

BIO-MEDICAL ANTHROPOLOGICAL PERSPECTIVE ON URBAN-RURAL AND SOCIOECONOMIC DISPARITIES IN EASTERN CROATIA

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Background: Cardiovascular diseases (CVDs) remain the leading cause of death in Croatia, accounting for 37% of all deaths, with a standardized mortality rate of 572.8/100,000, substantially exceeding the EU average of 367.6/100,000. The Osijek-Baranja region in eastern Croatia, characterized by both continental climate and significant urban-rural gradients, presents a particularly high burden of modifiable CVD risk factors. Bio-medical anthropological approaches offer a critical lens for examining how biological vulnerability intersects with socioeconomic, environmental, and lifestyle determinants of cardiovascular health at the population level.

Objective: To analyse the prevalence and distribution of cardiovascular risk factors, including hypertension, dyslipidaemia, obesity, and physical inactivity, across urban and rural populations in eastern Croatia, and to assess associations with socioeconomic deprivation indicators and anthropometric measurements.

Subjects and methods: A cross-sectional study was conducted in the Osijek-Baranja County, encompassing adult participants registered with general practice offices in both urban and rural settings. Anthropometric assessments (body mass index, waist circumference, waist-hip ratio) were performed alongside clinical measurements (blood pressure, fasting lipid profiles). Socioeconomic data were collected through structured questionnaires. Data were analysed using multivariate logistic regression to identify independent predictors of elevated cardiovascular risk.

Results: Rural participants demonstrated a significantly higher prevalence of arterial hypertension, increased BMI, elevated waist circumference and waist-hip ratio, and elevated LDL cholesterol compared to urban counterparts. Urban participants showed significantly greater rates of insufficient physical activity. Overall, more than 75% of participants exhibited at least two major modifiable cardiovascular risk factors, consistent with regional epidemiological patterns documented across continental Croatia.

Conclusions: The findings highlight the persistence of high cardiovascular risk factor burden in eastern Croatia, with pronounced urban-rural disparities mediated by both biological and socioeconomic factors. A targeted, community-based public health strategy, integrating bio-medical anthropological profiling into cardiovascular prevention programmes, is urgently needed for this high-risk region. These results underscore the value of integrating anthropometric and population-level biological data into cardiovascular health interventions.

Keywords: Cardiovascular risk factors; Bio-medical anthropology; Urban-rural disparities; Croatia; Population health.