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Geographical variations in the prevalence of hypertension in France: Cross-sectional analysis of the CONSTANCES cohort

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ABSTRACT

AIMS - While international variations in the prevalence of hypertension are well described, less is known about intra-national disparities and their determinants. We wanted to describe the variations in hypertension prevalence within France and to determine how much lifestyle and socioeconomic factors contributed to explain these regional variations. **METHODS** - Participants (62,247 French adults aged 18 to 69 years) were recruited in the 16 centres of the CONSTANCES study between 2012 and 2015. Hypertension was defined as blood pressure higher than 140/90 mmHg and/or taking antihypertensive medications. The contribution of lifestyle and socioeconomic factors to hypertension prevalence variations among centres was examined using sequential hierarchical logistic models. **RESULTS** - Hypertension prevalence was 37.3% (95% confidence interval (CI) = 36.6-38.0) in men and 23.2% (95% CI = 22.7-23.8) in women. Hypertension prevalence rates varied by almost two-fold among centres (1.9 in men, 1.6 in women) with the highest prevalence in the north and the east of France. Body mass index was strongly associated with hypertension in women (odds ratio (OR)1-unit increase = 1.11 (95% CI = 1.11-1.12)) and was the highest contributor to between-centre variations (27% in women), followed by socioeconomic characteristics (e.g. OR_{high} versus low education = 0.85 (95% CI = 0.83-0.87), contributing to 14% of variations in women). Together, family history of hypertension, body mass index, education, occupation and residential area socioeconomic level explained about 30% and 40% of between-centre variations in men and women, respectively. **CONCLUSION** - Hypertension prevalence greatly varies among French regions and this is partly explained by known lifestyle and socioeconomic factors. Nevertheless, these variations and all the hypertension determinants have not been fully deciphered yet.

KEYWORDS: Hypertension; Cardiovascular disease risk factors; Disparities; Epidemiology; Geographical variations

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