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FAMILY ECONOMIC STRENGTHENING AND NON-KIN SUPPORT NETWORKS FOR CHILDREN ORPHANED BY HIV/AIDS LIVING IN LOW RESOURCE COMMUNITIES IN UGANDA: A MIXED METHODS APPROACH

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This dissertation is dedicated to the loving memory of my parents:

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ABSTRACT

This dissertation examined the extent to which a family-based economic strengthening intervention that utilizes child development accounts (CDAs) is associated with the creation and strengthening of relationships between non-kin support networks, defined as relationship ties not based on blood and marriage –for children orphaned by HIV/AIDS living in low resource communities in Uganda. This study draws from asset theory (Sherraden, 1991), which posits, in part, that asset-ownership creates an "asset effect." The argument is that when individuals accumulate assets, society responds to them in a more positive way, leading to the creation of social capital in the form of social contacts and social networks. These social networks constitute a locus of access to resources, which in turn, determine and influence the individual's social, economic and health outcomes (Coleman, 1988). For orphaned children living in low resource communities, with no public safety nets–where extended families are already overwhelmed by high numbers of children and poverty, informal sources of support, including those formed outside the extended family, may be one of the very few viable options to the survival and wellbeing of orphaned children. Therefore, based on the premise of asset theory, one would be justified to posit that an asset-based intervention may create an "asset effect" that would allow poor orphaned children to acquire social networks, including non-kin relationships, that might help them in times of need.

This dissertation utilized a mixed methods approach. Specifically, longitudinal quantitative survey data collected from a NICHD-funded randomized clinical trial known as Bridges to the Future (2011-2016) in Uganda, designed to evaluate the efficacy of a family-based economic strengthening intervention for orphaned children in Uganda was analyzed. A

total of 1410 orphaned children (average age of 12.7) participated in the Bridges intervention. Binary logistic regression analyses were performed, using data collected at baseline, 12-months and 24-months post intervention initiation. In-depth interviews were conducted with a sample of 38 participants selected from the same Bridges study, providing additional understanding and interpretation of the quantitative findings.

Results from the study indicate the following: 1) orphaned children are socially isolated and the threshold for non-kin supportive services is so low –that usual care services provided to the control condition appear instrumental in children's lives; 2) the intervention seems to have helped to strengthen the existing relationships with family members, and to ease the financial burden of taking care of orphaned children by providing financial resources, educational opportunities and health promotion resources to mitigate the risks of poverty and HIV/AIDS; 3) social support networks for orphaned children are very small, tend to vary by gender, and usually consist of individuals with similar economic situations and challenges; and 4) caregivers play an important role in the relationships their children form outside of their families. However, poverty, coupled with community mistrust and the stigma attached to orphanhood and seeking support outside of a family setting, limit orphaned children from participating in social relationships, as well as accessing and tapping into existing supportive community resources.

Findings from this study indicate that the extended family system is still the primary and a major source of social support to orphaned children in poor communities heavily affected by the HIV epidemic. Therefore, in the absence of public safety-nets and public social welfare programs, building social assets over and above the provision of economic resources that could support extended families that are increasingly taking in orphaned children is critical.

CHAPTER ONE

Introduction and Literature Review

1.1. Introduction

Research on economic strengthening strategies that combine conditional cash transfers-defined as the provision of assistance in the form of cash to increase real income for poor individuals/households or those at the risk of falling into poverty (Lagarde & Palmer, 2009), and asset building specific interventions-defined as efforts that enable individuals with limited financial and economic resources to acquire and accumulate long term productive assets, demonstrates that such interventions positively impact the psychological, social, economic and health related outcomes of program participants, including educational aspirations, school engagement and performance (Adato & Bassett, 2012; Cheatham & Elliott, 2013; Curley, Ssewamala, & Han, 2010; Elliot, 2009; Grinstein-Weiss, Sherraden, Gale, Rohe, Schreiner, & Key, 2013; Kim & Sherraden, 2011; Ssewamala & Ismayilova, 2008), future orientation and self-efficacy (Scalon & Adams, 2009; Yadama & Sherraden, 1996), life satisfaction and enhanced self-esteem (Clark, 1997; Rohe & Stegman, 1994; Scanlon, 2001); financial savings (Chowa & Ansong, 2010; Ssewamala & Ismayilova, 2009), reducing sexual risk taking intentions and behaviors (de Walque, Nathan, Abdul, Abilahi, Gong, & Medlin et al., 2012; Handa, Halpern, Pettifor, & Thirumurthy, 2014; Ssewamala, Han, Neilands, Ismayilova, & Sperber, 2010), and improved mental health and psychosocial functioning (Han, Ssewamala, & Wang, 2013; Ssewamala, Neilands, Waldfogel, & Ismayilova, 2012).

The empirical findings presented in these studies are in agreement with asset theory advanced by Michael Sherraden (1990; 1991). Specifically, asset theory posits, in part, that assets (such as savings, educational opportunities and economic opportunities, including microenterprise activities) have important social, economic and psychological benefits for individuals and families. Indeed, this has been the focus of most studies on family- based economic strengthening interventions. Yet, the same theory also maintains that asset-ownership creates an "asset effect"-meaning, when individuals accumulate assets, society responds to them in a more positive way, potentially leading to the creation of social capital in the form of social contacts and social networks, which may later provide informational and social protection benefits to the asset owner (Schreiner & Sherraden, 2007; Sherraden, 1991).

However, even with this plausible argument, not much empirical work has been done to ascertain the extent to which family-based economic strengthening interventions impact social support networks for children and families participating in such interventions. Hence we do not know much about the "asset effect" on social support networks for program participants. Yet, informal sources of support, including those formed outside the individual's close family, consist of resources that individuals draw on to "get ahead" by increasing their access to information and financial resources to achieve upward mobility (social leverage) or "get by" by providing tangible and material support to reduce economic hardships and buffer the stressors of everyday life or coping (Briggs, 1998).

The current study examines the extent to which participating in a family-based economic strengthening intervention is associated with the creation and strengthening of non-kin support networks-defined as relationship ties not based on blood and marriage for children who have lost one or both parents to AIDS –hereafter, orphaned children[1] and the mechanisms through which such associations occur. For orphaned children living in low resource communities, with no public safety nets–where extended families are already overwhelmed by high numbers of orphaned children and poverty, informal sources of support such as non-kin support networks may be the only viable option to ensure children's survival and wellbeing following the death of their parents. Therefore, based on asset theory, one would be justified to posit that an asset-based intervention may create an "asset effect" that would allow poor orphaned children to acquire social networks, including relationships with non-kin ties, that might help them cope with the day-to-day life stressors.

Overall, the study has three major aims: 1) to describe non-kin support networks available to orphaned children, and their variation based on children's key sociodemographic characteristics (age, gender, orphanhood status and primary caregiver); 2) to examine the extent to which a family-based economic strengthening intervention is associated with the creation of non-kin support networks among orphaned children; and 3) to examine the nature and quality of relationships between orphaned children and non-

[1] For purposes of this dissertation, the terms "orphans", "orphaned children" or "children orphaned by AIDS" are used instead of "AIDS-orphans" to refer to children below the age of 18 who have lost one or both parents due to AIDS. According to the 2015 UNAIDS terminology guidelines, the term "AIDS-orphans" not only stigmatizes children but also labels them as HIV-positive, which may not be true. These guidelines are available at: http://www.unaids.org/sites/default/files/media_asset/2015_terminology_guidelines_en.pdf

kin support networks, and to understand how orphaned children perceive the ways through which the intervention shapes these relationships.

To address these research aims, the current study utilized a mixed methods approach, using quantitative secondary data collected to evaluate an innovative family-based economic empowerment intervention that utilize child development accounts (CDAs) – an asset-based intervention, aimed at family economic strengthening and the promotion of positive social, economic, and health outcomes for orphaned children in Uganda. To understand the nature and quality of relationships between orphaned children and non-kin support networks (study aim #3), qualitative data collected from a sample of participants from the same study was utilized. Qualitative data was also utilized to provide additional interpretations of the quantitative findings.

1.2. Literature review

This section is divided into two parts. The first part explores the current situation of children orphaned by AIDS in sub-Saharan Africa, pointing to increased childhood vulnerability exacerbated by AIDS and poverty. The second part reviews existing literature on economic strengthening programs and intervention on children's outcomes – including orphaned children, and available literature on economic strengthening and social support networks. Findings from previous research reveal positive social, economic and health benefits for children and youth associated with participating in economic strengthening programs and interventions.

1.2.1. Current situation of children orphaned by AIDS in sub-Saharan Africa

Over 52 million children under the age of 18 in sub-Saharan Africa are orphans who have lost one or both parents, and more than 15 million children have been orphaned as a direct result of HIV/AIDS (UNICEF, 2015). These numbers are likely to increase as parents who are already infected die from the disease. Millions of other children are at a greater risk of HIV/AIDS infections because of the fragile economic conditions in their families and communities, which makes them vulnerable and exposes them to risky behaviors and HIV/AIDS (Adato & Bassett, 2009; Dinkelman, Lam, & Leibbrandt, 2008; Gillespie, Kadiya, & Greener, 2007).

There is a broader acknowledgement that HIV/AIDS negatively impacts not only the affected individual, but also their household livelihoods and community safety nets. For children orphaned by AIDS, 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; Field, Diego, & Sanders, 2001; Foster & Williamson, 2000; Klein, Dougherty, & Olino, 2005; Kumar, Dandona, Kumar, Ramgopal, & Dandona, 2014; Lata & Verma, 2013; Nyambedha & Aagaard-Hansen, 2010). These negative impacts may increase children's risk of abuse and exploitation, sexual risk taking behaviors and exposure to HIV/AIDS (Chae, 2013; Foster & Williamson, 2000; Juma, Alaii, Bartholomew, Askew, & Van den Born, 2013a; McLoyd, 1998; Morantz, Cole, Vreeman, Ayaya, Ayuku, & Braitstein, 2013; Palarmo & Peterman, 2009).

The impact of HIV/AIDS on children is compounded by poverty and their limited access to basic needs (Case, Paxton, & Ableidinger, 2004; Cluver, Boyes, Orkin, & Sherr, 2013; Duncan & Brooks-Gunn, 2000; Hunter & Williamson, 2000). Poverty not only undermines the family's ability to physically care for children, but also the family's stability and overall functioning (Matshalaga & Powell, 2002). Children orphaned by AIDS are at a greater risk of growing up poor, due to the loss of at least one parent, coupled with the deteriorating health of the second parent. A study conducted by UNICEF (2014) indicate that orphanhood and the presence of a chronically ill adult in the household are among the major predictors of childhood vulnerability on key social and health outcomes, including schooling and school attendance, child labor, birth registration, vaccination and nutritional health.

In addition, the cost of treating HIV/AIDS 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). Indeed, studies in Cote d'Ivoire (Bechu, 1998) and Kenya (Wafula, Kaseje, Ochieng, & Were, 2013) have documented that when a family member has HIV, the household spends between 4 and 5 times more on health care services than the unaffected household. These financial constraints limit children's access to basic needs, including food, shelter, health care, education and schooling needs (Foster & Williamson, 2000; Juma et al, 2013b; Kasirye & Hisali, 2010; Orkin, Boyes, Cluver, & Zhang, 2014; Steinberg, Johnson, Schierhout, & Ndegwa, 2002).

Unfortunately, the extended family system that traditionally provided care and support to orphaned children is so overburdened by the increasing number of orphans and poverty that family members are often unwilling to take on additional children (Foster, 2000; Kasedde, Doyle, Seeley, & Ross, 2014; Kidman & Thurman, 2014; Madhavan, 2004; Mafumbate, 2014; Powell & Hunt, 2013). Moreover, most of the caregivers are ailing grandmothers who are unable to provide sufficient care to the orphans (Adato, Kadiyala, Roopnaraine, Biermayr-Jenzano, & Norman, 2005; Bicego, Rutstein, & Johnshon, 2003; Gilborn, Nyonyintono, Kabumbuli, & Jagwe-Wadda, 2001; Karimli, Ssewamala, & Ismayilova, 2012; Madhavan, 2004; Shaibu, 2013). As a consequence, children who are not absorbed into extended families, end up living on their own; others end up on streets where they are exposed to risk behaviors including substance use and prostitution, which increases their chances of exposure to sexually transmitted infections, including HIV/AIDS (Lindblade, Odhiambo, Rosen, & DeCock, 2003; Meghdadpour, Curtis, Pettifor, & MacPhail, 2012; Salaam, 2004).

Given that poor countries–such as those in sub-Saharan Africa-have weak and/or no government welfare safety nets, orphaned children and their families often seek relief from informal sources of support including neighbors, friends, teachers and other community members, and non-government institutions (including churches, civil society or community-level informal groups where they exist), to cope in times of crisis (Currie & Heymann, 2011; Skovdal, & Ogutu, 2012).

Overall, 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 diseases, including HIV (Richter, Sherr, Adato, Belsey, Chandan, & Desmond et al, 2009).

One of the fundamental strategies to improve the wellbeing of children orphaned by AIDS is through strengthening the economic capacity of households and communities where they live. Specifically, economic strengthening is often 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. Emerging evidence indicates that economic strengthening strategies that utilize cash transfers –whether conditional (tied to obligations of recipients to participate in work, training, education or other activities) or unconditional (given without obligations), have the potential to improve individual human capital, such as education and health related outcomes, including HIV prevention and reducing sexual risk taking intentions and behaviors among adolescents (Adato & Bassett, 2012; 2009; Filmer & Schady, 2011; de Walque et al., 2012; Handa et al., 2014; Heise, Lutz, Ranganathan, & Watts, 2013; Marcus & Page, 2013; Ranganathan & Lagarde, 2012; Robertson, Mushati, Eaton, Dumba, Mavise, Makoni et al., 2013). The following sections review literature on economic strengthening interventions and the benefits associated with such interventions on children's outcomes.

1.2.2. Economic strengthening for orphaned children

In communities heavily affected by HIV/AIDS, such as those in sub-Saharan Africa, the epidemic has had severe negative social and economic impacts on children, families and communities (Foster & Williamson, 2000). As a result, economic strengthening is at the core of supporting families caring for orphaned children. The 2008 USAID Report on Economic Strengthening for Vulnerable Children (James-Wilson & Torres, 2008) defines economic strengthening as, "the portfolio of strategies and interventions that supply, protect and or grow physical, natural, financial, human and social assets." These strategies and interventions may include the establishment or strengthening of social assistance programs such as cash transfers, the provision of insurance services, and the facilitation of access to savings, business credit, skills training, and employment among others.

Additionally, the 2004 Framework for the Protection, Care and Support of Orphans and Vulnerable Children Living in the World with HIV and AIDS (Gulaid, 2004) and Children on the Brink (UNAIDS, UNICEF & USAID, 2004) identify five key strategies for addressing the needs of orphans and vulnerable children, of which economic strengthening is important for the first three strategies. A recent report on the state of the world's children (UNICEF, 2016) maintains the same strategies. These include: 1) strengthening the capacity of families to protect and care for orphans and vulnerable children (through improving household economic capacity and providing psychosocial support to affected children and their caregivers); 2) mobilizing and supporting community-based responses to provide both immediate and long-term assistance to vulnerable households (such as promoting and supporting community care

for children without any support, organizing cooperative support activities, and engaging local leaders in responding to the needs of vulnerable community members); and 3) ensuring access for orphans and vulnerable children to essential services (such as education and health services).

The current study is in line with these core strategies. Specifically, this study examines a family-based economic strengthening intervention that utilize Child Development Accounts (CDAs), also a form of conditional cash transfer program, to strengthen the financial, human and social assets of poor children orphaned by AIDS living within their families in Uganda, one of the sub-Saharan African countries hardest hit by the HIV/AIDS epidemic.

1.2.3. Effects of economic strengthening on children's outcomes

Over the years, there has been growing interest in asset based approaches, specifically those that utilize children savings accounts or CDAs, influenced by the view that the more opportunities children and young people have to participate in asset-based development programs, the more likely they are to accumulate and report a range of positive protective factors, and to sustain their health and wellbeing. Indeed, several studies both in sub-Saharan Africa and in developed countries have documented specific benefits associated with participating in such programs, ranging from improved educational outcomes, economic outcomes, and improved health and psychosocial wellbeing (Curley, Ssewamala & Han, 2010; Elliot, 2009; Han, Ssewamala, & Wang, 2013; Kim & Sherraden, 2011; Ssewamala, Han, & Neilands, 2009; Ssewamala, Han, Neilands, Ismayilova, & Sperber, 2010; Ssewamala & Ismayilova, 2009).

