Title:
Orphanhood among children under age 18 in Democratic Republic of the Congo: A regional perspective

Running head: Orphanhood in Democratic Republic of the Congo

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Abstract

There is an abundant literature on orphanhood in sub-Saharan Africa inspired by the rising HIV prevalence in many countries of the region. Most studies have been conducted at national levels, ignoring therefore the heterogeneity within countries. Yet this has programmatic policy implications. This study fills the gap in the context of Democratic Republic of the Congo and attempts to address the effects of two independent but important factors, namely HIV prevalence, and wars and violence in the Eastern part of the country using two Demographic and Health Surveys. Findings did not show any indication of a strong and significant relationship between HIV prevalence and orphan rates at provincial level. Based on these findings, there is a possible effect of wars and violence on orphan rates. Also, gender differences were observed at both national and provincial levels.

Introduction

The number of orphans in sub-Saharan Africa (SSA) has steadily increased over the past years. Recent estimates indicate that SSA is the most affected region worldwide with over 12 million of orphaned children by AIDS (UNAIDS, 2008). With this alarming figure, orphanhood has become a serious social problem in SSA; and scholars have justifiably named it a "*crisis*" (Beegle et al., 2010; Evans, 2005; Evans & Miguel, 2007). First, there are only a few social support systems in SSA outside of families. Therefore, orphan children are more vulnerable and are more likely to be homeless and/or head of household, living in extreme poverty (Case et al., 2004). Additionally, orphans are at greater risks of malnutrition (Kimani-Murage et al., 2011; Cluver et al., 2012; Crampin et al., 2003; Rayond et al., 2018), poor school outcomes (Evans & Miguel, 2007; Oleke et al., 2007; Ainsworth & Filmer, 2006), and sexual behaviour (Mkandawire, 2013; Tsala Dimbuene & Kuate Defo, 2013; Tsala Dimbuene & Kuate Defo, 2012). Second, children who lost one or both parents have gone through a series of traumatic events. The consequences of these latter may have adverse outcomes such as depression, stress and anxiety (Raymond et al., 2018; O'Donnell et al., 2014). Third, even though the knowledge about AIDS regarding the modes of transmission and prevention strategies has increased over time (Tsala Dimbuene & Kuate Defo, 2011), there still is lot of stigma attached to the pandemic. Therefore, orphan children of AIDS can be stigmatized and may be denied education or health care (UNAIDS & UNICEF, 2003; Hill et al., 2008). As a consequence, subsequent living arrangements for orphaned children do not help either. In fact, my own work has shown that adolescents and youth living in neither- or one-parent families are more likely to initiate first at an earlier age compared with those who resided in two-parent families (Tsala Dimbuene & Kuate Defo, 2012; Kuate Defo and Tsala Dimbuene, 2012; Tsala Dimbuene & Kuate Defo, 2013).

Previous research has done much progress portraying the orphan crisis in SSA as a region and at country level. However, there are some other dimensions of the phenomenon, which are understudied. For example, it is absurd to assume that orphanhood is evenly distributed within a country because AIDS prevalence varies within a country and therefore its effects may differ from a region to another. In the context of Democratic Republic of the Congo (DRC) which has been devastated by wars and armed groups in the Eastern DRC for over 20 years, conflicts which resulted in population displacement, rape, and deaths may generate unexpected effects on orphanhood in the country (Beegle et al., 2010). Yet furthering our understanding of the distribution of orphanhood within a country is critical and has programmatic implications to better focus efforts targeted at social protection of orphans.

Within this background, this paper contributes to the existing literature in SSA in describing orphanhood in DRC through a regional perspective and whenever possible looking into differences between girls and boys under age 18. There are justifiable reasons for a continuous focus on youth under 18 years, which forms in many SSA countries over

52% of the total population. In DRC, people less than 15 years represent 46% out of an estimated population of 84 million (PRB, 2018). As aforementioned, it is important to have a clear understanding of orphanhood because, along with subsequent living arrangements, they have implications on the well-being of this segment of the population. More specifically, the paper attempts to disentangle the effects of two independents phenomena, namely HIV and successive wars.

Data and Methodology

To achieve this goal, this paper uses data from two consecutive Demographic and Health Surveys (DHS) conducted in 2007 and 2013-14.[1] DHSs usually focus on women of reproductive ages (15-49 years); however they collect information about household living environments and assets, and household composition as well. In this paper, we used the household datasets, which include information about household members and selected characteristics. The household sample sizes in 2007 and 2014 were different in the sense that sample size in 2014 was almost twice that of 2007.[2]

Regarding the samples used in the analyses, readers should note that information about living arrangements were collected only for individuals under age 18. As such, our analyses restricted to those sub-samples. We noted that samples of the surveys in the two years were a bit different, Figures 1.a and 1.b are an attempt to check the comparability of the two samples for individuals under age 18. Figure 1.a shows that the two distributions in 2007 and 2014 are quite comparable.

---------- Figures 1.a and 1.b about here ----------

Figure 1.b indicates that prevalence rates of orphanhood increased with age; however the prevalence rates did not vary very much except at certain ages (5, 10, 15). This may be due to a known effect in demography, the "attraction at rounded ages such as 5, 10, and 15". However, it is worthy to recognize that ignoring the effects of age and gender can be misleading.

In this paper, orphan was defined as an individual aged under 18 whom one or both parents were reported to be deceased. In fact, DHS collected information about parental survival. More specifically, the respondent of the household questionnaire in each household was asked whether the [**mother**], or [**father**] of each household member was alive. Responses ranged from yes, no or don't know. Based on this definition, it was possible to categorize orphans as *single* (when only one parent was deceased) or *double orphan* (when both

[1] Data collection for this last survey spanned from 2013 to 2014. However, most data were collected in 2013. For the sake of presentation in the paper, we refer to this last survey as DHS-2014.
[2] In 2007, 8,886 households were selected while 18,171 were selected in 2014.

parents were deceased). Further, single orphans can be either *paternal orphans* (if the father was deceased) or *maternal orphans* (if the mother was deceased). In both surveys, there were only small percentages of missing values; they were excluded because they do not affect the final results.

