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Extended families and perceived caregiver support to AIDS orphans in Rakai district of Uganda

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Abstract

Purpose—To understand the role of extended family in responding to problems of AID-orphaned children and adolescents in Uganda, the study examines who are the primary caregivers of AIDS-orphaned children and adolescents, what are the types of caregiving provided to orphans and whether the quality of caregiving varies by the primary caregiver's gender and type.

Methods—The study uses bivariate analyses and mixed effects models utilizing baseline data from a cluster randomized experimental design including 283 orphaned adolescents in Uganda.

Results—The analysis revealed a generally dominating role of female caregivers for both single and double orphans. In the absence of biological parents – as in the case of double orphans – grandparents' role as caregivers prevail. On average, the study participants indicated receiving the high level of perceived caregiver support: the average score of 3.56 out of 4 (95% CI=3.5, 3.65). Results of mixed effect models (adjusting for school effects) revealed significant differences in perceived caregiver support by caregiver's gender. Compared to their male counterparts, female participants with whom the child/adolescent lives (B=0.22, 95% CI=0.11, 0.34) and women who are currently taking care of a child/adolescent (B=0.15, 95% CI=0.05, 0.26) provide greater caregiver support as perceived and reported by a child/adolescent. Similarly, female financiers – compared to male source of financial support - provide greater caregiver support as perceived and reported by a child/adolescent (B=0.16, 95% CI=0.04, 0.3).

Conclusions—Our findings demonstrate that extended families are still holding up as an important source of care and support for AIDS orphaned children and adolescents in Uganda. The findings support the argument about importance of matrilineal and grandparental care for AIDS orphans.

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Keywords

extended family; orphaned adolescents; economic empowerment intervention; Uganda; sub-Saharan Africa; Suubi Project

1. Introduction

UNICEF estimates that twelve million children and adolescents in sub-Saharan Africa are orphans, having lost one or both parents to AIDS (UNICEF, 2011). Specifically in Uganda, 6.5 percent of adult population lived with HIV and 1.2 million children and adolescents were orphaned due to AIDS in 2009(UNAIDS, 2010). Orphanhood does not only affect a child or adolescent who grows up without a parent, but it also exerts additional economic pressure on the extended family system. In Uganda, a country with no publically funded welfare safety net, orphaned children and adolescents depend either on support from civil society, including churches and non-government organizations, or on extended family members for their survival. An extended family may constitute kin members including grandparents, uncles, aunts, older siblings (brothers and sisters), and in-laws (Guest, 2001).

Although the extended family system is relatively large in the Ugandan context, studies indicate that due to poverty and disease (including HIV/AIDS), the extended family system is overwhelmed and that members are increasingly reluctant to take in additional orphaned children and adolescents even when they are kin (Nyambedha, Wandibba, & Aagaard-Hansen, 2003; Ssewamala & Ismayilova, 2009). Additionally, in response to social changes such as urbanization, customary patrilineal care for orphans was replaced by matrilineal and grandparental care (Oleke, Blystad, & Rekdal, 2005).

Given this context, our paper explores who are the primary caregivers of AIDS-orphaned children and adolescents in Uganda and what are the types of caregiving provided to orphans. The paper also examines whether the caregiver support – as perceived and reported by orphans -varies by the primary caregiver's gender and relationship to the orphan. An exploration of these questions is important because there is a need to ascertain where the government and non-government resources for supporting this vulnerable group of children and adolescents should be invested. Moreover, the results may contribute to our understanding of the importance of extended family over and above other forms of care—in government/non-governmental institutional care—in responding to problems of AID-orphaned children and adolescents, and strengthening family capacities in caring for these children and adolescents.

2. Background

2.1. The changing profile of primary caregiver

The extended family system - the traditional form of care for orphans in most parts of sub-Saharan Africa - continues to be the most commonly used safety net (Lund & Agyei-Mensah, 2008). Despite the fact that persistent poverty had led to saturation of absorption capacity of traditional safety nets (Guest, 2001), more than 90 percent of orphaned children and adolescents in most of sub-Saharan Africa are still taken care by extended families (Oleke et al., 2005).

Abebe and Aase (Abebe & Aase, 2007) distinguish between the extended family structure – which is based on blood relationships, including uncles, aunts, grandparents, and cousins - from the "fictive kinship" structure that covers people with no blood relationship (such as

friends, teachers, and neighbors). Indeed, in some cases, community members volunteer to care for orphaned children and adolescents (Drew, Makufa, & Foster, 1998).

Several studies argue that structure of extended families – pertaining to patrilineal support system - resisted to major social changes (Therborn, 2004). Others, however, emphasize the detrimental effect of urbanization (Cheng & Siankam, 2009; Foster & Williamson, 2000) and argue that patrilineal kinship system no longer prevails, and the customary patrilineal care for orphans was replaced by matrilineal and grandparental care (Oleke et al., 2005). Specifically, the practice of uncles and aunts being the primary caregivers to orphaned children and adolescents in sub-Saharan Africa is gradually changing either due to migration or due to HIV/AIDS—which is claiming the relatively young generation. Instead, grandparents are increasingly becoming the source of safety nets for orphaned children and adolescents (Foster, 2000; Lewis, 2005). As Cheng and Siankam (2009) rightly observe, many households in sub-Saharan Africa increasingly miss the so-called middle generation making grandparents the primary caregivers for their grandchildren.