Curley, Ssewamala & Han, (2010) evaluated a family asset-based intervention that utilizes CDAs for education, among a sample of 274 orphaned-children in Uganda. They found that not only did orphans with CDAs save for their education (average monthly savings of US$6.33), they had more positive changes in their future educational plans (β= .35, p≤. 05) and a higher level of confidence in their future plans (β= .36, p≤ .001) than their counterparts in the control group. Elliot (2009) examined the potential role of Children's College Accounts (CCAs) as a way to reduce the gap between educational aspirations and expectations, among a total sample of 1,065 at risk-youth, between 12 to 18 years of age. Elliot utilized data from the 2002 Panel Study of Income Dynamics (PSID) and the Child Development Supplement (CDS) to the PSID, a nationally representative longitudinal survey of US individuals and families. Findings from this study indicate that children with CCAs were nearly twice as likely as children without CCAs to expect to attend college (OR =1.70, p≤ .01). Significant impacts on post primary school outcomes have also been documented elsewhere (Elliot, Destin, & Friedline, 2011; Elliot & Sherraden, 2013; Cheatham & Elliott, 2013; Grinstein-Weiss et al., 2013).

Han, Ssewamala, & Wang (2013) examined a family-based economic empowerment intervention among 270 orphaned children in Uganda and found that the intervention significantly reduced hopelessness (β= -1.08, p≤. 001) and depression levels (β= -1.76, p≤. 01) among orphaned children. In addition, Ssewamala and colleagues (2010) examined the effect of economic assets on sexual risk-taking intentions among school going orphaned adolescents in rural Uganda. Study findings indicate that adolescents receiving the economic strengthening intervention reported a significant

reduction in sexual risk-taking intentions compared to adolescents in the control condition (β= -1.64, p≤. 05).

Qualitative studies have also investigated the importance of asset accumulation and economic strengthening. Scanlon & Adams (2009) investigated how youth perceive the impact of participating in youth savings programs on their social, psychological, and behavioral functioning, using a sample of 30 youth between 14-19 years of age, who were participants in the Saving for Education, Entrepreneurship and Down payment (SEED) national demonstration. Study findings indicate that youth reported fiscal prudence, positive view of self, future orientation, sense of security and financial knowledge as benefits from participating in the study.

Scanlon (2001) suggested mediating and causal pathways for the outcomes in asset accumulation programs. These include future orientation, personal efficacy, sense of financial security and financial literacy. However, few studies have tested these pathways. For example, Ismayilova, Ssewamala & Karimli (2012) investigated the effects of a family economic strengthening intervention on family support variables and their role in mediating the change in adolescents' attitudes towards sexual risk-taking, using a total sample of 283 orphaned adolescents enrolled in a cluster randomized clinical study. Study findings indicate that at 12-months follow-up, adolescents in the treatment condition reported higher levels of perceived caregiver support (β= .27, 95% CI = .12, .43). Mediation analysis revealed that the improvement in perceived caregiver support accounted for a 16.8% reduction in adolescents' attitudes toward sexual risk taking behaviors at 24-months follow up (Z= -2.21, p≤. 05). Similarly, Ansong, Chowa & Grinstein-Weiss (2013) tested the mediation effects of future orientation in the

relationship between assets and perceived economic stability. Findings indicate that asset ownership creates an orientation towards the future (β= .11, p≤. 01), which reduces the strain on households during economic shocks (β= -.25, p≤. 01). The authors recommended that further research should investigate future orientation and its outcomes as part of the larger conceptualization of asset effects.

Given the findings documented above, the question remains, to what extent do asset based interventions that utilize CDAs influence the creation of social support networks among program participants, and what are the pathways through which asset accumulation impact participants' social support networks? The following section reviews some of the existing literature addressing this question.

1.2.4. Economic strengthening and social support networks

There are two broad determinants of asset accumulation: formal and informal efforts. Formal efforts include institutional or program policies deliberately designed to facilitate asset-accumulation. For the non-poor, these efforts may occur through asset-based policies, such as tax incentive deductions for contribution in retirement accounts and mortgage interest payment incentives. However, since these efforts occur primarily through tax expenditures, they do not benefit poor individuals (Lombe & Sherraden, 2008; Sherraden, Schreiner, & Beverly, 2003; Sherraden, 1991). The poor, on the other hand, depend on informal efforts such as support from family, friends and other individuals in the community to facilitate asset accumulation. These support networks tend to form the major channels through which the poor, including the participants in the current study, accumulate individual savings and assets.

Informal support networks may impact asset accumulation in two ways. On one hand, social network members may provide encouragement and give positive enforcement and reminders to participants to save. On the other hand, social network members may discourage savings through frequency of financial demands and suggesting that extra income should be shared among members, making it hard for program participants to save and accumulate assets (Beverly, Sherraden, Cramer, Shanks, Nam, & Zhan, 2008; Lombe & Sherraden, 2008; Stack 1974),

Previous studies have documented both the impact of asset accumulation programs on social support networks and the impact of social support networks on program participants (Moore, Beverly, Schreiner, Sherraden, Lombe, & Cho et al., 2001; Scalon & Adams, 2009; Wheeler –Brooks, 2009; Yadama & Sherraden, 1996). Mixed findings have been reported. For example, one of the earliest studies to examine social support networks was conducted by Yadama & Sherraden (1996). The authors utilized PSID data collected between 1968 and 1972 (N=2,871 families) to test the effects of assets and income on attitudes and behaviors, and the effects of attitudes and behaviors on assets and income. Their findings proved that savings rather than income had a significant positive effect on self-efficacy (β= .10, p≤.01) and connectedness to relatives, neighbors and or organizations in the community (β= .05, p≤ .05). In turn, both self-efficacy (β= .05, p=≤.01) and connectedness (β= .04, p≤.01) had a significant positive effect on savings. The authors concluded that their results supported the proposition that assets have a positive effect on expectations and confidence about the future, influence people to make specific plans with regard to work and family, and lead to more social connectedness with relatives, neighbors and community organizations.

In addition, Moore and colleagues (2001) examined the perceived effects of participating in Individual Development Accounts (IDA) programs, using cross sectional data from the American Dream Demonstration (ADD) participants. Among current participants, 70% said that they received encouragement to save from family members and friends, and only 38% indicated that family or friends often asked them for money. In addition, 35% considered themselves to be respected in their communities and only 3% agreed that IDAs caused them to have more problems with their neighbors. In-depth interviews with IDA participants in the ADD also suggest that the encouragement and saving reminders from IDA staff helped people save (Sherraden, McBride, Johnson, Hanson, Ssewamala & Shanks, 2005).

Wheeler–Brooks (2009) examined the role of social networks in the lives of participants in the SEED asset building programs. The author did not find any positive or negative effect of asset holding on social networks. However, program participants reported that their social networks influenced their ability to save as well as their participation in program activities. Other participants reported that participating in program activities created new relationships with other program members and helped nurture the already existing relationships among them.

Other research on the effects of participating in asset development programs has been conducted on civic engagement and social wellbeing. Scanlon & Adams (2009) utilized data from in-depth interviews with 30 SEED participants to examine whether they perceived increased involvement with their communities as a result of participating in the program. Only 2 participants (out of 30) noted that they had been motivated by the program to participate in other social programs in their communities that could help them

achieve their goals or had benefited from meeting new people from the SEED workshops, helping them to extend their social networks. In addition, Moore et al., (2001) report that about half of the current IDA participants said they were more likely than nonparticipants to have good relationships with family members and about one third said they were more likely to be involved in their neighborhoods and to be respected in their community. DiPasquale & Glaeser (1999) find evidence both in the United States and in Germany that homeownership –one of the goals for asset building, was strongly correlated with variables that attempt to measure good citizenship and social capital, such as civic engagement.

Although social network members may provide positive reinforcement and encouragement to program participants, other studies have reported that social network members may impede the savings efforts of program participants. For example, Lombe & Ssewamala (2007) assessed the effects of informal networks on performance in the ADD program, using a sample of 840 participants. Results indicate that an increase in the amount of help a respondent gives to community members was inversely related to performance in the IDA program (β= −56.72, t=−4.35, p≤. 01).

Similarly, Wheeler–Brooks (2009) found that some program participants reported that having to meet financials needs for people in their networks was a barrier to their full participation in the program because they did not have enough money to deposit into the savings accounts after meeting other demands. Other participants reported that some of their relationships were lost because they needed to focus on their savings first before lending money to their friends. In a qualitative study of 30 Hispanic and black families in

San Jose California and rural Mississippi, Caskey (1997) found that some participants did not save because others would insist they share their savings.

While these important findings have been documented, three limitations are worth mentioning. First, almost all these studies were conducted in the United States, a developed country with a well-established safety net. The results might be different in a poor sub-Saharan African country like Uganda, with a very vulnerable population, orphaned children without government safety net programs. Second, the conceptualization of social networks is very limited. Given the benefits associated with social networks discussed above, the reported studies did not investigate in detail how these networks developed and what kinds of support they provided, apart from encouragement and motivations to save. Besides, studies did not document how often support networks encouraged participants and if those networks supported participants by offering money to save. Third, without a comparison group (control condition) it is difficult to ascertain the net impact of the asset accumulation programs on the creation of social support networks, or to determine what would have happened without these programs. To address some of these gaps, the current study utilized data from a randomized controlled trial, with both the control and treatment conditions, to assess the net impact of participating in an asset-based intervention on the creation of non-kin support networks among orphaned children living in low-resource communities.

CHAPTER TWO

Theoretical Framework

The current study is grounded in two major theories: social network theory and asset theory. In the first section of this chapter, social network theory is used to explain why non-kin support networks might be important to orphaned children. The key components of social network theory employed in the current study are described, including social network structures and processes, content, and variations based on both recipient and relationship factors. In the second part, asset theory is utilized to explain how participating in a family-based economic strengthening intervention and owning assets might improve children's psychological outcomes, influence the creation of non-kin support networks, and how improved children's psychological outcomes might influence the creation of these social support networks. Research questions and conceptual hypotheses of the current study are generated based on these theories.

2.1. Social network theory

Social networks, defined as "units of social structure that includes persons or groups and ties of emotional support, which connect the individuals or groups," play a vital role in health and overall wellbeing of individuals (Cooke, Rossmann, McCubbin, & Patterson, 1998: 212). Specifically, social network theory is based on the premise that informal sources of support, including family, relatives, neighbors, friends and other individuals in the community have the potential to influence the capacity of individuals and groups to come together for collective action, influence individual thoughts, behaviors and attitudes, leading to a broad range of benefits for both the individual and the community (Collier, 1998; Putman, 2000). These social networks consist of resources

that individual members draw on to "get ahead" by increasing their access to information and financial resources to achieve upward mobility (social leverage) or "get by" by providing tangible and material support to reduce economic hardships and buffer the stressors of everyday life or coping (Briggs, 1998).

The primary attribute of social networks is the provision of social support. Indeed, social support has been cited as one of the key elements to health wellbeing of individuals, especially those experiencing major life transitions and crises-such as orphaned children (Cooke et al., 1998). A large body of empirical work supports the view that people who are more socially integrated and who experience supportive relationships have better physical and mental health outcomes (Achenbaum & Carr, 2014; Fiori & Denckla, 2012; Holt-Lunstand, Smith, & Layton, 2010; House, Landis, & Umberson, 1988; Kogstad, Mönness, & Sörensen, 2013; Smith & Christakis, 2008; Uchino, 2009). Among youth, social support networks have been associated with improved academic performance, especially among low-income youth, and with improved psychological, social and behavioral outcomes (Becker & Luthar, 2002; Dubois & Silverthorn, 2005; Woolley & Bown, 2007), as well as positive youth development (Bowers, Geldhof, Schmid, Napolitano, Minor, & Lerner, 2012; Furstenberg & Hughes, 1995; Malecki & Demaray, 2006; Oberle, Schonert-Reichl, & Guhn, et, al, 2014).

The current study specifically examines non-kin support networks (including friends, neighbors, teachers, church leaders and other individuals in the community) that provide support to orphaned children in times of need. As mentioned earlier, this is an important area of investigation because to orphaned children living in low resource communities with no public safety nets, where extended families are already

overwhelmed by the increasing number of orphaned children and poverty, non-kin support networks may be the only viable option to ensure children's survival and wellbeing following the death of their parents. Therefore, it is likely that support originating from non-kin support relationships might help orphaned children cope with day-to-day life stressors as well as help them "get ahead."

House, Umberson & Landis (1988) argue that social relationships affect individual outcomes through both their structures and processes. As a first step in trying to understand non-kin support networks available to orphaned children, this study examines both the structures (size, type, duration and frequency of contact), and content (type of social support received) of non-kin support networks as identified by orphaned children. In terms of content, this study investigates the types of social support that orphaned children receive. These include: 1) emotional support, which involves the provision of empathy, caring, love, trust, esteem and concern; 2) informational support, which involves the provision of advice, feedback, suggestions, references and information; 3) instrumental support, which involves the provision of in-kind assistance, time, labor and any direct assistance; and 4) financial support, which involves the provision of money (Cooke et al., 1998; Tardy, 1985; Thoits, 2011).

It is important to note that social support from social relationships is dynamic and varies based on recipient and provider factors, relationship factors and level of stress or need (Collier, 1998; Dunkel-Schetter & Skokan, 1990). A few studies have investigated variations in social support based on individual characteristics. For example, Coates (1987) examined gender differences in the social network characteristics of 390 black American adolescents (average age 14 years) of middle to lower socioeconomic status.

Study findings supported gender differences in both structural and support characteristics. Specifically, compared to males, female adolescents reported more frequent contact with their social network members, their social network was on average slightly older, they tended to see their social network members in more private settings, and they also reported knowing more people than males, although there were no differences between males and females in the actual number of social network members identified. In contrast, males reported having larger groups of intimate friends than did females.

Age has also been shown to influence both the size and composition of reported support networks among adults. Marsden (1987) found that. However, Pugliesi & Shook (1998) found that age had a weak but significant effect on the network size index. Specifically, increasing age was associated with a very small increase in the number of close ties.

The current study investigates social support network variations based on recipient factors, relationship factors and recipients' level of need. Specifically, the study investigates whether non-kin support networks vary based on key sociodemographic characteristics of orphaned children. These include: age, gender, orphanhood status and primary caregiver. Given the findings from previous studies presented above, this study hypothesizes that younger and male participants will be more likely to identify more supportive non-kin relationships, and female participants will be more likely to report high frequency of contact with their non-kin ties. In terms of need, double orphans (those who have lost both parents), and those reporting a grandparent as their primary caregiver are considered to be in greater need for support and will therefore be more likely than single orphans (those who have one surviving parent) to report supportive relationships

with non-kin ties. By investigating these variations, the current study helps to improve the understanding of which subgroups of orphaned children are more likely to be supported by non-kin support networks and those that need additional support.

Although most research in the field of social support has focused on its positive nature, a few studies have investigated the negative aspects and costs associated with social relationships, including financial constraints, time demands and negative interactions (Lincoln, 2000; Rook, 1997). Negative interactions may include discouraging expression of feelings, making critical remarks, invading one's privacy, interfering in one's affairs and failing to provide the promised support, which may increase psychological distress to the individual (Lincoln, 2000). It is possible that orphaned children may be at a higher risk of experiencing negative support given the economic hardships in which they live, combined with the lack of close supportive individuals i.e. biological parents to help shield them from such negative interactions.

In addition, previous research has documented that social network members do not always respond in supportive ways to an individual who is faced with a negative life event (Ingram, Betz, Mindes, Schmitt, & Smith, 2001; Wortman & Lehman, 1985). For example, studies that investigated both supportive and unsupportive responses from social support network members among individuals who had experienced stressful life events, including death of a family member, cancer or AIDS diagnosis, reported similar unsupportive responses (Dakof & Taylor, 1990; Dunkel-Schetter, 1984; Helmrath & Steinitz, 1978; Ingram, Jones, Fass, Neidig & Song, 1999; Lehman, Ellard & Wortman, 1986; Hays, Magee & Chauncey, 1994). Specifically, study participants across all stressful life events reported that some social network members minimized the impact of

the event, forcing cheerfulness, avoiding contact or communication with the person or expression of feelings about the event, criticizing and acting judgmental, being over protective of the person, making rude and insensitive comments, expressing excessive worry or pessimism, and expressing inappropriate expectations about the person's adjustment. Given that HIV/AIDS is a highly stigmatized disease, it is likely that orphaned children may experience unsupportive responses from individuals in their social networks due to misconceptions surrounding the nature of their parents' deaths, or simply because network members are helpless and do not know what to do or how to react to the children's situations.

2.2. Asset theory

Asset theory is the second body of work that provides a theoretical grounding for this study. In *Assets and the Poor*, Sherraden (1991) argues that while income-based social welfare supplements enable the poor to meet their basic needs, they do not change their thinking or behaviors in ways that would help them escape poverty. Sherraden suggested that helping the poor accumulate assets, defined as stocks of resources that people accumulate and hold over time, could help improve the way people think about themselves, their future and that of their children (Sherraden, 1991). This argument is based on the premise that individuals are forward looking and are more likely to make future realistic plans based on their current wellbeing. This study focused on orphaned children participating in a family-based economic strengthening intervention that utilize matched savings accounts, a form of asset accumulation intended for post primary education and microenterprise development.