In order to define living arrangements for the population of interest, DHS collected information on whether the mother/father of the specific person under age 18 lived in the household. Responses ranged from 0 to a maximum. When the father or mother did not live in the household, responses were coded 0. Otherwise they were coded 1 or plus. Another information, that we used in the current study which is however insufficient to fully capture the living arrangements, is the relationship with the head of the household. As I mentioned in my previous work (Tsala Dimbuene, 2010), it is not possible to determine whether or not a child lives with the two parents just by knowing he/she is the son or daughter of the head of the household. Combining the information on parental survival and co-residence, it was possible to identify four mutually exclusive categories including neither parent, father only, mother only, and two parents. Finally, because orphans are particularly vulnerable, we used the information on the relationship with the head of the household because this can exacerbate or buffer their vulnerability. Finally, there are also some data limitations because we wanted to get a thorough picture of both orphanhood and living arrangements by age and province. However due to small cases when disaggregating the numbers, it was not possible to pursue this goal.

Main findings

1. Variation of orphan rates between 2007 and 2014

This section briefly examines the evolution of orphan rates between the two consecutive DHS in DRC. Similar studies were undertaken at national level.[3] As mentioned before, figures at national level are important, however they mask within-country variation. It is therefore important to unravel the distribution of the phenomenon at provincial level.[4] Most studies on orphanhood in SSA seek the effects of HIV/AIDS on orphanhood and living arrangements of children.

---------- Table 1 about here ----------

[3] See for details, Bicego et al. (2003); Monaschand Boerma (2004); Beegle et al. (2010). This paper extends previous studies at detailed geography in DRC. Readers should keep in mind that DRC was until 2007 divided in 11 provinces (Kinshasa, Bandundu, Kongo Central, Kasai Oriental, Kasai Occidental, Province Orientale, Equateur, North Kivu, South Kivu, Maniema, and Katanga). Very recently, DRC went devolution with 26 provinces. To make comparisons possible between the two surveys, we used the administrative subdivisions even though data were collected to be representative at (new) provincial level.

[4] In this study, we refer interchangeably provincial and regional level for statistics computed at the level of province.

Democratic Republic of the Congo is a low prevalence country. In 2014, there was observed a prevalence of 0.6% among people aged 15-59 years.[5] The prevalence varied from 0.2% in Kongo central to 4.0% in Maniema. However, there is not a clear association between HIV prevalence and orphan rates within provinces. For instance, while the province of Maniema has the highest prevalence (4.0%), it exhibited the lowest orphan rate in 2014 (7.4%). In 2014, the highest orphan rate was observed in Equateur with 10.4%. Earlier in 2007, the highest orphan rates were observed in Bandundu (10.1%); Oriental (10.2%); North Kivu (10.7%); and South Kivu (11.2%). Again, Maniema did not have the highest orphan rate despite the highest HIV prevalence observed in 2014 if one might assume that HIV prevalence remained stable between the two surveys. Finally, the orphan rates declined in most provinces between 2007 and 2014. Exceptions are Equateur, Kasai Oriental and Katanga where the orphan rates slightly increased between the two surveys.

2. Gender differences of orphan rates between 2007 and 2014

In this paper, we were also interested into gender differences about orphanhood. To achieve this goal, orphan rates were computed for each province by gender. These orphan rates were compared between girls and boys for each year. A negative change means that orphan rates are higher for girls compared with boys. Overall, differences are negative; that means that in both 2007 and 2014, girls had higher orphan rates than boys. In 2007, the highest differences between girls and boys concerning orphanhood were observed in the provinces of Oriental and South Kivu, with -3.5% and -4.1%, respectively. In contrast, differences between girls and boys in 2014 were marginal in most provinces. Two exceptions where positive differences were observed include South Kivu and Kasai Oriental, with 1.2% and 1.6%, respectively.

3. Trends or of orphan rates between 2007 and 2014, by the type of orphans

To better understand what happened between 2007 and 2014 in each type of orphans, orphan rates in 2007 and 2014 were plotted (Figure 2). Points closer to the 45° line means that the two orphan rates in each province are not very different in the two surveys.

---------- Figure 2 and Table 2 about here ----------

Panel A on any orphans indicates that in most provinces orphan rates have declined between 2007 and 2014, except in three provinces, including Katanga, Kasai oriental and Equateur. Looking into Panel B on paternal orphans showed that there were no changes in four provinces including Kasai Oriental, Kinshasa, Oriental, and Katanga. Bandundu is the only province where an increase was observed between 2007 and 2014. In the rest of the

[5] See for details, 2013-14 DHS report about DRC; page 262.

provinces, the orphan rates of paternal orphans decreased. Panel C about maternal orphans showed a totally different picture. Indeed, maternal orphan rates increased in most provinces. Among these provinces, there is Maniema where the highest HIV prevalence was observed in 2014. Further, provinces such as Katanga, Maniena, North Kivu, and Equateur have been struggling with so many wars and armed groups in the country. However, more research is needed to confirm the effect of wars on maternal orphanhood. Another underlying question is why these provinces were affected differently regarding paternal and maternal orphanhood? Intuitively, one might assume that women are less capable to escape ongoing wars and may have been more affected than men. Alternatively, DRC has been proclaimed as the "World Capital of Rape". Along with its effects, this may explain higher maternal rates in these provinces. In the opposite, Kongo central was only partially affected by wars and violence in the country; however, differences in maternal orphanhood between 2007 and 2014 are substantial. Analyzing double orphan provides an interesting feature with four provinces that were devastated by wars and violence where an increase in double orphan rates was observed, including Equateur, Katanga, North Kivu, and Oriental. Definitely something is going on in Kongo central that requires a deep search. As mentioned above, this province was only partially affected by wars and violence; however findings indicate an increase of double orphans in the province.

4. Living arrangements among 0-17 years in DRC

In this section, we build upon Beegle et al. (2010)'s methodology where they present first living arrangements among non-orphans, followed by orphans' living arrangements while emphasizing at the same time gender differences. Living arrangements among non-orphans can serve as benchmark in a country, how they might change over time and how they are related to HIV prevalence (Beegle et al., 2010).

