

P-468 **DEMOGRAPHIC AND OCCUPATIONAL FACTORS ASSOCIATED TO MENTAL SUFFERING AMONG HEALTHCARE WORKERS IN BRAZIL DURING COVID-19 PANDEMIC**

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Introduction COVID-19 pandemic changed healthcare routines and increased occupational stress among workers.

Objectives To analyze the factors associated with mental suffering among frontline healthcare workers (HCW).

Methods National cross-sectional study carried out in May-June 2020 in Brazil. Participants were invited through social media to fill a questionnaire about sociodemographic, occupational, and clinical data. The Swedish Demand-Control-Support Questionnaire was applied to characterize the work psychosocial context. The World Health Organization's Self-Reporting Questionnaire (SRQ-20) was used to evaluate the mental suffering. A multiple logistic regression was performed to analyze factors associated to the outcome.

Results Data were obtained from 437 workers; their average age was 38.4 years (sd±10.0). Most of them were from nursing team (65.0%), female (71.0%) and working in public services (70.1%). Job strain was reported from 23.8% and 52.9% indicated low social support. The overall prevalence of mental suffering was 61.6% and associated factors were: : females (odds ratio - OR 1.93; 95% confidence interval - 95% CI 1.22–3.07), age < 40 years (OR 1.64; 95% CI 1.07–2.52), weekly workload ≥ 60 hours (OR 1.87; 95% CI 1.15–3.11), job strain (OR 2.45; 95% CI 1.41–4.40) and low social support at work (OR 3.47; 95% CI 2.26–5.38).

Conclusion Individual characteristics and occupational aspects are associated to the suffering in this Brazilian sample of healthcare workers. Policies to improve occupational psychosocial conditions are needed in order to reduce negative mental outcomes, in special during COVID-19 pandemic.

P-470 **ASSOCIATION BETWEEN OCCUPATIONAL STRESS AND DEPRESSIVE SYMPTOMS AMONG HEALTHCARE WORKERS IN NORTH-EASTERN BRAZIL: A PRE-PANDEMIC SCENARIO**

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Introduction Healthcare workers (HCW) have been reported to be at high risk for several mental health problems due to occupational stress. The outbreak of COVID-19 pandemic in early 2020 raised new concerns about the mental health of HCW workers, which may be affected by new demands and the organization of work. Studies comparing pre- and post-pandemic work environments in health settings are necessary to evaluate the effect of the pandemic on HCW's mental health.

Objectives We aimed to investigate the association between occupation stress and depressive symptoms among HCW in a city in northeastern Brazil at the end of 2019, before the COVID-19 outbreak.

Methods This is a cross-sectional study with a representative sample of 355 HCW from a city in northeastern Brazil. Occupational stress, based on the demand-control model, was

measured by the Job Content Questionnaire (JCQ), and depressive symptoms were evaluated by the Patient Health Questionnaire (PHQ-9). Poisson regressions were used to estimate prevalence ratios (PR) and to analyse associations of interest.

Results The prevalence of depressive symptoms (PHQ-9 ≥ 9) was 22.4%. Occupational stress was strongly associated with the outcome. In the crude analyses, the prevalence of depression symptoms among workers exposed to high job strain was 3.54 (95% CI: 1.60–6.90) times that of those with low strain. After adjustment for sex, age and income, the prevalence ratio remained highly significant (PR=3.34; 95%CI: 1.80–6.18).

Conclusions Occupational stress was a strong risk factor for depressive symptoms in a pre-pandemic scenario. The prevalence of depressive symptoms is expected to increase during the pandemic. Assessing occupational stress and depression during follow-up over the next few years may elucidate the impact of the pandemic on work processes and on HCW's mental health.

P-471 **RISK OF ENVENOMING BY POISONOUS ANIMALS IN WORKERS FROM BRAZIL (2007–2019)**

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Introduction Envenomation by poisonous animals is an important public health issue in the world. The relationship between this health issue and occupation is little investigated in Brazil, and is a dimension of the accident that require more attention.

Objectives Estimate the incidence rate of poisonous animal's accidents for each occupational group and region of Brazil, between 2007–2019.

Methods Snakebite, spider and scorpion stings cases reported by Brazilian regions (2007–2019), aged 18–65 years, were collected from the Notification of Injury Information System (Sinan). The occupation identification of workers followed Brazilian Classification of Occupations (CBO). Worker population data were obtained from Brazilian Institute of Geography and Statistics (IBGE). Analyses were conducted by Stata 16.

Results In this period, 1,523,271 accidents by poisonous animals were reported, which 49.2% were caused by scorpions, 18.4% by snakes, 17.6% by spiders and 14.8% by other etiological agents. In Brazil, the cumulative incidence for snakebite was 9.1/100,000 workers and higher in the North (36.1/100,000 workers). For spider stings, the national incidence was 7.9/100,000 workers, with emphasis on the South (32.9/100,000 workers). The scorpion stings incidence was 16.1/100,000 workers in Brazil, and it was higher in the Northeast (24.6/100,000 workers). Occupation was reported in 480,614 (31.6%) cases and agriculture workers were the most affected group (51.8%). They presented the highest incidence rates among Brazil regions for all three envenomations (snakebite=57.9/100,000 workers; spider stings=29.2/100,000 workers; scorpion stings=52.3/100,000 workers).