There are primarily two options for care and support of orphaned children in Uganda and much of sub-Saharan Africa: 1) institutionalization (or use of orphanages), and 2) family care with surviving parents or relatives (Ssewamala & Ismayilova, 2009). This paper is about children in family care. Overall, orphaned children in family care are more likely to live with their female care givers (Ansell & Young, 2004; Cheng & Siankam, 2009). In most of sub-Saharan Africa, female headed households care for more orphans than male headed households, and grandmothers are increasingly becoming the primary caregivers for AIDS orphans (Thupayagale-Tshweneagae, Wright, & Hoffmann, 2010). Although grandmothers are increasingly becoming the most important caregivers for orphaned children and adolescents, especially in sub-Saharan Africa, their impact on orphans' well-being is not well documented.

2.2. Quality of caregiving varying by the type of caregiver

Generally, it is believed that children and adolescents living in households headed by their biological parents or grandparents have better schooling outcomes compared to children and adolescents living in households headed by other relatives or non-relatives (Ainsworth & Filmer, 2006; Parker & Short, 2009). Variation in educational outcomes is seen – among other factors - as a function of quality of caregiving provided to an orphan (Case, Paxson, & Ableidinger, 2004; Operario, Cluver, Rees, MacPhail, & Pettifor, 2008). Educational problems may also be caused by psychological challenges due to difficulties in adapting to new household, separation from siblings, and other changes.

Economic constrains and caregiver's age may account for variation in quality of caregiving provided for orphans by their caregivers. Some caregivers may be too young or too old to provide adequate care for orphans (Sengendo & Nambi, 1997).

As mentioned earlier, increasing number of orphans are cared by their grandparents – specifically by their grandmothers. Grandparent's effect on child's and adolescent's well being may vary depending on number of factors, including grandmother's beliefs, knowledge, access to resources, emotional and physical constraints (Parker & Short, 2009). In general, grandparents are less able to provide discipline and adequate socialization (Sengendo & Nambi, 1997). Particular attention is paid to special role played by grandmothers. On one hand, grandmothers who -compared to other relatives - show more affection towards the children and adolescents might have very positive impact on orphan's emotional and psychological well-being because they are less likely to discriminate against these children and adolescents since they don't have any young children of their own (Parker & Short, 2009). On another side, however, grandmothers may be too poor or feeble

to care effectively for the child and adolescent (Nyambedha et al., 2003; Thupayagale-Tshweneagae et al., 2010)

Studies on the nature and quality of caregiving available to AIDS orphans in sub-Saharan Africa are relatively scarce (Cluver, 2007). Similarly, there is contrasting evidence on the changing profile of primary caregiver for orphaned children and adolescents. Our paper seeks to add to the knowledge on caregiving available to orphaned children and adolescents in sub-Saharan Africa by exploring the following questions:

1. Who are the primary caregivers for AIDS-orphaned children and adolescents in low resource communities; and what types of caregiving—defined as the kinds of support, including financial and emotional (Barrera, 1986; Swanson et al., 1997)—are provided to orphans? (e.g. with whom the child/adolescent lives, who financially supports the child/adolescent, who takes care of a child/adolescent, who would the child/adolescent go for advice)
2. Does the type of caregiving vary by the child's/adolescent's age, gender and orphanhood status?
3. Does the caregiver support – as perceived and reported by an orphan - vary by the caregiver's gender and the caregiver's relationship to an orphan?

3. Methodology

3.1. Data source

This paper uses the baseline data from a National Institute of Mental Health funded intervention implemented in Uganda (2005–2008). The study included 283 orphaned children and adolescents (161 girls and 122 boys)–of age from 11 to 17 years old- recruited from fifteen primary schools located in Rakai, one of the districts of Uganda that have been hardest hit by HIV/AIDS.

The overall aim of the intervention was to test the effect of a family economic empowerment intervention comprising of matched Children's Savings Accounts (CSA) for education on improving the health and education outcomes of AIDS-orphaned adolescents. The study employed a cluster-randomized experimental design with randomization at the school level.

All the selected schools were semi-urban public schools with similar socio-economic characteristics. Each of the fifteen schools was randomly assigned to experimental or control condition at the school level. All participants within one school received the same condition assignment.

To be recruited into the study, the caregivers of children and adolescents at the selected schools had to express their interest to participate. Further enrollment was administered on the basis of three criteria: (1) an orphaned child/adolescent, defined as a child/adolescent who has lost one or both parents to HIV/AIDS; (2) enrolled in primary school; and (3) in the last two year of primary school.