4.1 Living arrangements among non-orphans between 2007 and 2014.

Table 3 shows that 70% of individuals aged 0-17 years in 2007 lived with their biological parents. Findings also indicate a huge variation of 16 percentage points between provinces with Kinshasa, which registered the lowest percentage of youth living in two-parent families (58%) and South Kivu (74%). Of particular concern is this situation of Kinshasa where almost one-third of youth do not live with their biological parents, yet it is well documented that family environment is critical for youth psychosocial development. This province hosting over 12 million of inhabitants has a HIV prevalence of 1.6% in 2014 on one hand and has not been much affected by wars and violence. It is likely that persistent economic hardship in the country which results in marriage/union disruption may explain these figures. Indeed, this is followed by another 23% of youth living in mother-only families in Kinshasa.[6]

[6] In Kinshasa, there is an increasing number of out-of-wedlock births among young women. In other to better understand the sizeable percentage of people under age 18 living with mother only, we are planning to undertake a study on out-of-wedlock births in Kinshasa using all available data including DHS and Multiple

In 2014, these figures worsened. In fact, only 65% of youth aged 0-17 in DRC lived with their two biological parents. As previously said, there is a huge variation among provinces (21 percentage points). These figures ranged from the province Oriental (54%) to Maniema (75%). However, Kinshasa still is among provinces with the lowest percentage (57%) of youth aged 0-17 living with their two parents. There is also important to note the sizeable percentage of youth aged 0-17 living in mother-only families. Overall, 19% of youth aged 0-17 lived with their mother only; the province of Kongo Central recorded the highest percentage with 25%.

Looking into gender differences, findings can be summarized as follows. Among girls aged 0-17 years, 65% lived with their two parents. The highest (lowest) percentage was observed in Maniema with 74% of girls living in two-parent families (Kinshasa with 55%). Regarding mother-only coresidence, 18% of girls lived with their mother only. Findings indicate important variations between provinces. The highest percentage of girls who lived with their mother was observed in Kongo Central with 24%.

For boys, 66% of them lived with their two parents. Again, there are important variations between provinces. Figures ranged from 55% in Province Oriental to 76% in Maniema, resulting in a difference of 21 percentage points. An additional 25% lived wit their mother only.

4.2 Living arrangements among orphans

Turning now to the living arrangements of orphans, we defined three mutually exclusive categories, including *neither parent*, *father only* and *mother only* based on the information about parental survival and parental coresidence. For consistency, we ensured that an individual whom the two parents were reported to be alive could not be in this sub-sample. Table 4 reports findings on the levels and changes in living arrangements of simple or double orphans.

Overall, there are two emerging categories of living arrangements among orphans in DRC in both survey years: orphans live either in neither-parent households or in mother-only households. Percentage of orphans living in father-only households is lower compared with the two categories mentioned above. However, more than one-tenth of youth aged 0-17 lived with their father only. In 2007, 14% of youth lived with their father only. The corresponding figure was 15% in 2014. Among girls, the percentage living with their father only was 12% and 14% in 2007 and 2014, respectively.

Going to the two major categories of living arrangements among orphans in DRC, findings indicate that 47% of youth lived in neither-parent households in 2007. This percentage varied from 36% in Kongo Central to 54% in Province Oriental. An additional 39% among orphans lived with their mother only. Important variations among provinces were observed,

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Indicators and Cluster Surveys. As a matter of facts, a study conducted in Kinshasa, DRC reported an unintended pregnancy rate of 147 per 1,000 women aged 15-49 (Chae et al., 2016.

ranging from 32% in Maniema to 57% in Kongo Central. In the 2014 survey, findings indicate that 47% and 38% of the children under age 18 lived in neither-parent households or with their mother only, respectively. As previously observed, there are important variations among provinces. For instance, the percentage of children under age 18 who lived in neither-parent households ranged from 33% in Kongo Central to 56% in Province Oriental. Likewise, the percentage of those who lived with their mother only ranged from 28% in South Kivu to 47% in Kongo Central. Finally, some minor differences are observed between girls and boys regarding neither-parent and mother-only living arrangements. However, changes in these two living arrangements are important between 2007 and 2014 within provinces. For instance, the percentage of youth living in neither-parent households increased by 16 percentage points between 2007 and 2014. At the same time, the percentage of youth living with their mother only declined by 17 percentage points.

Another dimension of living arrangements that we looked into was the relationship with the head of the household. Due to small cells, responses were grouped into seven mutually exclusive categories (see Table 5). Three categories emerged from these analyses. Orphans are grandchild, niece/nephew, or siblings (brother/sister). Findings indicate that, among children not living with a surviving parent, 38% of them are grandchildren of the head of the household. Further, 29% are niece or nephew of the head of the household and 16% live with their brother or sister. Regional differences are also observed.

Discussion and conclusion

This paper examined orphanhood and living arrangements of orphans using regional and gender perspectives in Democratic Republic of the Congo using the two existing DHS in the country. While family environment is critical for the optimal psychosocial development and well-being of children (Tsala Dimbuene & Kuate Defo, 2011; Tsala Dimbuene, 2014), SSA still understudied concerning the influences of living arrangements on children well-being. Previous studies (Beegle et al., 2010; Bicego et al., 2003; Monasch & Boerma, 2004) adopted a national approach; yet national statistics can mask within-country variation of the phenomenon (Beegle et al., 2010). By adopting a regional perspective, this study contributes to the existing literature in unraveling within-country differences, and can better guide interventions targeting at improving social protection for vulnerable children.

Additionally, the paper attempted to implicitly isolate the effects of two independent factors, namely HIV prevalence, and wars and violence in the country for two main reasons. First, HIV prevalence in DRC is low and was estimated at 0.6% at national level among people aged 15-59 years. In fact, most studies on orphanhood posit that adult mortality caused by AIDS is mainly responsible for the increasing number of orphans in the continent. Does this hypothesis hold in the context of low prevalence as it is in DRC? A second avenue of explanation stands on the fact that DRC has been devastated by wars and violence for over 20 years. These wars and violence have caused not only deaths but also displacement of populations in Eastern DRC that may result in family dislocation and/or

disaggregation. Provinces such as North and South Kivu, Oriental, Maniema, Katanga, and Equateur have been the theatre of violence and wars. Therefore, may wars and violence instead explain the variations in orphan rates and living arrangements of orphans in the country? We closely looked on how these provinces fare on orphanhood compared with other provinces where the effects of wars and violence are supposedly lower.

