Social Science & Medicine 70 (2010) 53–60

Contents lists available at ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

Forced migration and child health and mortality in Angola☆

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ARTICLE INFO

Article history:
Available online 29 October 2009

Keywords:
Childhood mortality
Child health
War
Forced migration
Sub-Saharan Africa
Angola

ABSTRACT

This study investigates the effects of forced migration on child survival and health in Angola. Using survey data collected in Luanda, Angola, in 2004, just two years after the end of that country's prolonged civil war, we compare three groups: migrants who moved primarily due to war, migrants whose moves were not directly related to war, and non-migrants. First, we examine the differences among the three groups in under-five mortality. Using an event-history approach, we find that hazards of child death in any given year were higher in families that experienced war-related migration in the same year or in the previous year, net of other factors. To assess longer-term effects of forced migration, we examine hazards of death of children who were born in Luanda, i.e., after migrants had reached their destinations. We again observe a disadvantage of forced migrants, but this disadvantage is explained by other characteristics. When looking at the place of delivery, number of antenatal consultations, and age-adequate immunization of children born in Luanda, we again detect a disadvantage of forced migrants relative to non-migrants, but now this disadvantage also extends to migrants who came to Luanda for reasons other than war. Finally, no differences across the three groups in child morbidity and related health care seeking behavior in the two weeks preceding the survey are found. We interpret these results within the context of the literature on short- and long-term effects of forced migration on child health.

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Introduction

Child health outcomes and childhood mortality, in particular, are widely accepted as indicators of the overall health and social welfare of a population. Under the framework of the Millennium Development Goals, sub-Saharan nations are enjoined to reduce childhood mortality rates by 2015 to one-third of the 1990 levels (MDG Report, 2006). However, progress towards these goals is not only undermined by poverty and economic crisis that prevails under peaceful conditions but also by armed conflicts that periodically flare up around the continent. Health and welfare of children of refugee and displaced populations have therefore been the main focus of humanitarian efforts in war-ridden African countries and have generated considerable attention in the literature (e.g., African-European Institute, 1990; Kinfu, 1999; Singh, Karunakara, Burnham, & Hill 2005a, 2005b). However, the complexities of the effects of military conflicts on health are poorly understood and rarely studied.

The literature on the consequences of forced migration for child health and mortality can be synthesized in two categories: studies focusing on immediate effects of forced migration and studies that examine longer term effects. In the immediate term, studies overwhelmingly demonstrate the mortality disadvantage of children of displaced populations compared to the host population. Thus in a study of published mortality rates from 37 conflict zones, Guha-Sapir and Gijsbert (2004) illustrated increased vulnerabilities among children under five. Similarly, O'Hare and Southhall (2007) and Hamill and Houston (2000) found a negative association between recent military conflict and under-five survival and other child and maternal health indicators in sub-Saharan Africa and 137 other countries around the world respectively. Studies of displaced populations in specific countries engaged in conflict such as the Democratic Republic of Congo, Mozambique, and Eastern Sudan, yielded similar findings (Ahoua, Tamrat, Duroch, Grais, & Brown, 2006; Doocy, Burnham, & Robinson, 2007; Macassa, Ghilagaber, Bernhardt, & Burstro, 2003; Van Herp, Parque, Rackley, & Ford, 2003).

In the longer term, however, findings on the effects of forced migration on child health and mortality are less conclusive, with some studies indicating that forced migration does not significantly increase under-five mortality relative to that of host populations. Thus Singh et al. (2005a) compared refugees and the host population in northwestern Uganda and Sudan and found no

☆ The data used in this study were collected with support from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, USA, grant # ROSHD45129.

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0277-9536/$ – see front matter Published by Elsevier Ltd.
doi:10.1016/j.socscimed.2009.09.057

differences in under-five mortality between the two. In a follow-up study by the same authors, women who did not migrate in a situation of conflict and women who repatriated before the age of 15 experienced higher under-five mortality rates compared with women who were currently refugees and who repatriated after the age of 15 (Singh et al., 2005b). Hynes, Sheik, Wilson, and Spiegel (2002) also found better child health outcomes among refugees compared to the host population and those who had not migrated. Studies of infant and child mortality among Palestinian refugees documented a health advantage of refugees relative to their non-refugee counterparts (Khawaja, 2004; Madi, 2000). Yet other studies linked forced migration with enduring mortality disadvantages. Thus, in a study in rural South Africa, no differences in infant mortality were found between former Mozambican refugee households and households of southern African natives but differences were detected in childhood mortality four years after the arrival of refugees in host destination (Hargreaves, Collinson, Kahn, Clark & Tollman, 2004). And a study of former refugee and non-refugee households in Rwanda showed lower survival chances among children of refugee women (Verwimp & Van Bavel, 2005).

