



## Child Development and Migrant Transnationalism: The Health of Children Who Stay Behind in Ghana and Nigeria

Victor Cebotari, Valentina Mazzucato & Melissa Siegel

To cite this article: Victor Cebotari, Valentina Mazzucato & Melissa Siegel (2017) Child Development and Migrant Transnationalism: The Health of Children Who Stay Behind in Ghana and Nigeria, *The Journal of Development Studies*, 53:3, 444-459, DOI: 10.1080/00220388.2016.1187723

To link to this article: <http://dx.doi.org/10.1080/00220388.2016.1187723>



© 2016 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 06 Jun 2016.



Submit your article to this journal [↗](#)



Article views: 639



View related articles [↗](#)



View Crossmark data [↗](#)

# Child Development and Migrant Transnationalism: The Health of Children Who Stay Behind in Ghana and Nigeria

VICTOR CEBOTARI\*, VALENTINA MAZZUCATO\*\* & MELISSA SIEGEL\*

\*Maastricht Graduate School of Governance, Maastricht University, Maastricht, the Netherlands, \*\*Department of Technology and Society Studies, Maastricht University, Maastricht, the Netherlands

*(Final version received February 2016; final version accepted March 2016)*

**ABSTRACT** *This paper examines the relation between parental migration and children's health in Ghana (N = 2760) and Nigeria (N = 2168) and considers four dimensions of parental migration: the type of separation, parental migration and the caregiver, stability of care arrangements, and the availability of remittances. By employing an ordered scale of children's self-rated health, we found that children with international migrant parents who are divorced/separated are less likely than children in non-migrant families to have good health. The magnitude of the effects are higher in Nigeria, attesting for a greater vulnerability of Nigerian children in divorced migrant families. Among children with parents living abroad who are stably married, specific dimensions of children's transnational life are associated with negative health, while others are not. This study highlights the sensitivity of results to the context of parent-child separation and to the transnational dimension being measured.*

## Introduction

By 2010, approximately one million Nigerians and 825,000 Ghanaians, excluding undocumented nationals, had left their country to seek better opportunities abroad (World Bank, 2011). When Ghanaian and Nigerian parents migrate, many of their children stay behind. Although precise numbers of children in transnational care are not available, data show that up to 38 per cent and 21 per cent of Ghanaian and Nigerian children, respectively, excluding orphans, had at least one biological parent who was away in 2008 (GDHS, 2008; NDHS, 2008). For these children, the absence of parents has likely become a common feature of their lives, and scholars are now asking how different contexts of parental absence affect children's wellbeing (Jordan & Graham, 2012; Mazzucato & Schans, 2011) and children's health (Donato & Duncan, 2011; Donato, Kanaiaupuni, & Stainback, 2003).

Studies suggest that migration of parents generally results in large income gains with subsequent health benefits for family members who stay behind (Amuedo-Dorantes & Pozo, 2011; Donato & Duncan, 2011). At the same time, transnational families usually operate across large distances and over longer periods of time, which may negatively affect children's health (Dreby, 2010; Stillman & McKenzie, 2012). More recently, a stream of research has begun to observe outcomes of children in the context of parental migration and extraordinary family circumstances such as parental death or

---

*Correspondence Address:* Victor Cebotari, Maastricht Graduate School of Governance, Maastricht University, Boschstraat 24, 6211 AX, Maastricht, the Netherlands. Email: [victor.cebotari@maastrichtuniversity.nl](mailto:victor.cebotari@maastrichtuniversity.nl)

© 2016 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

divorce (Carling & Tønnessen, 2013; Mazzucato & Cebotari, 2016; Nobles, 2011). These studies reveal that parental absence, due to divorce or parental death, affects children more negatively than separation due to migration.

Despite existing knowledge, gaps remain. Studies often rely on single-context analyses and rarely look beyond the traditional measure of which migrant parent is absent. Additionally, studies do not often compare health outcomes of children living transnationally with those living in non-migrant families or with those experiencing combined forms of parental absence such as migration, divorce or parental death. Moreover, most studies use measures of children's health based on parental or caregiver assessments, which have been found to under-report child distress when comparing similar outcomes based on children's self-reports (Jordan & Graham, 2012).

This study aims to contribute to transnational family studies in the following two ways: 1) by investigating the context of parental migration in combination with extraordinary family circumstances, such as divorce and parental death, in relation to children's self-rated health; and 2) to explore the relationships between different transnational family characteristics – stability of care arrangement, remittances, parental migration status and the caregiver – and children's health. We use survey data collected in 2010–2011 among junior and senior high school children, between the ages of 11 and 18, in Ghana and Nigeria. The data allow us to differentiate between children living transnationally and children living in non-migrant families. This study focuses on Ghana and Nigeria, which are two countries with large out-migration flows in sub-Saharan Africa. The inclusion of these two countries was motivated by common traits such as long histories of migration to similar destinations, and common family norms regarding child raising. The comparison of Ghana and Nigeria will provide cross-country evidence on the relationship between parental migration and child health. The study also adds a quantitative analysis of African transnational families, which is missing from the literature.

## **Background**

### *Transnational Families and Child Health*

At the turn of the century, transnational family studies have emerged to focus on the relationships between family members living across borders and how these relationships shape the outcomes of those who stay behind (Bryceson & Vuorela, 2002). In particular, the life chances of children who are 'left-behind' have become a topic of scholarly interest. Studies suggest that migrant parents positively influence child development through a wide range of behaviours, including family stability, maintaining regular communication with the child, making regular visits, purchasing goods and sending remittances for family necessities. Thus, theoretical and empirical transnational family studies broadly distinguish between different transnational family arrangements in measuring child outcomes (Mazzucato & Schans, 2011). Several of these arrangements and their associations with child health are addressed below.

A recent but growing body of research has begun to measure the outcomes of children in transnational families who are affected by extraordinary family circumstances such as union dissolution and parental death (Carling & Tønnessen, 2013; Cebotari & Mazzucato, 2016; Mazzucato & Cebotari, 2016; Nobles, 2011). These dynamics of family life have the potential to affect the household's resources and how investments are made in children's health. However, the way migration interrelates with problematic family circumstances to affect child health is far from clear. A handful of studies have investigated the relationship between child health and migration when parents are divorced or deceased and found contrasting evidence. In Malawi, Carling and Tønnessen (2013) found that children whose father is deceased or whose parents are divorced are worse off in terms of nutrition, fever and diarrhoea, when compared to children whose fathers are either present or migrants. In Ghana, Mazzucato and Cebotari (2016) emphasised similar costs of separation when measuring psychological health of children whose parents migrated and were divorced. On the contrary, research based on Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS) found no difference in nutritional outcomes among orphan and non-orphan children in 23 African countries, including Ghana and Nigeria (Rivers et al., 2008). In Mexico, Nobles (2011) found that

children have more interaction with their migrant fathers and are better able to mitigate the effects of separation than children whose fathers left the family following divorce. The negative outcomes associated with divorce compared to migration are explained by the specifics of these forms of absence. Parents who migrate are mainly motivated by a desire to improve the lives of children who stay behind, while in cases of divorce, parents may not have the emotional and financial resources to invest in children, especially when divorced parents migrate and form new families abroad and have children within those unions (Dreby, 2010).

