

P-477 EXPOSURE TO SARS-COV-2 AT WORK AND CORONAVIRUS DISEASE (COVID-19): SURVEY WITH WORKERS

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Introduction With COVID-19 world dissemination, WHO declared a Public Health Emergency of International Relevance on March, 11th, 2020. In the face of absent effective treatment or vaccine for all, workers unable to comply with social distance were subjected to company health and security management policies. This study explored the knowledge on workplace safety measures.

Methods 2002 workers had accessed to self-reporting forms from December/2020 through March/2021. From these, over a thousand answered some of the questions, while 687 had filled most of the forms on the RedCap platform.

Results From 687 workers distributed in 22 Units of Federation, the greater representation were SP (33%), RJ (30%) RS (19%) states. The majority belonging to health (22%), post office (11,3%), services (9,5%), education (9%) and extractive industry (9%). Participants were 54% women and 59% white. Among them, 24% were confirmed as positive for COVID-19. More than half (53%) believed contamination occurred at or during commute to work and 18% were undetermined. Regarding capacitation promoted by employers, 63% reported it as non-present or insufficient. The majority (70%) considered the collective space to address preventive measures as absent and/or insufficient, as well sanitary barriers use in employee and costumer distancing (2 m). 55% stated individual protection equipment were not supplied regularly and sufficiently since the beginning of pandemic.

Conclusion The findings in this study revealed deficiencies in contingency plans adopted by companies and workplace safety measures policy as well. Furthermore, inadequate protection equipment supply during COVID-19 pandemic was also reported. This situation increased insecurity and exposure risk to SARS-CoV-2 in workers, reducing preventive measures effectiveness to mitigate pandemic, turning workplace in an important locus for virus spread. Financial support: Vice-Presidency of Environment, Attention and Health Promotion of the Oswaldo Cruz Foundation and Public Ministry of Labor - 4th Region.

P-478 ASSOCIATION BETWEEN WORKPLACE BULLYING AND NECK PAIN: A STUDY WITH CIVIL SERVANTS FROM A MIDDLE-INCOME COUNTRY

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Introduction Workplace bullying is associated with several health outcomes, including musculoskeletal pain. Most studies on the subject are from high-income countries. Studies on the relationship between bullying and neck pain are scarce, and no studies were found in low- and middle-income countries.

Objectives Therefore, we aimed to examine the association between workplace bullying and neck pain among civil servants from a state in southern Brazil.

Methods This is a cross-sectional study with 1,615 judicial civil servants from a Brazilian state. Workplace bullying was measured by the Negative Acts Questionnaire (NAQ-r) and Neck Pain by the Nordic Questionnaire for Musculoskeletal Symptoms (NQMS). Logistic regression was used to estimate prevalence odds ratios (POR) and test associations of interest.

Results The prevalence of workplace bullying was 17.8%. The overall prevalence of neck in the last 7 days was 45.3%. After controlling for sex and age, workplace bullying was strongly associated with neck pain (POR=1.74; 95% CI: 1.34–2.25). The association remained significant in the full model, after adjustment for sex, age, skin colour, body mass index, educational level, job type, ergonomic factors and physical inactivity. The odds of neck pain in the last 7 days were 52.0% higher among bullied workers (POR= 1.52; 95% CI: 1.15–2.00), compared to non-bullied employees.

Conclusions Workplace bullying may increase the risk of neck pain in civil servants, particularly in middle-income countries like Brazil. Etiological hypotheses were raised. Interventions to minimize the burden of neck pain may focus on psychosocial factors at work, particularly bullying. Further longitudinal studies should also evaluate this association, investigating possible causal paths, mechanisms and mediation.

P-479 COVID-19: FACTORS ASSOCIATED WITH THE DEATH OF HEALTH PROFESSIONALS IN A STATE IN THE BRAZILIAN AMAZON

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Introduction Amapá is a state in the Brazilian Amazon, located on the left bank of the Amazon River, which in 2020 had a population of 860,000 inhabitants. It is one of the Brazilian states with the greatest socioeconomic vulnerability and with low medical and hospital density. In the context of COVID-19, the health services of the State presented a high burden, with the lack of personal protective equipment for health professionals and many absences from work due to illness.

Objective To analyze factors associated with the death of health professionals by COVID-19 in the State of Amapá.

Methods Case-control study that used official data produced and made publicly available by the State Department of Health of Amapá. The events of interest were deaths of health professionals, residing in the State, by COVID-19 and the controls were individuals cured of the disease. Active cases of the disease were excluded from the analysis. The analyzed data were recorded between March 2020 and January 2021. . Logistic regression was used for analysis, with a significance level of p-value < 0.05.

Results Data from 1,258 professionals were included in the analysis. Of this total, 20 had an outcome of death and 1,238 had a cured outcome of COVID-19. The majority were female (67.7%), race/brown (66.9%), without comorbidity (86.6%), living in the Metropolitan Region of Macapá (capital of the State) (56.7%). Factors associated with death were: age \geq 65 years (odds ratio (OR) 10.43; 95% confidence interval (CI) 2.78–39.11), presence of comorbidity (OR 4.52; 95% CI 1.74–11.74) and residence in the region metropolitan area of Macapá (OR 4.37; 95% CI 1.25–15.29). The model was adjusted by the gender variable.