3.2. Measures

This paper analyzes the baseline data collected through individual interviews with adolescents (90-minute long). The family support questions were adapted from the Family Environment Scale/Family Assessment Measures (FES/FAM) scale (Tolan, 2002).

Primary caregiver and type of caregiving—To identify who are the primary caregivers and what are the types of caregiving, we look into three questions: *"Who does the child/adolescent live with", "Who takes care of child/adolescent now (e.g. paying child's/*

adolescent's fees, buying child's/adolescent's books, etc)", and *"Who is the source of financial support".* Additionally, orphans were asked to indicate three most important adults in their lives (important adult 1, important adult 2, and important adult 3).

Child's/adolescent's perception of caregiver support—To examine the child's/adolescent's perception of support available from her/his caregiver, we created a scale using factor analyses. Twenty items from the survey instrument were subjected to factor analysis using STATA 11. The suitability of data for factor analysis was assessed using the Kaiser-Meyer Oklin value of sampling adequacy. Our dataset demonstrated the Kaiser-Meyer Oklin value of 0.7, which exceeds the recommended value of 0.6 (Kaiser 1974, Pallant 2007). The varimax rotation performed in this factor analysis showed that the variables loaded substantially on three distinct factors, which suggested the presence of certain structure (Lackey & Sullivan 2003). The three-factor solution explained 33.4% of the variance.

Eleven, out of twenty items had strong factor loadings (>0.3) on one factor with eigenvalue equal to 3.14. All the rest of variables, although loading on two different factors (with eigenvalues of 1.84 and 1.7), showed very low Cronbach's alpha. Therefore, we did not consider them for our analysis.

Eleven items ("*Can count on parents/guardians for help"; "Parents/guardians push me to do my best"; "Parents/guardians say give in to arguments"; "Parents/guardians show interest in my schoolwork"; "Parents/guardians explain why they want me to do something"; "Parents/guardians encourage me when I get poor marks"; "Parents/guardians know who my friends are"; "Parents/guardians spend time talking to me"; "Family does things for fun together";" How often do your parents/guardians take time to listen to you"; "If you have a problem, how often do your parents/guardians offer to help")*, each rated on a 4-point likert scale with responses ranging from "1 - strongly disagree" to "4 - strongly agree", comprised a scale measuring perceived caregiver support. We created an average score on eleven items where higher value indicates higher level of caregiver support. The scale has high internal consistency (α=0.71).

Covariates: To measure the household's general wealth, we created composite score on seventeen items (e.g. *Does the family own a house? Does the family own land? Does the family own motorcycle? Does the family own bicycle? Does the family own banana garden? Does the family own animals? Does the family own a small business?)*. The higher value indicates higher level of the general household wealth. The scale has moderate internal consistency (α=0.62). The child's/adolescent's orphanhood status is a categorical variable with three response categories: single maternal orphan, single paternal orphan, and double orphan.

3.3. Data analysis

To answer research question #1 - who are the primary caregivers for AIDS-orphaned children and adolescents in low-resource communities, and what type of caregiving is provided to orphans - we run univariate analyses using Stata 11. Because of the clustered nature of our data, we used survey procedures in Stata and reported estimates of population parameters (means, proportions) along with confidence interval statistics - to account for variations not only between individuals but also between clusters (in our case, schools).

To explore research question #2, we run bivariate analyses on variation of primary caregiver's profile by the child's/adolescent's age, gender and orphanhood status. Due to clustered nature of our data, we report adjusted Wald F-statistics – to look at individual-level variations while accounting for potential correlation between the observations from the same clusters.

To answer research question #3, we run mixed effects regression to look into variation in perceived caregiver support across (i) the primary caregiver's gender; and (ii) the primary caregiver's relationship to an orphan (biological parents, grandparents or other relative). Three models are run to examine whether the caregiver support -as perceived and reported by an orphan - varies by the caregiver's gender. Model 1 runs regression using the caregiver with whom the orphan lives. Model 2 runs regression using the caregiver who currently takes care of an orphan (e.g. paying school fees, buying books). Model 3 runs regression using the caregiver reported as the source of financial support for orphan's family. The child's/adolescent's age, gender and orphanhood status, as well as the number of children in the household and the household's general wealth are used as main covariates.

As mentioned earlier, all the analyses accounted for clustering of individuals within schools, adjusting for possible effect of school-level factors on individual-level behavior (Andrew & Jennifer, 2007).

4. Results

4.1. Socio-demographic characteristics of the sample

Results indicate that participants lived in relatively large families. The average number of people in the household (Table 1) is six members (M=6.6, 95% CI =6.06, 7.2). This is one member above the reported national averages (of 5) per household in Uganda, and two member above the reported average (of 4) per household in Rakai district of Uganda specifically (Uganda Bureau of Statistics, 2010). The relatively high numbers could be because our study focused on families with orphaned children and adolescents. It is therefore likely that by virtue of the fact that our study focused on families caring for orphans, many of them may have taken in extra children and adolescents—hence reporting a slightly higher number of household members than a typical Uganda family.

