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Trends of Hypertension Prevalence in Kenya

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Abstract
Aim: Hypertension prevalence in Kenya exhibits substantial variation across demographic and geographic groups, posing challenges for the development of universally effective interventions. This study aims to identify and analyse trends in hypertension prevalence disaggregated by age, sex, and county.
Method: We analysed hypertension prevalence trends among males and females aged 15–49 years using data from the 2022 Kenya Demographic and Health Survey. Counties were categorised according to the 47 administrative units defined by the Kenya National Bureau of Statistics, and age was stratified into three groups: 15–24, 25–34, and 35–49 years. To assess prevalence inequalities across these groups, we employed a log-binomial regression model.
Results: The risk of hypertension increases significantly with age. Compared to individuals aged 15–24 years, those aged 25–34 exhibit a 1.77-fold higher risk ($p = 0.000118$), while individuals aged 35–49 demonstrate a 5.67-fold increased risk ($p < 0.0001$). Females are at a significantly higher risk of hypertension compared to males, with a relative risk (RR) of 4.11 ($p = 0.000489$). High-risk counties include Nairobi, Kisumu, and Nakuru. In contrast, counties such as Wajir ($RR \approx 0.000004$, $p < 0.0001$), Nandi ($RR \approx 0.08$, $p = 0.003$), Elgeyo-Marakwet ($RR \approx 0.06$, $p = 0.015$), and Kirinyaga ($RR \approx 0.15$, $p = 0.019$) exhibit significantly lower risk levels. Conversely, females in Kirinyaga are at elevated risk ($RR \approx 3.64$, $p = 0.043$). Notably, hypertension risk among females tends to decline with age, particularly among those aged 35–49 years (risk change: -0.60, $p = 0.018$).
Conclusion: The findings highlight the need for targeted interventions for older adults and females, and call for further investigation into protective factors in low-risk counties to guide effective prevention strategies
Keywords: hypertension prevalence, trends, logbinomial model, disaggregated.

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