Most transnational family studies restrict their focus to children of migrant parents who are in a stable marital relationship (Donato & Duncan, 2011; Jordan & Graham, 2012; Wen & Lin, 2012). In doing so, these studies are able to assess how the parental input in a stable family environment is invested in the health of children in transnational care.

Which parents have migrated and the child's primary caregiver are distinctions that most studies consider when examining child health in relation to parental absence. Specifically, children were found to experience more distress when mothers migrate than when fathers migrate, which is mainly due to traditional gender norms related to childcare (Parreñas, 2005). When fathers migrate, the mother is usually the child's primary caregiver, whereas when mothers migrate, fathers usually rely on extended family for transnational childcare (Cortés, 2007). Thus, children may feel more affected by maternal migration because this also results in the change of the primary caregiver for the children who stay behind.

It is therefore important to identify the migrant parent and the primary caregiver of the child in transnational care. Previous studies examining this association found reduced child mortality when fathers migrate and children remain in the care of mothers in Mozambique (Yabiku, Agadjanian, & Cau, 2012). On the contrary, Mazzucato et al. (2015) found poorer emotional health among Nigerian and Angolan children whose mothers migrate and are cared for by fathers, and among Angolan children whose mothers and fathers migrate and children are cared for by extended family. Other studies found no differences in the physical health and nutritional status of children who are cared for by the mother, father or a grandparent in Moldova when one or both parents are abroad (Gassmann, Siegel, Vanore, & Waidler, 2013).

The literature on family processes, not specifically related to migration, found that frequent changes in caregivers lead to lower education (Amato & Cheadle, 2005) and expose children to violence and risky health behaviours (Boynton-Jarrett, Hair, & Zuckerman, 2013). No study of transnational families has examined the frequency with which children change caregivers when parents migrate. Two recent exceptions (Mazzucato & Cebotari, 2016; Mazzucato et al., 2015) found that Ghanaian, Nigerian and Angolan children in transnational care who changed caregivers one or more times had poorer psychological health. Children may be subjected to emotional pressure when adjusting to a new caregiver, which in turn may affect their physical health. These insights warrant an investigation of the relationship between frequency of caregiver change and children's health in transnational families.

Many of the empirical studies measuring the health of children who are separated from their parents were conducted in China, and thus, these studies target internal long-distance parental migration. Another stream of research looks at migration from Latin America and Southeast Asia, which entails international migration. Studies suggest that close proximity is important for maintaining good quality relationships between children and their parents (Bowlby, 1958). As such, international parental migration may pose major administrative and financial barriers to visits for parents and children that are greater than those for children and parents who are separated within national borders. Other studies emphasise the role of the child in the migration patterns of parents and that parental altruism towards their children may play a role in the migrant's location decision (Dustmann, 2003). When separation occurs across borders, studies point to modern communication technologies as facilitators for maintaining more direct contacts between migrant parents and their children (Madianou & Miller, 2011). A recent study by Mazzucato et al. (2015) found no difference in psychological health among children whose parents migrated internally or internationally compared to children in non-migrant families in Ghana and Nigeria.

Looking at financial resources available to families, studies show that remittances are used to access better healthcare for children (Lindstrom & Muñoz-Franco, 2006) and to improve nutritional intake and the overall health status of children (Asis, 2006; Frank, 2005). Remittances were also found to have positive spillover effects in the community because providing better healthcare for children of migrants reduces the transmission of preventable diseases in the larger community (Kanaiaupuni & Donato, 1999). Nevertheless, not all migrant parents are able to send remittances, and among those who do, it is not always clear if resources are spent on children (Bargain & Boutin, 2015; Mazzucato & Schans, 2011). Furthermore, remittances capture only a marginal component of contributions that migrant parents make to families in the home country (Nobles, 2011). Therefore, transnational studies benefit from employing a range of transnational family characteristics in measuring the health of children in transnational care.

### *Hypotheses*

Taken together, these studies provide important evidence on the complexity of factors that may influence the health of children in transnational care. Importantly, they suggest that parental absence does not automatically imply worse health for children who stay behind. Factors pertaining to parental migration, caregiver identity, geographical proximity, remittances and marital status all may nuance the way parental absence relates with child health. Based on the literature presented above, the following hypotheses are explored:

*Hypothesis 1a.* We expect a negative relationship between either internal or international parental migration and the health of children whose parents are divorced/separated, when compared to children in non-migrant families.

*Hypothesis 1b.* We expect a positive association between either internal or international parental migration and the health of children whose parents are in a stable marital relationship, when compared to children in non-migrant families.

*Hypothesis 1c.* We expect that children with one parent away and the other parent deceased are more likely to have poorer health than children in non-migrant families.

*Hypothesis 2a.* Maternal migration, when the father is the caregiver, is more negatively associated with children's health compared to the health of children in non-migrant families.

*Hypothesis 2b.* Children who are cared for by the mother when the father is abroad are likely to have similar health to children living in non-migrant families.

*Hypothesis 2c.* We expect poorer health among children with both parents abroad than among children in non-migrant families.

*Hypothesis 3.* Frequent changes in caregiver are likely to be associated with poorer health among children in transnational families compared to children living with both biological parents who do not experience a change in caregivers.

*Hypothesis 4.* We expect the presence of remittances to be positively associated with children's health, whereas the absence of remittances is expected to be negatively associated with children's health compared to children living in non-migrant families.

## **Method**

### *Data and Sample*

To test our hypotheses, we use data from a large-scale survey conducted in 2010–2011 among junior and senior secondary school children in Ghana (N = 2,760) and Nigeria (N = 2,168). The survey took place in urban areas with high internal and international migration rates; these included the greater Accra region, Kumasi, Sunyani, and Cape Coast in Ghana and Ife and Ibadan in Nigeria. Because the samples were drawn from schools and in urban areas of high out-migration in each country, we may

not accurately reflect on children in other migrant populations. Therefore, the data may not be representative at the national level, but detailed protocols were established to allow future replication.