Findings of longer-term impact of forced migration are not limited to child mortality but are also documented for other child health outcomes. The importance of vaccination as a preventive measure for reducing child mortality has long been established in the general population (Brockerhoff & DeRose 1996; Kristensen, Aaby, & Jensen, 2000; Nyarko, Pence, & Debpuur, 2001), and several studies have examined child immunization among refugee and displaced populations. Thus Senessie, Gage, and von Elm (2007) in their study of child immunization in the context of the civil war in Sierra Leone found that children born during increased hostilities had inappropriate immunization for age. Another study by Nielsen, Benn, Bale, Martins, and Aaby (2005) found that vitamin A supplementation may have a particularly beneficial impact on child survival in conflict situations.

Conceptualization and hypotheses

Our study contributes to the literature on short- and long-term consequences of forced migration for childhood mortality and health by looking at childhood mortality and selected child health indicators. We go beyond the common assumption that physical threat is the main, if not only, motivation for migration during conflict (Davenport, Moore, & Poe, 2003; Moore & Shellman 2004). We argue that in settings of military conflicts, especially of those that are of a protracted and intermittent nature, not all migration is directly driven by fear of hostilities and therefore an exclusive focus on war-induced migration results in an incomplete picture of the complex relationship among armed conflict, migration, and health outcomes. We propose therefore, that war-driven migration should be distinguished from and analyzed in connection with migration that is not directly caused by hostilities.

The two types of migration are obviously different but may also bear similarities. The literature on migration and demographic, especially reproductive, behavior and outcomes can usefully illuminate these differences and similarities. This literature typically points to mechanisms of selection (migrants are self-selected on individual characteristics such as age, sex and socio-economic status), disruption (migrants are temporarily separated from their spouse, families or comfort zones) and adaptation (migrants eventually adapt to the social and cultural norms in their new place of residence) to explain fertility differences by migration status (e.g., Chattopadhyay, White, & Debpuur, 2006; Goldstein, White, & Goldstein, 1997). In this study, we adapt these perspectives to conceptualize the connections between family migration and child health outcomes. Thus, it is proposed that migratory moves that take place in the absence of direct threats to personal security might be better prepared than flights from all-out hostilities, which are usually unexpected and therefore are typically more disruptive. Similarly, non-war migrants may be selected based on distal factors such as the tendency to space births, avoidance of nutrient deficiency and health status, education and socio-economic characteristics. Lastly, adaptation mechanisms may eliminate any remaining differences in the three migration groups, thereby leveling off any short-term effects observed in child health outcomes in the process or immediate aftermath of migration.

Hence we compare child survival and health across three groups—migrants whose migration was triggered directly by hostilities (hereafter "war migrants"), migrants whose migration was motivated by reasons unrelated to war ("non-war migrants"), and long-term residents of a community that has served as the migration destination for the two migrant groups. To analyze the immediate effects of war and non-war migration experience on childhood mortality, we adopt a dynamic approach by comparing whether the probability of child death before the age of five in any given year is affected by experiencing war or non-war migration in that year relative to those not migrating. It is also plausible to expect that the short-term effects of migration experience may not exhibit within the year of migration, especially if migration occurs towards the end of the year, thus we also provide for the effects of migration to be lagged by one year. Within this approach, we hypothesize that, in the short term, war migration will be associated with higher probabilities of death relative to not migrating. At the same time, non-war migration will be associated with comparable or lower probabilities of death relative to not migrating. The rationale for this hypothesis is that war has a direct impact on childhood mortality both through malnourishment and through social and psychological distress that impacts on war migrants in the immediate aftermath of their migration. Although non-war migration may also be associated with considerable adversity, the effects of such adverse factors can be countervailed for by the positive selection of non-war migrants.

To examine the long-term effects of the type of migration on the probability of death, we limit our analysis to children born to the three groups under comparison in the place of migration destination. To provide a broader context for the analysis of the long-term effects of migration experience, we note that even in times of peace, poverty and economic conditions in sub-Saharan Africa compromise a country's ability to provide health services for children, especially those from marginalized socio-economic strata. This is exacerbated in times of war, when immunization programs and other interventions known to improve child health may either stagnate or wither (Samb, Aaby, Whittle, Seck, & Simondon, 1997). Within this context, we conceptualize that if adaptation mechanisms guide the long-term child mortality and health outcomes, we expect both war migrants and non-war migrants, ceteris paribus, to be similar to non-migrants in post-migration probabilities of child death. However, if the enduring effects of the selection mechanisms prevail, these mechanisms should work to reduce any disadvantage of non-war migrants relative to non-migrants. If the disruption mechanisms linger after migration, it would result in a continuing disadvantage of war migrants.

In addition to childhood mortality, we look at long-term effects of migration status on other indicators of child health. Again, if the disruptive effects caused by war migration endure after migration, we should expect children of war migrants to display disadvantages in health outcomes. Specifically, we hypothesize that compared to non-migrants and non-war migrants, children of war migrants would be less likely to be born outside a health facility, to have fewer prenatal consultations, to have a lower likelihood of being fully immunized, have higher levels of child morbidity, and lower use of health care. Yet if adaptation mechanisms prevail, these health indicators among the