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Examining the non-kin support networks of orphaned adolescents participating in a family-based economic strengthening intervention in Uganda

Proscovia Nabunya, PhD [Research Assistant Professor],

Brown School of Social Work, Washington University in St. Louis, Campus Box, 1196, One Brookings Drive, St. Louis, MO, 63130, nabunyp@wustl.edu

Deborah Padgett, PhD [Professor of Social Work and Global Public Health],

New York University Silver School of Social Work, 1 Washington Square North, New York, NY 10003, deborah.padgett@nyu.edu

Fred M. Ssewamala, PhD [Professor & Director],

International Center for Child Health and Development, Brown School of Social Work, Washington University in St. Louis, Campus Box 1196, One Brookings Drive, St. Louis, MO 63130, fms1@wustl.edu

Mark E. Courtney, PhD [Professor of Social Work], and

The University of Chicago School of Social Service Administration, 969 E. 60th Street, Chicago, IL 60637, markc@uchicago.edu

Torsten Neilands, PhD [Professor of Medicine]

University of California San Francisco School of Medicine, 550 16th Street, San Francisco, CA 94158, Torsten.Neilands@ucsf.edu

Abstract

Aim: This paper examines the non-kin support networks of orphaned adolescents participating in a family-based economic strengthening intervention in HIV-impacted communities in Uganda.

Methods: Data from a cluster randomized experimental study for orphaned adolescents (11–17 years) was analyzed. Participants were randomly assigned to either the control condition receiving bolstered standard of care (BSOC) services, or the treatment condition receiving BSOC services plus an economic strengthening intervention. Binary logistic regression analyses were conducted to examine the effect of the intervention on participants' non-kin support networks.

Results: Existing social support networks for orphaned adolescents are small, limited, and usually consist of individuals with similar socio-economic situations and challenges. Orphaned adolescents are socially isolated and the threshold for non-kin supportive services is very low, that the BSOC services provided to the control condition appear instrumental in their survival and wellbeing. Availability of personal savings was associated with higher odds of identifying at least one supportive non-kin tie.

Conclusion: The extended family system is still the primary and a major source of social support to orphaned children in HIV-impacted communities. In the absence of public safety-nets, building social assets, over and above offering economic opportunities to extended families supporting orphaned children is critical.

Keywords

Social support networks; Non-kin support; Economic strengthening; Orphaned children; Uganda

Background

Over 49 million children under the age of 18 in sub-Saharan Africa (SSA) are orphans, having lost one or both parents (hereafter, orphaned children); and more than 10 million of these children have been orphaned as a direct result of HIV/AIDS (UNICEF, 2016). In Uganda, one of the countries hardest hit by the epidemic in SSA, 1.2 million children are orphaned as a direct result of HIV/AIDS (UNICEF, 2016). HIV/AIDS negatively impacts not only the affected individual, but also their household livelihoods and community safety nets. For orphaned children, these negative impacts include economic hardships, poor schooling and education outcomes, poor physical and mental health functioning due to psychological distress, stigma and discrimination, and the loss of social support from both the household and the community (Atwine, Cantor –Grace, & Bajunirwe, 2005; Chi & Li, 2013; Cluver, Orkin, Gardner, & Boyes, 2012; Foster & Williamson, 2000; Klein, Dougherty, & Olino, 2005; Kumar, Dandona, Kumar, Ramgopal, & Dandona, 2014; Lata & Verma, 2013; Nyambetha & Aagaard-Hansen, 2010).

The social, economic, and psychosocial impact of orphanhood on children is compounded by the fact that many families live in communities that are already disadvantaged by poverty and have very limited access to basic services. Poor families have fewer resources and reduced capacity to deal with the morbidity and mortality of family members, mainly because they have less income and few, if any, assets and savings to buffer the impact of HIV/AIDS (Richter, Sherr, Adato, Belsey, Chandan, & Desmond, et al, 2009). Specifically, the cost of treating HIV-related illnesses places a huge financial burden on family resources, as families are forced to devote their already scarce resources to care for the sick family member, yet the capacity to generate income drops significantly (Adato & Bassett, 2012; Gillespie & Kadiyala, 2005; Subbarao & Coury, 2004).