To assess the representativeness of our samples, we looked at nationally representative data from the Demographic and Health Surveys (DHS). The comparison did not show radical differences. Specifically, our data show that 45.7 per cent and 31.5 per cent of Ghanaian and Nigerian children, respectively, excluding orphans, live without at least one biological parent. In comparison, the DHS data show that 46.4 per cent and 25.3 per cent of children who live in urban areas in Ghana and Nigeria, respectively, have similar family arrangements (GDHS, 2008; NDHS, 2008).

A stratified sampling procedure was used to randomly select an equal number of junior and senior secondary, private and public, and low- and high-quality schools in each location. The departments of education in Ghana and Nigeria have rankings of quality for private and public schools based on exam scores and enrolment rates. The schools were approached and asked for their consent to participate in the survey. All schools, with the exception of one school in Ghana that was replaced by a randomly selected school, agreed to participate. In total, 22 schools in Ghana and 25 schools in Nigeria were selected to participate in the survey. In each school, one class was randomly selected from each of the three grades. In addition, a purposive sample of children in transnational care was selected from each school to ensure a sufficient number of children with parents abroad. This sampling was performed by randomly selecting an additional six classrooms from each school and pooling all children with at least one parent abroad; these children were then asked to participate. Independent sample t-tests were performed comparing the means of key characteristics for the randomly selected and pooled samples and found no statistical significant differences. Therefore, the inclusion of the two samples does not affect the reliability of the overall data.

The survey is based on a questionnaire that was expressly developed to measure the complexity of transnational child raising arrangements and to quantify child outcomes such as education, health and emotional wellbeing. A team consisting of a supervisor and up to three trained interviewers administered the questionnaires in the selected classrooms. The questionnaire was administered as a self-assessment tool – that is, children completed the questionnaire themselves under the supervision of the fieldwork team. The same version of the questionnaire was used in both Ghana and Nigeria. Students were introduced to the project, and the team mentioned the voluntary nature of their participation in the survey. The overall student response rate was 85 per cent. The ethical dimension of the project was approved by the Social Research Ethics Committee of University College Cork.

The sample consists of children living with both biological parents and children living in families in which at least one parent has migrated internally or internationally for a period of at least three months or more at the time of the survey. The sample of this study comprises secondary school children and youths aged 11–18. To avoid ambiguity in the status of parental absence, we chose to omit children whose parents were both deceased (Ghana  $N = 22$ ; Nigeria  $N = 4$ ), those with one parent who was deceased and whose other parent had not migrated internally or internationally (Ghana  $N = 183$ ; Nigeria  $N = 89$ ) and those who could not indicate the location of their parents at the time of the survey (Ghana  $N = 50$ ; Nigeria  $N = 32$ ).

### *Dependent Variable*

For this analysis, the dependent variable is self-rated child health at the time of the survey. The health status of children was assessed using the question, ‘on a scale from 1 to 5 [1 = not good to 5 = very good], how would you rate your own health?’ Because of the cross-sectional nature of the data, the health measurement we employ captures short-term outcomes. Previous studies using panel data found that migration intentions and decisions may impact child outcomes (Dustmann, 2003). Given the dearth of quantitative studies on transnational families, the use of cross-sectional ordinal scales in measuring children’s health will add to our knowledge about children’s wellbeing. Furthermore, recent studies by Donato and Duncan (2011) and Wen and Lin (2012) used ordinal scaling in measuring children’s health and produced robust results.

Although the self-assessment of children's health might reflect a certain level of subjectivity, studies indicate that children's self-reports more consistently evaluate the outcomes than when adults are asked to report similar outcomes for children (Jordan & Graham, 2012). Nevertheless, because self-reported health might capture children's subjective worries and concerns in the family (Donato & Duncan, 2011), the analysis also controls for the quality of child-caregiver relationship (Jordan & Graham, 2012; Vanore, 2015).

### *Independent Variables*

This analysis includes four independent variables of key interest that measure different characteristics of children's transnational lives. Looking at different transnational dimensions is critical to quantifying the effects of parental absence on child health. The first variable looks at the *location of the migrant parent and the type of separation* – whether children live in non-migrant families; have their parents away internally or internationally and in a stable marital relationship; have their parents away internally or internationally but are divorced/separated; or have one parent away internally or internationally and the other parent is deceased. The second measure looks at the *migration status of parents and who is the caregiver*. This indicator distinguishes between children living in non-migrant families, children with a migrant father and cared for by the mother, children with a migrant mother and cared for by the father and children with both parents abroad who are cared for by a non-parental caregiver. A third measure accounts for the *stability of the care arrangements* by recording the number of times children changed caregivers – children in non-migrant families who never changed the caregiver, children in non-migrant families who changed the caregiver at least once, children with parents abroad who never changed the caregiver and children with parents abroad who changed the caregiver at least once. Finally, we look at the availability of *remittances* for children in transnational families. This measure comprises children in non-migrant families with no remittances, children with parents abroad who receive remittances and children with parents abroad who do not receive remittances.

Additional indicators were included to control for child, familial and school characteristics. Child covariates include *age* in full years and *gender*. The family characteristics include binary variables for *maternal* and *paternal education*, where 1 indicates whether the parent has completed upper secondary education or more; a continuous measure of the *total number of siblings* living with the child – this indicator includes biological brothers and sisters as well as half-brothers and sisters living under the same roof with the respondent at the time of the survey; a binary measure where 1 indicates the *presence of younger siblings* living with the child at the time of the survey; a self-declared binary measure for *living conditions*, where 1 denotes better living conditions compared to other children; a continuous measure of *housing conditions*, where the total number of people living in the house is divided by the total number of rooms; and a family process measure (Jordan & Graham, 2012) that assesses the *quality of the child-caregiver relationship*, where 1 indicates a distant relationship. Finally, two measurements rank the schools as *low or high quality* and *public or private*. The school environment has not featured prominently in transnational research. Previous studies found a positive correlation between child wellbeing and the support children received from the school and teachers (Wen & Lin, 2012).

### *Analytical Strategy*

Ordinal probit regressions were fitted for this analysis. This method was chosen given the hierarchical scaling of the dependent variable. The ordinal probit technique allows for rank-ordering of the dependent variable without making assumptions about the intervals between categories. Robust standard errors were computed for coefficients to account for clustering of observations (for example, poor health) in certain schools and urban neighbourhoods.