Findings did not show any indication of a strong and significant relationship between HIV prevalence and orphan rates at provincial level. For instance, one might have expected higher orphan rates in Maniema based on HIV prevalence observed in 2014. Yet orphan rates in 2007 show that this province ranked the second (9%) after Katanga which had the lowest orphan rate at 7%. Based on these findings, there is a possible effect of wars and violence on orphan rates. Indeed, orphan rates are high in three provinces devastated by successive wars and violence. They include North Kivu, South Kivu and the province Oriental. The situation in 2014 changed a bit; however the highest orphan rates was again in the province of Equateur highly affected by wars and violence; yet it has a lower HIV prevalence. These findings reflected much more among boys than girls who had the highest orphan rates in these provinces in 2007 and 2014.

In conclusion, there are clear indications that orphanhood affect provinces in DRC at different rates. Therefore, orphan-related studies should consider whenever possible to account for within-country variation because it has programmatically policy implications. Orphanhood in SSA has been described as a crisis. At the same time, the traditional social support in the families is overwhelmed given the rising number of orphans that it can no longer afford. Interventions aimed at supporting vulnerable children including orphans should be aware of within-country variation to better allocate the limited resources available to provide them with material and psychosocial support. Regarding the effects of wars and violence on orphan rates, these are conjectures in the absence of more detailed information. Ideally, information at cluster level should have been more useful.

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Tables and figures

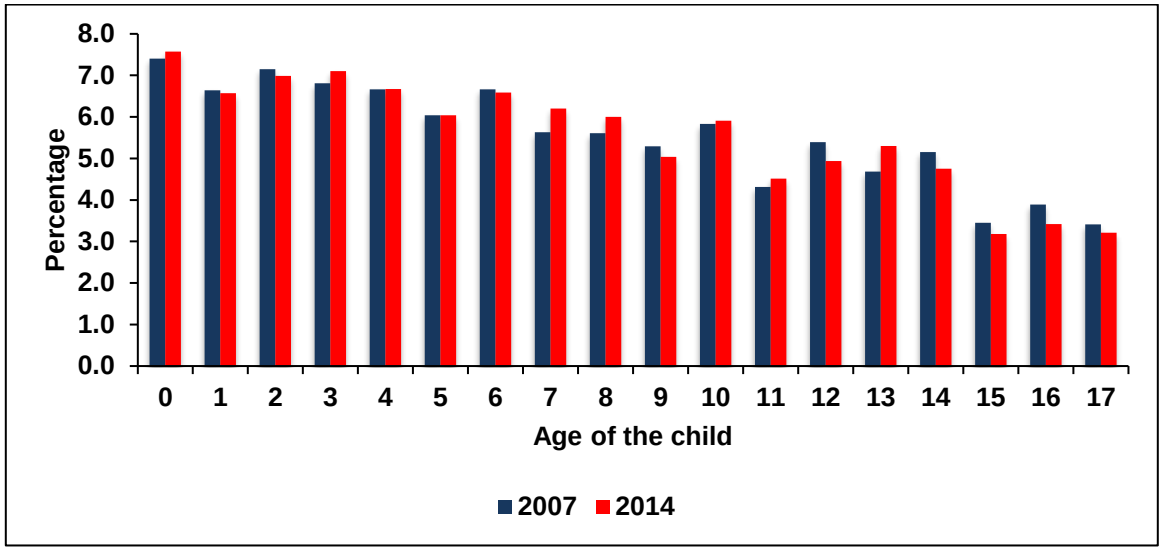


Figure 1.a: Percentage distribution of the samples by age and survey year
Source: DHS 2007 and 2013-14

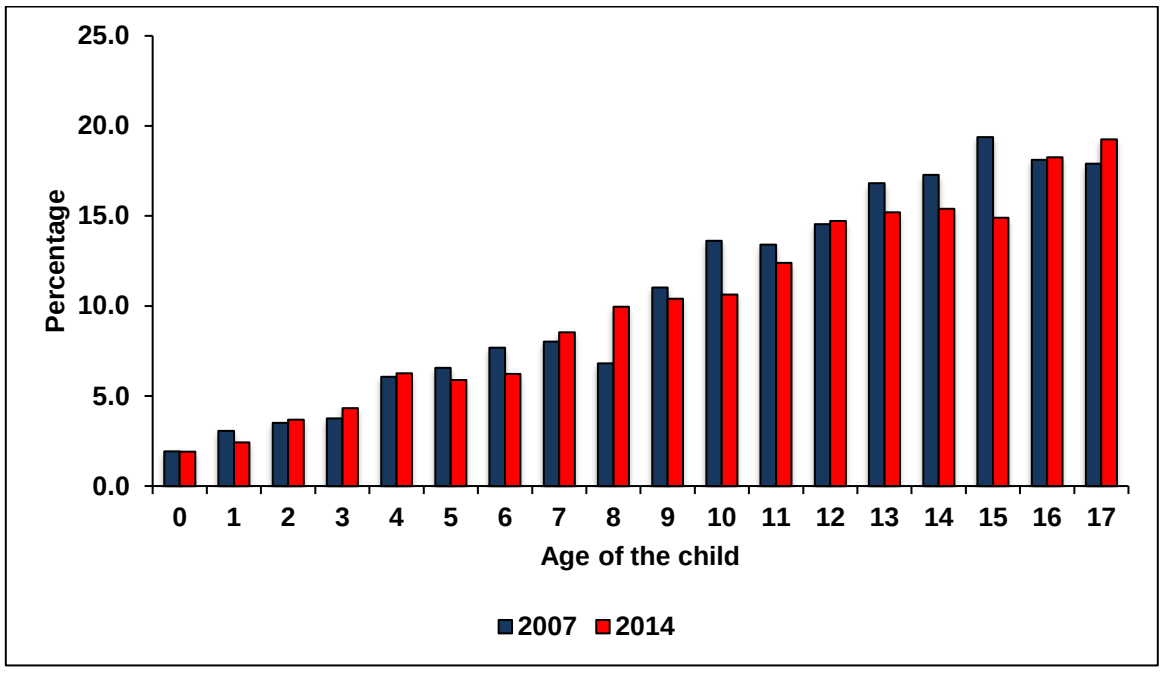


Figure 1.b: Prevalence of orphanhood by age and survey year[7]

