

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 ( $\geq 5$  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 ( $\leq 37$  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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10.1136/oemed-2017-104636.165

**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  $\geq 4$  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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10.1136/oemed-2017-104636.166

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.