The analysis was conducted in two stages. First, we began the analysis by examining the relation between children's health and parental absence that involves internal or international migration and

considering whether the parents are in a stable marital relationship, are divorced/separated, or if one parent is deceased (Table 3). This stage of analysis used a hierarchical regression technique in which we successively control for child characteristics (Models 1 and 4), family indicators (Models 2 and 5) and school conditions (Models 3 and 6).

In the second stage of analysis, we test whether specifics of children's transnational life – parental migration status and who is the caregiver, the stability of the care arrangements and remittances – associate positively or negatively with children's health (Table 4). This stage comprises three distinct regression models, each using a transnational characteristic combined with the full cluster of controls as described in the first stage. This analysis isolates the context of international parental migration, when parents are in a stable marital relationship and excludes children with parents who are deceased, divorced or away internally. Given these exclusions, a total of 859 and 539 observations were dropped from the Ghanaian and Nigerian samples, respectively. Means comparison tests did not find statistical significant differences in the means of key indicators between the excluded and non-excluded observations, suggesting that cases were missing at random.

In the analysis, we compare children in migrant and non-migrant families. This comparison raises the question of sample selectivity and whether children of migrants differ from children of non-migrants in a number of key characteristics. Independent group tests were implemented and no statistical significant differences on health, parental characteristics and living conditions were observed between the two groups (analyses available upon request). In Ghana, the education of parents was found to vary between the two groups of children, suggesting a certain degree of sample selectivity in this particular country context.

Multilevel models were not fitted because the tests for intraclass correlation (ICC) showed limited variation (below 0.10) at the school and city levels. Nevertheless, we control for the quality and type of schools to account for unobserved characteristics that may arise at the school level. Indicators in all models were tested for collinearity, and none was detected; the variation inflation factors (VIF) (1–1.5) and the tolerance values (0.8–0.9) were optimal.

A series of interaction models (not shown) were fitted to examine the moderating relation between gender, age and the four transnational indicators employed in the analysis. No statistical significant interactions that improved model fit were found, except for Ghana where interaction terms showed that girls fare better in health than boys when their parents are away internally and divorced and when living transnationally with no remittances. On the grounds of parsimony, we do not include the interacted models in the results but they are available upon request.

## Results

### *Descriptive Analysis*

Before presenting the results, we would like to make some cautionary remarks. First, the sampling strategy focused on urban areas of high out-migration in both countries, which may preclude the generalisation of findings beyond the areas sampled. Moreover, in focusing on children in schools, the samples miss children of migrants who were not enrolled in school and therefore may not fully capture variations in conditions of children in transnational care.

Keeping these in mind, we present the descriptive statistics of variables included in the analysis in Table 1. Within the sampled population, 14.9 per cent of Ghanaian children and 11.5 per cent of Nigerian children had one or both parents living abroad and in a stable marital relationship. In addition, 6.0 per cent and 2.7 per cent of all sampled children in Ghana and Nigeria, respectively, were living in divorced/separated families where at least one parent was away internationally. A rather large proportion of children in our sample – 13.0 per cent in Ghana and 8.6 per cent in Nigeria – were living in divorced/separated families where at least one parent was away internally. In Ghana, 7.6 per cent of children had one deceased parent while the other parent was away internally, compared to 5.9 per cent of children in Nigeria. Only 0.9 per cent and 0.5 per cent of all children in Ghana and Nigeria, respectively, had one deceased parent and one parent abroad. Given the few children with one

**Table 1.** Means/percentages (standard deviations) of dependent and independent variables

Variables	Ghana		Nigeria	
	Percentage /mean (SD)	N/n	Percentage /mean (SD)	N/n
Dependent variable				
Self-rated health	100	2293	100	2087
1 Not good	1.7	39	1.0	20
2	2.3	53	1.2	25
3	14.1	323	7.2	151
4	35.6	817	27.5	573
5 Very good	46.3	1061	63.2	1318
Independent variables				
Location parent(s) and the type of separation	100	2401	100	2103
Non-migrant parents	45.8	1100	62.2	1309
Parent(s) away internally: together	11.8	282	8.7	182
Parent(s) away internationally: together	14.9	357	11.5	241
Parents(s) away internally: divorced/separated	13.0	313	8.6	180
Parents(s) away internationally: divorced/separated	6.0	145	2.7	56
Parent in the country: parent deceased	7.6	183	5.9	124
Parent away internationally: parent deceased	0.9	21	0.5	11
Migration status and the caregiver	100	1411	100	1544
Non-migrant parents	73.9	1042	84.4	1303
Father away internationally, mother caregiver	14.5	205	8.9	137
Mother away internationally, father caregiver	2.8	39	1.9	30
Both parents away internationally, other caregiver	8.9	125	4.8	74
Stability of the care arrangement	100	1318	100	1504
Non-migrant parents: changed never	57.4	756	68.2	1026
Non-migrant parents: changed caregiver $\geq 1$	16	211	15.5	233
Parent(s) away internationally: never changed caregiver	14.2	187	7.9	118
Parent(s) away internationally: changed caregiver $\geq 1$	12.4	164	8.4	127
Remittances	100	1287	100	1697
Non-migrant parents: no remittances	82.9	1067	77.1	1308
Parent(s) away internationally: yes remittances	14.2	183	19.7	334
Parent(s) away internationally: no remittances	2.9	37	3.2	55
Child age (years)	15.3 (1.7)	2494	13.7 (2.0)	2128
Child is girl	54.8	1366	55.3	1177
Mother's education secondary or more	45.4	1070	77.3	1595
Father's education secondary or more	63.56	1500	81.1	1670
No. of siblings living with the child	3.0 (2.4)	2494	2.9 (2.2)	2128
The child is living with younger siblings	55.2	1354	54.5	1144
Living conditions are better (compared to other children)	59.1	1454	67.4	1411
Number of people per rooms in the house	1.6 (2.2)	2262	1.1 (1.0)	2039
Distant relationship with the caregiver	16.0	366	14.3	290
Low-quality schools	32.6	814	28.6	608
Private schools	38.5	961	58.2	1239

Note: Standard deviations in parentheses.

deceased parent and one parent abroad, this group is described here but excluded from the subsequent analysis.

