

**Results** Occupational stress was extremely high; the average length of time working without rest was 18.4 hours. 57% responded that their personal safety was severely at risk, and 49% felt at severe risk of losing their life. 24% (17% of fire-fighters and 44% of police) reported at least one acute stress related symptom following the fire, while 10% (6% of fire-fighters and 21% of police) continue to have PTSD 1 year following the fire. A strong inverse correlation between level of training, years of experience, and availability appropriate protective equipment, baseline health status exists with psychological outcomes. There was a strong positive correlation between availability of occupational health services, proximity to fire, risk perception with psychological outcomes.

**Conclusion** First responders were exposed to significant occupational stressors during the Carmel fire. These exposures and organisational factors increased the odds of acute stress disorder and PTSD. Further research is needed on the residual mental health effects among emergency responders from occupational stressors, and efficacy of preventative policies.

### 591 PREVALENCE OF MENTAL ILLNESS AMONG METALWORKERS IN SÃO PAULO, BRAZIL

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**Introduction** Mental health status is related to work context and content. There are many stressful conditions at work associated to negative effects on workers' health. According to the World Health Organisation (WHO), common mental disorders affect more than 30% of employed workers. Mental and behavioural disorders are the third main cause of social security benefits payment in Brazil. This study aims to raise the prevalence of mental illness among employees of two metallurgical companies and differences between them.

**Methods** A descriptive cross-sectional study was carried out in two companies located in São Paulo State, Brazil, in 2016. Participants were 440 workers – 146 from company A and 294 from company B. They answered a sociodemographic questionnaire and the WHO's Self-Report Questionnaire with 20 questions about mental symptoms (SRQ-20). Cases were participants with seven or more positive answers in SRQ-20.

**Results** Company A produces wires for the construction industry and B is a metallurgical producer of steel cables for the oil and mining industry. The prevalence of mental illness among the participants was 15.17% (company A) and 12.28% (company B). There was a higher percentage of mental symptoms among company A women (66%) than company B (26.6%). About education, participants with more than 12 school years presented more mental illness in company B (36.8%) than company A (19.5%). In general, 'to feel nervous, tense, worried', and 'sleep badly' were most common positive answers in both groups.

**Discussion** Mental illness prevalence was similar among both groups and results were similar to other studies. Company A women and Company B high education workers would be at higher risk for mental problems. It's necessary to provide medical and psychological support to cases and preventive actions should be offered to promoting health among employees of those companies.

### 609 ASSOCIATION BETWEEN LONG WORKING HOUR AND JOB STRESS AND DEPRESSION AMONG EMPLOYEES AT GRID COMPANY IN CHINA

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**Objective** This study was to understand the current situation of long working hours and identify the association of long working hours and job stress and depression among workers in state grid company.

**Methods** The project was done using the cross-sectional survey. All questionnaires were completed by self-administered with informal consent. Employees whose weekly working hours was 40 or less were set as the reference group, and the others were categorised with a gradient of 10 hours for grouping; the PHQ-9 scale used to assess depression, the job demand-control (JDC) Model used to evaluate job stress. And SPSS software to analyse data, multivariate Logistic analysis were performed to identify the association between long working hours and job stress, depression.

Results there were 1069 staff attend this survey and 63.0% employee with standard working hour which they work for 40 hours a week. And 18.8% employees with 41–50 hours a week, and 12.9% workers with 51–60 hours a week, only 5.2% employees worked over 60 hours a week. There were 63.2% workers with job stress by job demand control ratio over 1.0% and 66.9% employee self-reported with depression by PHQ-9 over 5. The association between increasing weekly working hours and occupational stress and depression was statistically significant. Compared to the reference group, for those who worked more than 60 hours per week, the odds ratio of depression was 3.25 (95% CI: 1.43 to 7.40) times increased; the odds ratio of occupational stress was 4.34 (95% CI: 1.19 to 15.92) times increased; the odds ratio of moderate-severe and severe depressive symptoms was 11.18 (95% CI: 1.21 to 115.05) times increased.

**Conclusions** Long working hours can significantly increase the risk of job stress and depressive symptoms among the national grid company employees. When their weekly working hours exceeds 60, long working hours will be the independent risk factor for both job stress and depression.

### 620 EVOLUTION OF A YOUNG WORKER TRAINING CURRICULUM: TAKING SAFETY FROM THE CLASSROOM TO THE BREAK ROOM

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**Introduction** Young Workers (14–24) represent a valuable aspect of the workforce. However, limited work experience and developmental factors predispose young workers to an increased risk of occupational injuries compared to their older counterparts. Although traditional safety training has targeted the identification of hazards (e.g., chemical exposures, physically demanding work), it typically does not address work environment/organisational factors that can also impact health