

Poster Presentation

Methodology

0260

VISUALISING THE UNEMPLOYMENT-TO-EMPLOYMENT TRANSITIONS TO EXPLORE FACTORS INFLUENCING RETURN TO WORK IN THE WORK PROGRAMME: RESULTS FROM THE SUPPORTING OLDER PEOPLE INTO EMPLOYMENT (SOPIE) COHORT

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Objectives Returning to employment after a period on welfare benefits is particularly challenging for people aged over-50 and those with health conditions. We explore the unemployment-to-employment transitions made by clients engaging with the Work Programme (WP); the UK Government's main return to work (RTW) initiative. It supports two main groups of welfare benefit claimants - JSA, for people who are unemployed but capable of work; ESA, for people with a disability that makes it more difficult to work.

Methods The data were from the SOPIE cohort (13 461 unemployed clients aged 18–64, who entered the WP in Scotland between April 2013 and July 2014). For clients who started a job, unemployment and employment spells during their two-year period in the WP were determined and sequence index plots produced using Stata version 14. These visualisations were explored by age and benefit type.

Results Job start rates were: 'JSA clients under-50', 65%; 'JSA clients over-50', 49%; 'ESA clients under-50', 23%; 'ESA clients over-50', 14%. Despite the lower numbers of ESA clients with a job start the visualisations revealed that these clients (both under and over-50) were as likely to sustain employment as JSA clients. Analyses also investigated employment by Standard Occupational Classification and full versus part-time.

Conclusions Visualising longitudinal employment data provides new insight into the relationship between age, health and the RTW process. Although people receiving health-related benefits (ESA) enter employment at lower rates, they can sustain employment similarly to JSA clients, suggesting support for policies aiming to reduce the disability employment gap.

Oral Presentation

Shift Work

0261

THE EFFECTS OF NIGHT WORK AND LIGHT EXPOSURE ON SALIVARY MELATONIN CONCENTRATION DURING WORK DAYS AND DAYS OFF

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Objective We aimed to examine the effects of night work on salivary melatonin concentrations during and subsequent to night work and the mediating role of light.

Methods We included 254 day workers and 87 night workers that were followed during 322 work days and 301 days off work. Each day was defined as the 24 hour period starting from the beginning of a night shift or awakening in mornings with daytime work and days off. Light levels were recorded and synchronised with diary information on start and end of sleep and work. On average, participants provided four saliva samples per day, and these were analysed for melatonin concentration. Differences between day and night workers on work days and days off were assessed with multilevel regression models with melatonin concentrations as outcome. All models were stratified or adjusted by time of the day. For light exposure, we estimated the total, direct, and indirect effects of night work on melatonin concentrations obtaining 95% confidence intervals through bootstrapping.

Results On work days, night workers showed 16.5% (95% CI 0.2; 30.5) lower salivary melatonin concentration compared with day workers. Light exposure seemed to mediate about 40% of the melatonin suppression seen during night, but no mediating effect of light was seen during day time. On days off, we observed no difference in melatonin concentration between day and night workers.

Conclusion These findings are in accordance with a transient and partly light mediated effect of night work on melatonin concentration.

Oral Presentation

Reproductive Effects

0262 RISK OF MISCARRIAGE IN ASSOCIATION TO WORK AT NIGHT: A PROSPECTIVE PAYROLL DATA STUDY

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Methods This study used data from the Dutch National Working Conditions Survey (NWCS 2014; occupational disease confirmed by a doctor, self-reported, employees).

Multivariate regression analyses were performed to assess the independent association at the individual level (OR) between each determinant and the presence of at least one occupational disease. Additionally, the Population Attributable Risk (PAR) was calculated for each determinant in order to assess the risk at the population level as well.

Results The top three determinants that may be influenced and also contributed most to *musculoskeletal* occupational diseases, were the same at the individual and the population level: 'Repetitive movements' (PAR=40.0%; OR=2.25), 'Working in uncomfortable positions/bad posture' (PAR=17.7%; OR=1.62), and 'High job demands' (PAR=17.6%; OR=1.57).

Determinants that contributed most to *psychological* occupational diseases were also the same on the individual and population level: 'Low engagement' (PAR=33.6%; OR=2.27), 'Conflict with supervisor' (PAR=16.7%; OR=1.51), and 'High emotional demands' (PAR=14.4%; OR=2.85).

Conclusion These determinants may be influenced through education, measures and/or policies at the workplace or on higher levels, in order to decrease the prevalence of occupational diseases in the working population.

Poster Presentation

Exposure Assessment

0264 PROBE: HAZARDOUS CHEMICAL PRODUCTS REGISTER FOR OCCUPATIONAL USE IN BELGIUM

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During their job, workers are exposed to a wide variety of working conditions including chemical substances that are potentially detrimental to employees' health. Today, Belgian data on occupational exposure to dangerous chemicals are collected by Occupational Health Services (OHS) merely for the purpose of assuring the appropriate health screening. This makes these data of little use for epidemiological research and exposure surveillance on one hand and for policy development by competent authorities on the other hand. The PROBE (Hazardous chemical Products Register for Occupational use in Belgium) study is set up to investigate the exposure of Belgian workers to dangerous chemical products, including type, duration and frequency of exposure. PROBE consists of a systematic collection and analysis of occupational chemical exposure data. A trained, motivated, and representative sample of occupational physicians from both internal and external OHS will

Oral Presentation

Risk Assessment

0263 DETERMINANTS OF OCCUPATIONAL DISEASES IN THE NETHERLANDS: RISKS AT THE INDIVIDUAL AND THE POPULATION LEVEL

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Objective To identify the main determinants of occupational diseases at both the individual and the population level.