

to investigate whether farmers in Taiwan had an increased risk of dying from leukaemia (ICD-9 codes 204–208). All deaths of Taiwan residents were retrieved from the Taiwan Death Certification Registry. Cases were defined as deaths from leukaemia who were at least 50 years of age between 1997 and 2009. Controls were deaths from all causes other than cancers. We extracted information on sex, marital status, year of birth, year of death, cause of death, county of residence, and usual occupation from each death certificate. Logistic regression models were applied to calculate the mortality odds ratio (MOR) and their 95% confidence interval (CI). A total of 32 456 deceased farmers were identified between 1997 and 2009. Of these 32 456 decedents, 140 deaths were coded as leukaemia. After adjusted for gender, marital status, age at death, year of death, and urbanisation level, farmers were not with significant increase in the risk of leukaemia (aMOR=0.92, 95% CI=0.77–1.10), compared to non-farmers. There were no significant difference in term of the death by age and gender between farmers and non-framers. The patterns of death by age and gender were similar between farmers and non-farmers. Further investigation of leukaemia risk among farmers is warranted.

Oral Presentation

Other

0204 RETINAL DETACHMENT AND OCCUPATIONAL LIFTING: THE EVIDENCE TO DATE

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Introduction There is an “oral tradition”, especially among myopics, that heavy lifting leads to retinal detachment (RD). Some years ago, searching the literature, we failed to find evidence supporting this theory. Then, in the early 2000s, we performed a case-control study to test the hypothesis that repeated lifting tasks could be a risk factor for RD.

Methods Cases were identified among myopic patients surgically treated for RD in a large urban hospital. Controls were drawn from myopic outpatients attending an eye clinic in the same catchment area. Both filled in a questionnaire on personal and work-related factors, including past/present occupational lifting tasks. Three categories of exposure to lifting (product of load, manoeuvres/hour and lifting-years) were identified: no lifting, light lifting (≤ 8000 kg freq yr), heavy lifting (> 8000 kg freq yr). We estimated odds ratios (ORs) and 95% confidence intervals (95% CIs) by fitting a logistic regression model adjusted for age, sex and degree of myopia.

Results 61 cases and 99 controls were identified. In addition to ocular surgery and ocular and/or head trauma (known risk factors), strong independent associations were recorded for heavy lifting (OR 4.4, 95% CI 1.5–13) and high body mass index (OR 6.8, 95% CI 1.6–29). No association was recorded for light lifting (OR 1.1, 95% CI 0.4–3.0).

Conclusion These findings supported the a priori hypothesis that heavy lifting was a strong risk factor for RD. We are now conducting a multicentre case-control study to confirm our previous results. If confirmed, this association would open up new opportunities for prevention.

Poster Presentation

Respiratory

0205 SPIROMETRIC CHANGES IN NORMAL OR EARLY ILO PNEUMOCONIOSIS RADIOGRAPHS OF SANDSTONE-DUST EXPOSED WORKERS: A PRELIMINARY RESULT

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Withdrawn at the author's request

Poster Presentation

Working Conditions

0206 THE LONGITUDINAL ASSOCIATION BETWEEN MULTIPLE JOB HOLDING AND LONG-TERM SICKNESS ABSENCE AMONG DANISH EMPLOYEES. AN EXPLORATIVE STUDY USING REGISTER-BASED DATA

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Background Multiple job holding (MJH) is common in many countries, but little is known about its (health) consequences. Our aim is to explore the longitudinal association between

MJH and long-term sickness absence (LTSA) among Danish employees.

Methods We included employees (n=8,968) who participated in the Danish Work Environment Cohort Study (DWECS), based on a representative sample of the Danish working population. Three dichotomous independent variables were created: MJH in general, combination MJH (i.e. second job as employee) and hybrid MJH (i.e. self-employed in second job). LTSA (≥ 5 weeks) was measured using the Danish Register for Evaluation of Marginalisation (DREAM) during 78 weeks of follow-up. Potential confounders included demographics, health, and work characteristics. Logistic regression analyses were performed to study whether LTSA was associated with MJH in general, combination MJH, and hybrid MJH. Interaction effects for gender, age, total working hours per week (≤ 37 or > 37 hours a week) and shift work were tested.