The most important role of assets is to cushion income shocks that occur due to job loss, major illnesses or marital breakup, in this case parental loss including the long period of HIV related illnesses. Assets provide resources to bridge income shortfalls, hence families are more likely to maintain a financial balance during these periods until economic sufficiency is regained (Sherraden, 1990; 1991). However, the role of assets goes beyond consumption and economic sufficiency to produce psychological, social and behavioral outcomes. Schreiner & Sherraden (2007) maintain that owning assets produces "asset affects," meaning that when people own assets they behave and think differently and society responds to them in a different way. Specifically, assets create a future orientation by providing individuals, especially those with low incomes, with otherwise unattainable opportunities to hope, plan and dream about their future and that of their children. Indeed, several studies discussed earlier have documented the effects of owning assets and psychological benefits on program participants, including future orientation and self-efficacy (Yadama & Sherraden, 1996), life satisfaction (Scalon, 1998), enhanced self-esteem (Clark, 1997; Rohe & Stegman, 1994), educational aspirations and school performance (Cheatham & Elliott, 2013; Curley et al., 2010; Elliot, 2009; Grinstein-Weiss et al., 2013; Kim & Sherraden, 2011).

In addition, owning assets produces important social benefits. In particular, assets can buy social capital in the form of social contacts and social networks, which may later provide informational and social protection benefits to the asset owner (Sherraden, 1991). However, as noted above, few studies have investigated the relationships between participating in asset-based programs and informal social networks (Beverly et al., 2001; Lombe & Ssewamala, 2007; Moore et al., 2001; Scanlon & Adams, 2009; Wheeler –

Brooks, 2009). Therefore, we know very little about how participation in such programs affects the informal social support networks of program participants. The current study specifically examines how the accumulation of financial savings is associated with the creation of non-kin support networks that support orphaned children in times of need.

Based upon asset theory and the research evidence presented above, this study hypothesizes that accumulating savings may be associated with the creation of non-kin support networks in two ways. First, 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 a community, other people expect future returns from them. Second, owning assets may be associated with the creation of non-kin support networks indirectly through improved children's psychological outcomes. Specifically, savings raise children's future expectations and self-efficacy, which in turn raises children's efforts and motivation to perform well both in the savings program (CDA) and in school. These efforts may involve reaching out and seeking financial, instrumental and informational support from non-kin support networks that may not be available within the children's families. Therefore, the current study investigates both the direct and indirect pathways through which these associations occur.

The conceptual model specifying the expected relationships between a family-based economic strengthening intervention, children's psychological outcomes (self-concept, self-efficacy, future orientation and life satisfaction) and non-kin support networks is presented in Appendix A.

2.3. Study aims, research questions and hypotheses

The current study examines the extent to which a family-based economic strengthening intervention, that utilize youth matched savings accounts, is associated with the creation and strengthening of non-kin support networks for orphaned children. The study is guided by the following specific aims, research questions and hypotheses:

Study Aim 1: To describe non-kin support networks available to orphaned children and their variations based on children's key sociodemographic characteristics.

1.a. What are the non-kin support networks available to orphaned children, and what forms of support (emotional, instrumental, financial and informational support) do they provide?

1.b. Do these non-kin support networks vary by children's key socio-demographic characteristics (age, gender, orphanhood status and primary caregiver)?

Study Aim 2: To examine the extent to which a family-based economic strengthening intervention is associated with the creation of non-kin support networks among orphaned children.

2.a. To what extent is a family-based economic strengthening intervention associated with the creation of non-kin support networks (as measured by network size, frequency of contact and types of support received), for orphaned children?

2.b. What are the mechanisms (self-concept, self-efficacy, future orientation and life satisfaction) through which the intervention is associated with the creation of non-kin support networks for orphaned children?

Study Aim 3: To examine the nature and quality of relationships between orphaned children and non-kin support networks, and to understand how orphaned children perceive the ways through which the intervention shapes these relationships.

To address study aim # 3, this study utilized a qualitative study approach to: 1) explore in-depth the nature and quality of relationships between orphaned children and non-kin support networks, and 2) to understand how orphaned children perceive the ways through which a family-based economic strengthening intervention shapes their relationships with non-kin support networks. A detailed description of the qualitative study is provided in the methods section.

Research questions 1a and 1b were addressed in an exploratory manner utilizing descriptive analyses. To address research questions 2a and 2b the current study tested the following hypotheses:

H.1. Over time, orphaned children receiving a family-based economic strengthening intervention (treatment condition) will report higher levels of non-kin support networks (indicated by network size, frequency of contact and type of support received), compared to children not receiving the intervention (control condition).

H.2. Over time, orphaned children receiving a family-based economic strengthening intervention (treatment condition) will demonstrate an improvement in psychological outcomes (self-concept, self-efficacy, future orientation and life satisfaction).

H.3. Improvements in the psychological outcomes of orphaned children will be positively associated with non-kin support networks.

H.4. Changes in psychological outcomes will mediate the relationship between a family-based economic strengthening intervention and non-kin support networks.

CHAPTER THREE

Methods

The current study utilized a mixed methods approach. Specifically, longitudinal quantitative survey data from Bridges to the Future study (detailed below) was analyzed to address study aims #1 & #2. To address study aim #3, in-depth interviews were conducted with a sample of participants selected from the same Bridges to the Future study. Findings from the quantitative study informed the inclusion criteria of participants in the qualitative study.

3.1. Quantitative Study

3.1.1. Sample and data

The current study utilized data from Bridges to the Future Study, a 5-year (2011-2016) longitudinal randomized clinical trial funded by the National Institute of Child Health and Human Development (NICHD, Grant #1R01 HD070727-01, PI: Fred M. Ssewamala, PhD). Bridges to the Future was designed to evaluate the efficacy and cost-effectiveness of an innovative family-based economic empowerment intervention that utilize child development accounts (CDAs), a form of economic strengthening aimed at promoting social, economic, and health outcomes and life options for orphaned children in Uganda. A total of 1410-orphaned children (n=621 boys and n=789 girls) with an average age of 12.7 (range 10-16, at the time of enrollment) were recruited to participate in the study. Children were eligible to participate if they: 1) they had lost one or both parents to HIV/AIDS, 2) were living with 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) in a government-aided primary school.

Data from three data points was analyzed: baseline, 12-months, and 24-months post intervention initiation. Data were collected using a 90-minute structured survey, administered by trained Ugandan interviewers. A total of 1410 participants were interviewed at baseline (between March and June 2012); 1348 participants were interviewed at 12-months follow-up (between May and July 2013), representing a 4% attrition rate; and 1228 participants were interviewed at 24-months follow-up (between April and June 2014), representing an attrition rate of 13% from baseline. The primary reason for attrition was loss to follow-up.

3.1.2. Study context

The Bridges intervention is currently being implemented in 48 rural primary schools, in 4 political districts of Rakai, Masaka, Lwengo and Kalungu in southern Uganda, a region heavily affected by HIV/AIDS. The first incident of HIV/AIDS was reported in Rakai district in the early 1980's. Since then, the epidemic has had devastating effects on this region, including high rates of poverty and high numbers of orphaned children with no support. Unfortunately, the prevalence of HIV is on the rise in this region compared to other parts of the country. The most recent statistics from the Uganda AIDS Commission (UAC, 2015) show that the HIV prevalence rates in this region have been increasing since 2011. The schools included in the Bridges intervention were matched on the following characteristics: 1) socioeconomic status of the children attending the schools (all low income); 2) government sponsorship, meaning that all schools were government aided and all children in the schools were enrolled through the

Universal Primary Education (UPE) system; and 3) overall academic performance based on the national standardized Primary Leaving Examinations (PLE) administered by the Uganda Government's Ministry of Education and Sports.

3.1.3. Study design and intervention

The Bridges intervention utilized a randomized control design. Each of the 48 primary schools was randomly assigned to either the control arm (n=16 schools, 496 participants) or one of the 2 two treatment arms: Bridges arm (n=16 schools, 402 participants) or Bridges PLUS arm (n=16 schools, 512 participants). For purposes of this dissertation, the 2 treatment arms were combined into one treatment group. Randomization was conducted at the school level to minimize cross-arm contamination. Participants in the control condition received what is referred to as "usual care" services offered to orphaned children in the region. Usual care includes counseling (usually conducted by church pastors), food aid (in the form of school lunches), and scholastic materials (such as textbooks, notebooks, and school uniforms). The intervention had two treatment arms: Bridges arm and Bridges PLUS arm. Participants in both treatment arms received the "usual care" mentioned above, plus 3 intervention components:

- First, a Child Development Account (CDA), which is a form of family economic strengthening held in both the child and caregiver's name in a well-established and recognized financial institution or bank registered by the Central Bank of Uganda. The child's family and other relatives were allowed and indeed encouraged to contribute to the CDA. The accumulated savings 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. In other words, the only difference

between the Bridges arm and the Bridges Plus arm was the match rate. The match cap (the maximum amount of family contribution matched by the program) in both treatment groups was an equivalent of US$14 a month per family, or US$336 for the 24-month intervention period. 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.

- Second, participants and their caregivers received workshops on financial education, including savings, asset accumulation and asset development, and microenterprise development. The workshops were intended to promote economic stability for the families in the study, and to enable the participating child to continue in school with greater economic security.
- Third, 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. Participants were assigned to small groups of between five and seven individuals and were required to stay in those groups with the same mentor throughout the mentorship program. The sessions were conducted once a month for 1 hour at the participants' respective schools for 9 months during the intervention period. The mentorship curriculum was developed and tested in two earlier NIH funded studies, the Suubi and Suubi-Maka studies (see Ssewamala and colleagues, 2014).

A detailed description of the intervention is provided elsewhere (see Ssewamala et al., 2012; 2010; Ssewamala & Ismayilova, 2009; 2008).

3.1.4. 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). The qualitative component received approval from the University of Chicago SSA/Chapin Hall IRB (IRB15-0090). Each interviewer had to undergo clinical practice training and had to obtain the Collaborative Institutional Training Initiative (CITI) Certificate before interacting with study participants.

3.1.5. Study measures

Dependent variable

The major dependent variable for the current study is non-kin support networks. This outcome was measured using 3 indicators measured at both 12-months and 24-months post intervention initiation: 1) network size, 2) frequency of contact, and 3) type of support received from non-kin ties. 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) 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 total number of non-

kin ties identified indicated the network size. Frequency of contact was indicated by the number of times per month that contact occur between the participant and the non-kin tie identified. Duration of receiving support (i.e. "For how long have you been receiving support from this person/group?") was used as a proxy for network creation. Specifically, if the participant reported that they started receiving support within 12 months following baseline assessment, that network tie was attributed to the intervention. On the other hand, if the participant was receiving support prior to baseline assessment, that network tie was not attributed to the intervention. Type of support received was indicated by the specific kinds of support identified by participants (e.g. monetary, advice, food, clothing, etc.). These were grouped into 4 types of social support (material, financial, in-kind and emotional support).

Independent variable

The key independent variable for the current study is participation in a family-based economic strengthening intervention (treatment condition). Participation was coded as "1" for the treatment condition and "0" for non-participation (control condition).

Mechanisms of change

Child psychological factors measured at 12-months post intervention initiation were utilized as mechanisms of change. These variables include: self-concept, self-efficacy, future orientation and life satisfaction.

Self-concept: Self-concept was measured using items adapted from the Tennessee Self-Concept Scale (Fitts &Warren, 1996). The 20-item scale (range: 20-100) measures

children's perception of identity, self-satisfaction and other behaviors, on a 5-point scale (1= always false, 2= usually false, 3=sometimes true/sometimes false, 4=usually true and 5= always true). Sample questions include: "I like the way I look", "I don't feel as well as I should" and "I hate myself." This scale achieved high reliability with the study population (Cronbach's alpha =. 81). Summary scale scores were created, with higher scores indicating higher levels of child self-concept.

Self-efficacy: Self-efficacy was measured using the Youth Self-Efficacy Survey (YSES) items adapted from the Project on Human Development in Chicago Neighborhoods (Earls & Buka, 1997). For each pair of items, participants were asked to indicate whether they were more like the person on the left or the person on the right. Following their choice, participants were asked whether the statement was either *"very true"* or "*sort of true"* to them. Sample pairs include: "Some kids feel they can understand math if they work at it, BUT other kids feel that no matter how hard they work at it, it is still very hard to learn math" and "Some kids feel that they can understand what they read if they work at it, BUT other kids find it hard to understand what they read even if they work at it." Reliability analysis yielded a Cronbach's alpha of .79. Items in the inverse direction on each side were reverse coded to create summary scores, with higher scores indicating higher levels of child self-efficacy.

Future orientation: Future orientation was measured using items adapted from the Beck Hopelessness Scale (BHS) (Beck, Weissman, Lester, & Trexler, 1974). The 20-item scale (range 0-20) measures hopelessness and pessimistic attitudes toward the future. Sample items include: "I look forward to the future with hope and enthusiasm," "I have great faith in the future" and "My future seems dark." Responses were binary coded as

1=true and 0=false. The scale had a moderate reliability, Cronbach's alpha =. 69. Summary scores were created, with higher scores indicating higher levels of child hopelessness and low levels of positive future orientation.

Life satisfaction: Life satisfaction was measured on two dimensions: community satisfaction and school satisfaction. Both scales include 8-items (range: 8-32) adapted from the Multidimensional Student's Life Satisfaction Scale (MSLSS) (Huebner, 1994). The MSLSS was designed to provide a multidimensional profile of children's life satisfaction judgments with important specific domains (such as school, family, and friends) in their lives and assesses their general overall life satisfaction. Participants were asked to rate how satisfied they were with their community and their school, on a 4-point scale (1=never, 2=sometimes, 3=often and 4= almost always). The Cronbach's alpha scores for community and school satisfaction were .63 and .66 respectively. Summary scores were created with higher scores indicating higher levels of community satisfaction and school satisfaction.

A detailed description of mechanisms of change is provided in Appendix B.

Control variables

This study utilized several child-level socio-demographic characteristics measured at baseline. These include: 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.

3.1.6. Data analysis

Data analysis for the quantitative component was conducted using both SPSS 23 and Stata 14 software packages. The first step in the analysis was to analyze the socio-demographic characteristics of the study sample. Frequencies and measures of central tendency, such as means and standard deviations were reported. The next step was to compare the characteristics of the treatment condition with those of the control condition to identify similarities and differences on key socio-demographic characteristics. Further, participants' measures of psychological wellbeing were analyzed to ascertain the differences between the treatment and control conditions at baseline and 12-months intervention initiation.

To address study aim #1, an extensive descriptive analysis of non-kin ties was conducted. Specifically, the following items were analyzed: 1) identification of at least one non-kin tie (identification of at least one network tie was used instead of size given the small number of network ties identified, i.e. 1-4 non-kin ties with only one participant identifying 4 ties, 2) type of social network indicated by relationship with non-kin tie, 3) recency of receiving support from non-kin ties was used as a proxy to determine whether participants started receiving support prior to or after joining the Bridges intervention. Support received after joining the Bridges intervention was indicated by "within 12 months" referring to the period between study initiation/baseline assessment and 12-months follow-up. Support received prior to joining the intervention was indicated by "more than 12 months," 4) frequency of contact with non-kin ties was indicated by the

average number of times per month that contact occur between the participant and the non-kin tie identified, and 5) the type of support received. The next step was to conduct bivariate analysis to see whether non-kin support networks vary on key socio-demographic characteristics of the sample (participants' age, gender, orphanhood status and primary caregiver).

To address study aim #2, regression and, if warranted, SEM were to be conducted to determine the total, direct and indirect relationships between the Bridges intervention and non-kin support networks. A series of regressions were to be tested simultaneously: a) the direct relationship between the intervention and non-kin support networks, b) the relationship between the intervention and children's psychological outcomes, c) the relationship between children's psychological outcomes and non-kin support networks, and d) the relationship between the intervention and non-kin support networks controlling for children's psychological outcomes. As a first step, dummy variables were created for each of the 3 indicators of non-kin support networks. Binary logistic regression analyses were conducted to determine the effect of the intervention on non-kin support networks. If no significant relationship (i.e. total effect) was observed, then further decomposition of the effect into direct and indirect effects using SEM was not performed.

Clustering

Clustering of study participants within schools was addressed using a cluster variable for school (STATA command: svyset School ID) created to indicate which school a participant went to. Confidence intervals and p-values for comparing sample characteristics at baseline were adjusted using design-based estimators available in STATA (e.g. svy: means, svy: proportions).

3.2. Qualitative Study

The primary aim of the qualitative component was to examine the nature and quality of relationships between orphaned children and non-kin support networks, and to understand how orphaned children perceive the ways through which a family-based economic strengthening intervention shapes their relationships with non-kin support networks. To address this research aim, in-depth interviews were conducted.

3.2.1. Sample and selection

The qualitative component of the current study (conducted between June and August 2015) utilized a sample of 38 participants (girls: n=19, boys: n=19) selected from the Bridges intervention. Nineteen (19) of the participants were selected from the treatment condition receiving the family economic strengthening intervention, and the other 19 were selected from the control condition. One of the strategies identified by Patton (2001) in selecting a purposive sample is extreme or deviant sampling. This involves cases that are rich in information because they are special in some way. The logic of extreme case sampling is that lessons may be learned about unusual conditions or extreme outcomes that are relevant to improving certain outcomes. Following secondary data analysis (collected at 12-months and 24-months post intervention initiation), 4 categories of participants were generated based on the types of non-kin ties identified. These categories include: 1) participants reporting the Bridges intervention as their only non-kin source of support, 2) participants reporting both the Bridges intervention and other non-kin sources of support, 3) participants reporting other non-kin ties other than the Bridges intervention, and 4) participants reporting no non-kin ties at all.