Conclusion Protective actions for workers most susceptible to death, such as moving to activities with less exposure and/or teleworking, are necessary.

P-480 **CANCER MORTALITY IN MALE WORKERS EMPLOYED IN THE METALLURGICAL SHOP OF AN ENTERPRISE FOR THE BLISTER COPPER PRODUCTION**

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Introduction Currently, in Russia, malignant tumours (MT) are the second leading cause of the population mortality. Long-term, regular and intense occupational contact with exogenous chemical or physical carcinogens can lead to an occupational cancer. Occupational cancer risk assessment is required.

Objectives Revealing the influence of carcinogenic factors of the working environment on the cancer mortality rate among workmen in the metallurgical shop of an enterprise for blister copper production.

Methods A retrospective epidemiological study of cancer mortality among workmen and the population living in the area where the studied copper-smelting plant is located, for 20 years (1995–2014) was carried out. Intensive rates were calculated per 100,000 (age-specific and general, age-standardized). The so-called ‘expected’ mortality was calculated, which is the mortality of the ‘other’ population, standardized by age (in the workmen was taken as the standard). The excess of the observed cancer mortality rates determined the degree of additional risk associated with work, and made it possible to roughly estimate the intensity of the influence of production carcinogenic factors. The confidence intervals were calculated at $p < 0.05$.

Results The intensive cancer mortality rate in workmen for lung cancer was 495.87 ± 201.94 versus 120.51 ± 19.04 (4.1, $p < 0.05$). Significantly higher in the 50–59 age group for all tumours: 1239.67 ± 318.09 versus 307.3 ± 30.38 (4.0, $p < 0.05$). In the same group, the respiratory cancer mortality was significantly higher by 5.5 ($p < 0.05$). The ‘expected’ cancer mortality rates in workmen had statistically significant differences in all tumour localizations are 2.3 times, and for the respiratory cancers by 4.0 times, incl. on the trachea, bronchi and lungs tumours by 3.5 times ($p < 0.05$), as well as the ratio of observed cancer mortality rates to ‘expected’ in workmen.

Conclusion Intensive and standardized cancer mortality rates for blister copper workmen are significantly higher than control, indicating an occupational cancer hazard with the highest levels according to the highest carcinogenic load (respiratory and digestive organs).

P-482 **THE ROLE OF SELF-REPORTED STRESSORS IN RECOVERY FROM LONG-TERM EXHAUSTION: A LONGITUDINAL STUDY**

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Introduction Stress-related exhaustion is characterized by both physical and mental symptoms of exhaustion and for many patients the prognosis seems to be long lasting. Little is known what factors may influence such long-term prognosis. One plausible explanation could be differences in exposure to certain stressors, or vulnerability related to previous life events.

Objectives The purpose of this study was to examine if work and private related stress-exposure, as well as adverse childhood experiences differ between patients that are still exhausted at a long-term follow-up, with a group of patients that have recovered from their exhaustion.

Methods Patient records from 150 patients diagnosed with Exhaustion Disorder (ED) at a specialist outpatient stress clinic was analysed regarding work- and private-related stressors, and adverse childhood experiences. The first part of data analysis consisted of a qualitative text analysis, creating a coding scheme. Frequency statistics regarding each stressor was calculated to compare the two groups. At the 7–10 year follow-up, 34% of the patients still fulfilled the criteria for ED, compared to 66% that had recovered.

Results Compared to the patients that had recovered, significantly more patients with long-term exhaustion, reported managerial responsibilities (8% versus 0%) and caregiver stress related to children (24% versus 6%) at follow-up. Significantly more recovered patients reported work related quantitative demands (73% versus 53%) and managerial responsibilities (14% versus 2%) at first visit, and experienced more caregiver stress related to parents at follow-up (6% versus 0%). There were no differences regarding adverse childhood experiences.

Conclusions The main conclusion is that neither adverse childhood experiences nor any of the stressors at the onset of exhaustion seem to be associated with a lack of recovery. However, stressors at follow-up relating to having responsibility for other people, such as managerial responsibilities or caring for a child with a chronic disease or psychiatric disorder, may be associated with prolonged recovery.

P-489 **SYSTEMATIC REVIEW OF INTERVENTIONS TO MITIGATE PRECARIOUS EMPLOYMENT AND ITS EFFECTS ON THE HEALTH AND WELL-BEING OF INDIVIDUALS AND COMMUNITIES**

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Objectives The review is part of the Sweden-based research programme PWR, which consists of early-career and senior researchers in public health, occupational health as well as social sciences from a range of European countries, the United States, Canada and Chile. PWR started in 2019. The purpose of our review is to identify implemented initiatives that aim to or have the potential to eliminate, reduce or mitigate workers’ exposure to precarious employment and/or its effects on the physical and mental health, health equity, safety and well-being of workers.

Methods We use the PRISMA guideline for systematic reviews, including its extension for equity-focused reviews. Our comprehensive search covers a combination of social, public health, medical, and public policy databases along with