Results In total, 11.7% (n=1,048) of the respondents reported having multiple jobs and 7.6% (n=678) experienced LTSA during follow-up. After adjustment for confounders, no significant association between LTSA and MJH in general (OR=0.82), combination MJH (OR=0.81), or hybrid MJH (OR=0.83) was found. Among employees working more than 37 hours per week, combination MJH was associated with a higher likelihood of LTSA (OR=1.50).

Conclusions We did not find evidence for an increased likelihood of LTSA among multiple job holders. Future research should study the likelihood of LTSA among subgroups of multiple job holders, e.g. those working long hours.

Oral Presentation

Shift Work

0207

HYPERTENSIVE DISORDERS OF PREGNANCY AMONG NIGHT WORKERS IN DANISH HOSPITALS: A NATIONAL REGISTER-BASED COHORT STUDY

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Objective Few studies investigated hypertensive disorders of pregnancy (HDP) in relation to work at night with inconclusive results and crude exposure assessment. Our aim is to investigate the risk of HDP after work at night during pregnancy based on objective exposure assessment from The Danish Working Hour Database (DWHDB), which contains information on working hours from all public hospital employees in Denmark.

Methods The study population (n=20,385) comprised women from DWHDB who have given birth at least once between 2007 and 2013. Night and day shifts were defined as at least

three hours between 00:00 and 05:00 and between 06:00 and 20:00 respectively. Cases of HDP defined as gestational hypertension or preeclampsia/eclampsia were retrieved from The Danish National Patient Registry. We analysed the risk of HDP by number of night shifts during the first 20 weeks of gestation by logistic regression adjusted for relevant covariates.

Results The risk of HDP among women working 1–3 and ≥ 4 night shifts during the first 20 pregnancy weeks was OR=0.94 (95%CI 0.77, 1.16) and OR=1.03 (0.75, 1.41), respectively, compared to day workers. Stratified analyses revealed an increased risk of HDP among women older than 35 years who worked at night compared to day workers (OR=1.76; 1.05, 3.04 p value for interaction < 0.001).

Conclusion Our results of no overall increased risk of HDP among night workers are reassuring. The post hoc result finding of increased risk among women older than 35 years needs cautious interpretation.

Invited

Developing Countries

0208

INVITED KEYNOTE: OBSTACLES TO CONDUCTING OCCUPATIONAL EPIDEMIOLOGICAL RESEARCH IN DEVELOPING COUNTRIES

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The reasons advocated for conducting epidemiological studies in developing countries often include a need to improve the data base for prevention of ill health, including occupational diseases. Evidence based on research in developed countries may not be wholly relevant to developing countries because of differences in the environment, culture, health behaviour, health systems, and other factors. The obstacles to conducting occupational epidemiology studies in developing countries include: a) A lack of understanding of the purpose and nature of epidemiological studies. This often leads to potential study populations declining to participate.

b) Difficulty in defining homogenous study populations. This is especially true in developing countries with diverse multinational expatriate workers.

c) The absence of an infrastructure and support for conducting epidemiological research. Ethical committees meet infrequently. Statistical advice is difficult to obtain. Laboratories for analysis of environmental and/or biological samples are often not readily available.

d) Logistical difficulties include difficulty in contacting and recruiting study participants.

Organising teams of interviewers and research assistants can also be problematic.

e) The nature of the research. A questionnaire may well have to be translated into several languages. There may be a reluctance by study participants to provide biological samples such as a venous blood sample. If environmental monitoring devices are to be placed in workplaces, this can be viewed with apprehension.