The children and adolescents included in the study averaged 13.7 years of age. Thirty nine percent of these children and adolescents were double orphans (reporting both parents not living), 41.95% were paternal orphans (reporting a father not living) and 19% were maternal orphans (reporting a mother not living). (See Table 1)

4.2. Profile of the primary caregiver

In addressing research question #1, exploring who are the primary caregivers for the orphaned children and adolescents in Rakai district of Uganda, we found that 41.32% of orphans reported living with their grandparents (mostly grandmothers). Grandparent's role as caregivers was more explicitly pronounced in life of double orphans compared to that of single orphans. Specifically, more double orphans lived with grandparents compared to single orphans ($F=18.3$, $p<0.001$) and more double orphans were taken care of and financially supported by their grandparents compared to single orphans (respectively, $F=17.68$, $p<0.001$ and $F=13.5$, $p<0.001$). Moreover, grandmothers were reported more often than other female relatives to be a woman that raised an orphan most of her/his life (See Table 2). These results reflect the fact that single orphans still have a surviving biological parent who takes care of them. On the other hand, double orphans, by definition, are children and adolescents with no surviving parent. So, they have to be taken care of by someone. In this case, grandparents have stepped in, and taken care of them.

The analysis revealed a generally dominating role of female caregivers - biological mothers, grandmothers and aunts – for both single and double orphans. Even when biological mothers- perceived as the most natural caregivers (Beegle, Filmer, Stokes, & Tiererova, 2009)-were no longer alive, specifically in the case of double orphans, female caregivers (grandmothers and aunts) were mentioned more often than male caregivers (grandfathers

and uncles). In particular, 68.14% of double orphans in our study live with their grandmothers (44.25%) and aunts (23.89%). Moreover, when asked "*who takes care of you now (e.g. paying your fees, buying your books, etc)"* 62.83% of children and adolescents reported grandmothers (36.28%) and aunts (26.55%).

Overall, female caregivers play a prominent financial-support role for the orphaned children and adolescents in the study. For example, 64.52% of children and adolescents in the study reported that their families were financially supported by a biological mother, a grandmother, or an aunt. The role of a male caregiver as a financial supporter to the orphans in the study was relatively small. This can be linked with generally smaller number of children and adolescents living with their fathers and grandfathers. The result significantly varied by the child's/adolescent's orphanhood status: more single orphans than double orphans reported female caregivers being primary source of financial support ($F=7.57$, $p<0.01$). However, even when both biological parents were not alive, female caregivers – specifically grandmothers and aunts – were reported more often than male caregivers as the primary source of financial support (See Table 2).

Among male caregivers for double orphans, uncles played more important role as providers of financial support, compared to grandfathers and other male relatives (See Table 2)

Sixty three percent of caregivers financially supporting the child's/adolescent's family were self-employed and 37% were formally employed.

Additionally, children and adolescents were asked to indicate three most important adults in their lives (see Table 2). In all three cases (important adult 1, important adult 2 and important adult 3), the reported most important adults in child's/adolescent's life were females. In addition, more double orphans – compared to single orphans – mentioned grandparents as important adult 1 and important adult 2 (respectively, $F=12.88$, $p<0.001$ and $F=4.16$, $p<0.001$). These findings are in line with the existing body of literature which indicates that double orphans (with no living biological parent) tend to be taken in by their grandparents.

In addition, over 62 percent of the participants considered "other relatives" – not their "biological parents" -to be among the most important two adults, out of three, in their lives. This finding is important because it points to the fact that the extended family system is still playing an important role in the care and support of orphaned children in Uganda. Moreover, study participants reported communicating with each of their two important adults at least 4 time each a week. Again, these findings are a manifestation of the importance of the extended family system in the care and support of this group of vulnerable children.

4.3. Variation in perceived caregiver support by the caregiver

On average, the study participants indicated receiving the high level of perceived caregiver support (Table 2): the average score of 3.56 out of 4 (95% CI=3.5, 3.65). These results point to caregiving families that are very involved and supportive of the orphaned child and adolescent.

Results of mixed effect models (adjusting for school effects) are described in Table 3. The three models presented in this table seek to understand whether the caregiver support -as perceived and reported by an orphan - varies by the caregiver's gender. Model 1 looks into this variation for the caregiver with whom the orphan lives. Model 2 examines these differences for the caregiver who currently takes care of an orphan (e.g. paying school fees, buying books). Model 3 analyzes this variation for the caregiver reported as the source of financial support for orphan's family.

All three models revealed significant differences in perceived caregiver support by caregiver's gender (See Table 3). Compared to their male counterparts, female caregviers with whom the child/adolescent lives (B=0.22, 95% CI=0.11, 0.34) and women who are currently taking care of a child/adolescent (B=0.15, 95% CI=0.05, 0.26) provide greater caregiver support as perceived and reported by a child/adolescent. Similarly, female financiers – compared to male source of financial support - provide greater caregiver support as perceived and reported by a child/adolescent (B=0.16, 95% CI=0.04, 0.3).

