

**Key messages:**

- Among Roma women, the prevalence of hidden hypertension and, consequently, of elevated blood pressure increased significantly over the study period.
- Stopping the increasing trend of MetS would require interventions which focus on the increasing prevalence of central obesity and hypertension in the Roma population.

## Changes in the prevalence of MetS and its components between 2011 and 2018 in the Roma Population

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### Background:

Metabolic syndrome (MetS) is a worldwide problem with severe health consequences, which are further exacerbated by the current COVID-19 pandemic. In this study, we examine the changes in the prevalence of MetS and its components among the Roma (one of the most vulnerable ethnic group in Europe) in two disadvantaged counties of North-eastern Hungary in the period between 2011 and 2018.

### Methods:

Two health examination surveys were performed in the Hungarian Roma population aged 20-64 years in 2011 (n = 458) and in 2018 (n = 374). The data from these surveys were used to examine how the prevalence of MetS and its components and the prevalence of relevant preventive medication changed during the study period.

### Results:

The increase in the prevalence of MetS itself in the whole Roma population was not found to be significant in the period examined (although it increased from 40.0% up to 46.0%,  $p = 0.080$ ); however, there was a significant increase in the prevalence of central obesity (from 62.7% to 73.3%,  $p = 0.001$ ) and raised blood pressure (BP) or treated hypertension (from 45.2% to 54.5%,  $p = 0.007$ ). These changes were mainly observed in the younger age groups, so the risk for MetS increased significantly in the 20-34 (OR = 1.10,  $p = 0.038$ ) and 35-49 (OR = 1.07,  $p = 0.048$ ) year-old groups in the 2018 study population compared to the 2011 one. A favourable non-significant decrease was observed in the prevalence of raised fasting plasma glucose concentration (from 29.0% to 24.1%,  $p = 0.107$ ) and reduced HDL-C levels (from 60.3% to 55.6%) over the study period.

### Conclusions:

The increasing prevalence of hidden hypertension and, consequently, the number of untreated individuals with raised BP (from 29.6% to 43.5%,  $p = 0.014$ ) among women is quite alarming; therefore, a targeted public health strategy and targeted interventions are desperately needed to prevent further worsening of the current situation.