After generating a list of participants who met the inclusion criteria above, potential participants from each category were selected using a systematic random sampling technique. Every 5th child's name on the list in each category was selected as a potential participant. Research assistants contacted the potential participants to obtain their availability and interest in participating in the study. Potential participants who expressed interest in participating met with research assistants to learn more about the study and provide consent.

3.2.2. Informed consent

All participants' caregivers provided voluntary written consent allowing their children to participate in the Bridges intervention. Each participant provided voluntary written assent to participate. Participants in the qualitative component provided verbal assent to be interviewed. During the informed consent process, it was clearly explained that participation in the qualitative study was voluntary and the child could refuse to participate, withdraw from the study at any time, for any reason, with no explanation, and would not be penalized in any way, or affect his or her participation in the Bridges intervention. Participants were also told of the potential risks and benefits of participating in the qualitative study.

3.2.3. Data collection

Data from 38 participants was collected using audio-recorded in-depth interviews, conducted by trained Ugandan interviewers –currently involved with collecting data for the Bridges intervention. An interview guide was developed for this purpose (see Appendix C.1). Both the consent form and interview guide were translated into Luganda, the language widely spoken in the study area, and then back translated into English to

ensure accuracy. The topics explored include: meaning of social support, sources of social support and the types of support received, relationship with non-kin ties, perceived role of the study in shaping relationships with non-kin ties, reciprocity, and network challenges. Interviews were conducted at a location convenient to the participants (whether home or school), lasting between 20-35 minutes. Participants were gender matched to interviewers, i.e. a female interviewer interviewed girls, and a male interviewer interviewed boys. Prior to administration, the interview guide was pretested on 5 participants. These participants did not participate in the study and their responses were not considered.

Researchers' role and involvement in the qualitative study

Following quantitative data analysis, it became apparent that I needed to collect qualitative data to help provide additional interpretations of the quantitative findings. With the guidance from my committee, I developed the interview guide, the selection criteria and obtained IRB approval for the qualitative study. I worked closely with two trained research assistants in Uganda to pre-test the interview guide, obtain verbal consent from participants and conduct in-depth interviews. During the data collection process, I conducted interviews with 5 participants, transcribed all 38 audio-recorded interviews and checked the translated transcripts for accuracy. I met with research assistants on a regular basis to de-brief and to obtain feedback and suggestions regarding the interview process. Throughout the data analysis process, I relied on the help of my committee to develop a coding plan, generate codes and themes, data reporting and interpretation.

Given my prior research experience working with orphaned children in Uganda on two NIH-funded studies that informed the Bridges intervention, i.e. the Suubi Program (2005-2008; Grant # 1 R21 MH076475-01) and Suubi-Maka (2008-2012; Grant # RMH081763A), both implemented by Professor Fred Ssewamala –one of my dissertation committee members, I felt qualified and prepared to conduct the qualitative study. Prior to data collection, I took courses in coding and analyzing qualitative data to strengthen my data analysis skills. In addition, my knowledge of the socio, economic, political and cultural context of the study area, helped me to understand and provide interpretation of the qualitative findings, in relation to the results observed in the quantitative study.

3.2.4. Data analysis

Following in-depth interviews, audio recordings were transcribed verbatim in Luganda and the transcripts were translated into English. Data transcripts were exported to MAXQDA12 software for qualitative analysis. Prior to data analysis, a codebook with the names, description of codes (both predetermined and anticipated) and possible examples was developed (See Appendix C.2). The codebook was revised and updated throughout the data analysis process. Data was analyzed using a combination of content-based analysis coding methods. These included: provisional coding, structural coding and in-vivo coding as suggested by Saldana (2012). Specifically, provisional coding utilized a list of predetermined codes informed by literature review (including asset theory and social network theory), findings from quantitative data analysis, and anticipated responses from in-depth interview data. Provisional codes were revised and expanded to include new codes and sub codes.

The second coding method utilized during data analysis was structural coding. Structural coding involves labeling and indexing of data to allow quick access to specific data segments relevant to a particular analysis, research question or study objective (Namey, Guest, Thairu & Johnson, 2008). For this analysis, transcripts were reviewed and highlights were made on all texts that included the participants' responses relevant to the analysis. The next step was to code all the highlighted data segments with the predetermined codes. Once all the transcripts were structurally coded, data pertaining to specific domains was extracted for further coding and analysis, and to examine similarities, differences and relationships between coded segments. Any text that could not be coded with the initial coding scheme was given a new code or generated as a sub code under an existing code. These codes were grouped into categories, which in turn were linked into more general themes.

The third coding method utilized was in vivo coding. Actual words and phrases used by participants were coded to enhance and deepen the understanding of adolescents' perceptions of the supportive systems in their communities. In addition, coding in vivo allows the interpretations of terms that participants use in their everyday lives, rather than interpretation in terms derived from academic disciplines and professional practices (Saldana, 2012). To preserve authenticity, all passages presented in the text are direct quotes from the participants without alterations. In order to protect participants' identities and privacy the names were not reported.

Finally, attribute coding was utilized to organize participants' descriptive characteristics, including overall study group (treatment or control), participants' gender, school grade levels and groups based on non-kin ties identified.

CHAPTER FOUR

Results

The results are divided into two sections. In the first section, results from quantitative secondary data analysis are presented. These include a description of the socio-demographics and household characteristics of the study sample at baseline, a description of participants' non-kin support networks, their variations based on key demographic characteristics, and children's psychological outcomes at 12-months post intervention initiation. In addition, results from regression analyses testing the relationship between: a) the Bridges intervention and non-kin support networks, b) the Bridges intervention and children's psychological outcomes, c) children's psychological outcomes and non-kin support networks, and d) the Bridges intervention and non-kin support networks controlling for children's psychological outcomes. Findings from the qualitative study are presented in the second section of this chapter.

4.1. Findings from the Quantitative Study

4.1.1. Socio-demographics and household characteristics of the sample

Table 4.1 describes the baseline socio-demographics and household characteristics of the sample. These characteristics are compared between the control and treatment conditions to ascertain the differences between the two groups. Of the total sample, 35% of the participants were randomly assigned to the control condition and 65% were assigned to the treatment condition. The average age of all participants was 12.7 years, ranging from 10 to 16 years. More than half of the participants (55.6%) were aged 13 years and older. Approximately 56% were females, consistent with the average

primary school enrollments in Uganda where the proportion of female students tends to be higher than the males. The majority of participants (78.9%) were single orphans, meaning they had one surviving biological parent. Participants in the treatment condition were more likely to be single orphans compared to participants in the control condition ($F_{1,47} = 6.66$, $p \leq .01$). Thirty-nine percent (39%) of the participants reported a surviving biological parent as their primary caregiver and about 37% reported a grandparent. Other family members and relatives that help take care of orphaned children include aunts, uncles, siblings and in-laws.

In terms of household characteristics, participants lived in households with an average of 6 individuals, with 3 children under the age of 18. About 38% reported a surviving biological parent and about 24% reported a grandparent as the person financially supporting the family. Given the economic situation of communities in which orphaned children live, it is not uncommon for families to physically care for orphaned children with other non-resident relatives providing financial support and other basic needs. Only 31% of the participants reported availability of personal savings. The household asset index measured the amount of assets reported by participants in the form of home ownership, land or rental property, means of transportation, gardens and livestock, and any ownership of a family microenterprise business. The average asset ownership reported was 9.7 items out of the possible 20, indicating moderate levels of household asset ownership. No other significant differences were observed between the control and treatment conditions.

Table 4. 1.

Baseline socio-demographics and household characteristics of the sample: n (%)

Variable	Total Sample (N=1410)	Control Condition (n=496)	Treatment Condition (n=914)[a]	Design-Based F
Study Condition (%)	100	35.18	64.82	
Participants' age (mean, SE)				
(Range: 10-16)	12.68 (0.41)	12.76 (0.08)	12.64 (0.45)	1.82
Age groups				0.89
Below 13 years	626(44.4)	210(42.34)	416(45.51)	
13 and older	784(55.6)	286(57.66)	498 (54.49)	
Participants' gender				0.24
Female	789(55.96)	273(55.04)	516(56.46)	
Male	621(44.04)	223(44.96)	398(43.54)	
Orphanhood status				6.66**
Single orphan	1,113(78.94)	375(75.2)	740(80.96)	
Double orphan	297(21.06)	123(24.8)	174(19.04)	
Primary caregiver				2.71
Biological parent	552(39.15)	176(35.48)	376(41.14)	
Grandparent	516(36.6)	197(39.72)	319(34.9)	
Other relative [b]	342(24.26)	123(24.8)	219(24.96)	
Household composition				
Number of people in household				
(Mean, SE) (Range: 2-21)	6.35(0.72)	6.47 (0.10)	6.29 (0.94)	1.49
Number of children in household				
(Mean, SE) (Range: 0-19)	3.18(0.06)	3.20 (0.09)	3.17 (0.08)	0.07
Person supporting family financially				2.21
Biological parent	535(37.94)	169(34.07)	366(40.04)	
Grandparent	342(24.26)	125(25.2)	217(23.74)	
Other relative	533(37.8)	202(40.73)	331(36.21)	
Asset ownership				
Availability of personal savings				
No	977(69.29)	355(71.57)	622(68.05)	0.99
Yes	433(30.71)	141(28.43)	292(31.95)	
Household Asset Index (Mean, SE)				
(Range:0-20)	9.73(0.15)	9.83 (.029)	9.68 (0.17)	0.64

Notes:

[a] 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.

[b] Other relatives include aunts, uncles, siblings and in-laws.

**$p \leq .01$

Findings related to non-kin support networks

4.1.2. Description of non-kin support networks available to orphaned children

One of the primary aims of the current study was to understand the non-kin support networks available to orphaned children who provide them with support or assistance in times of need. In addition, this study assumed that over time, participants in the treatment condition would report high numbers of non-kin ties compared to their counterparts in the control condition.

Identification of non-kin ties

As presented in Table 4.2, 82% of participants identified at least one supportive non-kin tie available to them, 17.8% did not identify any non-kin tie. However, among participants with non-kin ties, about two thirds (65.5%) identified the Bridges intervention, indicating that the intervention is the largest provider of social support outside the children's families. No statistically significant differences were observed between the control and treatment conditions in the identification of non-kin ties, although 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%). About 16.7% of all participants identified other non-kin ties, other than the Bridges intervention. These include participants' friends and family friends, neighbors, schoolteachers, church priests/pastors, nuns and fictive kin. In addition, participants reported community-based organizations, including faith-based institutions and other NGOs such as World Vision, Rotary club and the African Network for the Prevention and Protection Against Child Abuse and Neglect (ANPPCAN) as sources of support.

Table 4. 2.

Description of participants' non-kin support networks between study groups at 12-months post intervention initiation: percentage (95% confidence interval)

Variable	Total Sample (N=1321)	Control Condition (n=470)	Treatment Condition (n=851)	Design-Based F
Non-kin tie identified				
Yes	82.21(79.21, 84.86)	79.36(74.66, 83.39)	83.78(80.03, 86.95)	2.61
No	17.79(15.14, 20.79)	20.64(16.61, 25.34)	16.22(13.05, 19.97)	
Relationship with non-kin tie				
Suubi/Bridges	65.48(61.4, 69.34)	62.13(56.4, 67.54)	67.33(61.99, 72.26)	1.20
Other non-kin tie	16.73(13.81, 20.13)	17.23(12.43, 23.41)	16.45(12.96, 20.66)	
No non-kin tie	17.79(15.14, 20.79)	20.64(16.61, 25.34)	16.22(13.05, 19.97)	
Recency of receiving support				
Within 12 months	73.26(69.51, 76.71)	70.21(65.29, 74.71)	74.94(69.9, 79.39)	1.13
More than 12 months	8.94(6.95, 11.43)	9.15(5.67, 14.44)	8.82(6.61, 11.69)	
No non-kin tie	17.8(15.16, 17.8)	20.64(16.61, 25.34)	16.24(13.08, 19.98)	
Frequency of contact				
At least 2 times	43.36(39.98, 46.8)	41.15(35.58, 46.96)	44.59(40.52, 48.74)	1.41
3 times or more	38.7(35.96, 41.51)	38.17(33.73, 42.81)	39(35.56, 42.56)	
No non-kin tie	17.94(15.25, 20.99)	20.68(16.62, 25.44)	16.41(13.17, 20.27)	
Kind of support received				
Financial & material	80.68(77.62, 83.42)	77.87(73.07, 82.03)	82.24(78.37, 85.54)	1.47
Other support	1.52(.89, .56)	1.49(.73, 3.04)	1.53(.75, 3.11)	
No non-kin tie	17.8(15.16, 20.8)	20.64(16.61, 25.34)	16.24(13.08, 19.98)	

Frequency of contact with non-kin ties

Frequency of contact was indicated by the number of times per month contact occurred between the adolescent and the non-kin tie identified. About 43% 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 more likely than participants in the control condition to report contact with their non-kin ties at least 2 times a month (44.6% versus 41%). However, the difference was not statistically significant. Only 38.7% of all participants reported being in contact with their non-kin ties at least 3 times or more per month.

Recency of receiving support from non-kin ties

The majority of participants (73.3%) reported that they had started receiving support within 12 months following enrollment into the Bridges intervention. This finding is reflective of the large proportion of participants who identified the Bridges intervention as part of their non-kin support network. Similarly, participants in the treatment condition were more likely than the control condition to report recency of support within the past 12 months (74.9% versus 70.2%), but the difference was not statistically significant. Only 8.9% of participants reported receiving support from non-kin ties prior to joining the Bridges intervention.

Types of support received from non-kin ties

Type of support received was indicated 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.

Findings from bivariate analysis indicate that orphaned children have small and very limited non-kin support networks, characterized by less frequency of contact and mainly provide material and financial support. In addition, the Bridges intervention forms the largest part of the participants' source of support for both participants in the treatment and control conditions. Similar results were observed at 24-months post intervention initiation. The results and a detailed count of all indicators is provided in Appendix D.

4.1.3. Variations in non-kin support networks based on participants' socio-demographic characteristics

In addition to understanding the non-kin support networks available to orphaned children, the current study sought to explore the variations of non-kin support networks based on key participants' socio-demographic characteristics, such as age, gender, orphanhood status and primary caregiver. Table 4.3 describes the variations in non-kin support networks based on participants' gender and age.

Age and gender

Bivariate analyses revealed significant differences between female and male participants on all indicators of non-kin support networks. Specifically, female participants were more likely than male participants to identify supportive non-kin ties available to them ($F_{1,47}$ =32.51, $p \leq .001$), more likely to identify the Bridges intervention as a source of support ($F_{1.96, 92.13}$ =15.5, $p \leq .001$), and more likely to report receiving support from non-kin ties after joining the Bridges intervention ($F_{1.89, 88.79}$ =16.43, $p \leq .001$). In addition, female participants were more likely than male participants to report contact with their non-kin ties at least 2 times per month ($F_{1.99, 93.57}$ =16.06, $p \leq .001$), and were more likely to report receiving financial and material support ($F_{1.97, 92.72}$ =20.07, $p \leq .001$).

Analysis of non-kin ties based on participant's age revealed only one significant difference between participants younger than 13 years and participants 13 years or older. Specifically, younger adolescents were more likely than older adolescents to report receiving financial and material support ($F_{1.92, 90.45}$ =8.79, $p \leq .001$). Although not significant, younger adolescents were also more likely than older adolescents to identify

supportive non-kin ties (84.3% versus 80.5%), more likely to identify the Bridges intervention as a source of support (66.3% versus 64.8%), and slightly more likely to report receiving support from non-kin ties after joining the Bridges intervention (73.8% versus 72.8%). However, older adolescents were slightly more likely than young adolescents to report contact with their supportive non-kin ties at least 2 times per month (44.1% versus 42.5%).

Table 4. 3.

Variations in non-kin support networks by participants' gender and age at 12-months post intervention initiation: percentages (95% confidence intervals).