In addition, as people already infected with the disease continue to die, the number of orphaned children continue to increase, putting a strain on the extended family system that traditionally provided care and support to orphaned children. As a result, extended family members, who are mostly grandmothers, are not willing or able to care for additional children (Kasedde, Doyle, Seeley, & Ross, 2014; Karimli, Ssewamala, & Ismayilova, 2012; Kidman & Thurman, 2014; Mafumbate, 2014; Powell & Hunt, 2013). Orphaned children who are not absorbed into extended families end up living on their own in child-headed households (Evans, 2011; Foster, Makufa, Drew, & Kralovec, 1997); forced into early marriages; and others end up on the streets where they are exposed to risky behaviors, including prostitution and substance use, which increase their chances of exposure to

sexually transmitted infections, including HIV/AIDS (Dinkelman, Lam, & Leibbrandt, 2008; Gillespie, Kadiyala, & Greener, 2007; Meghdadpour, Curtis, Pettifor, & MacPhail, 2012; Thurman, Brown, Richter, Maharaj, & Magnani, 2006).

Although orphaned children in HIV-impacted communities, especially those in SSA experience several adversities, substantial evidence has documented significant resilience that mitigates the impact of parental HIV on children (Harrison, Li, Zhang, Zhao, & Zhao, 2018; Li, Chi, Sherr, Cluver, & Stanton, 2015; Woollett, Cluver, Hatcher, & Brahmabhatt, 2016; White & Pulla, 2013). Such resilience is influenced by a combination of individual, family and community-level factors that provide resources and a supportive environment (Betancourt, Meyers-Ohki, Stulac, Barrera, Mushashi, & Beardslee, 2011; Heath, Donald, Theron, & Lyon, 2014; Li, et al., 2015; Skovdal, & Campbell, 2010; Skovdal & Daniel, 2012). Indeed, given that poor countries—such as those in SSA, have weak and/or no government welfare safety nets, orphaned children and their families must seek relief from informal sources of support including neighbors, friends, teachers, other community members and non-government institutions, including churches, civil society or community-level informal groups—where they exist (Currie & Heymann, 2011; Skovdal, & Ogutu, 2012).

Specific to community-level resilience factors, this paper examines the non-kin support networks—defined as relationship ties not based on blood and marriage, for orphaned children participating in a family-based economic strengthening intervention. Orphaned children living in low resource communities amidst over-extended families, non-kin support may be the only viable option to ensure children's survival and wellbeing. Opportunities to increase social support or even the perception of social support can enhance resilience among orphaned children (Cluver, Fincham, & Seedat, 2009). Therefore, it is likely that support originating from non-kin relationships or perceiving relationships with non-kin ties as supportive, might help orphaned children cope with day-to-day life stressors and help to leverage future opportunities. We therefore, focus on a pivotal yet neglected aspect of the children's capacity to transition to successful adulthood in poor communities—non-kin support. Specifically, we address the following research questions:

1. What are the non-kin support networks available to orphaned children and what forms of support (financial, material, informational and emotional support) do they provide?
2. To what extent is a family-based economic strengthening intervention associated with the identification and formation of non-kin support networks for orphaned children?

Economic strengthening for orphaned and vulnerable adolescents

In communities heavily affected by HIV/AIDS, economic strengthening programs have been implemented to assist vulnerable children and families impacted by the disease. These programs combine conditional cash transfers with asset-building strategies that enables individuals with limited financial and economic resources to acquire and accumulate long term productive assets (Lagarde, Haines, & Palmer, 2009; Ssewamala, 2015). In particular, economic strengthening is needed for families and caregivers to meet the expanding

responsibilities for both ill family members (such as medical care needs) as well as orphaned children living within or joining the household. Several studies conducted in SSA as well as in developed countries have documented the benefits of such programs, such as, educational achievement, including future educational planning, educational aspirations and expectations (Cheatham & Elliott, 2013; Curley, Ssewamala & Han, 2010; Elliot, 2009), economic growth, improved health and psychosocial wellbeing (Adato & Bassett, 2012; Han, Ssewamala, & Wang, 2013; Ssewamala & Ismayilova, 2009).

The results documented above are positioned within in asset theory advanced by Sherraden (1990; 1991). This theory posits that assets (such as savings, educational and economic opportunities, including microenterprise activities) have important economic benefits for individuals and families. However, the role of assets goes beyond consumption and economic sufficiency to produce psychological, social and behavioral outcomes. Specifically, Schreiner & Sherraden (2007) maintain that owning assets produces “asset effects,” meaning that when people own assets they behave and think differently and society responds to them in a different way, potentially leading to the creation of social capital that provides informational and social protection benefits for the asset owner (Schreiner & Sherraden, 2007; Sherraden, 1991). People tend to positively respond to and treat asset owners as more valuable members of the society than non-asset owners in anticipation of future reciprocity, whether reciprocity actually happens or not (Schreiner & Sherraden, 2007). Therefore, one could argue that orphaned children participating an economic strengthening intervention may attract non-kin support, because other people may expect future reciprocity (Antonucci & Jackson, 1990; Jung, 1990; Uehara, 1995). Moreover, studies have documented the importance of reciprocity in health wellbeing, including in caregiving and caretaking relationships (Aktas, & Sertel-Berk, 2015; Mitchell, Isenberg, Maragh-Bass, & Knowlton, 2018).

