

**Objectives** The aim is to examine occupational noise exposure as a risk factor for depression, utilising noise exposure as an objective measure of distressing working conditions that circumvents reporting bias.

**Method** In a 7-year cohort study we followed 109 378 industrial workers and 45 613 financial workers from 2001 or first year of employment thereafter until 2007. At start and end of follow up we recorded mean, full-shift noise exposure levels by personal dosimeters for 1077 workers from randomly selected companies. We assumed a linear relation with calendar year and predicted exposure levels by trade and occupation since 1980 and calculated cumulative noise exposure. Danish national registries provided complete employment histories since 1980, psychiatric diagnoses (1977–2001), and redemption of antidepressants (Selective Serotonin Reuptake Inhibitors, SSRI) (1994–2007). Workers with psychiatric diagnoses or use of antidepressants before 2001 were excluded.

**Results** During follow-up we identified 7754 incident users of SSRIs. Among women, risk of starting SSRI medication increased by cumulative noise exposure level OR=1.02 (95% CI: 1.01–1.02) per dB(A)-year when adjusted for age, calendar year and socioeconomic status. When excluding white-collar workers no effect was seen among women and no effect of noise was apparent among men overall.

**Conclusions** These preliminary results do not provide strong evidence that occupational noise exposure is a risk factor for depression. The increased OR seen among all women can be explained by differences in socioeconomic status between the blue-collar industrial workers and the white-collar financial workers since no trends were apparent in internal analyses among blue-collar workers.

**0181 ASSOCIATIONS BETWEEN PRE-DEFINED OCCUPATIONAL JOB TASKS AND BREAST CANCER RISK**

<sup>1</sup>Sylvia Rabstein, <sup>1</sup>Beate Pesch, <sup>2</sup>Volker Harth, <sup>3</sup>Christina Justenhoven, <sup>4</sup>Ute Hamann, <sup>3</sup>Hiltrud Brauch, <sup>5</sup>Yon Ko, <sup>1</sup>Thomas Bruening. <sup>1</sup>Institute of Prevention and Occupational Medicine, German Social Accident Insurance (IPA), Bochum, Germany; <sup>2</sup>Institute for Occupational Medicine and Maritime Medicine, University Medical Centre Hamburg-Eppendorf, Hamburg, Germany; <sup>3</sup>Dr. Margarete Fischer-Bosch-Institute of Clinical Pharmacology and University of Tübingen, Stuttgart, Germany; <sup>4</sup>Molecular Genetics of Breast Cancer, Deutsches Krebsforschungszentrum (DKFZ), Heidelberg, Germany; <sup>5</sup>Department of Internal Medicine, Evangelische Kliniken Bonn gGmbH, Johanniter-Krankenhaus Bonn, Bonn, Germany

10.1136/oemed-2014-102362.261

**Objectives** The role of occupational exposures in agricultural and industrial settings has been addressed in several breast cancer studies. Recently, the influence of shift work in nurses added as an occupational hazard that has been intensively discussed. Here, we investigate the association of job tasks in the industrial and health sector and breast cancer in a large case-control study.

**Method** The population-based case-control study *Gene-Environment Interaction and Breast Cancer* (GENICA) was conducted in the Greater Region of Bonn, Germany. Occupational history and job task information were collected in computer-assisted interviews. Thirty pre-defined job tasks were assessed for 1143 cases and 1155 controls in addition to the occupational history. Risk estimates were calculated as odds ratios (ORs) with 95% confidence intervals (CIs) conditional on age and adjusted for potential confounders.

**Results** First preliminary results indicate an increased age-adjusted risk for women who ever worked in anaesthesia (OR

1.87; 95% CI 1.03–8.0), based on fourteen cases and five controls.

**Conclusions** Our study revealed an increased risk for ever working in anaesthesia. This elevated risk might originate from chemical exposures or night shift work. Interactions between exposures and night work might be relevant in the progression of breast cancer. However, the results of this study are limited by the low prevalence of risk jobs and specific exposures.

**0186 GENDER BIAS IN OCCUPATIONAL EPIDEMIOLOGY RESEARCH: A SYSTEMATIC REVIEW ON WORK-RELATED LUNG CANCER**

<sup>1</sup>Charles-Olivier Betansedj, <sup>1,2</sup>Emilie Counil. <sup>1</sup>Giscop 93, Université Paris 13, Bobigny, Ile-de-France, France; <sup>2</sup>EHESP Rennes, Sorbonne Paris Cité, Paris, Ile-de-France, France; <sup>3</sup>IRIS (UMR 8156-997), Université Paris 13, Bobigny, Ile-de-France, France

10.1136/oemed-2014-102362.262

**Objectives** The “one-eyed science” pointed out by some authors has contributed to the invisibilization of working conditions as a health determinant among women. Our objectives were to document current epidemiological practices in the assessment of work-related lung cancer risks, and to discuss how gender-related biases compromise the scientific validity of exposure and risk estimates among women, as compared to men.

**Method** A systematic literature review over the last 7 years was performed, and based on the screening of 410 abstracts retrieved from *PubMed*, 122 articles were retained. Data were collected through a questionnaire, and analysed both quantitatively and qualitatively. Articles were classified according to the gender distribution of the study sample as either **men only**, **women only** or **mixed**.

**Results** **Androcentrism** was present, as nearly 50% of studies recruited men-only participants. Moreover, 45% of them were subject to an **overgeneralization** of study results. **Gender-insensitivity** could be observed from the papers (35%) which did not provide justification for the gender composition of study sample. A **double standard** was also suspected in the exposure assessment methods. Sex and gender-related terms were found to be frequently used **interchangeably**.

**Conclusions** Upgraded results with an increased sample size are forthcoming. Meanwhile, these preliminary results raise the question of the “gender bias” in epidemiology, and how *sex* and *gender* should be taken into account in the design, conduct, analysis and dissemination of results in order to minimise gender-related biases and reinforce the scientific validity of research.

**0189 APPLICATION OF A DYNAMIC POPULATION-BASED MODEL TO ASSESS THE EFFECT OF SILICA EXPOSURE INTERVENTIONS ON COPD IN DUTCH CONSTRUCTION WORKERS: RESULTS FROM THE ‘RELIEVED WORKING STUDY’**

<sup>1</sup>Anjoeka Pronk, <sup>1</sup>Ruud Boessen, <sup>1,2</sup>Erik van Deursen, <sup>1</sup>Tim Meijster, <sup>1</sup>Rinke Klein Entink, <sup>1</sup>Birgit van Duuren-Stuurman, <sup>2</sup>Dick Heederik, <sup>3</sup>Nick Warren, <sup>3</sup>Emma Tan. <sup>1</sup>TNO, Zeist, The Netherlands; <sup>2</sup>IRAS, Utrecht, The Netherlands; <sup>3</sup>HSL, Buxton, UK

10.1136/oemed-2014-102362.263

**Objectives** A multidimensional intervention aimed at reducing silica exposure in the Dutch construction industry was performed. The objective of this study was to assess the effect of