		Gender		
Variable	Total Sample (1321)	Male (n=589)	Female (n=732)	Design-Based F
Non-kin tie identified				
Yes	82.21(79.21, 84.86)	75.04(70.73, 78.91)	87.98(84.56, 90.72)	32.51***
No	17.79(15.14, 20.79)	24.96(21.09, 29.27)	12.02(9.28, 15.44)	
Relationship with non-kin tie				
Suubi/Bridges	65.48(61.4, 69.34)	57.72(52.34, 62.93)	71.72(66.88, 76.11)	15.50***
Other non-kin tie	16.73(13.81, 20.13)	17.32(13.8, 21.51)	16.26(12.49, 20.88)	
No non-kin tie	17.79(15.14, 20.79)	24.96(21.09, 29.27)	12.02(9.28, 15.44)	
Recency of receiving support				
Within12 months	73.26(69.51, 76.7)	66.84(61.73, 71.58)	78.42(73.83, 82.39)	16.43***
More than 12 months	8.94(6.95, 11.43)	8.16(6.01, 11)	9.56(6.97, 12.99)	
No non-kin tie	17.8(15.16, 20.8)	25(21.14, 29.31)	12.02(9.28, 15.44)	
Frequency of contact				
At least 2 times	43.36(39.98, 46.8)	37.31(32.48, 42.41)	48.27(43.99, 52.58)	16.06***
3 times or more	38.7(35.96, 41.51)	37.65(33.9, 41.55)	39.56(35.47, 43.79)	
No non-kin tie	17.94(15.25, 20.99)	25.04(21.16, 29.37)	12.17(9.36, 15.67)	
Kind of support received				
Financial & material	80.68(77.62, 83.42)	72.84(68.54, 76.74)	87(83.48, 89.87)	20.07***
Other support	1.52(.89, 2.56)	2.21(1.16, 4.15)	.96(.43, 2.10)	
No non-kin tie	17.8(15.16, 20.8)	24.96(21.09, 29.27)	12.04(9.30, 15.45)	

Table 4.3. (Continued)

Variable	Age Groups: Below 13 years (n=593)	Age Groups: 13 years & Above (n=728)	Design-Based F
Non-kin tie identified			
Yes	84.32(80.45, 87.54)	80.49(76.94, 83.62)	3.83
No	15.68(12.46, 19.55)	19.51(16.38, 23.06)	
Relationship with non-kin tie			
Suubi/Bridges	66.27(61.19, 71.01)	64.84(60.26, 69.16)	2.08
Other non-kin ties	18.04(14.31, 22.5)	15.66(12.45, 19.52)	
No non-kin tie	15.68(12.46, 19.55)	19.51(16.38, 23.06)	
Recency of receiving support			
Within 12 months	73.82(69.59, 77.65)	72.8(68.37, 76.82)	2.97
More than 12 months	10.47(7.88, 13.8)	7.69(5.5, 10.66)	
No non-kin tie	15.71(12.49, 19.58)	19.51(16.38, 23.06)	
Frequency of contact			
At least 2 times	42.47(38.33, 46.71)	44.08(39.74, 48.51)	2.85
3 times or more	41.61(37.28, 46.07)	36.36(33.29, 39.56)	
No non-kin tie	15.92(12.64, 19.87)	19.56(16.41, 23.15)	
Kind of support received			
Financial & material	81.59(77.47, 85.1)	79.95(76.38, 83.09)	8.79***
Other support	2.70(1.68, 4.33)	.55(.20, 1.48)	
No non-kin tie	15.71(12.49, 19.58)	19.51(16.38, 23.06)	

Note: ***p≤.001

Orphanhood status and primary caregiver

In Table 4.4, variations in non-kin support networks based on participants' orphanhood status and primary caregiver are presented. Participants' non-kin support networks did not differ among single orphans or double orphans. However, single orphans were more likely than double orphans to identify at least one non-kin tie available to them (82.9% versus 79.4%), more likely to identify the Bridges intervention

as a source of support (66.9% versus 60.3%), more likely to report receiving support after joining the Bridges intervention (74.7% versus 67.9%), more likely to report contact with their non-kin ties at least 2 times per month (44.5% versus 39%), and more likely to report receiving financial and material support from their non-kin ties (81.2% versus 78.7%). On the other hand, double orphans were more likely than single orphans to report contact with their non-kin ties 3 times or more per month (40.2% versus 38.3%).

Similar to orphanhood status, no statistically significant differences were observed between participants reporting a biological parent, grandparents or other relative as their primary caregivers. However, participants reporting a surviving biological parent or a grandparent (both at similar percentages) were more likely than participants reporting other relatives to identify a supportive non-kin tie (83% versus 79), report the Bridges intervention as a source of support, receiving support from non-kin ties after joining the study, and to report financial and material support from non-kin ties.

Although data analysis only revealed significant differences between gender groups, these findings have implications regarding the subgroups of orphaned children that are less likely to be supported and therefore deserve additional attention. These include older adolescents (13 years and older), double orphans and those in care of other relatives other than grandparents or a surviving biological parent. Detailed implications for these findings are presented in the discussion section.

Table 4. 4.

Variations in non-kin support networks by participants' orphanhood status and primary caregiver at 12-months post intervention initiation: percentages (95% confidence intervals).

Variable	Total Sample (1321)	Single Orphan (n=1044)	Double Orphan (n=277)	Design-Based F
Non-kin tie identified				
Yes	82.21(79.21, 84.86)	82.95(80.05, 85.51)	79.42(73.07, 84.59)	1.85
No	17.79(15.14, 20.79)	17.05(14.49, 19.95)	20.58(15.41, 26.93)	
Relationship with non-kin tie				
Suubi/Bridges	65.48(61.4, 69.34)	66.86(62.68, 70.79)	60.29(52.85, 67.28)	1.78
Other non-kin ties	16.73(13.81, 20.13)	16.09(12.99, 19.77)	19.13(14.03, 25.54)	
No non-kin tie	17.79(15.14, 20.79)	17.05(14.49, 19.95)	20.58(15.41, 26.93)	
Recency of receiving support				
Within 12 months	73.26(69.51, 76.7)	74.69(71, 78.05)	67.87(60.55, 74.41)	2.41
More than 12 months	8.94(6.95, 11.43)	8.25(6.24, 10.82)	11.55(7.57, 17.23)	
No non-kin tie	17.8(15.16, 20.8)	17.07(14.52, 19.96)	20.58(15.41, 26.93)	
Frequency of contact				
At least 2 times	43.36(39.98, 46.8)	44.49(41.19, 47.83)	39.13(32.59, 46.09)	1.55
3 times or more	38.7(35.96, 41.51)	38.3(35.61, 41.06)	40.22(33.74, 47.05)	
No non-kin tie	17.94(15.25, 20.99)	17.21(14.61, 20.17)	20.65(15.42, 27.09)	
Kind of support received				
Financial & material	80.68(77.62, 83.42)	81.21(78.15, 83.92)	78.7(71.95, 84.19)	1.58
Other Support	1.52(.89, 2.56)	1.73(.99, .99)	.72(.18, 2.86)	
No non-kin tie	17.8(15.16, 20.8)	17.07(14.52, 19.96)	20.58(15.41, 26.93)	

Table 4.4. (Continued)

Variable	Biological Parent (n=522)	Grandparents (n=483)	Other Relative (n=316)	Design-Based F
Non-kin tie identified				
Yes	83.14(79.07, 86.56)	83.02(78.43, 86.8)	79.43(73.97, 83.99)	1.00
No	16.86(13.44, 20.93)	16.98(13.2, 21.57)	20.57(16.01, 26.03)	
Relationship with non-kin tie				
Suubi/Bridges	65.52(59.62, 70.98)	66.05(60.51, 71.17)	64.56(58.87, 69.86)	0.73
Other non-kin ties	17.62(13.95, 22.02)	16.98(13.22, 21.54)	14.87(11.28, 19.36)	
No non-kin tie	16.86(13.44, 20.93)	16.98(13.2, 21.57)	20.57(16.01, 26.03)	
Recency of receiving support				
Within 12 months	73.37(68.24, 77.94)	73.86(68.24, 78.79)	72.15(65.74, 77.77)	
More than 12 months	9.77(7.27, 13.02)	9.13(6.29, 13.06)	7.28(4.49, 11.59)	
No non-kin tie	16.86(13.44, 20.93)	17.01(13.23, 21.61)	20.57(16.01, 26.03)	0.73
Frequency of contact				
At least 2 times	44.57(39.64, 49.62)	43.22(38.42, 48.14)	41.59(35.28, 48.18)	0.52
3 times or more	38.37(34.49, 42.41)	39.67(34.96, 44.57)	37.78(31.98, 43.95)	
No non-kin tie	17.05(13.58, 21.19)	17.12(13.31, 21.75)	20.63(15.99, 26.2)	
Kind of support received				
Financial & material	81(76.74, 84.64)	81.57(76.8, 85.55)	78.8(73.28, 83.43)	1.15
Other Support	2.11(1.08, 4.09)	1.45(.64, 3.25)	.63(.15, 2.56)	
No non-kin tie	16.89(13.48, 20.95)	16.98(13.2, 21.57)	20.57(16.01, 26.03)	

4.1.4. Participants' measures of psychological wellbeing

The second aim of this study was to understand the mechanisms through which participating in the Bridges intervention is associated with the creation of non-kin support networks for orphaned children. Mechanisms of change were indicated by measures of psychological wellbeing including future orientation (measured by the hopelessness scale), self-concept, self-efficacy and life satisfaction. Participants' scores at baseline (T_0), 12-months (T_1), and the changes from baseline to 12-months (ΔT_0 to T_1) are presented in Table 4.5.

Future orientation

No significant differences were observed between study groups at baseline on the hopelessness measure. The overall baseline mean score was 5.37, ranging between 0-18. At 12-months follow-up however, participants in the treatment condition reported lower levels of hopelessness compared to the control condition (mean =3.71 versus 4.39, $F_{1,47}$ = 13.3, p=≤ .001), indicating an improvement in the future orientation of participants receiving the intervention. The difference in the scores between baseline and 12-months follow-up was also statistically significant ($F_{1,47}$ = 7.89, p=≤ .01).

Self-concept

Similar to the hopelessness scale, all participants reported similar scores on the measure of self-concept at baseline. The overall mean score was 78.4, ranging from 41 to 100. Following the intervention, participants in the treatment condition reported higher scores compared to participants in the control condition (mean =82.6 versus 80.2, $F_{1,47}$ = 8.54, p=≤ .01.), with a statistically significant change from baseline to 12-months follow-up ($F_{1, 47}$ = 20.01, p=≤ .001).

Self-efficacy

At baseline, the overall mean score for self-efficacy measure was 98, with a range of 32-116. No statistically significant differences were observed between study groups at baseline or 12-months follow-up. However, the change from baseline to 12-months follow-up was statistically significant, as participants in the treatment condition

registered a greater change in self-efficacy compared to participants in the control condition (mean change =4.68 versus 1.18, $F_{1, 47} = 13.38$, $p=\leq .001$).

Life satisfaction

The overall mean score for life satisfaction at baseline was 53.7, with a range of 35-64. Participants in the control condition scored a 0.7-point difference higher than participants in the treatment condition (mean =54.2 versus 53.5). Although very small, this difference was statistically significant ($F_{1, 47} = 4.41$, $p=\leq .05$). No statistically significant differences were observed following the intervention at 12-months follow-up.

Overall, these results indicate that participating in the Bridges intervention was positively associated with improvements in three out of four participants' measures of psychological wellbeing, specifically, increasing positive future orientation by reducing hopelessness, improving self-esteem and self-efficacy.

Table 4. 5.

Descriptive results of participants' psychological outcomes between study groups at baseline and 12-months post intervention initiation: mean (95% confidence intervals).

Variable (Range)	Total Sample [a]	Control Condition [b]	Treatment Condition [c]	Design-Based F
Beck Hopelessness Scale (BHS)				
T_0 (0-18)	5.37(5.18, 5.57)	5.44(5.14, 5.74)	5.34(5.08, 5.59)	0.25
T_1 (0-16)	3.95(3.74, 4.16)	4.39(4.08, 4.69)	3.71(3.5, 3.93)	13.3***
Δ T_0 to T_1	-1.42(-1.65, -1.18)	-1.04(-1.35, -.73)	-1.62(-1.91, -1.34)	7.89**
Tennessee Self-Concept Scale (TSCS)				
T_0 (41 -100)	78.4(77.6, 79.2)	79(78.2, 79.9)	78(76.9, 79.1)	2.12
T_1 (48 -100)	81.7(80.8, 82.6)	80.2(78.9, 81.5)	82.6(81.6, 83.6)	8.54**
Δ T_0 to T_1	3.33(2.37, 4.28)	1.02(-.30, 2.34)	4.60(3.68, 5.53)	20.01***
Self-Efficacy				
T_0 (32 -116)	98(96.9, 99.1)	99.2(97.7, 100.8)	97.4(96, 98.7)	3.43
T_1 (48 -116)	101.4(100.7, 102.2)	100.5(99.2, 101.8)	101.95(101, 102.9)	3.41
Δ T_0 to T_1	3.43(2.28, 4.59)	1.18(-.23, 2.59)	4.68(3.37, 5.99)	13.38***
Life Satisfaction Scale				
T_0 (35-64)	53.7(53.4, 54.1)	54.2(53.7, 54.7)	53.5(53, 53.9)	4.41*
T_1 (12-64)	52.3(51.6, 52.9)	51.9(51.2, 52.7)	52.4(51.6, 53.3)	0.70
Δ T_0 to T_1	-1.46(-2.14, -.78)	-2.23(-3.16, -1.29)	-1.04(-1.92, -.17)	3.47

Notes:

[a] Baseline N =1410; N at 12-months post baseline =1321

[b] Control n=496 at baseline and 470 at 12-months post baseline

[c] Treatment n= 914 at baseline and 851 at 12-months post baseline

*p≤.05, **p≤.01, ***p≤.001

4.1.5. Results from regression analyses.

Hypothesis #1: Testing the relationship between the Bridges intervention and key indicators of non-kin support networks.

Results from logistic regression analysis testing the effect of the intervention on the indicators of non-kin support networks at 24-months post intervention initiation are presented in Table 4.6. No statistically significant results were observed regarding the identification of non-kin ties, the types of support received or recency of receiving support between the treatment and control conditions. However, the odds of reporting contact with a non-kin tie 3 times or more per month were 47% higher for participants in the treatment condition relative to control participants (OR=1.47, 95%CI=1.05, 2.04, $p \leq .05$). In addition, the odds of identifying the Bridges intervention as a source of support were 37% higher for participants in the treatment condition relative to the control participants (OR=1.37, 95%CI=1.01, 1.87, $p \leq .05$).

Furthermore, results revealed that the odds of identifying supportive non-kin ties (OR=2.11, 95%CI=1.48, 3.0, $p \leq .001$), contact with a non-kin tie at least 2 times a month (OR=1.40, 95%CI=1.09, 1.79, $p \leq .01$), receiving material and financial support (OR=2.15, 95%CI=1.51, 3.04, $p \leq .001$), receiving support within 24- months (OR=1.98, 95%CI=1.40, 2.80, $p \leq .001$), and identifying the Bridges intervention as a source of support (OR=1.96, 95%CI=1.48, 2.58, $p \leq .001$), were higher for female participants relative to male participants. Results from the regression analysis testing the relationship between the intervention and non-kin support networks at 12-months post intervention initiation are presented in Appendix D.

Table 4.6.

Relationship between the Bridges intervention and key indicators of non-kin support networks at 24-months post intervention initiation (OR, 95% confidence intervals).

	Network identification	Frequency of contact per month		Type of support received	
Variable		At least 2 times	3 times or more	Financial & Material	Other support
Study condition (control)	1.29(0.92, 1.81)	0.88(0.67, 1.16)	1.47(1.05, 2.04)*	1.26(0.89, 1.78)	2.68(0.30, 24.1)
Treatment					
Age group (13 & older)	1.35(1.01, 1.80)*	0.91(0.71, 1.17)	1.42(1.08, 1.87)**	1.33(1.0, 1.77)	1.25(0.24, 6.49)
Below 13 years					
Gender (male)	2.11(1.48, 3.0)***	1.40(1.09, 1.79)**	1.25(0.87, 1.80)	2.15(1.51, 3.04)***	0.38(0.07, 2.13)
Female					
Orphanhood status					
(single orphan)	0.88(0.61, 1.26)	0.74(0.56, 0.97)*	1.31(0.91, 1.88)	0.84(0.59, 1.19)	_
Double orphan					
Primary caregiver					
(biological parent)	1.0(0.72, 1.40)	1.13(0.82, 1.55)	0.86(0.61, 1.21)	1.07(0.77, 1.48)	_
Grandparent	0.98(0.68, 1.42)	0.95(0.71, 1.27)	1.04(0.76, 1.42)	1.01(0.69, 1.47)	6.18(8.41, 0.0)
Other relative					
Family composition					
No of people in HH	0.95(0.85, 1.05)	0.99(0.90, 1.08)	0.97(0.86, 1.07)	0.95(0.85, 1.06)	0.73(0.28, 1.9)
No of children in HH	1.05(0.91, 1.22)	1.02(0.90, 1.16)	1.02(0.90, 1.17)	1.04(0.90, 1.21)	1.41(0.58, 3.40)
Asset ownership					
Family Assets	1.0(0.96, 1.05)	1.0(0.95, 1.04)	1.0(0.95, 1.06)	1.0(0.96, 1.05)	1.01(0.71, 1.43)
Constant	2.24(1.18, 4.26)*	1.06(0.59, 1.91)	0.23(0.10, 0.53)***	2.11(1.09, 4.09)*	0.01(0.0, 0.49)*
Design-Based F(df)	2.37*(10, 38)	1.48(10, 38)	2.55* (10, 38)	2.50* (10, 38)	16.5*** (9, 39)

Table 4.6. (continued)

	Recency of receiving support		Relationship with non-kin ties	
Variable	Within 24-months	More than 24-months	Suubi/Bridges Intervention	Other non-kin ties
Study condition (control)				
Treatment	1.34(0.97, 1.82)	0.76(0.30, 1.91)	1.37(1.01, 1.87)*	0.75(0.43, 1.31)
Age group (13 & older)				
Below 13 years	1.21(0.91, 1.60)	1.55(0.71, 3.36)	1.03(0.80, 1.34)	1.71(1.17, 2.49)**
Gender (male)				
Female	1.98(1.40, 2.80)***	0.92(0.46, 1.84)	1.96(1.48, 2.58)***	0.81(0.54, 1.24)
Orphanhood status (single orphan)				
Double orphan	0.81(0.58, 1.13)	1.57(0.75, 3.31)	0.84(0.61, 1.17)	1.16(0.69, 1.98)
Primary caregiver (biological parent)				
Grandparent	1.04(0.76, 1.43)	0.82(0.33, 2.02)	1.01(0.76, 1.34)	1.01(0.57, 1.79)
Other relative	0.92(0.62, 1.36)	1.38(0.50, 3.78)	0.80(0.55, 1.16)	1.67(0.98, 2.82)
Family composition				
No of people in HH	0.93(0.84, 1.02)	1.15(0.94, 1.39)	0.91(0.83, 1.0)	1.12(0.97, 1.29)
No of children in HH	0.93(0.84, 1.02)	1.15(0.94, 1.39)	0.91(0.83, 1.0)	1.12(0.97, 1.29)
Asset ownership				
Family Assets	1.02(0.97, 1.06)	0.93(0.82, 1.07)	1.01(0.96, 1.06)	0.98(0.88, 1.09)
Constant	1.77(0.94, 3.30)	0.06(0.01, 0.24)***	1.68(0.91, 3.10)	0.08(0.02, 0.26)***
Design-Based F(df)	2.46*(9, 39)	2.03(9, 39)	3.31**(9, 39)	1.7(9, 39)

Notes:
[a] The reference group on all outcomes is "No non-kin tie"
*p≤.05, **p≤.01, ***p≤.001

Hypothesis #2: Testing the relationship between the Bridges intervention and children's psychological outcomes.

