-two percent of the cohort died during follow-up, which began at the time of leaving the company. Standardised mortality ratios relative to the US population for all causes for those who left voluntarily, involuntarily and due to illness were 0.72 (0.69–0.87), 0.69 (0.65–0.74), and 2.40 (2.21–2.60) respectively. Mortality from heart disease showed a similar pattern. Internal analyses using Poisson regression compared rates between involuntary and voluntary leavers after adjusting for age, race, sex, calendar time and education, and

yielded a rate ratio of 0.96 (0.87–1.07) for all causes and a rate ratio of 1.11 (0.93–3.56) for heart disease. Sub-analyses of those who left involuntarily at age 55 or older, or those who left involuntarily at the time of bankruptcy, did not indicate any excess mortality (all cause SMRs of 0.65 and 0.64, respectively).

Conclusion: These data do not indicate that those who left involuntarily had higher mortality than those who left voluntarily. Both groups showed a strong healthy worker effect. Our data are limited by lack of knowledge of re-employment patterns after leaving the company, reliance on mortality rather than morbidity data, and by the relatively short length of follow-up after leaving work (mean 13 years).

Key words: unemployment; mortality; airline

190 INTELLECTUAL PERFORMANCE AND DISABILITY PENSION

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Objectives: Many countries have experienced an increase in disability pensions (DP). A special concern has been people who are granted a DP during the first years after entering gainful employment. We wanted to examine determinants for such early disability pension with a life course approach. Especially we wanted to focus on the impact of and relationship between intellectual performance and educational attainment on DP.

Methods: Through linkage of several national registers containing personal information from birth into adult age, we established a longitudinal, population-based cohort. Study participants were all males born in Norway in the period 1967–1976, as registered by the Medical Birth Registry of Norway, who were national residents at age 17. The main independent variables were intellectual performance (at conscript) and educational attainment at age 20 years; the latter was dichotomised into a low (11 years or less) and highly educated group (12 years or more). We also considered different early factors: perinatal and childhood health and some social and health related parental characteristics. The study outcome was having been granted a DP. Follow-up started when subjects were first registered with a personal income above the level entitling sickness absence compensation and lasted until the end of 2003. Thus, subjects who were granted a DP before ever having had an income were not included. 305 722 persons were included in the study. Adjusted hazard ratios were computed using Cox regression analyses.

Results: 4603 persons (1.5%) were granted a DP. Almost 2/3 of the DPs were due to psychiatric or musculoskeletal disorders. DP was strongly associated with decreasing intellectual performance. For persons with similar intellectual performance, the HR for DP was about 150% higher in the low educated group compared to the highly educated group, also when controlled for a wide range of life course factors. The overall DP risk for subjects with low education was about five times the risk for high educated persons.

Conclusion: DP in young adults was strongly associated with intellectual performance and educational attainment. Achieving an education reduced the DP risk even for people with low intellectual performance and might thus be regarded as a possible preventive measure.

Key words: disability pension; intellectual performance; education

191 PRECARIOUS EMPLOYMENT AND DEPRESSIVE SYMPTOMS IN FRANCE

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Objectives: The aim of this study is to document the relationship between depressive symptoms and precarious employment of the active population aged 18 years and over in France.

Methods: We analysed a weighted sample of 13 014 men and women representative of the active population, using data from the French National Health Survey 2002–2003. Depressive symptoms were measured by the CES-D scale, dichotomised according to the French threshold.

Precarious employment was assessed using employment status according to four items: unemployed, fixed-term employees, permanent employees and self-employed. Furthermore, several indicators of precarious employment history were studied: length working part time during professional life, experience of unemployment, length in unemployment during professional life and job change due to health problems. Logistic regressions were used to adjust for demographic, socioeconomic, health and personal variables. Analyses were carried out separately for men and women.

Results: After adjustment on socio-demographic and health variables, unemployed men were found to have significantly higher prevalence of depressive symptoms than fixed term employees (OR 1.75, 95% CI 1.11 to 2.76). For women, there was a gradient in the association between depressive symptoms and employment status; the less concerned women were self-employed while the most concerned were unemployed (OR 4.45, 95% CI 2.20 to 8.97). Compared with self-employed women, the odds ratios for permanently employed women were equal to 2.19 (95% CI 1.3 to 4.7) and to 3.52 for fixed term employed women (95% CI 1.69 to 7.32). Furthermore, depressive symptoms were associated with a length greater than 24 months working part time during professional life (OR 1.55, 95% CI 1.14 to 2.10). Whatever the gender, high odds ratios were found among the active population with a poor educational level or weak social protection.

