

ABSTRACT

Population growth, demographic transitions and urbanization in sub-Saharan Africa (SSA) will increase non-communicable disease (NCD) burden. We studied the association between neighborhood greenness and NCDs in a multi-country cross-sectional study. Among 1178 participants, in adjusted models, a 0.11 unit NDVI increase was associated with lower BMI (β : -1.01, 95% CI: -1.35, -0.67), and lower odds of overweight/obesity (aOR: 0.73, 95% CI: 0.62, 0.85), diabetes (aOR: 0.77, 95% CI: 0.62, 0.96), and having ≥ 3 allostatic load components compared to none (aOR: 0.66, 95% CI: 0.52, 0.85). Except for diabetes, these remained statistically significant after Bonferroni correction. We observed no association between NDVI and hypertension or cholesterol. Our findings are consistent with health benefits of neighborhood greenness reported in other countries, suggesting greening strategies could be considered as part of broader public health interventions for NCDs. Trial registration: ClinicalTrials.gov NCT02927249.

Keywords: Environmental epidemiology; Greenness; Non-communicable diseases; Obesity; Sub-saharan Africa; Vegetation.