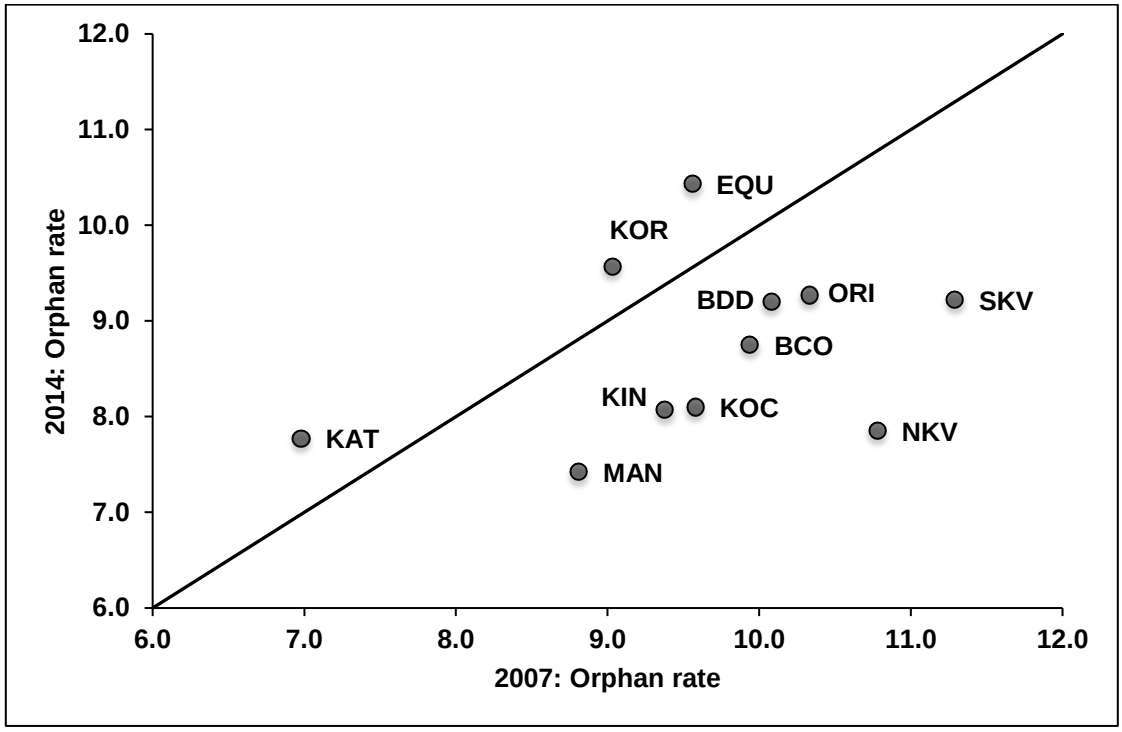
[7] Prevalence rates of orphanhood presented are not standardized yet we are aware that they may be affected by both age and gender.

Source: DHS 2007 and 2013-14

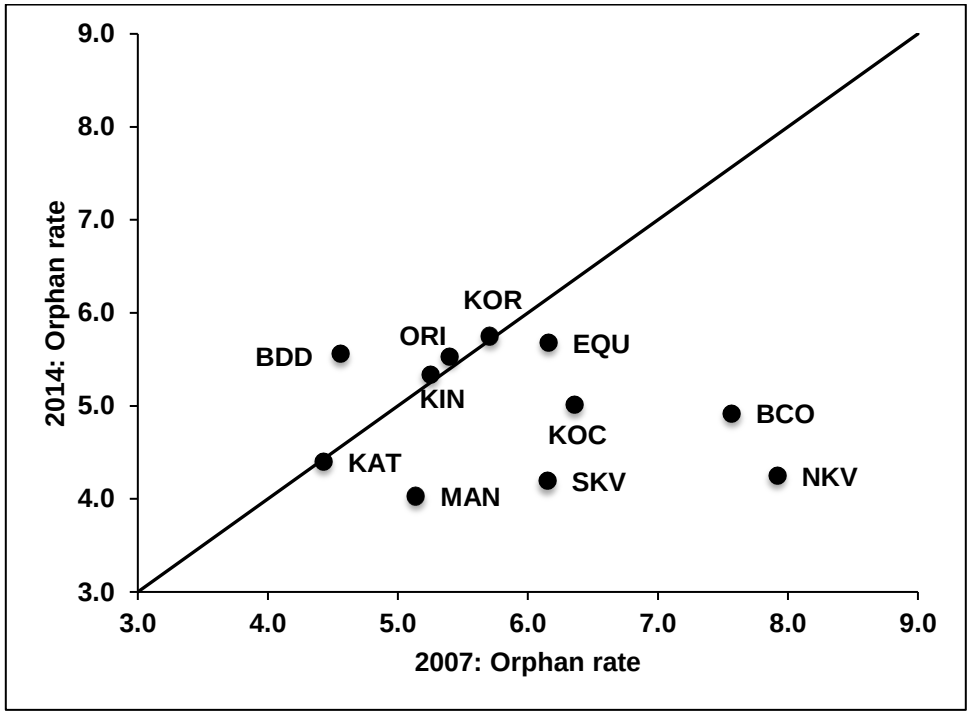
Table 1: Levels and orphan rates by province, and sex

