

CAHR 2022

contextual factors impact the risk of HIV infection in South African townships

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background

- 19.1% of people in South Africa are living with HIV
- HIV prevalence in townships nearly twice that of national average

In Cape Town¹:



1 in 4 people are unemployed



4 out of 5 people have not completed secondary education



1 in 3 households live below the poverty line



1 in 5 households live in informal dwellings

objective

Explore whether contextual factors related to socioeconomic position impact the risk of HIV infection in South Africa

methods

Bayesian analysis of secondary data from a quasi-randomized trial¹



Recruitment

N = 3095

Participants from Townships of Cape Town who presented at local clinics for HIV testing



Measurement

Age & Sex
Sub-district of residence
Dwelling situation
Employment status
Education level
Monthly income
HIV status

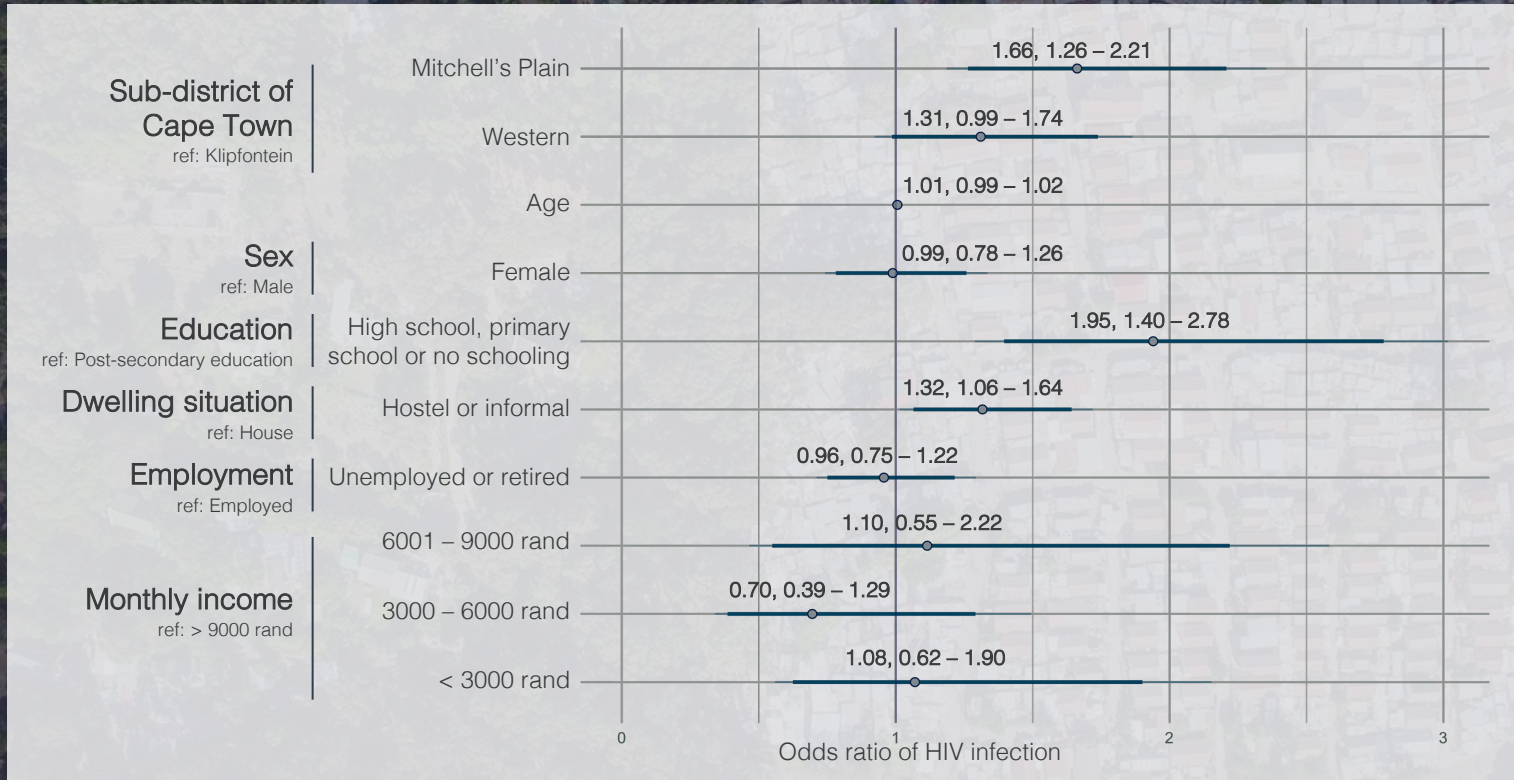


Analysis

Multiple imputation by chained equations
Bayesian Logistic regression
Priors for age & sex informed by literature²
Software: R & RStudio

results

posterior median and 89% credible interval of adjusted odds ratios



conclusion

- Contextual factors such as **less stable housing**, **lower education level** and **sub-district of residence** impact the odds of HIV infection
- Greater **emphasis on addressing social determinants of health** by improving housing and promoting general education is warranted

acknowledgements

Nitika Pant Pai, MD, MPH, PhD
Susan J. Bartlett, PhD
Aliasgar Esmail, MD
Keertan Dheda, MBBS PhD
Sahir Bhatnagar, PhD