In Table 4.7, results from regression analysis testing the relationship between the Bridges intervention and children's psychological outcomes are presented. At 12-months follow-up, participants in the treatment condition reported a reduction in hopelessness relative to participants in the control condition (*B*=-.67, 95%CI=-1.03, -.31, p≤.001) and an improvement in self-esteem (*B*=2.38, 95%CI= 0.74, 4.02, p≤.01). In addition, participants below 13 years of age and female participants reported improved life satisfaction compared to older adolescents (*B*= 3.10, 95%CI=1.92, 4.28, p≤.001) and male participants respectively (*B*= 1.21, 95%CI= 0.14, 2.28, p≤.05). However, participants reporting other relative (i.e. aunt, uncle, siblings or in-laws) as the primary caregiver reported lower levels of future orientation relative to those reporting a surviving biological parent (*B*= 0.61, 95%CI= 0.15, 1.08, p≤.01), and lower levels of self-efficacy (*B*= -2.24, 95%CI= -3.87, -.61, p≤.01). Similarly, participants living in households with more children reported lower levels of self-efficacy (*B*= -.08, 95%CI=-.52, 0.35, p≤.01).

Although these findings demonstrate a positive role of the intervention in improving certain psychological outcomes, i.e. future orientation and self-esteem, the same findings point to the vulnerability of specific sub groups of orphans, especially those living in households with more children and those living with other relatives other than grandparents or a surviving biological parent.

Table 4. 7.

Relationship between the Bridges intervention and children's psychological outcomes at 12-months post intervention initiation (*B*, 95% confidence interval).

Variable	Future orientation	Self-Concept	Self-Efficacy	Life satisfaction
Study condition (control)				
Treatment	-.67(-1.03, -.31)***	2.38(0.74, 4.02)**	1.33(-.23, 2.89)	0.34(-.82, 1.49)
Age group (13 & older)				
Below 13 years	0.01(-.34, 0.36)	0.65(-.55, 1.84)	-.14(-1.15, 0.86)	3.1(1.92, 4.28)***
Gender (male)				
Female	0.12(-.16, 0.40)	-.1.34(-2.53, -.15)*	0.70(-.73, 2.14)	1.21(0.14, 2.28)*
Orphanhood status (single orphan)				
Double orphan	0.0(-.48, 0.48)	-.05(-1.87, 1.77)	-1.03(-2.37, 0.31)	-1.09(-2.8, 0.65)
Primary caregiver (biological parent)				
Grandparent	-.12(-.46, .22)	0.09(-1.61, 1.78)	-.48(-1.70, 0.74)	0.09(-1.08, 1.26)
Other relative	0.61(0.15, 1.08)**	-1.37(-3.23, 0.49)	-2.24(-3.87, -.61)**	-.80(-2.22, 0.61)
Family composition				
No of people in HH	0.07(-.06, 0.21)	-.19(-.61, 0.23)	-.02(-.41, 0.37)	0.10(-.25, .45)
No of children in HH	-.04(-.21, 0.13)	-.04(-.49, 0.41)	-.08(-.52, 0.35)**	-.05(-.45, .35)
Asset ownership				
Family assets	-.03(-.08, 0.02)	0.17(-.02, 0.36)	0.30(0.10, 0.49)**	0.07(-.10, 0.24)
Constant	4.13(3.4, 4.86)***	80.8(78.1, 83.5)***	98.6(95.9, 101.3)***	49.3(46.9, 51.7)***
Design-Based F(df)	3.29**	4.10***(9,39)	3.19**	5.73***

Notes:
*p≤.05, **p≤.01, ***p≤.001

Hypothesis #3: Testing the relationship between participants' psychological outcomes and key indicators of non-kin support networks.

The results of logistic regression testing the relationships between participants' psychological outcomes at 12-months and key indicators of non-kin support networks at 24-months post intervention initiation are presented in Table 4.8. No statistically significant relationships were observed between psychological outcomes and the identification of non-kin ties. However, the odds of reporting contact with a non-kin tie at least 2 times a month and receiving financial and material support were one-point higher (i.e. OR=1.01, 95%CI=1.0, 1.03, $p \leq .05$ and OR=1.02, 95%CI=1.01, 1.04, $p \leq .05$ respectively) for participants reporting high scores on the measure of life satisfaction.

Hypothesis # 4: Testing the relationship between the Bridges intervention and non-kin support networks controlling for participants' psychological outcomes.

As presented in Table 4.9, controlling for participants' psychological outcomes, the odds of identifying the Bridges intervention as a source of support were 39% higher for participants in the treatment condition in a model controlling for self-efficacy (OR=1.39, 95%CI=1.01, 1.92, $p \leq .05$), and 41% higher in the model controlling for life satisfaction relative to control participants (OR=1.41, 95%CI=1.03, 1.94, $p \leq .05$). However, participants with low levels of future orientation had lower odds of identifying non-kin ties (OR=0.95, 95%CI=0.91, 0.99, $p \leq .01$), and reporting material and financial support (OR=0.92, 95%CI=0.88, 0.96, $p \leq .001$).

Table 4.8.

Relationship between children's psychological outcomes and key indicators of non-kin support networks (β, 95% confidence interval).

	Network Identification	Frequency of contact per month		Type of support received	
Variable		At least 2 times	3 times or more	Financial & Material	Other support
Future orientation	0.86(0.59, 1.25)	0.97(0.93, 1.0)	1.0(0.94, 1.05)	0.90(0.68, 1.18)	1.10(0.97, 1.26)
Self-concept	1.01(1.0, 1.02)	1.0(0.99, 1.01)	1.01(1.0, 1.02)	1.01(1.0, 1.02)	1.03(0.99, 1.08)
Self-efficacy	1.0(0.99, 1.02)	1.01(1.0, 1.02)	1.0(0.98, 1.01)	1.0(0.98, 1.01)	1.01(0.97, 1.04)
Life satisfaction	1.27(0.93, 1.72)	1.01(1.0, 1.03)*	1.01(0.99, 1.03)	1.02(1.01, 1.04)*	0.99(0.93, 1.06)

	Recency of receiving support		Relationship with non-kin ties	
Variable	Within 24-months	More than 24-months	Suubi/Bridges Intervention	Other non-kin ties
Future orientation	0.97(0.93, 1.01)	0.89(0.81, 0.97)**	0.95(0.91, 0.99)**	0.95(0.91, 0.99)**
Self-concept	1.01(0.99, 1.02)	1.0(0.97, 1.04)	1.01(1.01, 1.02)	1.01(0.98, 1.01)
Self-efficacy	1.0(0.99, 1.02)	1.02(0.99, 1.06)	1.01(0.99, 1.02)	0.99(0.97, 1.01)
Life satisfaction	1.02(1.01, 1.04)***	1.03(0.99, 1.07)	1.03(1.02, 1.04)***	1.0(0.97, 1.02)

Regression models control for participants' socio-demographic and household characteristics.
*p≤.05, **p≤.01, ***p≤.001

Table 4.9.

Relationship between the Bridges intervention and key indicators of non-kin support networks controlling for participants' psychological outcomes: (OR, 95% confidence interval).

	Network Identification	Frequency of contact per month		Type of support received	
		At least 2 times	3 times or more	Financial & Material	Other support
Model 1					
Intervention	1.28(0.91, 1.82)	0.86(0.65, 1.12)	1.22(0.82, 1.82)	1.24(0.85, 1.82)	1.09(0.40, 2.94)
Future Orientation	0.95(0.91, 0.99)**	0.96(0.93, 1.0)	1.0(0.95, 1.06)	0.92(0.88, 0.96)***	1.10(0.97, 1.27)
Model 2					
Intervention	1.30(0.91, 1.85)	0.88(0.67, 1.15)	1.23(0.83, 1.82)	1.28(0.88, 1.87)	0.95(0.34, 2.62)
Self-Concept	1.01(1.0, 1.02)	1.0(0.99, 1.01)	1.01(0.99, 1.02)	1.01(1.0, 1.02)	1.03(0.99, 1.08)
Model 3					
Intervention	1.33(0.93, 1.88)	0.87(0.66, 1.14)	1.23(0.83, 1.82)	1.32(0.92, 1.90)	1.01(0.38, 2.71)
Self-Efficacy	1.0(0.99, 1.02)	1.01(1.0, 1.02)	1.0(0.98, 1.01)	1.0(0.98, 1.01)	1.01(0.97, 1.04)
Model 4					
Intervention	1.34(0.95, 1.91)	0.88(0.67, 1.15)	1.21(0.81, 1.80)	1.31(0.90, 1.90)	1.02(0.38, 2.70)
Life satisfaction	1.03(1.01, 1.04)***	1.01(1.0, 1.03)*	1.01(0.99, 1.03)	1.02(1.0, 1.04)*	0.99(0.93, 1.06)

Table 4.9. (continued)

	Recency of receiving support		Relationship with non-kin ties	
	Within 24 -months	More than 24-months	Suubi/Bridges Intervention	Other non-kin ties
Model 5				
Intervention	1.34(0.96, 1.85)	0.70(0.28, 1.78)	1.36(0.98, 1.87)	1.36(0.98, 1.87)
Future Orientation	0.98(0.94, 1.02)	0.88(0.80, 0.97)**	0.95(0.92, 0.99)*	0.95(0.92, 0.99)*
Model 6				
Intervention	1.34(0.96, 1.86)	0.75(0.30, 1.88)	1.38(0.99, 1.90)	0.76(0.43, 1.33)
Self-Concept	1.01(0.99, 1.02)	1.01(0.97, 1.05)	1.01(0.99, 1.02)	1.01(0.98, 1.02)
Model 7				
Intervention	1.36(0.99, 1.88)	0.74(0.29, 1.86)	1.39(1.01, 1.92)*	0.76(0.44, 1.32)
Self-Efficacy	1.01(0.98, 1.01)	1.02(0.99, 1.06)	1.01(1.0, 1.02)	0.99(0.97, 1.01)
Model 8				
Intervention	1.37(0.99, 1.89)	0.76(0.30, 1.91)	1.41(1.03, 1.94)*	0.75(0.44, 1.30)
Life satisfaction	1.02(1.01, 1.04)***	1.03(0.99, 1.07)	1.03(1.02, 1.04)***	1.01(0.97, 1.02)

Notes:
Regression models control for participants' socio-demographic and household characteristics.
*p≤.05, **p≤.01, ***p≤.001

4.2. Findings from the Qualitative Study

In this section, results from in-depth interviews are presented. The results are divided into four sections. The characteristics of the sample are presented in the first section. In the second section, participants' understanding of social support, including sources of support from both kin and non-kin sources vis-à-vis family support is presented. In the third section, participants' relationships with non-kin ties, including the Bridges intervention, variations in the support received and responses from participants without non-kin sources of support are presented. The perceived role of the Bridges intervention in shaping participants' relationships, issues of reciprocity, relationship challenges and coping mechanisms are reported in the fourth section of this chapter.

Sample characteristics

A total of 38 participants between 14-19 years (females =19 and males =19) participated in in-depth interviews (Table 4.10). All selected adolescents were active participants in the Bridges intervention. Nineteen (19) participants were selected from the treatment condition and the other 19 were selected from the control condition. Twenty-four (24) participants identified the Bridges intervention as a source of support, 9 participants identified other non-kin sources of support and 5 participants did not identify any non-kin source of support. In addition, 30 participants were enrolled in school and 6 participants were out of school/dropped out at the time of interviews.

Table 4. 10.

Characteristics of the qualitative sample (n)

	Total (N=38)	Females (n=19)	Males (n=19)
Study group			
Control	19	11	8
Treatment	19	8	11
Participants' age			
14	7	4	3
15	13	6	7
16	10	5	5
17+	8	4	4
Non-kin ties identified			
Bridges intervention only	14	6	8
Bridges intervention and other non-kin ties	10	5	5
Other non-kin ties	9	4	5
No non-kin ties	5	4	1
School enrollment			
In school	30	16	14
Out of school	8	3	5

Participants' understanding of social support

Definition of social support

Results from quantitative data analysis revealed that the majority of study participants (78%) reported receiving material and financial support from non-kin ties. Only 6 participants reported receiving any form of emotional or in-kind assistance from their non-kin ties. Given this finding, in-depth interviews explored participants' understanding of what social support meant to them and whom they consider a supportive person. The interviews demonstrated that adolescents define support in terms of "giving and receiving both material and non-material assistance during times of need" and

"helping individuals overcome problems and improve their situations." Participants' responses are detailed below:

Support as "giving and receiving both material and non-material assistance"

Consistent with findings from quantitative data analysis, participants defined support in terms of giving and receiving material assistance such as basic needs (food, clothing, accommodation) and school needs (school fees, books, pens and pencils, school uniforms), and financial support during times of need, as illustrated below:

> "The way I understand support is that, for example, as an orphaned child, if someone gives me something that I don't have or something I need like paying for my school fees and taking care of all my basic needs, that's support."

Another participant reported that:

> "Support means helping someone with the things they can't afford financially… [for example], someone giving us money to take care of our household needs especially when my mother has no money. I work but sometimes I don't have enough money, someone would help me with money to take care of our household, or buying me something nice like a bicycle, a house and taking care of me and my household."

The above illustration also demonstrates how orphaned children struggle to financially support their families. Some of these children have to engage in labor at an early age in order to make ends meet. To them, any form of assistance goes beyond benefiting just one individual, but the entire household. In addition, participants acknowledged that social support not only involve giving and receiving material or financial assistance, but non-material support as well. Non-material support identified mainly consist of *emotional support,* which involves the provision of encouragement, empathy, caring and acceptance to help orphaned children build their self-esteem, self-

confidence and improve their self-worth, and *informational support,* which involves the provision of guidance, advice and suggestions mainly on issues related to the importance of education and staying in school, good behaviors, acknowledging mistakes and making better choices, finding employment or obtaining vocational skills, and any other helpful information that could help orphaned children solve problems to get a head, as illustrated below:

> "Advising me on how to behave, the benefits of staying in school, how to treat other people around me, how to overcome challenges in life, and training me in household chores so that I am able to do those things by myself in the future."

Another participant reported that:

> "Support could mean someone coming to your school, talking to you and your teachers about the challenges or difficulties you face at school, especially if you cannot concentrate in class due to problems at home. They could find ways to make sure you concentrate and perform like other students..."

Support as "helping individuals overcome problems"

In addition to giving and receiving both material and non-material support, participants in the current study defined social support as helping individuals with problems overcome them. For example: *"Support means helping someone get out of a bad situation or a problem and helping them get into a better place and be like you."* Another participant reported that support involves helping someone get out of trouble without any expectation of getting paid back: *"...If you lose money and your friend offers to give it to you, not as a loan but for free so you don't get in trouble. That's what I call support."*

Participants' definitions of social support revealed no differences between female and male adolescents in the way they perceive and define support. Specifically, all participants emphasized "helping" those in "need" including orphaned children, the sick and the elderly, with the assistance needed for day-to-day survival. In addition, these definitions point to the adolescents' understanding of social support as efforts that could help address both their immediate and future/long term needs. Participants' perceptions of supportive individuals are presented below.