	Total sample			Girls			Boys			Difference between Girls and Boys		HIV prevalence in 2014 (*)
Province	**2007**	**2014**	**Change**	**2007**	**2014**	**Change**	**2007**	**2014**	**Change**	**2007**	**2014**	
Kinshasa	9.3	8.0	-1.2	8.9	8.0	-0.9	9.7	8.1	-1.6	-0.8	0.0	1.6
Bandundu	10.1	9.2	-0.9	10.4	9.2	-1.1	9.7	9.1	-0.6	0.6	0.1	0.3
Kongo Central	9.9	8.7	-1.3	9.1	8.1	-1.1	10.6	9.3	-1.4	-1.5	-1.2	0.2
Equateur	9.5	10.4	0.9	9.4	9.8	0.4	9.5	10.9	1.4	-0.1	-1.1	0.6
Kasaï Occidental	9.5	8.1	-1.4	8.7	8.9	0.1	10.2	7.3	-2.9	-1.5	1.6	0.6
Kasaï Oriental	9.0	9.5	0.6	8.2	9.7	1.5	9.8	9.4	-0.4	-1.7	0.2	1.8
Katanga	6.9	7.7	0.8	7.7	7.3	-0.4	6.2	8.2	2.0	1.5	-1.0	1.5
Maniema	8.8	7.4	-1.4	8.9	7.5	-1.4	8.7	7.3	-1.3	0.2	0.2	4.0
North Kivu	10.7	7.8	-2.9	10.8	7.6	-3.2	10.6	8.0	-2.6	0.2	-0.4	0.9
Oriental	10.2	9.2	-0.9	8.3	9.1	0.8	11.9	9.4	-2.5	-3.5	-0.3	2.3
South Kivu	11.2	9.2	-2.0	9.2	9.8	0.7	13.2	8.6	-4.6	-4.1	1.2	0.4

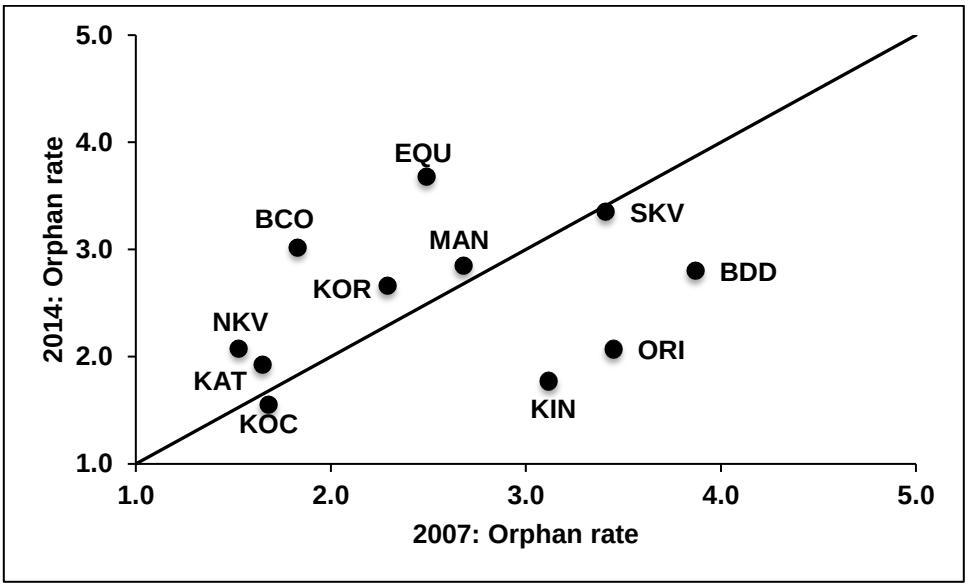
(*) Figures from 2014 DHS report; Table 15.4, page 262.
Source: DHS 2007 and 2013-14



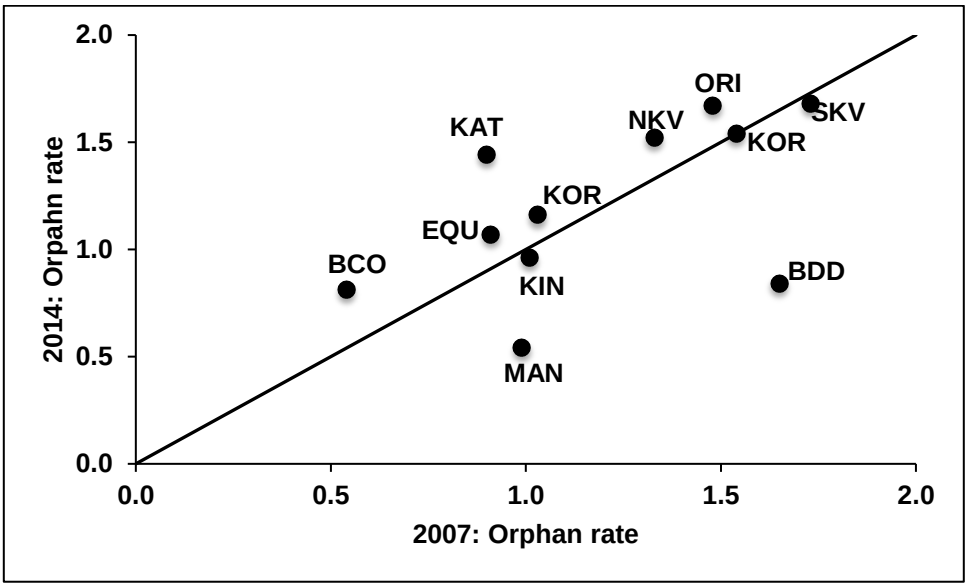
Panel A: Any orphans



Panel B: Paternal orphans



Panel C: Maternal orphans



Panel D: Double orphans

Note: Points above (below) 45-degree line correspond to an increase (decrease) of orphan rates between 2007 and 2014.

