

Prevalence and Determinants of Chronic Non-Communicable Diseases among Prison Inmates in the City of Tete, Mozambique: A Cross-Sectional Study

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High rates of hypertension (36.90%) and diabetes mellitus (DM) (10.34%) were found among inmates in Tete, Mozambique. Family history was a strong risk factor for DM, and female inmates had a higher likelihood of having hypertension.

BACKGROUND

High health inequalities and non-communicable chronic diseases (NCDs) are prevalent in the prison population, particularly in Sub-Saharan African countries, posing significant implications for morbidity and mortality.

The study analyzed the prevalence and determinants of NCDs in prisoners in Tete, Mozambique, addressing a lack of prior research on these conditions in this population.

METHODS

A cross-sectional study was conducted. The study population included both male and female prisoners. DM was diagnosed according to the criteria of the International Expert Committee, while hypertension was identified through self-report.

Multivariate logistic regression was applied to evaluate the associations between potential risk factors (e.g., family history, gender) and the presence of NCDs.

The analysis provided adjusted Odds Ratios (AORs) and 95% confidence intervals (CIs), with a p-value < 0.05 considered statistically significant. Data were analyzed using R software version 4.3.2 and RStudio version 2023.12.0+369.

RESULTS

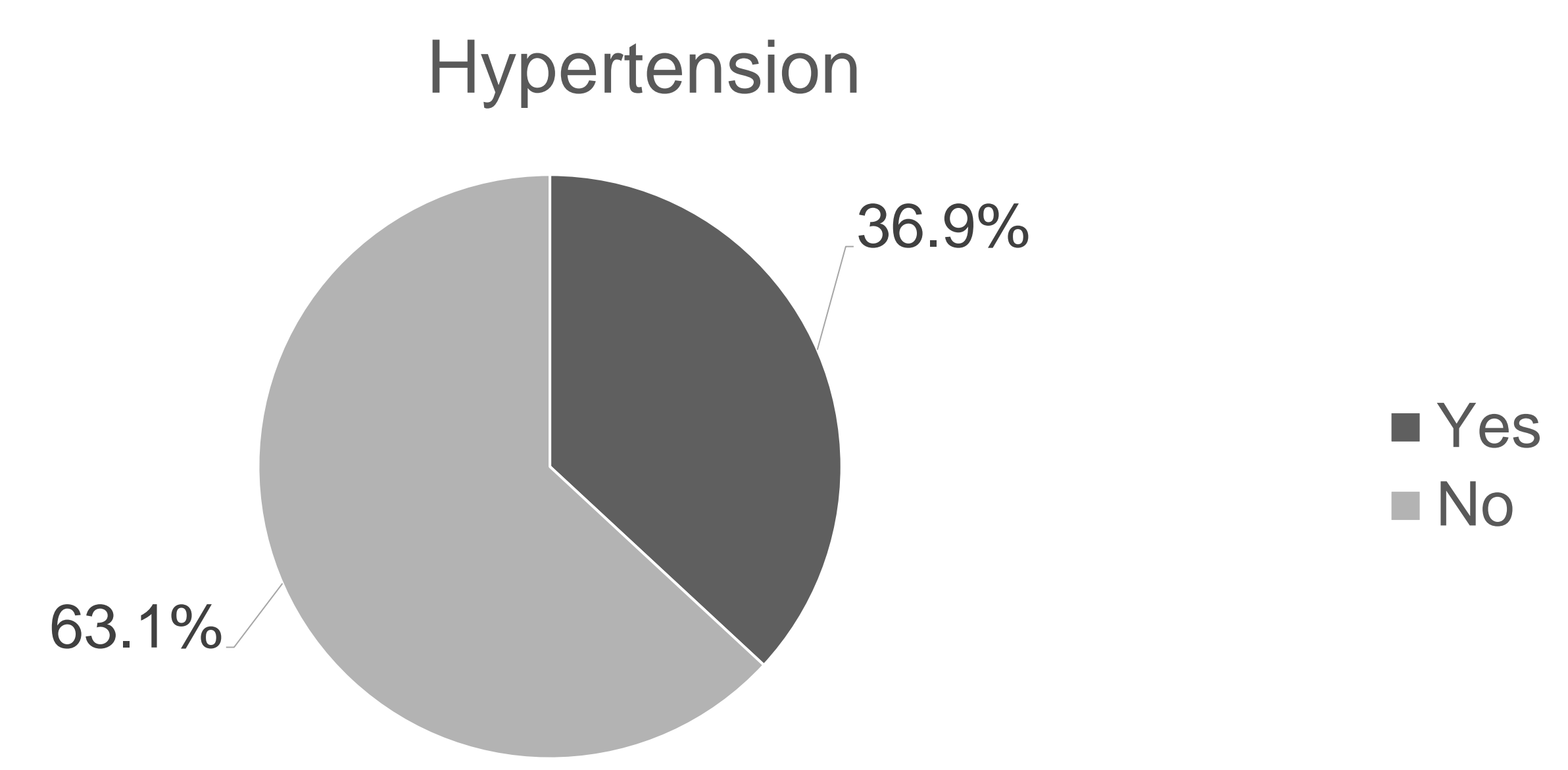
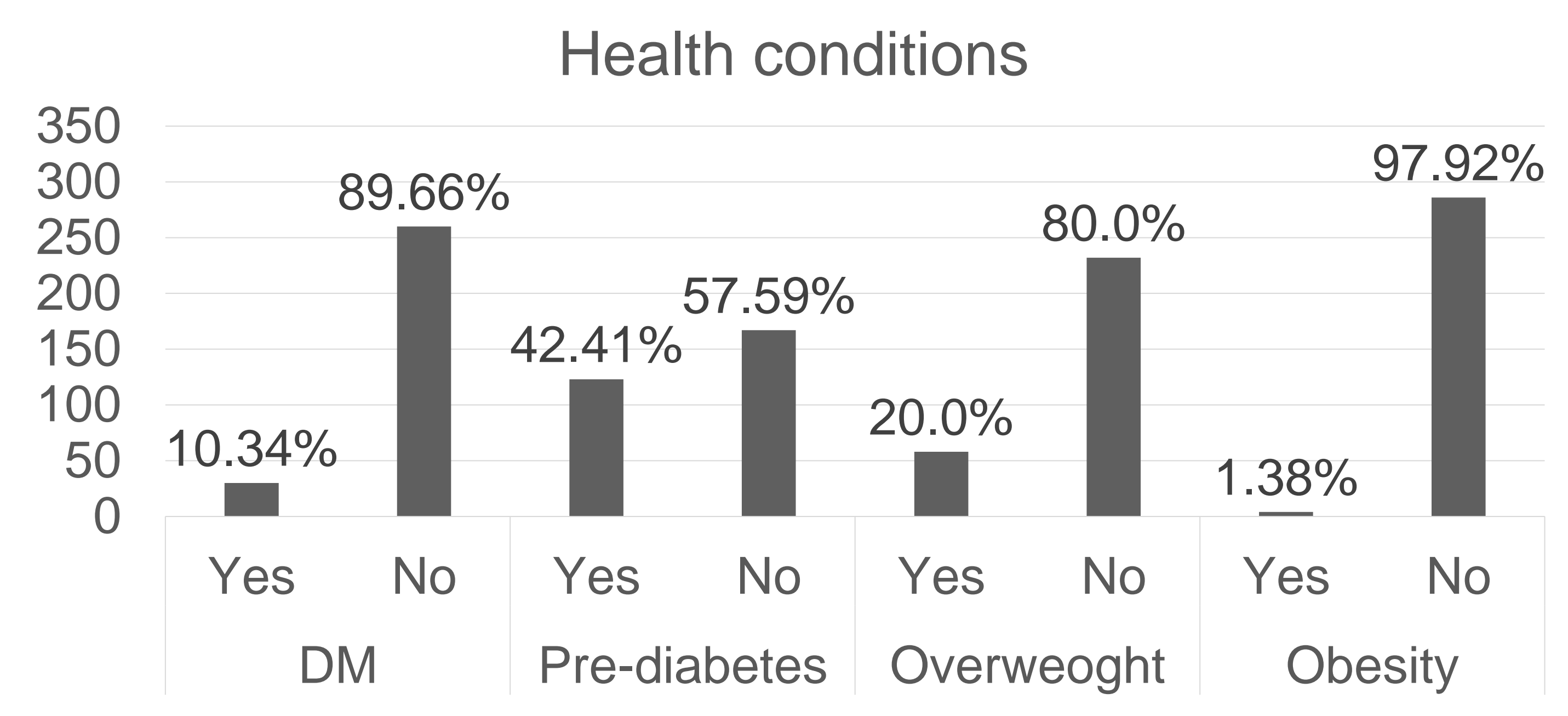
The prevalence of hypertension, DM, and obesity was 36.90% (95% CI: 31.33; 42.73), 10.34% (95% CI: 7.09; 14.44), and 1.38% (95% CI: 0.38; 3.49), respectively.

After adjusting for potential confounders, the analysis found that a family history of DM significantly increased the risk of DM. Additionally, female gender was identified as a risk factor for hypertension.

Table 1. Adjusted Logistic Regression Models

Variables	Hypertension AOR (IC 95%)	DM AOR (IC 95%)
Gender (Female)	2.51 (1.38; 4.54)	
Family History with DM (Yes)		17.2 (3.60; 81.99)

RESULTS CONTINUED



CONCLUSIONS

The study revealed high rates of DM and hypertension among inmates, emphasizing the importance of family history as a significant risk factor for DM and the association of female gender with hypertension.

These findings underscore the need for urgent implementation of preventive measures for hypertension and early screenings for individuals with a family history of DM. Addressing these issues is crucial to mitigating complications and improving health outcomes within the prison environment.

ADDITIONAL KEY INFORMATION

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