Participants' perceptions of supportive individuals

In-depth interviews revealed a range of participants' perceptions regarding whom they consider supportive. The most popular responses indicate that a supportive person should be "kindhearted," "trustworthy" and "provides support willingly without expectations." For example:

> "That person should be trustworthy and approachable anytime I have a problem. They should be able to follow-up and find out how I have used the things they gave me, if they gave me money, they should try to find out how I spent it. A supportive person should be able to give me financial advice, like if you get money, open up a bank account or buy an asset or buy something you don't have. A supportive person should be able to tell me their principles on how they expect me to behave and use whatever they give me."

Furthermore, participants reported that a supportive person should be generous and willing to share with others, give support willingly without expecting anything in return and one who does not get angry when asked for support. For example: *"Someone who does not ask for money in return of the support they give you, that person should be approachable."* Another participant reported that: "*A supportive person is that one who*

does not get angry at me when I ask for something." This participant noted that a supportive person should be generous and able to share with others:

> "Someone who voluntarily helps you. You know, there are people who have or who are fortunate but do not give to the needy. But you may find someone who has little but gives you the little s/he has."

Participants also talked about a supportive person as one who is able to maintain privacy of issues discussed or the support given, even after the relationship ends.

> "Someone who does not talk about the things they have given me or tell other people about it especially when we have a problem, someone who does not show off or brag about the things they have done for me."

Overall, the way orphaned children understand and define social support, and their perceptions of who a supportive individual should be is indicative of their real life experiences regarding their support networks both relatives and non-relatives. Indeed, given the poor communities in which these participants live, financial stability could be a major predictor for adolescents when choosing an individual to approach for support during times of need.

Sources of social support

Participants were asked to identify individuals who provide them with any kind of support. These individuals could be people they are related to such as family and extended family members (kin), or people they are not related to in any way (non-kin), including NGOs or other supportive groups/organizations in their communities. Sources of social support identified by adolescents include: a surviving biological parent, stepparents, siblings, uncles, aunties, grandparents and in-laws. Support from family members primarily include the provision of basic needs (food, clothing, accommodation,

medical needs), school needs, financial support, and non-material support such as the provision of advice and encouragement. The majority of participants indicated that they started receiving support from their relatives prior to joining the Bridges study. For relatives identified as primary caregivers/current guardian, support for the adolescents is provided on a daily basis. Other relatives usually provide support monthly, every academic term or annually.

Regarding non-kin sources of support, participants identified individuals such as neighbors and tenants, teachers, friends and family friends in their communities. Five (5) participants identified non-governmental organizations (Rotary club and World Vision), and other local community based organizations as part of their support networks. Similar to support from relatives, non-kin ties also provide basic needs, school needs, financial support and other non-material support such as help with household chores, provision of advice and encouragement, and connecting adolescents to other supportive individuals in the community. For example, one participant talked about her friend in the following way:

> "She saw me in the village, I was not in school at the time because my grandmother had no money to pay for my school fees. She became my friend and got to know me. She talked to the sister [nun] about my situation and eventually accepted to send me back to school. She did a wonderful thing for me."

In addition, local community organizations and NGOs identified by adolescents conduct school and home visits to check-in on the wellbeing of children, promote good agricultural practices by providing farming materials such as seedlings and animals to participants and their families, to promote economic stability and improve nutritional wellbeing. All participants who identified community organizations and NGOs reported receiving support from these organizations prior to joining the Bridges intervention.

Among participants who reported receiving support from non-kin ties after joining the Bridges intervention, none of them attributed receiving support as a result of participating in the intervention. Participants' relationships with the Bridges intervention and other non-kin ties, including relationship initiation and variations in the kinds of support received are presented below.

Relationship with non-kin ties

Relationship with the Bridges Intervention

Findings from the quantitative study revealed that the majority of participants both in the control and treatment conditions identified the Bridges intervention as a major source of support other than their family and relatives. Similarly, during in-depth interviews, 24 out of 38 adolescents identified the Bridges intervention as a source of their social support. Given that the Bridges intervention is temporary, with limited contact with participants, it was important to examine why adolescents overwhelmingly identified the intervention as part of their social support networks. Specifically, participants were asked to talk about their relationship with the Bridges intervention and the kind of support they received. These questions were intended to ascertain whether the support participants were referencing as coming from the Bridges intervention was over and above the standard supports provided by the intervention protocol-which constitutes scholastic materials (for both control and treatment conditions), mentorship, plus matched savings accounts for the treatment condition.

Indeed, when asked about the kinds of support received from the Bridges intervention, participants identified the usual care services provided including scholastic materials (books, pencils, school uniforms and school lunches), and financial incentives provided during program meetings and interviews-as transport refund and lunch allowance. Some participants reported that they used the financial incentives given to them to start small income generating activities, an indication that participants do not necessarily spend on themselves, but on ventures that would help their entire households. Regarding specific supportive Bridges staff, 13 participants identified staff members that they interacted with during mentorship and school visits as being more supportive than the rest, although the kinds of support they provided did not differ from the standard supports provided by the intervention protocol.

Participants in the treatment condition identified other intervention components as part of the support received. These include: matched savings accounts, workshops on financial management and microenterprise development, and the mentorship program. For example,

> "Trainings on income generating activities such as piggery, poultry and crop growing and education. From these trainings, I acquired knowledge on how to start a small business. I make brooms and sell them."

Another participant reported that:

> "I have learnt how to save money, good agricultural practices through the trainings they conducted at our school on income generating activities. Following those trainings, I started poultry keeping, something that I am very proud of."

In addition, participants in the treatment condition also participated in mentorship sessions where they met with peer mentors on a monthly basis for 9 months during the intervention period. Participants talked about the lessons learnt from these sessions,

including the importance of education and staying in school, maintaining discipline and good behavior, building self-confidence and self-esteem, preventing risky behaviors, developing negotiation skills and HIV prevention. For example: *"Suubi has helped me a lot by encouraging me to study hard, maintaining my relationship with my family members and how to prevent HIV and AIDS."* Another participant reported that:

> "I have learnt to have self-esteem, that is, having the confidence to say whatever you want to say. They taught us negotiation skills with friends and how to co-exist and treat other people. I also learnt about the ABC model of HIV and AIDS prevention and keeping myself safe until I finish my studies."

Relationship with other non-kin ties (other than the Bridges intervention)

To understand the nature of relationships between adolescents and non-kin ties, study participants were asked to talk about how these relationships were initiated, i.e. whether the adolescents initiated the contacts, the possible reasons for initiating these contacts, and whether these relationships were initiated before or after joining the Bridges intervention. In-depth interviews revealed that relationships between the majority of adolescents and non-kin ties developed prior to joining the Bridges intervention, mainly through introductions made by caregivers or prior relationships with caregivers, childhood friendships, through mutual friends, and through introductions made by community members/village council members especially for relationships with local community governmental and NGOs. For example,

> "They came to our village looking for orphaned children and we got registered. They have been supporting me since I was in primary three. They were visiting each home and registering children who had lost one or both parents. They also registered non-orphans without support or living with their grandparents in big families. The chairman of the group introduced them…"

The following excerpts illustrate the relationship initiated as a result of prior relationships with participants' caregivers:

> "I got to know him when I came to this village. He is a good friend with my brother-in-law. He [brother-in-law] introduced me to him and his family. From there, I started a relationship with him."

Another participant reported that:

> "She went to school with my mother and they became friends. They were four friends. Before my mother died, she asked her [her friend] to take care of me and provide for whatever I need including paying for my education. She is doing exactly what my mother asked her to do."

In addition to prior relationships, some caregivers play a role in initiating relationships with non-kin they consider beneficial to their children. For example: *"My mother went to school, talked to him [the teacher] and asked him to help me with my school work. He has been helping me ever since."* Furthermore, some adolescents reported being childhood friends with their supportive non-kin. These relationships mainly developed as a result of living in the same village and/or attending the same school/class. For example: *"We are childhood friends. We used to sit on the same desk in class. So when you spend most of the time with someone, you get to know them and you become friends eventually."* Some of these friends later introduced the participants to other supportive adults, as illustrated below:

> "My friend introduced me to her. I didn't know her before that. My friend took me to see her and see if she would help me with school fees. After listening to my situation, she said…I am going to give you money for school fees but do not waste it! I want you to stay in school, perform well and make me proud."

Some participants also identified situations that brought them together with supportive non-kin ties, including family tragedies such as death of a family member or sickness of a family member that compelled non-kin individuals to support these adolescents and their families. Below are some of the participants' illustrations:

> "It started after we had lost someone at home. She came for the funeral and spent the night at our house. That's how the relationship began. She then started giving us books. She started bringing the books to us at home. Her children receive support from someone. Whenever they bring her children books, she shares some with us."

Another participant reported that:

> "It all started when he attended a funeral at my house. My father did not know him before then. Later on, he asked me to call him at the beginning of each [school] term so he could send us money for school fees."

Other participants reported that relationships with non-kin ties developed as a result of their good behaviors and excellent performance in school: For example: *"I am very attentive in class, so my teachers noticed that and they started giving me extra support where I have difficulties. Sometimes I approach them asking for their help."*

Another participant reported that:

> "We are not relatives at all. I was very bright in school but I didn't have money for school fees. My parents died and the person I was staying with did not care about my education. My aunt [fictive] took me in to be part of her family. She has been very kind to me."

This participant talked about the relationship with his supportive neighbors in the following way:

> "I believe they saw that I had no issues with them and I used to treat them well. Other children who stay at my home are not well behaved. For me, I normally stay at home. One day the tenant asked me if I could babysit her children when she was away. I accepted and I took very good care of them. This made her very happy and that's how the relationship started."

Variations in the kinds of support received

Participants in the current study were asked to indicate whether the kinds of support they received vary per person. Specifically, whether the kinds of support they received from family members and relatives differ from the support received from non-kin ties. The majority of participants reported that both relatives and non-kin provide the same kinds of material and non-material support. Mixed responses were however reported regarding the variations in the amount of support received from family and non-kin ties. Specifically, some adolescents reported that non-kin provided more support than family members/relatives, while other adolescents reported receiving more support from family members than non-kin. For example:

> "Yes, it varies because at home they talk to me about life and good behaviors but they don't have the money to buy the necessities I need. My friend and the sister [nun] have been financially supporting me."

This participant reported that:

> "There is a difference because they [my sister and aunt] pay my school fees sometimes. My mother's friend pays every year. She is more concerned about my education than my relatives. She gives me more things than anyone else."

This participant however, reported that relatives provide more support than non-kin:

> "My relatives give me more things than people not related to me. For example, relatives buy me clothes, food and give me accommodation. However, non-relatives only give me a few things and advise me on the things I can do to remain safe and healthy."

In-depth interviews also revealed that the majority of family members were very supportive of the relationships between orphaned children and non-kin ties, and they tend to work together with non-kin to better support their children. However, a few participants reported that family members did not approve or support the relationships

with non-kin ties. For example: *"They are not supportive at all. They advise me against spending time with the neighbors. They talk bad about them and keep telling me that I don't need their help."* When asked why family members were not supportive of the relationship, this participant reported that:

> "I think they question how I am able to do whatever they ask me to do, including all the chores on time. They believe someone, the neighbors, are giving me advice on how to do things and that's why I don't pay attention to them [my family]. That's why sometimes my aunt talks about chasing me away from her house to go live with the neighbors if I don't stop associating with them."

Reasons for the lack of non-kin sources of support

Analysis of quantitative data revealed that about 18% of study participants did not identify any non-kin sources of support. During in-depth interviews, 5 participants were unable to identify any non-kin source of support other than their family and relatives. These participants were then asked to talk about the possible reasons as to why they did not have any supportive non-kin and what they do in situations when their current guardians are unable to provide them with the support they need. The reasons identified by participant include: feeling uncomfortable asking for support from other individuals, lack of support from the current guardian, stigma and the fear of being perceived as a beggar, belief that other people are not proud of the adolescents' accomplishments and the lack of trust in community members. For example, *"The feeling that I will be perceived as a beggar, it is very hard and I don't like it."* Another participant talked about feeling uncomfortable asking for help from other people other than the caregiver in the following way:

> "I don't know. I have lived with my mother most of the time. She is the only one person who has been helping me. I am scared of asking for help from other people, including my neighbors. I am used to my mother, so I don't feel comfortable asking for things from other people."

As mentioned earlier, caregivers play an important role in the relationships their children build outside of the home. One participant reported that she is unable to have supportive relationships with non-kin because the caregiver would not approve and in return, other individuals may be hesitant to offer support because they do not want to upset her guardian:

> "Some people may be hesitant to help me because they are scared of my guardian. They may think that if they give me anything, she [my guardian] may question their intentions. She may think that they are questioning her ability to take care of me. For instance, when I try to talk to my father, she [my guardian] asks why I called him and what I talked to him about. I think that is the reason why most people are hesitant to help me."

This participant added that:

> "She [the guardian] is very hard most of the time. The problem is that she is very quarrelsome. It is very hard to explain something to her. I cannot sit with her and explain anything to her because I am also scared of her."

However, this participant also reported that the guardian would approve if support came from an organization other than an individual, indicating that the source of support is important to some caregivers in determining whether their children should be supported or not, as described below:

> "If it is an organization, I think she would be ok with it. But if they are individuals in the community, she might think that I am the one who went to them asking for support. For the organization, she might think that it has come to support me, without me telling them anything. For example, if I get anything from the neighbors, she would ask why they gave it to me. To her, it would mean that I went to them and told them something. That is why they are afraid of her. I am

> also afraid of her because if she sees me with anything new, she would ask me where I got it from and who gave it to me."

In addition to the lack of support from caregivers, participants also talked about the lack of trust in their communities, which makes it hard to have supportive relationships:

> "No one because everyone seems difficult. Sometimes I may share information with the people outside our home and then they end up telling my aunt exactly what I told them. Sometimes you may just want clarification, sharing with them that…you know, my aunt told me this and this but I did not understand what she meant. That person might then go back and tell my aunt what I said. I don't trust anybody in my community and I don't think anybody can help me."

When asked who should be there to offer support, some participants mentioned other family members, neighbors that are doing well financially and community based organizations. Although participants reported receiving material support such as basic needs, school needs and financial assistance from both their relatives and non-relatives, the same needs were reported as part of their unmet needs, indicating that orphaned children do not receive sufficient support.

Perceived role of the intervention in shaping participants' relationships

To understand how participating in the Bridges intervention helped shape the relationships between participants and non-kin ties, participants were asked to indicate whether their relationships with both family members and supportive non-kin had changed since joining the intervention. Potential changes primarily include the number of people who provided support, the amount of support received, the types of support and frequency of receiving support after joining the study. In-depth interviews revealed that

relationships between adolescents and their supportive individuals –both relatives and non-kin ties had not changed as a result of joining the Bridges intervention. Specifically, the same individuals who supported the adolescents prior to joining the intervention were still supporting them. Two participants however reported a reduction in the amount of support received from their family members as illustrated below:

> "Some things changed. I have an uncle who used to give me school fees. However, when he heard about the project, he started giving me half the money and said the project would top up."

When asked why the uncle reduced on the amount of support, this participant reported that: *"When he heard about my enrollment into the project, he decided to give me half of the money and to use the rest of the money to take care of other household needs."* Another participant reported that: *"Support from home has reduced because Suubi also helps me. My mother said since Suubi provides me with books, she will take care of other things."*

In addition, participants identified other aspects of their relationships, especially with their family members that had changed. Some of these changes include reducing the guardian's financial burden, motivating guardians to pay for their children's education, boosting participants' education in terms of school participation and performance, receiving timely support from caregivers, and improvements in adolescents' behaviors. For example, this participant talked about the support from the intervention as "a relief" to the guardian:

> "There is a change. They [family] used to give me books and geometry sets but now Suubi gives me those things. It is a relief to the person who used to give me those things. Also, the money I get from them [Suubi] helps me to access other necessities."

Another participant reported that:

> "Being part of Suubi motivated my guardian to pay for my school fees. Every time you give us money, I use it to buy books. This makes it easier for her to bring money for school fees…I have progressed in my schooling. I am now in primary seven. I never expected to go this far."

Furthermore, these participants talked about improvements in their academic performance as a result of participating in the program and being able to access the school needs that their guardians could not afford before due to financial difficulties:

> "I have benefited a lot because they used to buy me books. My guardian did not have enough money to take care of all that. They bought textbooks...I don't think I would have passed my primary seven examinations without those books. They also gave me money to take care of my other needs, they bought me a school uniform and so many other things."

Another participant reported that:

> "It has changed because my education was boosted and I am very proud. Before Bridges, I was very uncertain about the future of my education, I didn't expect to get where I am today. Bridges has given me hope and patience."

Participants also reported receiving timely support from caregivers as a result of participating in the intervention, and improvement in the relationship with family members in the following way:

> "It has changed because right now, my family listens to me and listens to whatever I have to say. Before Suubi, they used not to listen to me. When I get reports from Suubi, I share with them, and if there is something that needs to be changed, they do so without hesitation."