Informal support networks, including non-kin support networks, may impact asset accumulation in two opposing ways. On the one hand, social network members may provide encouragement and reminders to participants to save. On the other hand, they may discourage savings through financial demands and suggesting that extra income should be shared among members (Beverly, Sherraden, Cramer, Shanks, Nam, & Zhan, 2008; Lombe & Sherraden, 2008; Stack 1974). Previous studies have documented that assets in the form of savings lead to more social connectedness with relatives, neighbors and community members (Yadama & Sherraden, 1996). They also increase participants’ ability to save and participate in program activities (Wheeler-Brooks, 2009), as well as civic engagement (Scanlon & Adams, 2009). However, other studies have reported a negative effect of social networks on program performance and savings accumulation (Caskey, 1997; Lombe & Ssewamala, 2007; Wheeler Brooks, 2009).

Given these mixed findings, coupled with the fact that none of these studies was focused on poor orphaned children, and that the majority were focused on the United States –a rich resourced country, it is important to investigate the effects of participating in an economic strengthening intervention on non-kin support networks for vulnerable and orphaned children in low resource settings such as SSA. Further, although the extended family’s role

is critical in supporting orphaned children, non-kin support can supplement or supplant weakened familial support.

To this end, we draw on data from a family-based economic strengthening intervention conducted in Uganda, known as Bridges to the Future, to examine the extent to which orphaned children depend on non-kin support in addition to family support (if available). Based upon asset theory and the research evidence presented above, we hypothesize that orphaned children receiving the intervention (treatment condition) will identify and report a higher number of non-kin supports compared to children not receiving the intervention (control condition). As earlier mentioned, people tend to positively respond to and treat asset owners as more valuable members of the society than non-asset owners in anticipation of future reciprocity, whether reciprocity actually happens or not (Schreiner & Sherraden, 2007). As such, orphaned children participating in the intervention may attract support from non-kin networks, partly because as valuable members of the community, other people expect future returns from them.

Methods

Sample and study site

This paper uses data from Bridges to the Future study, designed to evaluate the efficacy and cost-effectiveness of an innovative family-based economic empowerment intervention that utilize Child Development Accounts (CDAs) for orphaned children in Uganda. The Bridges study (2011–2016) was implemented in 4 political districts of Rakai, Masaka, Lwengo and Kalungu in Southernwestern Uganda – a region heavily affected by HIV with a high number of orphaned children. Recent estimates from the Uganda-population based HIV impact assessment, reported the HIV prevalence rates of the southwestern region at 7.9% compared to 6.2% of the national average of adults between 15–64 (Ministry of Health, 2017). A total of 1410 orphaned adolescents (between 10–16 years of age at study initiation) were selected from 48 public primary schools. All schools were government aided, located in rural areas, with comparable socioeconomic status of the students' body, average size of student enrollment, and performance based on the national standardized primary leaving examinations. In addition, adolescents who met the following inclusion criteria were selected: 1) they had lost one or both parents to HIV/AIDS, 2) were living within a family, not in an institution, and 3) were enrolled in primary 5 and 6 (an equivalent of 6th and 7th grades in the U.S. educational system).

Human Subjects Protection

Informed consent and assent were obtained from caregivers and adolescents respectively, prior to study participation. This process was done separately for caregivers and children to avoid cohesion. The Bridges intervention received approval from Columbia University Institutional Review Board (IRB-AAA11950) and the Uganda National Council of Science and Technology (SS2586). The study is registered in the Clinical Trials database (NCT01447615).

Bridges Intervention

The Bridges intervention utilized a cluster randomized control design. Each of the 48 primary schools was randomly assigned to either the control condition (n=16 schools, 496 participants) or one of the 2 two treatment conditions: Bridges (n=16 schools, 402 participants) or Bridges PLUS (n=16 schools, 512 participants). All participants selected from a particular school received the same intervention to address issues related to sample contamination. Participants in the control condition received bolstered standard of care (BSOC) services for orphaned children in the region. These include, food aid in the form of school lunches, scholastic materials such as textbooks, notebooks, school uniforms, and counseling conducted by church pastors.

