

coronary heart disease. Among night workers, we observed no consistent exposure-response relations for any quantitative night work characteristic. However, men, but not women night workers showed an overall increased incidence rate ratio of coronary heart disease of 1.22 (95% confidence interval 1.07–1.39) compared with dayworkers that could not be explained by medical or lifestyle factors.

**Conclusion** Our observation of no exposure-response relation between several quantitative night work characteristics and coronary heart disease does not provide support for an association between night work and coronary heart disease warranting specific night work schedules to prevent coronary heart disease.

**RF-187** NIGHT SHIFT WORK INCREASES THE RISK OF DIABETES: A 17-YEAR FOLLOW-UP COHORT STUDY AMONG ASIAN HEALTHCARE WORKERS

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**Introduction** In East Asian countries with highly developed economies, the prevalence of diabetes is rapidly increasing. Long working hours and shift work are suspected to be important risk factors in East Asia. A long-term follow-up study is warranted to clarify the relationship between diabetes, working hours, and shift work.

**Objectives** To evaluate the association of night shift work and risk of diabetes among Asian healthcare workers, and to explore their dose-response relationship using actual hours of night shift work monthly rather than cumulative years with night shift work.

**Methods** A retrospective cohort study was conducted among employees in a tertiary medical centre in central Taiwan. From 2002–2019, there were 7767 participants with a mean ( $\pm$ SD) age of 27.9 ( $\pm$ 7.0) years, and 89.6% of them were women. We collected information related to annual health check-ups, medical charts, and annual working hours, including during day, evening, and night shifts. We divided working hours into three categories (less than 60 hours per month, 60 to 100 hours per month, more than 100 hours per month). We estimated hazard ratios and 95% confidence intervals (CIs) for incident diabetes using Cox proportional hazards models, adjusting for age, sex, and body mass index.

**Results** 309 (3.98%) incident cases of diabetes occurred during 56,799 person-years at the 17-year follow-up. In the age- and sex-adjusted model, the HR (95% CI) for those who worked night shifts for more than 100 hours per month was 2.062 (1.179 to 3.608) compared with those who worked fewer than 60 hours. In the stratified analysis, the association between night shift work and diabetes was significant among those aged <40 years, females, and obese participants.

**Conclusions** Among Asian healthcare workers, night shift work is associated with the incidence of diabetes in a dose-dependent manner. This finding could identify workers at high risk of diabetes to provide preventive strategies.

## Work organization and Return to Work

**RF-37** ASSOCIATION BETWEEN MENTAL HEALTH SYMPTOMS AND SHIFTWORK AMONG FILIPINO WOMEN FACTORY WORKERS

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**Introduction** This study aimed to look at the association between working at night and mental health symptoms, and mediating factors to this association.

**Methods** This study looked at a database of 500 factory workers, about 90% of which were females. It originally investigated hazard exposures and occupational health of workers in export processing zones in the Philippines. The database included variables relating to work schedule such as night shift, overtime, and extended work, as well as mental and psychological health indices through a survey questionnaire.

**Results** The study showed that work schedule, work load and occurrence of mental health symptoms are associated with night schedule. The crude odds ratio for the association between shift schedule and frequency of occurrence of mental health symptoms is 2.13 (0.77–5.81). This means that without adjusting for confounders, those who work in the evening are 2.13 times more likely to have frequent occurrence of mental health symptoms as compared to those who work in the morning. Specifically, among females, those who work at night are 2.97 times more likely to have frequent occurrences of mental health symptoms compared to those who work in the morning. Those who are frequently exposed to occupational hazards are 5.78 (1.17–28.71) times more likely to have frequent mental health symptoms as compared to those who are not. The evidence for this association is strong.

**Conclusion** The study has shown that among Filipino women factory workers, nightshift work is associated with mental health symptoms.

**RF-182** ADOLESCENT TRAINEES WITH LEARNING DISABILITIES ON OCCUPATIONAL HEALTH AND SAFETY: PERCEPTION OF RISKS AND GENDER DIFFERENCES

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**Introduction** Adolescents with learning disabilities are vulnerable in terms of occupational health and safety (OHS). The Quebec Work-Oriented Training Path (WOTP) prepares them for the job market by offering pre-employment internships. Those are often typically feminine or masculine, and attract students according to their gender stereotypes. This segregation implies different OHS risks for women or men, who have chosen different environments. Considering this complex context, a research team is developing digital tools to improve the OHS management in the WOTP.

**Objectives** The first step is to identify what students currently understand about OHS, the risks present in their internships, and how gender influence these elements.