Among children with parents living abroad and in a stable marital relationship, the largest proportion had a migrant father and were living with the mother (14.5% in Ghana and 8.9% in Nigeria). Children whose mother was abroad and were living with the father accounted for 2.8 per cent of the participants in Ghana and 1.9 per cent in Nigeria. The proportion of children with both parents away internationally and who were living with a non-parental caregiver accounted for 8.9 per cent and 4.8 per cent, respectively, in Ghana and Nigeria. A substantial proportion of children in both Ghana and Nigeria changed their

**Table 2.** Means (standard deviations) of self-rated health status by transnational family characteristics

	Self-rated health status <sup>a</sup>				
	N/n	Ghana		Nigeria	
Transnational Family Characteristics					
Location parent(s) and the type of separation		$F(6, 2199) = 3.6^{**}$		$F(6, 2055) = 3.5^{**}$	
Non-migrant parents	1024	4.3	(0.9)	1289	4.6 (0.7)
Parent(s) away internally: together	249	4.2	(0.9)	175	4.4 (0.8)
Parent(s) away internationally: together	323	4.3	(0.8)	234	4.5 (0.7)
Parents(s) away internally: divorced/separated	294	4.0	(1.0)	179	4.3 (0.9)
Parents(s) away internationally: divorced/separated	136	4.0	(0.9)	56	4.4 (0.7)
Parent in the country: parent deceased	161	4.0	(1.0)	118	4.4 (0.8)
Parent away internationally: parent deceased	19	4.5	(1.0)	11	4.5 (0.7)
<i>N</i>	2206			2062	
Migration status and the caregiver		$F(3, 1283) = 1.4$		$F(3, 1500) = 1.1$	
Non-migrant parents	973	4.3	(0.9)	1283	4.6 (0.7)
Father away internationally, mother caregiver	187	4.4	(0.9)	132	4.6 (0.8)
Mother away internationally, father caregiver	34	4.4	(0.6)	29	4.3 (0.7)
Both parents away internationally, other caregiver	93	4.2	(0.9)	60	4.5 (0.7)
<i>N</i>	1287			1504	
Stability of the Care Arrangement		$F(3, 1201) = 5.1^{**}$		$F(3, 1465) = 4.0^{**}$	
Non-migrant parents: changed never	710	4.3	(0.8)	1014	4.6 (0.7)
Non-migrant parents: changed caregiver $\geq 1$	197	4.1	(0.9)	229	4.5 (0.8)
Parent(s) away internationally: never changed caregiver	165	4.4	(0.7)	108	4.6 (0.6)
Parent(s) away internationally: changed caregiver $\geq 1$	133	4.2	(0.9)	118	4.4 (0.9)
<i>N</i>	1205			1469	
Receiving remittances		$F(2, 1126) = 0.1$		$F(2, 1513) = 1.1$	
Non-migrant parents: no remittances	994	4.3	(0.9)	1288	4.6 (0.7)
Parent(s) away internationally: yes remittances	121	4.3	(0.9)	208	4.5 (0.8)
Parent(s) away internationally: no remittances	37	4.4	(0.6)	50	4.4 (0.7)
<i>N</i>	1152			1546	

Notes: Analysis of variance (ANOVA) was used for all comparisons. <sup>a</sup> The health status of children ranges between 1 = not good and 5 = very good. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

caregiver once or more. In Ghana, 28.4 per cent (12.4% + 16.0%) of children living in migrant and non-migrant families had changed their caregiver at least once, compared to 23.9 per cent (8.4% + 15.5%) of children in Nigeria. We also noted that more children with parents abroad receive remittances in Nigeria than in Ghana (19.7% versus 14.2%, respectively). Additionally, 2.9 per cent of children living transnationally in Ghana and 3.2 per cent of those in Nigeria do not receive remittances.

Table 2 describes the means of children's self-reported health by transnational characteristics. Data show that, on average, Nigerian children rated their health higher than Ghanaian children. An analysis of variance (ANOVA) shows that generally, children living in divorced families where parents have migrated internally or abroad or who have one parent deceased and one parent away internally were more likely to report poorer health than children with parents in the country or parents who were abroad and in a stable marital relationship. Similarly, children rate their health more poorly when they changed their caregiver one or more times. There are no statistical significant variations in children's health when examining the remittances and the migration status of parents and the caregiver in the two countries.

### Regression Results

This section presents the results of the ordered probit models. The first analysis assessed the relationship between different contexts of parental absence and child health by comparing the outcomes of

**Table 3.** Stepwise ordered probit regressions predicting children's subjective health in relation to the location of parents and the type of separation

	Ghana						Nigeria					
	Model 1 <sup>a</sup>		Model 2 <sup>b</sup>		Model 3 <sup>c</sup>		Model 4 <sup>a</sup>		Model 5 <sup>b</sup>		Model 6 <sup>c</sup>	
	$\beta$	SE										
Location parent(s) and the type of separation <sup>d</sup>												
Non-migrant parents												
Parent(s) away internally: together	-0.05	(0.08)	-0.04	(0.09)	-0.03	(0.09)	-0.16	(0.10)	-0.12	(0.11)	-0.14	(0.11)
Parent(s) away internationally: together	0.08	(0.07)	0.03	(0.08)	0.04	(0.08)	-0.08	(0.09)	-0.08	(0.10)	-0.04	(0.10)
Parents(s) away internally: divorced/separated	-0.18*	(0.07)	-0.14	(0.09)	-0.13	(0.09)	-0.31***	(0.09)	-0.33**	(0.10)	-0.37***	(0.11)
Parents(s) away internationally: divorced/separated	-0.23*	(0.10)	-0.27*	(0.11)	-0.27*	(0.11)	-0.34*	(0.14)	-0.40**	(0.15)	-0.36*	(0.15)
Parent away internally: parent deceased	-0.15	(0.10)	0.00	(0.12)	0.01	(0.12)	-0.17	(0.12)	-0.21	(0.13)	-0.23	(0.13)
N	2206		1726		1726		2062		1771		1771	
X <sup>2</sup>	38.63		47.00		59.10		35.16		88.94		98.83	
Log-likelihood	-2528.14		-2128.69		-1975.58		-1901.28		-1633.22		-1628.02	

Notes: Robust standard errors in parentheses. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . <sup>a</sup>Models 1 and 4 include the variable of interest (location of parents and the type of separation) and child characteristics (age; gender). <sup>b</sup>Models 2 and 5 add family characteristics (parents' education; number of siblings; child lives with younger siblings; living and housing conditions; quality of the child-caregiver relationship). <sup>c</sup>Models 3 and 6 add school characteristics (quality of schools; public-private schools). <sup>d</sup>This analysis omits children in the category 'parent away internationally: parent deceased', as this category contained too few observations for inclusion in the models.