Participants in the two treatment conditions received the BSOC services plus a packaged economic empowerment intervention comprising of three components: 1) a CDA, which is a form of economic strengthening held in both the child and caregiver's name, in a well-established and recognized financial institution or bank. The child's family and other relatives were allowed and indeed encouraged to contribute to the CDA. The accumulated savings (over a 2-year period) in a CDA were matched with money from the program by a ratio of 1:1 for the Bridges arm or a 2:1 match ratio for the Bridges PLUS arm. The only difference between Bridges and Bridges Plus arm was the match rate. The savings plus the match accumulated in the CDA were intended to pay for the child's post primary education and/or start a microenterprise business. This component of the intervention was designed to reduce the long-run risk of poverty by raising the likelihood that a child would stay in school (given the ability to pay for post-primary education), and raising family income through income generating activities; 2) workshops on financial education and microenterprise development, intended to support savings and the establishment of family-level income generating activities for both children and their caregivers; and 3) a mentorship program, guided by a 9-session curriculum, intended to help children develop the ability to identify specific future goals and educational aspirations through building their self-esteem, encouraging hopefulness and building stronger communication skills with their caregivers. Connecting children to caring peer or adult relationships is one of the most important sources of resilience among children experiencing adversities, such as orphaned children. Overall, the provision of workshops and mentorship was meant to boost the effectiveness of CDAs, by encouraging children to save, supporting them to develop career aspirations and providing further support and guidance on starting small businesses. A more detailed description of the intervention and the mentorship program is provided elsewhere (see Ssewamala et al., 2014; Ssewamala & Ismayilova, 2009).

Data and Measures

This paper uses data collected from a total of 1321 adolescents who responded to interviews at 12-months post intervention initiation. This is because the outcome variable was assessed at 12-months and not baseline. Data were collected using a 90-minute structured survey, administered by trained Ugandan interviewers. Surveys were translated into Luganda language –the mostly widely spoken language in the study area, and then back translated into English to ensure consistency.

The outcome variable for this study was participants' non-kin support networks, indicated by: 1) identification of at least one non-kin tie, 2) type of non-kin tie(s) identified, 3) timing of receiving support from each non-kin tie, 4) frequency of contact with each non-kin tie, and 5) type of support received from each non-kin tie. To measure non-kin support networks, the name generator sampling technique (Burt, 1984; Marsden, 1987; Wellman, 1979), similar to that used in the General Social Survey (GSS) (Marsden, 1987) was utilized. Specifically, participants were asked to name up to 5 individuals other than their caregiver and relatives that provide them with any kind of support. For each individual (non-kin tie) identified, participants were asked the following: 1) What are the initials of the person or name of the group? 2) What is your relationship with this person/group? 3) For how long have you been receiving support from this person/group? 4) On average, how many times per month do you contact this person/group? And, 5) What kinds of support do you receive from this person/group?

The key independent variable was participation in the Bridges intervention (treatment condition). Participation was coded as "1" for the treatment condition and "0" for non-participation (control condition). For purposes of this paper, the two treatment conditions (Bridges and Bridges Plus) were combined into one, given that they were both intended to facilitate asset accumulation. Several child-level socio-demographic and household characteristics were included: child's gender (male or female), child's age (in years), orphanhood status (double orphan, with both biological parents not living, or single orphan, with one biological parent still living), primary caregiver (surviving biological parent, grandparent or other relative, i.e. aunt, uncle, siblings and in-laws), household size (total number of people and number of children in the household), and a measure of household asset ownership (such as of home ownership, land or rental property, means of transportation, gardens and livestock, and any ownership of a family microenterprise business).

Data Analysis Procedures

Data analysis was conducted using both SPSS 23 and Stata 14 software packages. First, participants' key socio-demographic and household characteristics were analyzed and compared between the control and treatment conditions. Second, to address research question 1, an extensive descriptive analysis was conducted on the 5 non-kin support network indicators i.e. identification of at least one non-kin tie, type of non-kin tie, timing of receiving support from non-kin tie, frequency of contact with non-kin tie, and type of support received from non-kin tie. Each of these indicators was compared between the treatment and control conditions to ascertain group differences. Third, to test the extent to which participating in a family-based economic strengthening intervention is associated with the identification and formation of non-kin support networks (research question 2), binary logistic regression analyses were conducted on 2 indicators: 1) identification of at least one non-kin tie, and 2) timing of receiving support from non-kin tie. Specifically, dummy variables were generated for each of the two indicators. Identification of non-kin support networks was coded as "0" for "no non-kin tie identified" and "1" for "at least one non-kin tie identified." This was due to the small number of non-kin ties (1–4) identified by each participant. 2) Timing of receiving support from a non-kin tie was used as a proxy for

network formation because non-kin ties were assessed at 12-months follow-up and not at baseline. As such, support received “prior to joining the Bridges intervention” was coded as “0” and support received “after joining the Bridges intervention” was coded as “1.” Each model controlled for participants’ sociodemographic and household characteristics. Clustering of study participants within schools was addressed using a cluster variable for school created to indicate which school a participant went to. Confidence intervals and p-values for comparing sample characteristics were adjusted using design-based estimators available in STATA.

