

Extended Abstract UAPS 2019

Title: Internal migration and health in sub-Saharan Africa: the contrasting effect of migrant status on mortality over the life-course

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Short Abstract

Internal migration accounts for the majority of movement globally, however, evidence on the relationship between internal migration and health is scarce. Studies have contributed mixed evidence regarding the direction of this relationship, and it is not clear whether the relationship is consistent over the life course. The aim of this paper is to explore differences in mortality by in- and return migrant status from birth to age 80. Cox proportional hazards models are used to analyse longitudinal mortality data from 29 sub-Saharan African Health and Demographic Surveillance Systems over the period 1990 to 2015. The results suggest that migrants have a higher risk of mortality, with return migrants being at greater risk than in-migrants, as compared to permanent residents. However, infants born to migrant mothers may have a survival advantage. There is evidence of an adaptation effect across all ages, with the risk of mortality reducing with duration following migration.

Background

Internal migration, the movement of people within national boundaries, accounts for the majority of movements globally (Skeldon 2008; United Nations Development Programme 2009). These trends drive the process of urbanisation which is rising rapidly in Low- and Middle-Income Countries (United Nations Population Division 2014). The health implications of these mobile people are highly relevant to a country's policy and planning with respect to disease management, reduction in mortality and delivery of appropriate health services. Nevertheless, evidence on the relationship between internal migration and health is scarce and the studies that exist have contributed mixed evidence regarding the direction of this relationship. Migration, which results in a change in environment and health exposure, is known to impact health through a range of mechanisms (Lu and Qin 2014; Urquia and Gagnon 2011). Circumstances at migration destinations, including living and employment conditions and access to health care, may influence health outcomes following movement. An analysis of the relationship between internal migration status and all-cause mortality in nine Health and Demographic Surveillance System (HDSS) sites in sub-Saharan Africa confirmed the diversity of the migration-mortality relationships over the range of settings (Ginsburg et al. 2016). The study further found that with increased duration of residence, the effects on health were reduced as a result of adaptation to the new environment (Ginsburg et al. 2016). Moreover, the

relationship between migration and health appears to differ between children and adults (Abubakar et al. 2018). The effect of migration on health may further differ amongst children depending on maternal migration status (Brockerhoff 1994).

Using mortality as a major indicator of health, this study explores its relationship with internal migration across the life-course in an analysis of longitudinal data from 29 sub-Saharan African Health and Demographic Surveillance Systems (HDSS). While previous studies have considered the effects of migration status on adult mortality, fewer studies have contrasted the health of migrant and non-migrant children. In addition, the effect of a mother's migration status on infant mortality has been minimally assessed.

The objectives of this paper are 1) to explore differences in mortality by in- and return migrant status over the life-course in 29 sub-Saharan African local areas; 2) to assess the effect of duration of residence on migrant's mortality (the adaptation effect), and 3) to identify the effect of mothers' migration status on infant mortality.

Methods

We analyse all-cause mortality using data from 29 HDSSs in sub-Saharan Africa, by sex and for six broad age groups (infants < 1 years old, 1-4 year-olds, 5-14 year-olds, 15-29 year-olds, 30-59 year-olds and 60-79 year-olds). The period under consideration is from 1990 to 2015. Data employed in this study are open access, and available from the International Network for the Demographic Evaluation of Populations and Their Health (INDEPTH) iShare platform¹. The datasets detail all births, deaths and in- and out migrations with respect to these surveillance populations. These data allow for the identification, at the individual level, of new in-migrants to the HDSS areas, and return migrants (individuals who have lived in the HDSS area for periods exceeding 6 months, and returned following a period away). Permanent residents (or non-migrants) are individuals who have never moved out of the HDSS areas, and in-migrants or return migrants who have lived in the HDSS areas for ten or more years. To determine adaptation, we examine the length of time since in- or return migration to the HDSS site, whether less than two years, between two to five years or five to nine years. For infants, we analyse the migrants status of the mother only (contrasting in and return-migrants), since data on migrant children under the age of one year would necessarily be biased in favour of healthier children. For children age one to four years, and for all subsequent age groups, we are able to examine individual in- and return migrant status, as well as duration following the move.

Analyses are conducted using Cox proportional hazards models which control for site-period fixed effects. With the exception of the analysis of infants, all analyses are performed separately for males and females to account for any differences in the migration-mortality relationship between the sexes.

Results

Provisional results of Cox regression models are presented in Figure 1 and Figure 2a – d. Infants under one year old, whose mothers are in-migrants to the HDSS areas, have a lower risk of mortality

¹ <http://www.indepth-ishare.org/index.php/home>

compared to infants of permanent resident mothers (Figure 1). The trends for subsequent age groups are presented for in-migrant and return migrant males and females in Figures 2a. – 2d. The overall trends suggest that migrants have a higher risk of mortality, with the return migrants being at greater risk than in-migrants, as compared with permanent residents. Although the trends for males and females are similar, females appear to have a higher risk of mortality compared with males.