children living in non-migrant families with the outcomes of children having one or both parents away internally or internationally and where parents are together, divorced/separated or deceased. Table 3 summarises the regression results. The results show that Ghanaian and Nigerian children with parents away internationally and divorced/separated are less likely to have good health than children living in non-migrant families. Similar effects were found for Nigerian children with parents away internally and divorced/separated. The magnitude of the effects is higher in Nigeria ( $\beta = -0.36$ , Model 6) than in Ghana ( $\beta = -0.27$ , Model 3), which may indicate a greater vulnerability of Nigerian children in divorced migrant families. These findings give support to Hypothesis 1a. At the same time, results show that children with parents who are away internally or internationally and in a stable marital relationship, or children with one parent away internally and one parent deceased, have similar health to children in non-migrant families. These results partially confirm Hypothesis 1b and reject Hypothesis 1c. The stepwise inclusion of clusters of indicators in Table 3 does not show statistically significant changes in coefficients related to different contexts of parental absence, except for Ghana, where the inclusion of family and school indicators renders the coefficients for ‘internal parental migration and divorce/separation’ statistically insignificant. Therefore, we conclude that the associations between different contexts of parental absence and child health is not mediated by the inclusion of these clusters, but in Ghana, the family and school conditions mediate the context of internal migration when parents are in a strained marital relationship.

The second analysis focuses exclusively on the context of international parental migration when parents are in a stable marital relationship. Within this context, we look specifically at different characteristics of transnational family formations and how these conditions are associated with child health. Table 4 presents three sets of models, each examining the relationship of a different transnational family condition and children’s health. The full set of control variables is included in each model in Table 4.

The first set of models disaggregate the parental migration status and who is the caregiver into the following four forms: children living in non-migrant families, children whose father is abroad and who are cared for by their mother, children whose mother is abroad and who are cared for by their father, and children with both parents abroad and who are cared for by a non-parental caregiver (Models 7 and 10). The results show that children report poorer health when mothers migrate and fathers are the caregivers in Nigeria ( $\beta = -0.42$ ), while in Ghana this association is not statistically significant. The high magnitude of the coefficient in Nigeria attests for the impact maternal migration has on child health in this particular country context. Therefore, Hypothesis 2a is supported for Nigeria but rejected for Ghana. Paternal migration when the mother is the caregiver does not lead to worse child health, thus confirming Hypothesis 2b. Notably, in both countries, children with two migrant parents who are cared for by a non-parental caregiver had similar health to children in non-migrant families. We therefore reject Hypothesis 2c.

The second set of models looked at the relationship between child health and the stability of the care arrangement (Models 8 and 11). The results show that changing caregivers one or more times worsens the health of children in both transnational (Nigeria,  $\beta = -0.29$ ) and non-transnational (Ghana,  $\beta = -0.26$ ) families, thus confirming Hypothesis 3. On a positive note, results show that children living transnationally who never changed their caregiver had similar health to children in non-migrant families who never changed the caregiver.

The third set of models assesses the relationship between child health and the presence and absence of remittances for children living transnationally (Models 9 and 12). Net of other factors, the presence and absence of remittances do not affect the health of children in transnational care compared to children in non-migrant families. Therefore, Hypothesis 4 is only partially supported.

The results of four additional covariates were found to be statistically significant in our models. Age is a statistically significant indicator in relation to health – older children tended to rate their health more negatively in both Ghana and Nigeria. Living conditions were found to be more positively associated with children’s health, especially in Nigeria. Moreover, Nigerian children in crowded housing conditions and those attending private schools were less likely to highly rate their health.



## Discussion

Many children across Africa live separated from their parents due to migration or other family circumstances such as parental divorce or death. As more parents migrate, the academic and policy communities have raised concerns about the health outcomes of children who stay behind. Although children's health might be affected by the lack of intimate contact with their absent parent(s), there are reasons to believe that staying in the country of origin also offers advantages, as children remain embedded in the protective settings of family and home community. The empirical research to date, which has mostly focused on single countries, has shown mixed evidence. Using large-scale survey data, this article contributes to prior studies by differentiating between several types of parental absence; these include children with parents away internally and internationally and whose parents are either in a stable marital relationship, divorced/separated or deceased. In addition, this study examined different dimensions of children's transnational life by including perspectives of parental migration status and who is the caregiver, the stability of care arrangements and the availability of remittances for children in transnational care. The results are comparatively examined for Ghana and Nigeria, which are two countries with large internal and international migration rates in sub-Saharan African, which itself is one of the largest sources of migrants in the world.

The findings of this article contribute two nuances to the transnational family literature. Firstly, it is important to distinguish between the contexts of parental absence in relation to child health because different forms of living in transnational care provide distinct experiences for children. Specifically, we found a negative relationship between the self-rated health of children and the international parental migration that is accompanied by divorce. At the same time, children with parent(s) away internally or internationally and in a stable marital relationship have similar health to children in non-migrant families. The context of parental death and migration was also found to have a neutral association with child health. These associations emerged in both Ghana and Nigeria, suggesting a consistency in the patterns that goes beyond a single country context. Thus far, the results of this study suggest that children are most vulnerable to parental migration when this is coupled with marital problems. Previous studies found that migration and marital dissolution are likely to negatively affect children's educational outcomes (Nobles, 2011), their emotional wellbeing (Mazzucato & Cebotari, 2016) and their physical health (Carling & Tønnessen, 2013). Specifics of migration and divorce might provide additional evidence on how this relation affects children in our sample. For instance, problematic marriages among Ghanaian couples are more likely to occur in transnational families where women migrate (Caarls & Mazzucato, 2012). This implies that maternal migration may often take place under strained marital conditions compared to when fathers migrate. Furthermore, Nigerian migrants who are divorced were found to have increased legal and financial difficulties in reuniting with their children who stay behind (Haagsman, 2015). In addition, many parents who migrate and divorce form new families and have children in those unions (Dreby, 2010), which in turn may affect the parental inputs to children from previous marriages. Future research should give more attention to conditions associated with divorce and parental migration and their relation to child health.

The second contribution of this study is based on findings that the transnational life of children is not one-dimensional and that different transnational family arrangements affect children differently and not necessarily negatively. Depending on specifics of transnational care, children with migrant parents who are in a stable marital relationship may show similar health to children in non-migrant families. In our sample, the most common arrangement was fathers migrating and children staying in the care of mothers or children staying in the care of a non-parental caregiver when both parents migrate. In these two situations, health does not differ between children in transnational and non-transnational care. In the least common arrangement – when mothers migrate and children stay in the care of fathers – we found that Nigerian children are less likely to have better health compared to children in non-migrant families, but this result is not replicated in Ghana.