Results

1. Socio-demographic and household characteristics of the sample

Table 1 represents the socio-demographic and household characteristics of the sample. The average age of participants was 13.6 years, ranging from 11 to 17 years. Fifty-four percent (54%) of participants were girls. The majority of participants (80.2%) were single orphans, meaning they had one surviving biological parent. Participants in the treatment condition were significantly more likely to be single orphans than participants in the control condition ($F=4.97$, $p=.05$). Surviving biological parents (39.6%) and grandparents (33.5%) were reported as the primary caregivers of orphaned children, although financial support mainly came from a surviving parent (39.7%) or other relatives (33.8%). On average, participants lived in households with 6 individuals and 3 children under the age of 18. The average asset ownership reported was 10 items out of the possible 20, indicating moderate levels of assets owned by participants’ households. The majority of participants (53.7%) reported having personal savings. However, given that participants in the treatment group had been exposed to the intervention at 12-months follow-up, they were more likely to report personal savings than their counterparts in the control condition ($F=124.6$, $p=.001$).

2. Description of non-kin support networks

Identification and relationship with non-kin ties—As presented in Table 2, 82% of participants identified at least one supportive non-kin tie available to them, 17.8% did not identify any non-kin tie. No statistically significant differences were observed between the control and treatment conditions. However, participants in the treatment condition were slightly more likely to identify a non-kin tie compared to those in the control condition (83.8% versus 79.4%). Among participants with non-kin ties, the majority of those in the control condition (62%) and those in the treatment condition (67%) identified the Bridges intervention, indicating that the intervention was the largest source of non-kin support for study participants. Only 16.7% of participants identified non-kin ties other than the Bridges intervention. These included participants’ friends and family friends, neighbors, school teachers, church priests/pastors and community-based organizations.

Frequency of contact with non-kin ties—Frequency of contact was measured by the number of times per month contact occur between the adolescent and the non-kin tie identified. About 41% of the participants reported being in contact with their supportive non-kin ties at least 2 times per month. Participants in the treatment condition were slightly more likely than participants in the control condition to report contact with their non-kin ties

at least 2 times a month (44% versus 41%). However, the difference was not statistically significant. Only 39.2% of all participants reported being in contact with their non-kin ties at least 3 times or more per month.

Timing of receiving support from non-kin ties—The majority of participants (73.3%) reported that they had started receiving support from their non-kin ties after joining the Bridges study, with 74.9% of participants in the treatment condition and 70.2% of participants in the control condition. This finding is reflective of the large proportion of participants who identified the Bridges intervention as part of their non-kin support network. Only 8.9% of participants reported receiving support from non-kin ties prior to joining the study.

Types of support received from non-kin ties—Type of support received was measured by specific kinds of support identified by participants, including money, advice, food, clothing, school needs, etc. These kinds of support were grouped into financial and material support, and other support such as emotional, informational or in-kind assistance. The majority of participants (80.7%) reported receiving financial and material support, including money, basic needs (food, clothing, accommodation) and school needs (uniforms, school fees, books, pens, and any other materials needed at school). Other support reported by 1.5% of participants include the provision of advice and encouragement, help with homework and household chores, coaching and skill training. Similar to all other social network indicators, no statistically significant differences were observed between participants in the control and treatment conditions.

3. Effect of the intervention on non-kin support networks

Results from logistic regression analyses testing the effect of the intervention on the identification and formation of supportive non-kin networks are presented in Table 3. Controlling for participants' socio-demographic and household characteristics, the intervention was not associated with non-kin support network identification or formation. No statistically significant results were observed between the treatment and control conditions. However, participants' age, gender, orphanhood status and availability of personal savings were associated with non-kin support networks. In particular, age was associated with lower odds of identifying a supportive non-kin tie ($OR=0.86$, 95% $CI=0.76$, 0.98 , $p=.05$). Female participants were more likely to report higher odds of identifying at least one supportive non-kin tie ($OR=2.38$, 95% $CI=1.73$, 3.28 , $p=.001$), and receiving support after joining the Bridges intervention ($OR=1.65$, 95% $CI=1.23$, 2.21 , $p=.001$), relative to their male counterparts. In addition, single orphaned participants were more likely to report higher odds of receiving support after joining the Bridges intervention ($OR=1.42$, 95% $CI=1.02$, 1.97 , $p=.05$), relative to double orphans. Finally, having personal savings was associated with higher odds of identifying at least one supportive non-kin tie ($OR=2.26$, 95% $CI=1.48$, 3.44 , $p=.001$), and receiving support after joining the Bridges intervention ($OR=1.46$, 95% $CI=1.06$, 2.0 , $p=.05$).

