

company), two groups were formed: one for low and one for higher high exposure. Thirteen neuropsychological tests evaluated cognitive, motor, and four evaluated affective aspects.

**Results** Means were for: age 35(9.14) years; time working at the company 8(8.6) years. In the multiple linear regression models decreased function was confirmed only for two tests: trail-making A ( $R^2 = 12.3\%$ ) and Pursuit aiming II ( $R^2 = 19.5\%$ ). Age contributed to this and higher education level improved performance.

**Conclusions** Slight alterations were observed in this population exposed to low OS concentrations. However, it is necessary to improve cumulative exposure measurement and identify the best, most sensitive neuropsychological tests.

#### 145 RELATIONSHIP BETWEEN WORKING CONDITION AND HEALTH-RELATED QUALITY OF LIFE AMONG KOREAN SCHOOL COOKS FOR LUNCH SERVICES

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**Objectives** This paper investigates the health-related quality of life (HQOL) among Korean school cooks for lunch services, especially focusing on the relationship between working conditions and their physical and mental HQOL.

**Methods** A cross-sectional study of 1,397 school cooks in one province was carried out, using a mail survey from June to October 2012. Working conditions and HQOL were determined through structured self reported questionnaires.

To evaluate working conditions, subjective labour intensity was investigated using Borg scale, and the numbers of both daily working hours and meals assigned per cook were questioned. HQOL was determined by applying 'Korean SF-8.'

To evaluate the degree of association between working conditions and HQOL, odds ratios were estimated after adjusting for demographic factors, such as age, education, chronic disease, exercise and drinking habits by logistic regression.

**Results** All of respondents were female, and the mean age was 47.8 (S. D = 5.36).

School cooks assigned more than 120 meals showed statistically significantly lower HQOL scores both in physical (OR = 1.48, 95% CI = 1.03–2.13) and mental (OR = 1.47, 95% CI = 1.03–2.10) criteria than those who were assigned less than 90.

Workers who responded that 'My work is hard' ( $13 \leq \text{Borg scale} \leq 16$ ) or 'My work is very hard' ( $17 \leq \text{Borg scale} \leq 20$ ) have significantly lower physical (OR = 3.47, 95% CI = 2.47–4.86) and mental (OR = 1.88, 95% CI = 1.36–2.59) HQOL scores than those who did not ( $6 \leq \text{Borg scale} \leq 12$ ).

The number of daily working hours was not significantly related to physical and mental HQOL scores.

**Conclusions** The degree of subjective labour intensity and the number of meals assigned per cook were related to the physical and mental HQOL of school cooks for lunch services.

Since cooks assigned more than 120 meals have significantly lower physical and mental HQOL scores, the number of lunch meals assigned per cook should be reduced.

#### 146 NIGHT SHIFT WORK AND HEALTH STATUS OF WORKERS EMPLOYED IN INDUSTRIAL PLANTS. PRELIMINARY RESULTS

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**Objective** Night shift work has been linked to a higher incidence of some chronic diseases such as gastrointestinal or cardiovascular diseases. This is the first study assessing the prevalence of selected diseases and symptoms among middle-aged Polish night shift workers.

**Methods** We conducted a cross-sectional study of 605 blue collar workers in plants operating based on a shift system in Łódź, Poland. The study included 434 night shifts workers and 171 day-only workers (369 men and 236 women), aged 35–65. The employees coming to a periodic health examination to occupational physicians were invited to participate in the study. The data were collected via a self-administered questionnaire based on the "Standard Shiftwork Index". Crude frequencies of occurrence of particular diseases and symptoms were calculated.

**Results** The mean age of the night shift workers and the day workers were similar, i.e. 47.6 and 46.6 years, respectively ( $p = 0.13$ ). Hypertension (14.7%), high cholesterol/hypercholesterolemia (10.9%) and chronic back pain (10.9%) were the most common diseases in this population. The prevalence of hypertension (14.3% among the night shift workers) and gastric ulcer (6.0%) was slightly higher than in the general population in Poland in a similar age group (hypertension ~ 12% and gastric ulcer ~ 4%). The prevalence of irritable bowel syndrome (IBS) (1.2% among the night shift workers), coronary heart disease (CHD) (1.2%) and high cholesterol (9.9%) were slightly lower among the industrial workers compared to the general population in Poland (IBS ~ 13%, CHD ~ 5% and high cholesterol ~ 60%).

**Conclusions** Our study suggest some associations among Polish workers for the diseases potentially linked to night shift work, however further analyses are necessary (with adjustment for important confounders) to confirm these preliminary findings.

#### 147 DESCRIPTION OF WORK ACCIDENTS IN SERIOUS CONDITION PARANÁ - SOUTHERN BRAZIL

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**Objective** Characterise serious occupational accidents occurred in the state of Paraná between 2007 and 2010.

**Methods** This is a descriptive epidemiological study design, cross-sectional and retrospective type, which covered the area of the state of Paraná, southern Brazil. Data source was the Sistema de Informação de Agravos de Notificação (Brazilian Case Registry Database). The inclusion criterion was being a worker aged 16 to 65 years. We have selected 24 variables and the data analysis followed descriptive statistics.

**Results** Between 2007 and 2010, were 4354 notifications, with an increase in records number as the years progressed. Regarding to the workers profile, 88.36% were male, predominantly Caucasian (69.66%), 21.52% finished secondary school, and 17.16% were between 26 and 30 years. Most affected occupations were among workers in mining industry and construction (13.85%), production of consumer goods and industrial services (13.37%) and services workers, safety and security, selling at stores (11.97%). Regarding to work situation, 70.88% of workers had a formal contract, however, the CAT (employment