The level of perceived caregiver support – in all three models - was significantly associated with the general household wealth measuring households' access to assets and income-generating resources: the higher the general wealth of the household, the higher the caregiver support as perceived by an orphan. Similarly, female children and adolescents in our study reported higher level of perceived caregiver support, compared to male children and adolescents. In two models – Model 1 and Model 3 – the lower the child's/adolescent's age, the higher the perceived parental/guardian support reported by a child/adolescent (See Table 3).

Mixed effects regressions models looking into variation in perceived caregiver support by the caregiver's relationship with an orphan (biological parents, grandparents, other relatives, non-relatives) yielded no significant results and, therefore, are not reported. In other words, we found no association between the caregiver support – as perceived and reported by orphans – and the caregiver's relationship with an orphan.

5. Discussion

Our findings support the argument about importance of matrilineal and grandparental care for AIDS orphans (Oleke et al., 2005). In our study, female caregivers (e.g. biological mothers, grandmothers and aunts) dominated as primary caregivers in terms of financial support, care (e.g. paying child's fees, buying child's books, etc), and living with the orphans. Although it may be natural that single paternal orphans are most likely to be taken care by their biological mothers (Beegle et al., 2009), female caregivers – specifically grandmothers – still prevailed as primary caregivers for double orphans. Additionally, female caregivers provided higher level of caregiver support as perceived by orphaned children and adolescents.

Grandparents (specifically grandmothers) were found to be an important source of care for children and adolescents in our study. More than 41% of children and adolescents in our study reported living with their grandparents (mostly grandmothers) - in line with numbers reported in a survey of 40 sub-Saharan countries, where 48% of orphans reported living with their grandparents (Monasch & Boerma, 2004). Our findings are in line with the argument that – due to migration or HIV/AIDS affecting the younger generation – grandparents (specifically, grandmothers) replace uncles and aunts in taking care for the orphans in sub-Saharan Africa (Cheng & Siankam, 2009; Foster, 2000; Lewis, 2005)

While it is argued that caretakers are less likely to invest in orphans who are more distantly related (Case et al., 2004), we did not find significant differences in perceived caregiver support by the primary caregiver's relationship with an orphan (biological parents, grandparents, other relatives, non-relatives). Meanwhile, the perceived caregiver support was significantly associated with the caregiver's gender: female caregivers provide more caregiver support – as perceived and reported by orphans. Additionally, the perceived caregiver support is significantly associated with the general household wealth measuring households' access to assets and income-generating resources. This contributes to earlier findings that the impact of being cared by the extended family on the child's well-being depends on family's social and economic resources (Abebe & Aase, 2007; Verhoef, 2005).

Significant proportion of orphaned children and adolescents in our study reported relatives other than biological parents and grandparents as “important adults”. Other relatives being identified as the “most important adults” in lives of the orphaned children and adolescents in our study can be an indication for the extended family’s role in supporting these children and adolescents. Despite the arguments that extended families are overwhelmed and, thus, reluctant to take in orphans, our findings point to pertinacious role of extended family in taking care of the HIV/AIDS orphans in sub-Saharan Africa.

The results point to a need for programs and policies for orphaned and vulnerable children and adolescents to go beyond targeting their surviving biological parents to including other relatives who are playing a significant role in the care and support of these children and adolescents.

5.1. Limitations

The study has several limitations. It does not provide information about the caregiver support – as perceived by orphaned children and adolescents - in child-headed households. By design, no child-headed households were included in the study. Additionally, the study being limited to orphans only allows for no comparison between orphans and non-orphans in terms of types of caregiving and the perceived level of parental/guardian support. The sample includes children and adolescents only from rural area. Therefore, we refrain from making conclusions about the role of extended family in lives of AIDS orphans in urban environment.

5.2. Implications

Most policy choices in sub-Saharan African countries with large number of AIDS orphans evolve around three main initiatives: strengthening family and community-based responses, increasing access to essential services, and strengthening national capacities to protect the most vulnerable children and adolescents (Campbell, Moroni, & Webb, 2008). Although developing community responses might bring some benefits (Foster, 2002), the responsibility of care ultimately lies with the extended family households (Abebe & Aase, 2007).

Findings of our study point to importance of the extended family over and above other forms of care in responding to problems of AIDS orphans in sub-Saharan Africa. The extended family system in Uganda, although being weakened by disease and wars for the past 20 years (Ssewamala & Ismayilova, 2009), is still holding up. Therefore, strengthening families to care for orphaned children and adolescents shall go beyond their “biological parents” to including other relatives who are providing care and support of orphans. Our findings illustrate that extended families provide different types of caregiving: they take the orphaned child and adolescent to live in the household, they provide emotional support and basic care, and they financially support the orphan. Different caregivers may play different roles: some of them provide basic care while the other pay orphan’s school fees and provide financial support.