Discussion

Description of participants' non-kin support networks

This study examined the non-kin support networks for orphaned adolescents participating in a family-based economic strengthening intervention. Findings indicate that orphaned children are embedded in very small and limited number of informal supportive networks. In particular, only 17% of participants were able to identify supportive non-kin ties other than the Bridges intervention, primarily consisting of friends, neighbors, teachers, church related individuals and fictive kin. These findings are consistent with previous studies that investigated social networks and social support among low income individuals, including low-income single mothers (Dominquez & Watkins, 2003; Offer, 2012a; Weyers, Dragano, Möbus, Beck, Stang, & Möhlenkamp, et al., 2008).

These findings could be explained by the depletion of people due to early mortality and migrations, both of which are common in HIV-impacted communities. In addition, poverty and the lack of financial resources constitutes a severe barrier to the formation of social ties, and limit individuals from participating in social networks. Previous research has documented that poor and low income individuals often receive insufficient social support mainly because their social networks tend to be of similar socioeconomic conditions (Edin & Lein, 1997; Harknett & Hartnett, 2011; Henly, Danziger, & Offer, 2005). As a consequence, these kinds of support only help to buffer the day-to-day stressors. Therefore, like other poor individuals, orphaned children are embedded in poor homogenous social networks, limiting the flow of information and opportunities for upward mobility (McPherson, Smith-Lovin, & Cook, 2001; Swartz, 2009).

Frequency of contact with supportive non-kin ties was very minimal. The majority of participants (43%) reported contact with their supportive non-kin ties at least 2 times per month, and only 38.7% were in contact with their non-kin ties 3 times or more per month. These findings are consistent with the living arrangements and care relationships for orphaned children in the region. Specifically, orphaned children tend to reside with a surviving biological parent, or are absorbed into other households, usually with grandparents or extended family members (Karimli, et al, 2009), where other non-resident family members and non-kin—where available, help with both basic needs and financial support.

Effect of a family-based economic strengthening intervention on non-kin support networks

This study hypothesized that orphaned children receiving the intervention would be more likely to report higher levels of non-kin support networks compared to children not receiving the intervention (control condition). Specifically, given that individuals tend to value asset owners than non-asset owners, we hypothesized that orphaned children participating in the intervention would attract support from non-kin networks, partly, due to anticipation of future reciprocity. This hypothesis was not supported. One possible explanation could be that given the majority of participants in both the treatment and control conditions identified the Bridges intervention as a source of support, this may have undermined the significance of other supportive relationships with non-kin ties. In addition, given the poor social and economic conditions in the communities where orphaned children live, the threshold for

supportive services in general is so low that even the smallest form of support, such as a notebook, is valuable to orphaned children.

Although the intervention was not associated with non-kin support networks, significant findings were observed on a few participant characteristics, i.e. age, gender, orphanhood status and availability of personal savings. It could be that as children grow older, they are less likely to attract support from non-kin ties because they are beginning to assume independence, and other individuals consider them old enough to support themselves. In addition, significant findings among female children could be attributed to the way children are traditionally socialized in Uganda. Whereas, boys are trained to become heads of the households, especially in the absence of a father – the breadwinner, girls are trained to become homemakers, primarily taking care of household responsibilities, including young children and sick family members. It could be that because of all these responsibilities, girls attract more support from non-kin in order to ease on the burden of household responsibilities. Non-kin support networks for single orphaned adolescents could be attributed to biological relatedness i.e. orphaned children who lost both parents are less likely than those with a surviving biological parent to have the same opportunities of being introduced to other supportive individuals outside of their households.

Study limitations

The study has four major limitations related to measurement and study design. First, the indicators utilized to measure non-kin support networks may not be appropriate for this particular population –poor orphaned children, socially isolated, with multiple vulnerabilities. For example, in poor communities, individuals without material support may be able to provide other non-material support such as affection, love, care and empathy. However, this kind of support was not reported by participants, and it may have limited the identification of supportive non-kin ties. Second, the way the term “non-kin” is conceptualized in the Uganda culture may be limiting to children, given that families often have fictive kin that are considered family members/relatives, limiting the number of non-kin ties identified by orphaned children.

Third, data was self-reported by adolescents and might be subjected to social desirability bias. However, given that participants had no incentive to inflate or downplay their experiences, social desirability might have been very minimal. Fourth, by design, the current study lacked a true control condition given that participants in the control condition received “bolstered usual care” services. Future research designs need to consider utilizing true control conditions where participants in the control condition do not receive any form of assistance to enable the evaluation of the net effects of programs and interventions on participants’ outcomes.

