Multi-centre Analysis of the Dynamics In Migration and Health -MADIMAH Project-

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Background

• Population transitions rapid and unpredictable
• Migration and urbanisation increasingly recognised
• Changing exposures -> changing health outcomes.
• Migration process is complex
• Conventional understanding of rural-to-urban migration frequently blunt
• Comprehensive, valid data about flows are scarce
• Two way flows; circulation; impermanent forms of migration occur
MADIMAH Project Aims

- Understand migration patterns in INDEPTH HDSS populations
- Understand what drives migration
- Understand how migration relates to mortality.
- Produce databases for longitudinal analysis
- Provide training in longitudinal analysis
MADIMAH method

- Standardised data preparation for event history analysis in Stata
- HDSS -> Biographical file of individual events in time
- Data quality – event/following-event matrix
- Time-varying covariates from HDSS
- Standardised analysis of
  - the determinants of migration
  - migration as a factor influencing mortality
1. Nouna HDSS Burkina Faso
2. Nanoro HDSS Burkina Faso
3. Ouagadougou HDSS Burkina Faso
4. Navrongo HDSS Ghana
5. Kintampo HDSS Ghana
6. Dodowa HDSS Ghana
7. Kisumu HDSS Kenya
8. Nairobi HDSS Kenya
9. Kilifi HDSS Kenya
10. Manhica HDSS Mozambique
11. Agincourt HDSS South Africa
Age Sex Migration rates for Agincourt and Nairobi in 2010/2011

Nairobi In-Migration

Agincourt In-Migration

Nairobi Out-Migration

Agincourt Out-Migration
Factors associated with out-migration from Nairobi HDSS

Males

Females

Relative Risk Ratio

0.8
1
1.2
1.4
1.6
1.8
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8

prim educ vs no educ
secondary educ vs no educ
owns house vs rents house
flush vs pit toilet
no electricity vs electricity
prim educ vs no educ
secondary educ vs no educ
owns house vs rents house
flush vs pit toilet
no electricity vs electricity
Risk ratios for mortality from non-communicable disease
for migrants vs. non-migrants, Agincourt

1999-2002

Risk ratios for mortality from non-communicable disease
for migrants vs. non-migrants, Agincourt

1999-2002
Risk ratios for mortality from non-communicable disease
for migrants vs. non-migrants, Agincourt

INDEPTH
SCIENTIFIC CONFERENCE
2013
Risk ratios for mortality from non-communicable disease for migrants vs. non-migrants, Agincourt
Working Group aspirations

• Produce evidence of the causes and consequences of migration, standardised across many settings
• Thereby improving the understanding that is currently shaped by large cross-sectional studies with limited temporal detail (or by theory)
• To influence how policy makers see migration and urbanisation in their countries
Next steps

• Publish single centre and multi-centre studies of the dynamics and determinants of migration
• Launch MADIMAH stage 2 on the relationship between migration and mortality
  – Proposal writing is underway
  – Using the MADIMAH methods
  – All HDSS Centres are welcome
  – NB attend the WG workshop tomorrow at 17h00 room 210