For in-migrants, disadvantage is apparent in somewhat older age-groups (from around age 30 onwards), whereas the mortality disadvantage for return migrants is presents earlier in young adults. The results provide evidence of an adaptation effect, with the risk of mortality for in- and return migrants reducing with duration following migration. This is across all ages the disadvantage reduces with duration of residence.

Figure 1: Effect of mother's migration status and duration since migration on infant mortality

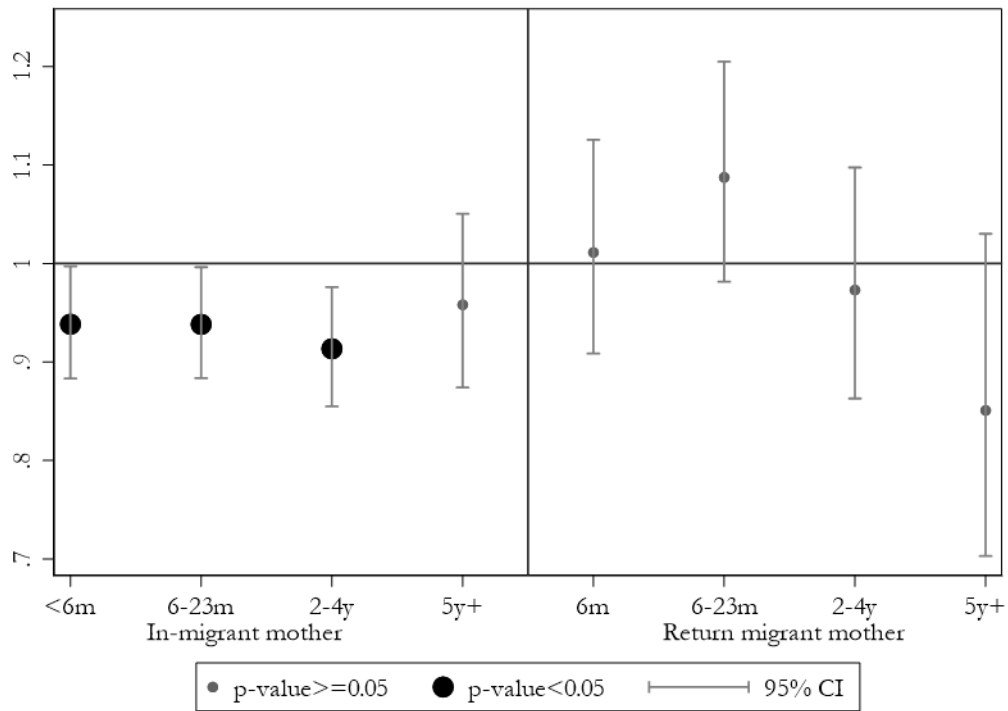
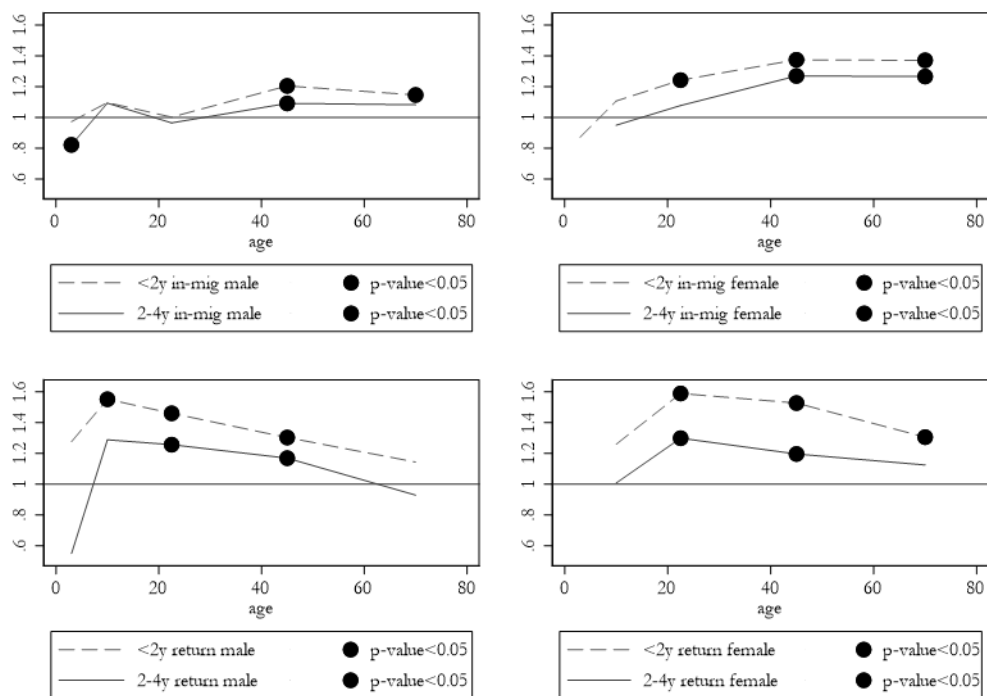


Figure 2a – d: Effect of migration status by duration since migration over the life-course by sex



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