Implications and Conclusion

Findings from this study point to important implications for research and practice. Although asset theory emphasizes the creation of social benefits in the form of social contacts and social networks to the asset owner/program participants, the characteristics of program participants, intervention design and program features may influence this outcome.

Specifically, given that program participants in the current study were young orphaned children, it could be that this age is less attractive to potential social contacts outside the home, since the children's financial obligations largely depend on and are controlled by the caregivers. Second, the intervention was designed as a multicomponent intervention with matched savings, financial education workshops and a mentorship program provided to program participants. It is not possible to tease out which individual component uniquely contributed to the identification and formation of non-kin support networks. It could be that individual intervention components influence non-kin support networks differently compared to the multicomponent intervention as whole. Third, program features and restrictions might affect potential social networks. For example, it would be easier for participants in a non-conditional cash transfer program to attract social networks because there are no obligations tied to the contribution and expenditure of the program funds. However, given that the CDA approach utilized in the Bridges study is a form of conditional cash transfer, i.e. conditioned on participants' own savings, and expenditure of matched funds is limited to education and microenterprise development, other individuals may not view adolescents who participate in the CDA as having resources to share in a reciprocal manner. Therefore, future research should investigate 1) how specific program features influence and/or restrict participation in social support networks among participants, and 2) intervention designs that facilitate examining the effect of individual intervention components on program outcomes.

In addition, findings from the current study would benefit from further investigation with caregivers of orphaned children to ascertain how relationships with non-kin support systems could be promoted and strengthened. Besides, some sources of support might have been overlooked during interviews given the age and support needs perceived by adolescents. Caregivers might be in position to give additional insights on what they consider more helpful in promoting the social, economic and overall health wellbeing of orphaned children under their care.

In terms of practice, given that social support networks for orphaned children tend to be very small and limited, findings from the current study point to opportunities for building social capital through bonding and bridging social support networks for children and their families (Putnam, 2000). Among orphaned and vulnerable children, bonding social networks may occur through encouraging children and caregivers, working toward the same goal to form relationships with each other. Poor families have different strengths and resources (including knowledge, relationships outside of their communities and unique lived experiences), once pooled together could help improve the wellbeing of children and families. On the other hand, bridging social capital might occur through program staff working to support orphaned children and their families, including NGOs, the civil society and the private sector—where available, to help individuals and families expand their circles and improve their opportunities. Such individuals have access to information related to education, employment opportunities and skill training within and outside the community, that might help create opportunities for social leverage for orphaned children and their families.

Finally, greater attention is needed to identify the strength of poor families, especially those providing care and support to orphaned children and their caregiving families. Many of these

families are functioning well and the children under their care are thriving. However, the mechanisms through which they adapt and cope with the demands and challenges of their day-to-day lives in the absence of public support and community support are not well known. In order to develop appropriate strategies, research should be devoted to sources and mechanisms through which family strengths are developed and sustained within poor communities, to necessitate the development of appropriate and sustainable interventions and programming for poor families and communities.

In conclusion, findings indicate that social support for orphaned children outside of their “family units” is lacking, and the burden of support still largely falls on the extended family system. Although the infrastructures for economic support are important, programs that work to support orphaned children in HIV-impacted communities, especially those in SSA sub-Saharan Africa, should also work to build and strengthen the relational and social assets of orphaned children and supportive individuals outside of the family unit, to supplement support from the extended family system. Such relationships may act as a protective factor against exploitative relationships and improve children’s resilience as they try to navigate the complexities and orphanhood-related adversative.

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Human Subjects Protection:

The Bridges intervention received approval from the Columbia University Institutional Review Board (IRB-AAA11950) and the Uganda National Council of Science and Technology (SS2586). The study is registered in the Clinical Trials database (NCT01447615).

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Table 1:

Socio-demographic and Household Characteristics of the Sample (N=1321)

