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Social Disparities in Cardiometabolic Health in Czechia and Venezuela Using the Allostatic Load Model
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Background:
Subjects with lower socioeconomic status (SES) are exposed to higher levels of environmental stressors. The cumulative effects of chronic stressors on cardiometabolic health can be evaluated using the allostatic load (AL) score. Despite the accepted social gradient, clear relationships between social determinants and cardiometabolic health in populations with different sociocultural contexts have been rarely explored. This study aimed to compare the relationships of social determinants with AL in different socioeconomic contexts: unstable Venezuela (VE) and stable Czechia (CZ).

Methods:
25-64 years old subjects from two cross-sectional population-based samples from CZ (2013-2014, n = 1579, 56% females) and VE (2014-2017, n = 1652, 70% females). The AL score
is, an increase of 20'966 cases between waves. Based on the cases was 2'355 after the 1st wave and 23'321 after the 2nd, that is, a 11% increase between waves. The cumulative number of SARS-CoV-2 diagnosed and 19% (IC:15%-23%) had anti-SARS-CoV-2 IgG after the start of the vaccination campaign. To assess the scale of surveillance bias, we assessed the burden of COVID-19 of the adult population after the 1st (Jul-Oct 2020) and the 2nd wave of the pandemic (Nov 2020-Feb 2021), before the number of diagnosed cases (positive PCR or antigen tests). Between 2 waves comparing seroprevalence with the number of infections are however problematic since it is influenced by testing severity is however problematic since it is influenced by testing modality. Indeed, differences in the frequency of infections are likely reflecting differences in social environment between the countries.

Results:
In CZ, men and women with low education and women with low income were more likely to have higher score of AL compared to those with high education and income (OR 1.45, 2.29 and 1.69). In VE, women with low education and low SES were more likely to have higher AL (OR 1.47 and 1.51), while men with low education and low SES were less likely to have higher AL (OR 0.64 and 0.61), compared to those with high education and high SES. Independently of age, sex, and socioeconomic characteristics, Venezuelans were more likely to have higher AL than Czechs.

Conclusions:
Associations of social position indices and cardiometabolic health (proxied by AL) differed between CZ and VE, most likely reflecting differences in social environment between the countries.

Key messages:
- Social gradients in cardiometabolic health differ among social environments.
- Social gradients in cardiometabolic health differ among sexes.