Despite their willingness to take in the orphans, the extended families - specifically in sub-Saharan Africa – are economically strained. Orphans more frequently live in households where more people are dependent on fewer income earner (Allison, 2012), and the number of orphans increases - especially in Eastern and Southern Africa (Bicego, Rutstein, & Johnson, 2003). Increased number of orphans taken in by the extended families, accompanied with deterioration in general household wealth due to loss of biological parents who were the main source family income, drag these families into poverty (Ssewamala & Ismayilova, 2009).

As mentioned earlier, economic constraints account for the quality of caregiving provided for orphans (Sengendo & Nambi, 1997). Similarly, our findings reveal significant association between the perceived caregiver support and the general household's wealth. Moreover, economic hardships may lead to the family breakdown resulting in orphans dropping out of school and seeking for jobs to support themselves and their families. However, children and adolescents have no employable skills, and, therefore, more often they end up on streets engaged in pretty criminal, drug and substance abuse and prostitution. (Curley, Ssewamala, & Han, 2010). Thus, strengthening the extended families' capacities in their care and support of orphaned children and adolescence may be a crucial element in improved caregiving for the orphans. More specifically, we refer to economic strengthening.

Certain initiatives have already been taken to improve the caregiver's financial capacities in providing orphaned children and adolescents with essential services, including education. These initiatives include conditional cash transfers, child grants and child savings accounts (Allison, 2012). Comparative analyses of these initiatives are beyond the scope of current paper. We do, however, emphasize that prevailing role of female caregivers – even when the biological mother is not alive – may require paying particular attention to gender dynamics when designing the family economic empowerment initiatives.

6. Conclusion

Our findings point to several implications: First, most of AIDS orphans in rural area are being taken care of by female caregivers (including biological mothers, grandmothers and aunts). Second, in agreement with other studies, grandparents are the most important source of financial support, after biological fathers (for maternal orphans) and biological mothers (for paternal orphans). This finding is in line with scholarly arguments about grandparents being an important source of support for AIDS orphans. In a country like Uganda where the parents normally count on their children to care for them during old-age, the AIDS pandemic is indeed changing these dynamics. However, not many programs are yet focused on helping this group of people (grandparents) adjust to their new role of caring for their grandchildren.

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Table 1

Socio-Demographic Characteristics of the Sample (N=283)

Key Characteristic	Percent, % [95% Confidence Interval]			
	Total (N=283)	Double orphan (n=113)	Single orphan (n=170)	Design-based F
Female child/adolescent	56.89 [47.28,66.01]	53 [41.4, 64.5]	59.4 [46.8, 70.9]	0.76
Child's/adolescent's age in years, mean	13.71 [13.37, 14.05]	13.8 [13.5, 14.22]	13.6 [13.2, 14]	1.7
Number of people in household, mean	6.6 [6.06, 7.2]	6.58 [6.08, 7.09]	6.7 [6.01, 7.4]	0.29
Number of children in household, mean	3.4 [3.02, 3.9]	3.33 [2.78, 3.88]	3.55 [3.05, 4.05]	0.73
Orphanhood status				
Single paternal orphan (report father not living)	41.94 [36.45, 47.63]			
Single maternal orphan (report mother not living)	19 [14.52, 24.45]			
Double orphan (report both parents not living)	39.07 [33.41, 45.04]			

Note: Design-based F test reported in this table refers to the Adjusted Wald F-test utilized due to the clustered nature of the sample.

Table 2

Who Are the Caregivers and What Types of Caregiving they Provide for Orphaned Children and Adolescents in the Sample (N=283)