Variable	Total Sample: n (%) (N=1321)	Control Condition: n (%) (n=470)	Treatment Condition n (%) (n=851) ^a	Design- Based F
Study Condition (%)	100	35.6	64.4	
Participants' age (mean, SE) (Range: 11-17)	13.6 (.04)	13.7 (.08)	13.6 (.05)	0.21
<i>Participants' gender</i>				0.44
Female	732(54.4)	254(54.1)	478(56.2)	
Male	589(44.6)	216(45.9)	373(43.8)	
<i>Orphanhood status</i>				4.97 [*]
Single orphan	1,060(80.2)	361(76.8)	699(82.1)	
Double orphan	261(19.8)	109(23.2)	152(17.9)	
<i>Primary caregiver</i>				2.10
Biological parent	523(39.6)	169(35.9)	354(41.6)	
Grandparent	443(33.5)	171(36.4)	272(31.9)	
Other relative ^b	355(26.9)	130(27.7)	225(26.4)	
<i>Household composition</i>				
Number of people in household (Mean, SE) (Range: 2-25)	6.33(.07)	6.41 (.12)	6.28 (.08)	0.79
Number of children in household (Mean, SE) (Range: 1-16)	3.02(.07)	2.96 (.09)	3.05 (.09)	0.40
<i>Person supporting family financially</i>				2.98
Biological parent	525(39.7)	167(35.5)	358(42.1)	
Grandparent	350(26.5)	138(29.4)	212(24.9)	
Other relative	446(33.8)	165(35.1)	281(33)	
<i>Asset ownership</i>				
Personal savings				
No	612(46.3)	330(70.2)	282(33.1)	124.6 ^{***}
Yes	709(53.7)	140(29.8)	569(66.9)	
Household Asset Index (Mean, SE) (Range:0-19)	10.2(.15)	9.99 (.30)	10.3(.15)	1.15

^aNotes: The treatment condition combines 2 treatment arms, i.e. the Bridges arm and the Bridges plus arm, hence doubling the number of participants compared to the control condition.

^bOther relatives include aunts, uncles, siblings and in-laws.

^{*}
p .05;

^{***}
p .001

Table 2:

Description of Participants' Non-kin Support Networks Between Study Groups (N=1321)

Variable	Total Sample (N=1321)	Control Condition (n=470)	Treatment Condition (n=851)	Design- Based F
<i>At least one non-kin tie identified</i>				
Yes	1086(82.2)	373(79.4)	713(83.8)	2.61
No	235(17.8)	97(20.6)	138(16.2)	
<i>Relationship with non-kin tie</i>				
Bridges participant	865(65.5)	292(62.1)	573(67.3)	1.20
Other non-kin tie ^a	221(16.7)	81(17.2)	140(16.5)	
No non-kin tie	235(17.8)	97(20.6)	138(16.2)	
<i>Time of receiving support from non-kin tie</i>				
After study enrollment	967(73.3)	330(70.2)	637(74.9)	1.13
Prior to study enrollment	118(8.9)	43(9.1)	75(8.8)	
No non-kin tie	235(17.8)	97(20.6)	138(16.2)	
<i>Frequency of contact with non-kin tie</i>				
At least 2 times	568(41.1)	193(41.1)	375(44.1)	1.47
3 times or more	518(39.2)	180(38.3)	338(39.7)	
No non-kin tie	235(17.8)	97(20.6)	138(16.2)	
<i>Kind of support received from non-kin tie</i>				
Financial & material	1,065(80.7)	366(77.9)	699(82.2)	1.47
Other support	20(1.5)	7(1.5)	13(1.5)	
No non-kin tie	235(17.8)	97(20.6)	138(16.2)	

^aNote: Breakdown of "Other" non-kin ties: No relationship n = 9; Friend n = 36; Neighbor n=46; Teacher/School related n=21; Priest/church related =10; NGO/community-based organization n=60; and fictive kin n=39.

Table 3.

Regression Analysis: Effect of the Intervention on the Identification and Formation of Non-kin Support Networks (N=1321)

	Identification of at least one non-kin tie OR, 95% CI	Timing of receiving support from non-kin tie OR, 95% CI
Intervention child	0.99(0.65, 1.49)	1.06(0.73, 1.55)
Child's age	0.86(0.76, 0.98) *	0.99(0.89, 1.09)
Female child	2.38(1.73, 3.28) ***	1.65(1.23, 2.21) ***
Single orphaned child	1.23(0.8, 1.87)	1.42(1.02, 1.97) *
<i>Primary Caregiver (biological parent)</i>		
Grandparent(s)	1.06(0.7, 1.61)	1.26(0.9, 1.75)
Other relative	0.93(0.59, 1.46)	1.15(0.8, 1.65)
<i>Family Composition</i>		
No. of people in HH	1.05(0.94, 1.18)	1.04(0.97, 1.11)
No. of children in HH	0.94(0.83, 1.07)	0.98(0.9, 1.08)
<i>Asset Ownership</i>		
Personal savings	2.26(1.48, 3.44) ***	1.46(1.06, 2.0) *
Family Assets	0.99(0.95, 1.04)	0.97(0.94, 1.0)
Constant	5.14(0.63, 42.3)	0.76(0.14, 4.05)
Design-Based F(df)	6.71(10, 38) ***	4.39(10, 38) ***

* Notes: p .05;

***
p .001