Figure 2: Trends in orphanhood among children aged 0-17 years
Source: DHS 2007 and 2014

Table 2: Rates of orphanhood by province, between 2007 and 2014

Province	Any orphans			Paternal orphans			Maternal orphans			Double orphans		
	2007	2014	Change	2007	2014	Change	2007	2014	Change	2007	2014	Change
Kinshasa	9.4	8.1	-1.3	5.3	5.3	0.1	3.1	1.8	-1.4	1.0	1.0	-0.1
Bandundu	10.1	9.2	-0.9	4.6	5.6	1.0	3.9	2.8	-1.1	1.7	0.8	-0.8
Kongo Central	9.9	8.8	-1.2	7.6	4.9	-2.7	1.8	3.0	1.2	0.5	0.8	0.3
Equateur	9.6	10.4	0.9	6.2	5.7	-0.5	2.5	3.7	1.2	0.9	1.1	0.2
Kasaï Occidental	9.6	8.1	-1.5	6.4	5.0	-1.4	1.7	1.6	-0.1	1.5	1.5	0.0
Kasaï Oriental	9.0	9.6	0.5	5.7	5.8	0.0	2.3	2.7	0.4	1.0	1.2	0.1
Katanga	7.0	7.8	0.8	4.4	4.4	0.0	1.7	1.9	0.3	0.9	1.4	0.5
Maniema	8.8	7.4	-1.4	5.1	4.0	-1.1	2.7	2.9	0.2	1.0	0.5	-0.5
North Kivu	10.8	7.9	-2.9	7.9	4.3	-3.7	1.5	2.1	0.6	1.3	1.5	0.2
Oriental	10.3	9.3	-1.1	5.4	5.5	0.1	3.5	2.1	-1.4	1.5	1.7	0.2
South Kivu	11.3	9.2	-2.1	6.2	4.2	-2.0	3.4	3.4	-0.1	1.7	1.7	-0.1

Source: DHS 2007 and 2013-14

Table 3: Living arrangements among non-orphans in Democratic Republic of the Congo

ALL	2007				2014				Changes between 2007 and 2014			
Province	Neither parent	Father only	Mother only	Both parents	Neither parent	Father only	Mother only	Both parents	Neither parent	Father only	Mother only	Both parents
Kinshasa	13.3	5.7	22.6	58.4	13.7	6.6	22.7	56.9	0.4	0.9	0.2	-1.5
Bandundu	7.8	2.1	18.3	71.8	7.6	3.5	21.3	67.6	-0.2	1.4	3.0	-4.2
Kongo Central	10.9	5.4	16.7	67.0	11.3	3.7	24.5	60.5	0.4	-1.7	7.8	-6.5
Equateur	8.3	6.6	11.6	73.5	10.9	6.4	18.2	64.4	2.6	-0.2	6.7	-9.1
Kasaï Occidental	10.4	3.8	15.4	70.4	9.5	3.6	19.6	67.4	-1.0	-0.2	4.2	-3.1
Kasaï Oriental	9.4	3.2	14.4	73.1	10.7	4.2	16.5	68.6	1.4	1.0	2.2	-4.5
Katanga	9.5	3.3	13.1	74.1	9.9	5.2	14.9	70.0	0.4	1.9	1.8	-4.1
Maniema	8.6	8.5	10.5	72.4	8.3	8.5	8.1	75.2	-0.3	-0.1	-2.4	2.8
North Kivu	11.4	2.0	13.2	73.4	12.9	3.0	18.1	66.0	1.5	1.0	4.9	-7.4
Oriental	12.3	7.0	16.3	64.5	16.5	10.5	19.3	53.8	4.2	3.4	3.1	-10.7
South Kivu	6.6	3.9	15.3	74.2	7.4	3.5	18.6	70.4	0.8	-0.3	3.3	-3.8
Total	9.9	4.5	15.6	70.0	10.7	5.2	18.6	65.4	0.8	0.7	3.0	-4.5
Girls												
Kinshasa	14.3	5.2	22.8	57.8	17.3	6.3	21.8	54.6	3.0	1.1	-1.0	-3.2
Bandundu	8.9	2.4	19.9	68.8	8.9	2.8	21.1	67.3	-0.1	0.4	1.2	-1.6
Kongo Central	11.3	3.9	16.3	68.5	12.3	4.2	24.3	59.2	1.0	0.4	8.0	-9.3
Equateur	9.3	6.0	12.3	72.3	10.8	6.6	18.4	64.2	1.5	0.5	6.1	-8.2
Kasaï Occidental	10.5	2.8	14.9	71.9	10.8	3.0	19.6	66.6	0.3	0.3	4.7	-5.3
Kasaï Oriental	10.8	3.3	13.3	72.6	11.8	3.5	16.5	68.2	1.0	0.2	3.2	-4.4
Katanga	11.4	2.6	13.3	72.7	10.6	4.7	14.5	70.3	-0.8	2.0	1.2	-2.4
Maniema	8.5	8.7	9.9	72.9	10.2	8.2	7.3	74.3	1.7	-0.5	-2.5	1.4
Nord Kivu	11.0	2.1	13.7	73.2	13.5	2.4	17.5	66.6	2.5	0.3	3.8	-6.6
Orientale	12.8	5.4	16.0	65.8	18.5	9.7	19.0	52.8	5.7	4.3	3.0	-13.0
South Kivu	6.5	3.5	15.4	74.6	7.6	2.9	17.6	71.9	1.1	-0.6	2.2	-2.7
Total	10.7	4.0	15.8	69.5	11.9	4.8	18.3	65.0	1.1	0.7	2.6	-4.4
Boys												
Kinshasa	12.3	6.3	22.3	59.0	9.9	7.0	23.7	59.4	-2.4	0.6	1.4	0.4
Bandundu	6.6	1.8	16.6	75.0	6.3	4.2	21.5	68.0	-0.3	2.4	4.8	-7.0
Kongo Central	10.5	6.8	17.0	65.7	10.3	3.2	24.7	61.9	-0.2	-3.6	7.7	-3.8
Equateur	7.4	7.2	10.9	74.6	11.0	6.3	18.0	64.7	3.6	-0.9	7.2	-9.9
Kasaï Occidental	10.4	4.8	15.8	69.0	8.0	4.3	19.6	68.1	-2.4	-0.5	3.8	-0.9
Kasaï Oriental	7.8	3.0	15.5	73.7	9.7	4.8	16.6	69.0	1.8	1.8	1.1	-4.7
Katanga	7.7	3.9	13.0	75.4	9.3	5.8	15.3	69.7	1.6	1.9	2.3	-5.8
Maniema	8.6	8.4	11.2	71.8	6.4	8.8	8.8	76.1	-2.3	0.4	-2.4	4.2
Nord Kivu	11.7	1.9	12.7	73.7	12.3	3.6	18.7	65.5	0.5	1.7	6.0	-8.2
Oriental	11.8	8.5	16.6	63.1	14.4	11.2	19.7	54.7	2.6	2.7	3.1	-8.4
South Kivu	6.6	4.2	15.3	73.9	7.2	4.2	19.7	69.0	0.6	-0.1	4.4	-4.8
Total	9.1	5.0	15.5	70.5	9.6	5.7	18.9	65.8	0.5	0.6	3.5	-4.6