These results lead to three reflections. First, most of the studies that found negative correlations between parental migration and child health were primarily conducted using adult assessments of children's outcomes. Yet, recent studies found that adults tend to under-report children's outcomes

compared to children's own perceptions of these outcomes (Jordan & Graham, 2012). In our study, we might capture differing variations in health as perceived by children when compared to findings in the literature that are based mainly on adult assessments. Second, family norms around child rearing play an important role in the coping process for children in transnational care in Ghana and Nigeria. Specifically, the widespread practice of child fostering involves both the family and the community in offering protection for children who experience transitions following parental migration. In Ghana, qualitative research found that children experience no stigma in their social environment when parents migrate and they are cared for by someone else (Poeze & Mazzucato, 2012). The current finding that children with both parents abroad who are cared for by a non-parental caregiver have similar health to children in non-migrant families likely reflects this feature of family norms in Ghana and Nigeria. Third, the family characteristics of maternal migration may be different from those of paternal migration, which may drive the negative results in Nigeria. Auxiliary analysis (not shown here) revealed that when mothers migrate, considerably more children in Nigeria than in Ghana changed their caregiver more than once. This indicates that Nigerian migrant mothers may have more difficulties in securing a stable caregiving arrangement for their children. In addition, research found that tensions in the family arise when mothers migrate and fathers stay behind (Constable, 2003), which in turn may negatively affect child health. More research is needed to observe the mechanisms associated with maternal migration and child health.

Stability of the care arrangements, measured as changes in caregiver, provides important insights into the dynamic lives of children in transnational care, beyond the context of parental migration. Stability in caregiving has previously been examined in relation to divorce and parental death in the Western context and was recently introduced into the transnational family literature by Mazzucato et al. (2015). The results of this study show that children in transnational and non-transnational families in Nigeria and Ghana, respectively, who changed their caregiver more than once, have poorer health than children in non-migrant families who never changed their caregiver. At the same time, children of migrants in Ghana and Nigeria who did not change their caregiver have similar health to children in non-migrant families who did not change caregivers. These findings show that the stability of the caregiver matters for the health of children in transnational care. Future research will benefit from integrating measures of stability of care arrangements in measuring the diversity of outcomes of wellbeing among children in transnational care.

Parental migration is often driven by the need to improve the wellbeing of family members who stay behind. Therefore, it is frequently praised for its development potential through remittances to children who stay behind. We found similar health among children in migrant families who receive or do not receive remittances and children in non-migrant families. Children in transnational care are often embedded in and have access to financial resources of the extended family, which often prioritises the available funds to children or family members who need them most (Lindstrom & Muñoz-Franco, 2006). Our findings are likely the reflection of the efficiency with which families manage monetary resources from migrants abroad and adjust to the needs of family members when remittances are scarce.

This study is not without limitations. One shortcoming relates to the selective process of migration. Migrants do not represent a random proportion of the community in the origin country. Instead, they have specific characteristics that make them prone to migration. A number of observable characteristics that might influence the selectivity of migration were included in our analysis, including parental education and living conditions, but other factors, such as the pre-existing health of children or the welfare of the family prior to migration could not be accounted for given the cross-sectional nature of our data. Therefore, findings of this study show correlations and not causation, and we caution readers to approach the results presented here as exploratory. Future studies in this field would benefit from the collection of panel data. Other limitations are linked to the sampling procedure. By surveying children in classrooms, we were unable to capture the health outcomes of children of migrants who dropped out of school. It was impossible to randomly sample children who left the school because they are widely dispersed within local communities. Additionally, our data were collected in urban areas with high out-migration rates, and therefore, the samples are not nationally representative. As a result,

the findings cannot be generalised to all children in the country. A final limitation relates to the absence of important indicators from our study, such as the length of separation, the cohort of migration or the return migration patterns. Many children, especially younger children, had difficulties remembering details of their parents' departure. These dimensions should be included systematically in future research measuring child health.

Despite these limitations, this study contributes essential evidence to the transnational literature and highlights the need to approach the topic of children in transnational care with a more nuanced lens. In Ghana and Nigeria, the context of migration spurs active policy debates that are unlikely to disappear from public debates anytime soon. The persistence of this topic calls for informed policy actions about transnational families and their functioning, which in turn can result in efficient policy interventions for children. Most efforts and policy decisions to improve the life of children in transnational care are the result of assessments from adults. Our results add to a growing number of recent studies emphasising the need to involve children in programmes and policies aimed to improve their experiences of living apart from their parents. Being a child should not be seen as a liability; indeed, an important achievement for academics and policy-makers alike would be to generate conclusions about children from children themselves.

### Acknowledgements

This work was supported by the NORFACE Research Program 'Migration in Europe: Social, Economic, Cultural and Policy Dynamics' under Grant number NORFACE-315; and the Netherlands Organization for Scientific Research, WOTRO Science for Development Division under Grant number W01.65.316. Codebook and instructions for data access can be found on [www.tcra.nl](http://www.tcra.nl).

### Disclosure statement

No potential conflict of interest was reported by the authors.

### References

- Amato, P. R., & Cheadle, J. (2005). The long reach of divorce: Divorce and child well-being across three generations. *Journal of Marriage and Family*, 67(1), 191–206. doi:10.1111/j.0022-2445.2005.00014.x
- Amuedo-Dorantes, C., & Pozo, S. (2011). New evidence on the role of remittances on healthcare expenditures by Mexican households. *Review of Economics of the Household*, 9(1), 69–98. doi:10.1007/s11150-009-9080-7
- Asis, M. (2006). Living with migration: Experiences of children left-behind in the Philippines. *Asian Population Studies*, 2(1), 45–67. doi:10.1080/17441730600700556
- Bargain, O., & Boutin, D. (2015). Remittance effects on child labour: Evidence from Burkina Faso. *The Journal of Development Studies*, online first. 51, 922–938. doi:10.1080/00220388.2015.1010154.
- Bowlby, J. (1958). The nature of the child's tie to the mother. *International Journal of Psycho-Analysis*, 39(5), 350–373.
- Boynton-Jarrett, R., Hair, E., & Zuckerman, B. (2013). Turbulent times: Effects of turbulence and violence exposure in adolescence on high school completion, health risk behavior, and mental health in young adulthood. *Social Science & Medicine*, 95(October), 77–86. doi:10.1016/j.socscimed.2012.09.007
- Bryceson, D. F., & Vuorela, U. (2002). *The transnational family: New European frontiers and global networks*. Oxford: Berg.
- Caarls, K., & Mazzucato, V. (2012, December 12–14). *Are transnational marriages unstable? Comparing Ghanaian migrants in Europe and their non-migrant counterparts in Ghana*. Paper presented at the Comparative and Multi-sited Approaches to International Migration, Paris.
- Carling, J., & Tønnessen, M. (2013). Fathers' whereabouts and children's welfare in Malawi. *Development Southern Africa*, 30(6), 724–742. doi:10.1080/0376835X.2013.859068
- Cebotari, V., & Mazzucato, V. (2016). Educational performance of children of migrant parents in Ghana, Nigeria and Angola. *Journal of Ethnic and Migration Studies*, 42(5), 834–856. doi:10.1080/1369183X.2015.1125777
- Constable, N. (2003). A transnational perspective on divorce and marriage: Filipina wives and workers. *Identities: Global Studies in Culture and Power*, 10(2), 163–180. doi:10.1080/10702890304328