Key Characteristic	Percent, % [95% Confidence Interval]			
	Total (N=283)	Double orphan (n=113)	Single orphan (n=170)	Design-based F
Who the child is living/staying with				**18.3*** **
Biological mother	23.32 [18.87, 28.45]	0	38.82 [31.3, 46.92]	
Biological father	7.42 [4.3, 12.6]	0	12.35 [7.53, 19.61]	
Grandmother	33.9 [27.2, 41.35]	44.25 [37.75, 50.94]	27.06 [19.4, 36.35]	
Granfather	7.42 [4.04, 13.25]	11.5 [6.35, 19.96]	4.7 [2.01, 10.62]	
Aunt	15.55 [11.2, 21.2]	23.89 [16.29, 33.6]	10 [6.2, 15.7]	
Uncle	7.07 [4.06, 12.02]	12.39 [8.096, 18.5]	3.53 [1.1, 10.5]	
Other relatives	5.3 [3.11, 8.9]	7.965 [4.2, 14.46]	3.53 [1.5, 7.8]	
Female caregiver: with whom the child lives	75 [69.88, 79.5]	72.22 [64.9, 78.5]	76.8 [70.3, 82.3]	**1.4**
Who takes care of child now (e.g. paying fees, buying books, etc)				**17.68*** **
Biological mother	25.4 [21.45, 29.9]	0	41.76 [34.73,49.15]	
Biological father	8.48 [4.9, 14.22]	0	14.12 [8.54,22.44]	
Grandmother	26.15 [19.2, 34.5]	36.28 [25.98,48.02]	19.41 [13.75,26.69]	
Granfather	9.2 [5.1, 15.98]	14.16 [7.603,24.85]	5.882 [2.915,11.51]	
Aunt	15.55 [10.9, 21.7]	26.55 [17.31,38.42]	8.235 [4.793,13.79]	
Uncle	8.13 [5.2, 12.5]	13.27 [8.145,20.9]	4.706 [2.176,9.88]	
Other relatives	7.07 [4.4, 11.1]	8.85 [5.314,14.38]	5.882 [2.398,13.72]	
Female caregiver: who takes care of a child now	70.97 [63.94, 77.12]	68.18 [59.55, 75.75]	72.78 [64.2, 79.97]	**1.12**
Source of financial support for child's family				**13.5*** **
Biological mother	24 [19.13, 29.69]	0	39.29 [30.68, 48.62]	
Biological father	6.09 [3.3, 10.88]	0	10.12 [5.786, 17.11]	
Grandmother	21.15 [16.28, 27]	27.93 [19.41,38.41]	16.67 [11.87, 22.9]	
Granfather	8.6 [4.67, 15.32]	12.61 [6.288,23.69]	5.95 [2.8, 12.18]	
Aunt	15.42 [11.54, 20.29]	20.72 [13.41,30.6]	11.9 [7.3, 18.7]	
Uncle	15 [11.4, 19.6]	25.23 [17.48,34.95]	8.3 [5.3, 12.82]	
Other relatives	9.68 [6.75, 13.7]	12.61 [7.84,19.67]	7.74 [4.13, 14.03]	
Female source of financial support	64.52 [57.53, 70.93]	53.15 [45.03, 61.11]	72.02 [63.95, 78.89]	**7.57** **

Key Characteristic	Percent, % [95% Confidence Interval]			
	Total (N=283)	Double orphan (n=113)	Single orphan (n=170)	Design-based F
Woman that raised the child most of her/his life				**10.04*** **
Biological mother	39.58 [33.88, 45.57]	17.7 [10.67, 27.91]	54.12 [45.81, 62.2]	
Grandmother	36.04 [28.71, 44.09]	50.44 [41.26, 59.59]	26.47 [19.86, 34.33]	
Other female relative (aunt, sister, step-mother)	20.49 [15.67, 26.35]	29.2 [19, 42.05]	14.71 [9.2, 22.75]	
No female caregiver	3.89 [1.81, 8.17]	2.65 [0.7, 10.03]	4.7 [1.8, 11.73]	
Man that raised the child most of her/his life				**5.11** **
Biological father	28.62 [22.87, 35.16]	16.8 [9.5, 27.9]	36.5 [28.01, 45.85]	
Grandfather	13.78 [9.83, 18.99]	18.58 [12.05, 27.55]	10.59 [6.5, 16.78]	
Other male relative (uncle, brother, step-father)	15.55 [12.45, 19.25]	22.12 [16.07, 29.65]	11.18 [7.55, 16.24]	
No male caregiver	42.05 [35.6, 48.79]	42.48 [32.96, 52.59]	41.76 [33.22, 50.84]	
Employment status of the source of financial support				**2.51**
formal employment	37 [30.49, 44.04]	57.14 [44.18, 69.2]	66.86 [59.63,73.38]	
self-employed	62.99 [55.96, 69.51]	42.86 [30.8, 55.82]	33.14 [26.62, 40.37]	
Relationship to important adult 1				**12.88*** **
Biological mother	22.6 [18.33, 27.56]	0	36.47 [29.5, 44.06]	
Biological father	6 [2.86, 12.2]	0	10 [4.947, 19.17]	
Grandmother	22.97 [16.99, 30.28]	27.43 [20.7, 35.38]	20 [13.96, 27.81]	
Granfather	6.36 [3.75, 10.59]	9.735 [4.606, 19.41]	4.118 [1.605, 10.16]	
Aunt	16.25 [10.77, 23.79]	29.2 [19.32,41.54]	7.647 [3.818,14.73]	
Uncle	8.8 [5.83, 13.2]	14.16 [8.752,22.1]	5.294 [3.094,8.915]	
Other relatives	14.13 [10.66, 18.5]	14.16 [9.396,20.78]	14.12 [9.889,19.76]	
Non-relatives	2.8 [1.12, 6.93]	3.54 [1.003,11.74]	2.353 [.8652,6.238]	
Female important adult 1	69.6 [62.15, 76.17]	66.37 [57.14,74.5]	71.76 [62.68,79.36]	**1.42**
Number of communications per week with important adult 1, mean	5.1 [4.5, 5.7]	5.36 [4.35, 6.4]	4.9 [4.23, 5.6]	**0.59**
Relationship to important adult 2				**4.17** **
Biological mother	4.95 [2.4, 9.8]	0	8.235 [4.182,15.58]	
Biological father	4.6 [2.9, 7.13]	0	7.647 [4.729,12.14]	
Grandmother	17.67 [12.9, 23.67]	15.93 [10.79,22.89]	18.82 [12.25,27.8]	
Granfather	4.6 [2.4, 8.7]	5.31 [2.411, 11.29]	4.118 [1.679, 9.745]	
Aunt	26.15 [20.7, 32.4]	36.28 [27.26,46.38]	19.41 [13.35,27.36]	