Conclusion: Precarious employment explored by atypical jobs such as fixed term contracts, unemployment and information on working part time are consistently associated with depressive symptoms, particularly for women. However, the main limitation of this study is due to the cross-sectional design of the survey, which limits interpretation in term of causality.

Key words: precarious; depressive; symptoms

192 CANCER SURVIVORS' EMPLOYMENT, CHANGES IN THEIR WORK SITUATION AND EXPERIENCES OF UNCERTAINTY AT WORK: A NORDIC STUDY OF CANCER AND WORK (NOCWO)

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Objectives: To investigate the impact of cancer on work, we compared employment outcomes and changes in work situation among cancer survivors and cancer-free referents from four Nordic countries. We also examined the influence of cancer on experiences of uncertainty in the employment situation and chances to improve the working position.

Methods: Working-age cancer survivors with an early-stage breast, lymphoma, testicular or prostate cancer were selected from the cancer register or hospital register in Denmark, Finland, Iceland and Norway. A reference group representing the general population was selected from population registers. Data on employment and work experiences were collected with a questionnaire, which was returned by 2326 survivors (70%) and 3643 referents (56%).

Results: The survivors were less often employed (75% vs 79%) and more often on a disability pension (12% vs 7%) than the referents. A similar difference between the survivors and referents was seen in all the countries. Danish breast and prostate cancer survivors were less often employed than other Nordic survivors, but among testicular cancer survivors the difference between the countries was small. About 10% of the survivors had changed work tasks, 8% had changed employer and 5% occupation because of cancer and 5% had been unemployed. Survivors were less likely than the

referents to report that the change of employer was influenced by the negative attitude of the superior. The physical demands of the former work were an important reason for the change of occupation. Survivors stated more often than the referents that their working position had not improved during the last years. However, experiences of uncertainty in the employment situation (including involuntary transfer to other duties, threat of lay-off or threat of termination of employment) were reported to a similar extent in both groups.

Conclusion: Cancer had only a slight effect on employment participation among the survivors with a good prognosis. Cancer caused changes in the work activities of some survivors, especially changes in work tasks, less often change in occupation. The physical demands of work were an important reason for changing occupation. Cancer reduced the chances to improve the working position but had a negligible effect on the experience of uncertainty in the employment situation.

Key words: cancer survivor; employment; work

193 AGING FARMERS: DETERMINANTS OF RETIREMENT IN A CALIFORNIAN COHORT OF FARM OPERATORS 1993-2004

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Objectives: As the majority of farmers continue to work past normal retirement age, the aim of the study was to determine which health conditions, if any, were determinants of retirement.

Methods: A random sample of 1947 Californian farmers (mean age 54.3 years) was interviewed by telephone in 1993. Repeat surveys in 1998 and 2004 included all original subjects willing to be re-interviewed, whether or not they still farmed. Questions included commodities, tasks, environmental exposures, health status and symptoms. Farmers were considered "retired" if they reported no hours of farm work in the previous year. Significant associations between retirement and health or exposure were adjusted for age in logistic regression models, and those remaining significant at $p < 0.05$ were included in multivariable longitudinal general estimating equations (GEE).

Results: In 2004, 388 farm operators aged 66 or older remained in the study. 153 (39.4%) had retired and 235 (60.6%) were still working. 112 of the retired farmers considered themselves no longer associated with a farm; 50% identified health as the main reason they had retired, the remainder economics or other factors. In 2004, cross-sectional logistic regression models adjusted for age indicated having heart problems limiting work (OR 1.99, 95% CI 1.03 to 3.86) or having diabetes (2.28, 1.33 to 3.91) were significantly associated with retirement. Retirement was associated with decreased levels of self-reported health status (1.91, 1.42 to 2.57) and any functional disability (2.37, 1.46 to 3.84). However, retirement was not associated with musculoskeletal problems or respiratory symptoms, although they were more common in farmers than in the general population. A final multivariable longitudinal model (GEE) indicated retirement was positively associated with calendar year, age, living alone (OR 1.56, 95% CI 1.04 to 2.32), income below \$50 000 before retirement (1.48, 1.05 to 2.06), any functional impairment (1.63, 1.04 to 2.57), and decreased ability to work (2.39, 1.43 to 3.99), but not diabetes or heart problems.

Conclusion: A higher and increasing percentage of farmers work beyond age 65 than does the general workforce. Most farmers continue to farm until a major health or functional problem impairs their ability. Health care and preventative measures need to address the reality of this aging population.

Key words: aging farmers; chronic conditions; determinants of retirement