- Cortés, R. (2007). *Children and women left behind in labor sending countries: An appraisal of social risks global report on migration and children* (pp. 40). Brighton: Child Migration Research Network, University of Sussex. Retrieved from [http://www.childmigration.net/files/Rosalia\\_Cortes\\_07.pdf](http://www.childmigration.net/files/Rosalia_Cortes_07.pdf).
- Donato, K. M., & Duncan, E. M. (2011). Migration, social networks, and child health in Mexican families. *Journal of Marriage and Family*, 73(4), 713–728. doi:10.1111/j.1741-3737.2011.00841.x
- Donato, K. M., Kanaiaupuni, S. M., & Stainback, M. (2003). Sex differences in child health: Effects of Mexico – U.S. migration. *Journal of Comparative Family Studies*, 34(4), 455–477.
- Dreby, J. (2010). *Divided by borders: Mexican migrants and their children*. Berkeley: University of California Press.
- Dustmann, C. (2003). Children and return migration. *Journal of Population Economics*, 16(4), 815–830. doi:10.1007/s00148-003-0161-2
- Frank, R. (2005). International migration and infant health in Mexico. *Journal of Immigrant Health*, 7(1), 11–22. doi:10.1007/s10903-005-1386-9
- Gassmann, F., Siegel, M., Vanore, M., & Waidler, J. (2013). *The impact of migration on children left behind in Moldova* (UNU-MERIT Working Paper Series). Maastricht Graduate School of Governance. UNU-MERIT: Maastricht.
- GDHS. (2008). Ghana demographic and health survey 2008. Retrieved from <http://www.dhsprogram.com/>
- Haagsman, K. (2015). *Parenting across borders: Effects of transnational parenting on the lives of angolan and Nigerian migrant parents in the Netherlands* (PhD thesis). Maastricht University, Maastricht.
- Jordan, L. P., & Graham, E. (2012). Resilience and well-being among children of migrant parents in South-East Asia. *Child Development*, 83(5), 1672–1688. doi:10.1111/j.1467-8624.2012.01810.x
- Kanaiaupuni, S. M., & Donato, K. M. (1999). Migradollars and mortality: The effects of migration on infant survival in Mexico. *Demography*, 36(3), 339–353. doi:10.2307/2648057
- Lindstrom, D. P., & Muñoz-Franco, E. (2006). Migration and maternal health services utilization in rural Guatemala. *Social Science & Medicine*, 63(3), 706–721. doi:10.1016/j.socscimed.2006.02.007
- Madianou, M., & Miller, D. (2011). Mobile phone parenting: Reconfiguring relationships between Filipina migrant mothers and their left-behind children. *New Media & Society*, 13(3), 457–470. doi:10.1177/1461444810393903
- Mazzucato, V., & Cebotari, V. (2016). Psychological well-being of Ghanaian children in transnational families. *Population Space and Place*. doi:10.1002/psp.2004
- Mazzucato, V., Cebotari, V., Veale, A., White, A., Grassi, M., & Vivet, J. (2015). International parental migration and the psychological well-being of children in Ghana, Nigeria, and Angola. *Social Science & Medicine*, 132(May), 215–224. doi:10.1016/j.socscimed.2014.10.058
- Mazucato, V., & Schans, D. (2011). Transnational families and the well-being of children: Conceptual and methodological challenges. *Journal of Marriage and Family*, 73(August), 704–712. doi:10.1111/j.1741-3737.2011.00840.x
- NDHS. (2008). Nigeria demographic and health survey 2008. Retrieved from <http://www.dhsprogram.com/>
- Nobles, J. (2011). Parenting from abroad: Migration, nonresident father involvement, and children's education in Mexico. *Journal of Marriage and Family*, 73(4), 729–746. doi:10.1111/j.1741-3737.2011.00842.x
- Parreñas, R. S. (2005). *Children of global migration: Transnational families and gendered woes*. Stanford, CA: Stanford University Press.
- Poeze, M., & Mazzucato, V. (2012). Ghanaian children in transnational families: Understanding left-behind children's experiences through local parenting norms. In L. Baldassar & L. Merla (Eds.), *Transnational families, migration, and care work*. Oxford: Routledge.
- Rivers, J., Mason, J., Silvestre, E., Gillespie, S., Mahy, M., & Monasch, R. (2008). Impact of orphanhood on underweight prevalence in sub-Saharan Africa. *Food and Nutrition Bulletin*, 29(1), 32–42. doi:10.1177/156482650802900104
- Stillman, S., & McKenzie, D. (2012). The impact of immigration on child health: Experimental evidence from a migration lottery program. *Economic Inquiry*, 50(1), 62–81. doi:10.1111/j.1465-7295.2009.00284.x
- Vanore, M. (2015). *Family-member migration and the psychosocial health outcomes of children in Moldova and Georgia* (PhD degree). Maastricht University, Maastricht. Retrieved from <http://digitalarchive.maastrichtuniversity.nl/fedora/get/guid:67fa2a26-bac5-49ff-adbe-cef3c0d0b74d/ASSET1>
- Wen, M., & Lin, D. (2012). Child development in rural China: Children left behind by their migrant parents and children of nonmigrant families. *Child Development*, 83(1), 120–136. doi:10.1111/j.1467-8624.2011.01698.x
- World Bank. (2011). *Migration and remittances factbook 2011*. Washington, DC: Author. Retrieved from <http://siteresources.worldbank.org/INTLAC/Resources/Factbook2011-Ebook.pdf>
- Yabiku, S. T., Agadjanian, V., & Cau, B. (2012). Labor migration and child mortality in Mozambique. *Social Science & Medicine*, 75(12), 2530–2538. doi:10.1016/j.socscimed.2012.10.001