Introduction: Low-income countries, particularly urban areas, are experiencing the double burden of malnutrition of malnutrition and cardio-metabolic risk factors (CMRF). This study was carried out in order to document it among the adults and according sociodemographic parameters.

Method: A population-based cross-sectional observational study was carried out. We first randomly selected 330 households stratified by tertile of the income levels proxy in low, middle and high group at the northern district of Ouagadougou, the capital city of Burkina Faso. In each income stratum, 110 individuals aged 25-60y and who had lived permanently in Ouagadougou for at least six months were randomly selected, followed with collection of anthropometric, socioeconomic and clinical data, and blood samples.

Results: The overall obesity/overweight prevalence was 24.2% and it was twice as high in women as in men (34.1% vs. 15.5% p<0.001). Hypertension, hyperglycaemia and low HDL prevalence were 21.9%, 22.3% and 30.0%, respectively, without gender difference. The prevalence of the metabolic syndrome (MetS) was 10.3%. Iron depletion and vitamin A deficiency affected 15.7% and 25.7%, of subjects respectively with higher rates in women. Coexistence of at least one nutritional deficiency and one CMRF was observed in 23.5% of subjects, and “this double burden” was significantly higher in women than in men (30.4% vs. 16.1%; p=0.008), and in the lower income group.

Conclusion: CMRF are becoming a leading nutritional problem in adults of Ouagadougou, while nutritional deficiencies persist. The double nutritional burden exacerbates health inequities and calls for action addressing both malnutrition and nutrition-related chronic diseases.