Key Characteristic	Percent, % [95% Confidence Interval]			
	Total (N=283)	Double orphan (n=113)	Single orphan (n=170)	Design-based F
Uncle	12.7 [9.7, 16.5]	15.04 [9.858,22.28]	11.18 [7.781,15.8]	
Other relatives	23.67 [17.47, 31.26]	19.47 [12.43,29.16]	26.47 [19.26,35.2]	
Non-relatives	5.65 [2.8, 11.08]	7.965 [2.605,21.87]	4.118 [1.627,10.03]	
Female important adult 2	59.8 [52.2, 66.94]	64.29 [53.32, 73.94]	56.8 [44.55, 68.3]	**0.84**
Number of communications per week with important adult 2, mean	3.9 [3.5, 4.3]	4.16 [3.4, 4.9]	3.7 [3.1, 4.2]	**1**
Relationship to important adult 3				**0.8586**
Biological mother	3.5 [1.5, 7.96]	1.77 [.3684, 8.071]	4.706 [1.952, 10.91]	
Biological father	1.77 [0.87, 3.6]	1.77 [.4795,6.312]	1.765 [.5776,5.263]	
Grandmother	10.95 [8.3, 14.3]	14.16 [9.557,20.48]	8.824 [4.693,15.98]	
Granfather	3.89 [1.66, 8.86]	2.655 [.7162,9.347]	4.706 [1.679,12.49]	
Aunt	23.3 [17.6, 30.3]	21.24 [12.03,34.72]	24.71 [18.12,32.73]	
Uncle	24.4 [19.7, 29.8]	24.78 [18.04,33.02]	24.12 [18.42,30.91]	
Other relatives	23.7 [18.02, 30.44]	27.43 [18.98,37.9]	21.18 [15.5,28.23]	
Non-relatives	8.5 [6.9, 10.43]	6.195 [2.569,14.19]	10 [6.781,14.51]	
Female important adult 3	52.69 [44.87, 60.4]	54.05 [44.12,63.68]	51.79 [43.16,60.31]	**0.26**
Number of communications per week with important adult 3, mean	3.9 [3.55, 4.2]	3.74 [3.15, 4.32]	3.94 [3.5, 4.4]	**0.3**
Perceived caregiver support, mean	3.56 [3.5, 3.6]	3.5 [3.4, 3.6]	3.56 [3.5, 3.7]	**0.49**

*
p≤.05,

**
p≤.01,

***
p≤.001

Note: Design-based F test reported in this table refers to the Adjusted Wald F-test utilized due to the clustered nature of the sample.

Table 3

Mixed Effects Regression Models for Perceived Caregiver Support at the Baseline (N=283)

Explanatory Variables	Coefficient (95% Confidence Interval)		
	Model 1 (perceived caregiver support by caregiver with whom the child/adolescent lives)	**Model 2 (perceived caregiver support by caregiver who currently takes care of the child/adolescent)**	**Model 3 (perceived caregiver support by caregivers who is the source of financial support for child's/ adolescent's family)**
Constant	3.5 [2.98, 4.04]***	3.6 [3.1, 4.3]***	3.6 [3.05, 4.1]***
Female caregiver	0.22 [0.11, 0.34]***	0.15 [0.05, 0.255]**	0.156 [0.04, 0.3]**
Number of years with the caregiver	0.026 [−0.01, 0.064]	n/a	n/a
Orphanhood status			
Double orphan	reference	reference	reference
Single maternal orphan	−0.04 [−0.2, −.09]	−0.06 [−0.2, 0.07]	−0.04 [−0.17, 0.09]
Single paternal orphan	0.005 [−0.1, 0.11]	0.02 [−0.08, 0.13]	0.3 [−0.07, 0.14]
Female child/adolescent	0.19 [0.099, 0.29]***	0.174 [0.08, 0.3]***	0.18 [0.09, 0.28]***
Child's/adolescent's age	−0.04 [−0.08, −0.04]*	−0.03 [−0.07, 0.001]	−0.36 [−0.07, −0.0001]*
Number of children in the household	−0.003 [−0.02, 0.017]	−0.006 [−0.03, 0.01]	−0.007 [−0.03, 0.01]
General wealth of the household	0.045 [0.02, 0.07]***	0.04 [0.02, 0.07]***	0.05 [0.02, 0.07]***

* p≤.05,

** p≤.01,

*** p≤.001

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