Conclusion Rural work is considered a risk factor for envenomation by poisonous animals. The rural area is the major natural habitat for many snake species. In addition, food storage sites are attractive to prey for snakes, spiders and scorpions, such as mice and cockroaches. Knowledge about those risks

can lead to a collective and individual accident prevention policy, with adequate personal protective equipment and work environment.

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THE INFLUENCE OF SEX ON THE ASSOCIATION BETWEEN CHIKUNGUNYA INFECTION AND DEPRESSIVE SYMPTOMS IN HEALTHCARE WORKERS

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Introduction Chikungunya viruses are endemic in tropical countries like Brazil. Healthcare workers (HCW) are at risk of infection in endemic areas. Besides causing chronic joint pain, the infection is hypothesised to be associated with mental health problems such as depression. However, no studies investigated this association and its relationship with sex are available.

Objectives To evaluate the association between previous infection by Chikungunya and depressive symptoms in HCW, investigating the role of sex in this relationship.

Methods This is a cross-sectional study with a representative sample (n = 343) of primary care and medium complexity HCW in the municipality of Santo Antônio de Jesus, Bahia, Brazil, in 2019. The DPP ZDC IgM/IgG rapid test was used to investigate recent infection (measured by IgM) or previous infection (by IgG) by the Chikungunya virus. The Patient Health Questionnaire (PHQ-9) was used to measure depressive symptoms. Poisson regression with robust variance estimation was used to estimate prevalence ratios (PR) and adjust for confounders. Stratified analyses by sex were performed.

Results The prevalence of recent or old Chikungunya infection was 8.9%, while the prevalence of depressive symptoms was 22.4%. Chikungunya infection was associated with a 2.05 (95%CI: 1.31–3.22) times higher prevalence of depressive symptoms in the bivariate analysis. After adjusting for sex, age, education, skin color and sequelae of chronic pain, the association remained strongly positive (PR = 1.74 (95%CI: 1.04–2.90)). Effect modification by sex was identified. The PR in men was 6.00 (95%CI: 1.98–18.16), while the in women was PR = 2.11 (95%CI: 1.29–3.44) in women.

Conclusions Findings reinforce the hypothesis that arboviruses, particularly Chikungunya, are independently associated with depression. Physiological viral action, as well as emotional, behavioural and psychosocial factors may partially justify these findings. Sex differences are notably high and must be further investigated, in order to understand possible mechanisms related to this association.

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SOCIOECONOMIC AND CLINICAL FACTORS ASSOCIATED WITH DEATH AND HOSPITALIZATION OF HEALTH PROFESSIONALS AFFECTED BY COVID-19 IN BRAZIL, 2020

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Introduction The new coronavirus pandemic affected the lives of millions of people across the planet in 2020. Brazil, in just

a few months, became the epicenter of the pandemic in Latin America. This, due to the absence of vaccines and the ineffective isolation measures adopted. In this context, health professionals stand out as a group with greater exposure and risk of being affected by COVID-19.

Objective To analyze clinical and sociodemographic characteristics associated with death and hospitalization of health professionals due to COVID-19, in addition to calculating the incidence rates per occupation.

Methods We conducted a cross-sectional observational study that used secondary data from the State of Espírito Santo Health Department. COVID-19 cases in healthcare professionals were recorded between February 27 and August 17, 2020 in Espírito Santo, Brazil. Cases with a lack of information were excluded. To compare the sociodemographic and clinical characteristics of health professionals with the clinical outcomes (cure or death) and the need for hospitalization, a bivariate analysis was performed using the X^2 tests of independence or Fisher's exact test. Data analysis was performed using the SPSS 20.0 software.

Results 75.6% (n = 9,191) of the cases were female; the general lethality rate was 0.27% and the general hospitalization rate was 1.0%. The clinical outcome of death and the occurrence of hospitalization were associated with: male gender, age greater than or equal to 50 years, higher education, fever, difficulty breathing, cough, cardiac comorbidity, diabetes and obesity (p <0.05). Only the occurrence of hospitalization was associated with: case reported in the metropolitan region of Vitória-ES, runny nose, sore throat, headache and renal comorbidity (p <0.05). The occupation with the highest incidence rate was nurses (16,053 cases/100,000 nurses).

Conclusion The study demonstrated a high frequency of cases in females, low general lethality and high incidence in nurses.

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TRENDS IN TIME SERIES OF COMMUTING ACCIDENTS OF THE MOST AFFECTED ECONOMIC ACTIVITIES IN BRAZIL, 2008 TO 2017

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Introduction Accidents at work are an important public health problem in Brazil. Among them, commuting accidents stand out, which can be defined as a type of work accident suffered on the way from home/place from meal to work or vice versa. Its consequences interfere in the national economy and generate suffering for the victim and his family.

Objectives To evaluate the trends of time series (2008–2017) of commuting accidents in the five most affected economic activities and to identify the epidemiological profile of the injured in Brazil.

Method This study is based on official Social Security data. The five most affected economic activities were determined by means of simple sums of absolute numbers. Time series trends were performed using simple time regression models. The epidemiological profile was determined based on the variables of sex and age. The regressions were performed with the SPSS 20.0 software, being considered significant, with reference to the F test, when p-value ≤ 0.05.

Results The most affected economic activities were Hospital Care.