Source: DHS 2007 and 2013-14

Table 4: Living arrangements among orphans in Democratic Republic of the Congo[a]

ALL	2007			2014			Changes between 2007 and 2014		
Province	Neither parent	Father only	Mother only	Neither parent	Father only	Mother only	Neither parent	Father only	Mother only
Kinshasa	47.2	13.5	39.4	41.1	9.9	49.0	-6.1	-3.6	9.7
Bandundu	44.2	19.3	36.5	43.5	9.6	46.9	-0.7	-9.7	10.4
Kongo Central	36.4	6.2	57.4	32.9	20.2	46.9	-3.5	14.0	-10.5
Equateur	46.9	14.6	38.5	43.8	22.5	33.7	-3.1	7.9	-4.8
Kasaï Occidental	49.0	8.4	42.6	42.8	12.0	45.2	-6.3	3.6	2.6
Kasaï Oriental	54.7	10.6	34.7	48.8	12.9	38.3	-5.9	2.2	3.7
Katanga	34.4	13.4	52.1	50.5	13.8	35.7	16.1	0.4	-16.5
Maniema	51.2	16.4	32.4	41.6	20.6	37.7	-9.6	4.2	5.4
North Kivu	42.3	2.5	55.2	53.9	16.2	30.0	11.6	13.7	-25.2
Oriental	54.2	16.6	29.3	55.8	12.8	31.5	1.6	-3.8	2.2
South Kivu	43.0	20.0	37.0	51.3	21.2	27.6	8.3	1.1	-9.4
Total	47.0	13.7	39.4	46.8	15.2	38.0	-0.2	1.5	-1.3
Girls									
Kinshasa	47.2	11.9	40.9	49.0	10.9	40.1	1.8	-1.1	-0.7
Bandundu	45.5	16.2	38.3	44.1	10.3	45.6	-1.4	-5.9	7.3
Kongo Central	41.8	2.8	55.4	40.4	15.8	43.9	-1.5	13.0	-11.5
Equateur	43.0	7.8	49.2	46.9	18.9	34.2	3.9	11.1	-15.0
Kasaï Occidental	47.9	15.7	36.4	45.7	9.2	45.1	-2.2	-6.6	8.8
Kasaï Oriental	61.3	7.0	31.8	49.0	11.7	39.3	-12.3	4.8	7.5
Katanga	39.1	12.2	48.7	49.7	13.9	36.4	10.6	1.8	-12.4
Maniema	51.0	16.9	32.1	47.1	18.1	34.8	-3.9	1.2	2.7
North Kivu	39.8	3.1	57.2	59.6	12.5	28.0	19.8	9.4	-29.2
Oriental	49.3	15.4	35.3	55.3	11.5	33.1	6.0	-3.9	-2.2
South Kivu	40.0	22.3	37.8	48.3	22.3	29.4	8.3	0.0	-8.4
Total	46.9	12.1	41.0	48.7	13.8	37.5	1.8	1.7	-3.5
Boys									
Kinshasa	47.1	14.9	38.0	32.5	8.8	58.7	-14.6	-6.1	20.7
Bandundu	42.8	22.8	34.4	43.0	8.9	48.1	0.2	-13.9	13.7
Kongo Central	32.1	8.9	59.0	26.4	24.1	49.6	-5.8	15.2	-9.4
Equateur	50.6	21.0	28.4	41.2	25.6	33.3	-9.4	4.5	4.9
Kasaï Occidental	49.9	2.6	47.5	39.0	15.7	45.4	-10.9	13.0	-2.1
Kasaï Oriental	49.0	13.8	37.1	48.7	14.0	37.3	-0.3	0.2	0.2
Katanga	29.0	14.9	56.1	51.2	13.7	35.1	22.2	-1.2	-21.0
Maniema	51.5	15.9	32.6	36.1	23.2	40.7	-15.4	7.3	8.1
North Kivu	44.7	1.9	53.4	48.0	20.0	32.1	3.4	18.0	-21.4
Oriental	57.3	17.3	25.5	56.2	14.0	29.9	-1.1	-3.3	4.4
South Kivu	45.1	18.5	36.5	54.5	19.9	25.6	9.4	1.5	-10.8
Total	47.0	15.1	37.9	44.9	16.5	38.5	-2.1	1.5	0.6

[a] Readers should be aware that these are row percentages and should be interpreted as the percentages among orphans (single or double) in each province which fall in the respective categories of living arrangements.

Source: DHS 2007 and 2013-14

Table 5: Relationship of double orphans and single orphans (not living with surviving parent) to the head of household

Province	Grandchild	Niece/Nephew	Brother/Sister	Other relatives	Adopted/Fostered child	Other relationship (*)	Parent-in-law
Kinshasa	34.2	39.0	14.6	5.0	1.7	2.3	3.2
Bandundu	35.5	37.4	8.3	3.5	8.9	1.0	5.4
Kongo Central	48.6	30.0	5.8	7.2	1.6	2.3	4.6
Equateur	29.2	34.0	18.9	1.9	9.2	4.7	2.2
Kasaï Occidental	36.6	23.0	22.9	6.5	0.3	4.7	6.0
Kasaï Oriental	46.7	22.1	16.0	1.0	1.9	7.0	5.3
Katanga	43.2	27.5	14.6	2.7	1.3	4.4	6.3
Maniema	38.9	19.7	18.2	2.7	5.9	7.8	6.9
North Kivu	46.5	21.3	12.2	7.2	1.4	4.3	7.1
Oriental	32.5	28.3	20.7	5.4	2.4	7.2	3.5
South Kivu	39.4	26.6	18.6	7.0	2.6	2.9	2.8
Total	37.9	29.3	15.9	4.1	4.0	4.4	4.6

(*) This category includes wife/husband, head of household, son/daughter-in-law, not related. They were grouped together due to small cases. For the same reasons, it was not possible to look into differences between girls and boys.

Source: DHS 2007 and 2013-14