Although participating in the Bridges intervention did not affect the number of people supporting the adolescents, in-depth interviews seem to indicate that the study was associated with positive benefits, specifically those related to reducing financial burden among caregivers and boosting academic performances among adolescents -two of the

major factors that impede educational achievements among orphaned children living in poor communities. In the final section of this chapter, issues of reciprocity, relationship challenges and coping mechanisms are presented.

Reciprocity, relationships challenges and coping mechanisms

To understand the levels of reciprocity that exist between adolescents and their supportive relationships, participants were asked to identify some of the current activities they perform (if any) for people in return of the support provided and whether they have any future expectations. Participants reported performing household chores for non-kin ties in return of the support they receive. In terms of future expectations, the majority of adolescents reported that supportive non-kin ties do not expect anything directly in return of the support given. Instead, they expect the adolescents to complete their education, become productive adults in the future and help support other vulnerable children and individuals in their communities.

Similar expectations were reported from family members and relatives. However, although the majority of participants reported that they perform these activities willingly as part of the household routine, one adolescent reported that the level of expectation to perform these activities increases once the caregiver gives her money for school fees:

> "After she gives me the money, she emphasizes that I have to do all the chores at home even do them better than before [prior to giving me the money] …If she decides to give you money for school fees, she may tell to do some chores in the evening after school…But after giving me the money, she emphasizes so much that I must do the chores and do them well. I used to do some of this work in the morning before going to school but now, she wants me to wash the children's school uniforms in the evening when I get back home and also iron the ones for the next day before I go to bed."

Relationship challenges

Participants identified financial constraints as the major source of challenges affecting their relationships with supportive individuals -both relatives and non-relatives. As a result, supportive non-kin, especially those supporting children in multiple households are forced to cut down on the amount of support they provide, as illustrated below:

> "Some things have changed because sister [nun] supports other children from several other families. She no longer has enough money. She actually told me that she couldn't afford to buy me books any longer. She will be paying my school fees and the school uniform only."

Another participant talked about financial difficulties in the following way:

> "Another thing may be, like I mentioned to you, I am not related to my aunt at all but she takes good care of me. It is important that I don't do anything to make her angry or jeopardize my relationship with her. I know that sometimes she struggles financially because I may ask her for something and she tells me I don't have that money, I have to pay school fees for other children. I give you only the things I can afford. Sometime it hurts me especially when I see other students with the things I want, or go to tour places in the city without me."

In addition to financial struggles, one participant reported that the person supporting her sometimes acts cold and unfriendly especially when she does not perform well in school. As a result, support is not provided on time:

> "She doesn't like it when I get poor grades in school because she pays a lot of money for me to live in a boarding section. You know how guardians are, she gets angry and sometimes does not give me what I ask for or gives me part of what I asked for."

Similarly, adolescents experience financial difficulties in their relationships with family members. As a result, family members take long to provide the needed support, sometimes leading to communication breakdown between the caregiver and the child.

Specifically, adolescents hesitate to ask for support from their caregivers because they are aware of the financial situation. For example:

> "Sometimes when I am sent home to collect fees, I find it hard to ask, especially when I know that they don't have money. I hesitate because they are helping me in so many other ways. I just sit home and wait until whenever they get the money."

Another participant reported that:

> "It is a tough time now. My aunt does not have money. Sometimes she doesn't pay school fees on time like she used to. Sometimes I don't ask for what I need because I know she doesn't have the money. Even when I am aware that she has some money, I am hesitant to ask because her reaction is always why is she asking for things yet she knows no one is helping me financially? That's why I don't ask her."

As a result of financial difficulties, adolescents end up getting the money needed for school late, sometimes they have to stay home for a while before going back to school. Other participants attribute late support to poor performance in school or making mistakes. For example:

> "Sometimes support from my sister doesn't come on time especially if my performance in school is poor. I think sometimes she wonders why I don't perform well yet she gives me all the requirements on time. I think that's why she delays to send me the things I need…"

Another participant reported that:

> "I believe she [aunt] delays especially after I have done something wrong or a mistake because she keeps bringing it up and reminds me about it. She would say do you remember when you did this and that or when you broke this? I used the money I would have given you to replace or repair what you broke. Or if there is a chore you didn't do well, she will remind you about it. She would then ask you to wait until whenever she gets the money. Sometimes she may say why ask for money yet you know that I am taking care of many children?"

In addition to financial difficulties, study participants identified other relationship challenges with family members/relatives, including performing too many household chores and family conflicts. For example:

> "I do so many chores at home. We wake up very early at 5:00am every day to do chores. We don't go to school unless all the chores are done. Even when we wake up late, we have to do the chores before going to school. In the evening after school, we have to go water the tomatoes in the garden and we usually come back very late. Sometimes we find that she had not prepared dinner, being the only girl at home, I have to prepare dinner after that."

This participant attributed these overwhelming responsibilities to being the only girl in the household and the fact that she is not the caregiver's biological child. Regarding family conflicts, this participant reported that his relationship with the neighbors is causing conflicts with the relatives because they do not approve:

> "There is no major problem, except that my relatives keep saying that if I don't stop associating with the neighbors, they will ask me to leave their home and go live with the neighbors. They want to chase me away from home. My aunt especially is not on good terms with them."

When asked why the aunt wanted to chase him away from home, this participant reported the underlying property wrangles with his aunt:

> "Before my father passed away, his wish was for me to take over his property. My aunt on the other hand wanted to sell them off the property claiming that some people wanted to take them away from me. Now she thinks that I may be working with the neighbors behind her back to sell off the properties myself. This is not true at all."

To overcome or cope with some of these relationship challenges, especially financial difficulties, participants, including those with non-kin ties reported that they sell off their property, such as chickens in order to raise money for school needs, asking other

family members for support, borrow from friends, use personal funds-if available, and others work for money outside of the home, which requires missing school for a few days, as illustrated below:

> "I use the money they give us during interviews to buy what I need. If it happens that I already spent the money, I work on the farm, I plant beans and when I harvest, I sell them and get money that I can use. Sometimes I work on the sewing machines, the money I get also helps me."

Although the extended family system is still the most important and primary source of support for poor orphaned children, children experience the greatest challenges in their relationships with family members or relatives. Specifically, in-depth interviews revealed that adolescents face more relationship challenges with their family members than non-kin ties. Most of these challenges stem from financial difficulties, which indicate that household poverty not only affect children's access to basic needs, but family relationships and the overall family functioning as well. Poverty combined with the lack of support from caregivers may limit poor orphaned children from accessing and tapping into supportive community resources that may be important in promoting the economic, social and health wellbeing of these children. Further discussion of these findings and their implications is presented in the next chapter.

CHAPTER FIVE

Discussion

The current study examined the extent to which a family-based economic strengthening intervention, that utilize youth matched savings accounts, is associated with the creation and strengthening of non-kin support networks for orphaned children. This study assumed that orphaned children living in low-resource communities with no public safety nets, where extended families are already overwhelmed, may turn to informal sources of support, such as non-kin support networks for care and support during times of need. Research questions were established to describe the non-kin sources of support available to orphaned children and their variations based on key-sociodemographic characteristics of age, gender, orphanhood status and primary caregiver.

In addition, the study attempted to examine the extent to which participating in family-based economic strengthening intervention is associated with the creation of non-kin networks for orphaned children, and the mechanisms through which such associations occur. The study hypothesized that over time, adolescents receiving the intervention would be more likely than those not receiving the intervention to report non-kin supports networks indicated by size, frequency of contact and type of support received. Further, the study assumed that adolescents receiving the intervention would demonstrate an improvement in psychological outcomes. These improvements in psychological outcomes would be positively associated with non-kin support networks, and changes in psychological outcomes would mediate the relationship between the intervention and non-kin ties.

The intervention had a significant effect on the frequency of contact with non-kin ties, the identification of the Bridges intervention as a source of support at 24-months, and two measures of psychological outcomes at 12-months, i.e. future orientation and self-concept. In addition, although life satisfaction had a significant effect on frequency of contact and type of support received, the intervention did not affect life satisfaction at 12-months. Therefore, no significant direct effect of the intervention on non-kin support networks through the psychological outcome measures was observed.

However, bivariate analyses describing non-kin support networks between study conditions, and variations in non-kin support networks based on participants' socio-demographic characteristics were conducted. In addition, in-depth interviews were conducted to understand the nature and quality of relationships between orphaned children and non-kin support networks, and to understand the reasons for the lack of non-kin ties. Possible explanations as to why the intervention was not associated with non-kin support networks are presented. Major findings from both quantitative and qualitative studies, and their implications for programing and policy, along with the limitations of the current study and implications for further research are discussed.

5.1. Discussion of results

Availability of non-kin support networks

Poverty 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). Indeed, findings from the

current study indicate that orphaned children are embedded in very small and limited number of informal supportive networks, primarily consisting of family members and relatives, and a very small number of non-kin ties. Specifically, only 17% of participants were able to identify supportive non-kin ties other than the Bridges intervention. These non-kin ties mainly consist of friends, neighbors, teachers, church related individuals (pastors and sisters/nuns), and fictive kin. This percentage even dropped to 9% at 24-months post study initiation. 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 indicate that social support for orphaned children outside of their homes is lacking. The burden of supporting orphaned children still largely falls on the extended family system.

Institutional-based support networks such as community-based organizations, faith-based organizations, NGOs and other private sector agencies –where available may offer viable and important options for support when family support and friendship support are unavailable or ineffective (Dominquez & Watkins, 2003). Moreover, studies have documented the role of community-based organizations and NGOs in supporting orphaned and vulnerable children in Sub-Saharan African countries heavily affected by HIV and AIDS (Caruso & Cope, 2006; Lerner & Trivedi, 2013; Rosenberg, Hartwig, & Merson, 2008). In the current study however, only 4% (n=60) and 3% (n=45) of participants at 12-months and 24-months post baseline respectively reported receiving some form of support from community-based organizations and NGOs. The decline in the number of participants reporting support from these organizations may indicate

discontinuation of services–moreover in a region with high numbers of orphaned children and where the prevalence of HIV is still higher than the national average i.e. 8% compared to 7.3% (UAC, 2015). Therefore, consistent with findings from other sub Saharan countries (Abashula, Jibat, & Ayele, 2014), institutional-based support is still insufficient, intermittent and coverage is limited to few children and families in communities that are most vulnerable.

Kinds of social support received

Social support networks serve both leverage and coping functions (Briggs, 1998). Close relationship ties, such as those identified by the majority of participants in the current study provide support best suited for coping because family and community members mutually depend on one another to get by (Edin & Lein, 1997; Lin, 1999). Indeed, the way participants in the current study defined social support is a clear indication of the need for coping support. Specifically, participants defined support in terms of "giving and receiving both material and non-material support during times of need, and "helping individuals overcome problems and improve their situations." Participants also reported a range of supports from their social networks, including financial support, primarily to pay for school tuition; material support in the form of food, clothing, medical needs and school needs; emotional support such as advice and encouragement, and in-kind assistance including help with homework, household chores, and transport needs. These kinds of support help to buffer the day-to-day stressors and to reduce family hardships.

Although social support networks have the potential to serve a leverage function or help individuals "get ahead," orphaned children are embedded in social networks that are less likely to serve this function. Indeed, during in-depth interviews, very few participants reported receiving support intended to help them "get a head." Therefore, like other poor individuals, orphaned children are embedded in homogenous social networks that are poor, limiting the flow of information and opportunities for upward mobility (McPherson, Smith-Lovin, & Cook, 2001; Swartz, 2009).

Frequency of contact and duration of receiving support

Frequency of contact with supportive non-kin ties was very minimum. 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. The purpose of these contacts and how they were initiated were however not explored during data collection. Similarly, in-depth interviews revealed that participants received support from non-kin ties either on a monthly basis or every school term. These findings are consistent with the living arrangements and care relationships for orphaned children in the region. Specifically, orphaned children usually live with a surviving biological parent or they are absorbed into other households, usually with grandparents or extended family members (Karimli, Ssewamala & Ismayilova, 2009), where other non-resident family members and non-kin–where available, help with both basic needs and financial support. Given that the majority of participants in the current study reported receiving school support and sometimes financial support from non-kin

ties, it is not surprising that contact is made either monthly or every school term (every 3 months), when scholastic materials are needed.

In regards to duration and recency of receiving support from non-kin ties, the majority of participants reported receiving support after joining the Bridges intervention –reflecting their identification of the intervention as part of their non-kin support networks. Those who identified support from community based organizations and NGOs were more likely to report receiving support from these organizations from a young age. Such organizations tend to target young children from the time they enroll in primary school. Given that none of the participants attributed receiving support from non-kin ties to the intervention, participants' relationships with non-kin ties and the support they received was not related to their participation in the Bridges intervention.

Variations in non-kin support networks based on participants' key demographic characteristics

Given that social relationships tend to vary based on receiver and provider factors (Collier, 1998; Dunkel-Schetter & Skokan, 1990), the current study examined the variations in non-kin support networks based on participants' key individual characteristics (age and gender), level of need (orphanhood status) and provider factors (primary caregiver). Study findings supported gender differences. However, contrary to the hypothesized relationship, female participants were more likely than male participants to identify at least one non-kin tie, report more frequency of contact with non-kin ties and to receive financial and material support. Differences in age were not supported although

young adolescents were slightly more likely than older adolescents to identify supportive non-kin ties.

Furthermore, variations based on participants' orphanhood status and primary caregivers were not supported. However, single orphans were more likely than double orphans to report a supportive non-kin tie. In addition, adolescents who reported a surviving biological parent or a grandparent as the primary caregiver were more likely than those who reported "other relative" to identify a supportive non-kin tie. Although these findings were not significant, possible explanations could be made to explain the observed trends. First, individuals in the community may feel compelled to support a child who just lost one biological parent, especially in situations where the deceased was the household breadwinner, in this case a father. Given that more than half of participants in the Bridges intervention are paternal orphans –meaning that they lost a biological father, it is possible that community members may feel compelled to support the widows and their children following the death of a father –the household breadwinner.

Second, social networks and received support may be related to biological relatedness between the child and the caregiver/guardian. Findings from in-depth interviews revealed that relationships with non-kin ties mainly developed as a result of prior relationships with the caregivers. Moreover, current caregivers directly influence the relationships their children form outside their families. Previous research has also documented differential treatment of orphans based on biological relatedness, where caregivers are inclined to give more love, attention and support to children they parent or grandparent (Goldberg & Short, 2012; Parker & Short 2009; Roby, Erickson & Nagaishi, 2016). In this case, orphaned children who lost both parents and those cared for by other

relatives are less likely than those with a surviving biological parent and those cared for by a grandparent to have the same opportunities of being introduced to other supportive individuals outside of their households.

Relationship initiation with non-kin ties

Parents/caregivers serve as bridges between the family and the social world of their children by helping them build social networks outside the family. Parents not only introduce their children to social relationships but also control and influence various aspects of their social lives, including the kinds of relationships they form in the community (Ladd & Pettit, 2002; Ladd, Profilet & Hart, 1992). Findings from the current study indicate that caregivers play an important role in influencing the relationships that orphaned children under their care form outside of the family. Specifically, participants indicated during in-depth interviews that most of their relationships with supportive non-kin ties developed as a result of prior relationships with their caregivers. However, some caregivers also directly controlled who their children interacted with. Among adolescents who reported these controls, caregivers were not supportive of the relationships with non-kin individuals, mainly resulting from the lack of trust among some of the community members.

Participants also identified other situations that connected them to supportive non-kin ties. Sickness and tragedies in the family such as the loss of a family member, especially a biological parent, compelled other individuals in the community to step in and provide support to the affected children as a way of easing on the family's pain and responsibilities. This finding points to social responsibilities and collective efforts that

still exist in some of these poor communities. Individuals who have the will and means are able to provide support to children and their families during times of need. However, questions regarding the sustainability of such support and for how long these individuals continue to support orphaned children still remain.

Other factors such as personal interest also played a part in relationship initiation with non-kin ties. Personal interests were shared by both children and their supportive non-kin. For example, some participants befriended other peers because they were approachable, easy to talk to or well behaved. On the other hand, participants reported that adults became interested in supporting them because they performed well and attained good grades in school, were very attentive in class, or that they were well behaved compared to other children. Exploring the extent to which it is normative for adults to take special interest and support young people, especially orphaned children in poor communities may be important for programming.

Community members especially local council members working with NGOs and other community-based organizations identified poor and vulnerable children and families who became program beneficiaries. Although this approach involves the community in identifying the "most deserving" children and households, it also has implications in terms of who gets supported given the levels of mistrust in some of these communities. Moreover, participants in the current study talked about being informed that they had "qualified" to receive support from these organizations. Given that the Government of Uganda recognizes orphan children –whether single orphans or double orphans as "critically vulnerable" (Kalibala & Elson, 2009; Kalibala, Schenk, Weiss & Elson, 2012; The Republic of Uganda, 2004b), the low numbers of children reporting

institutional-based support (other than the Bridges intervention) rise questions on how levels of vulnerability are determined at the local levels, and who is considered vulnerable enough to deserve assistance from these supportive organizations.

Overall, findings from the current study indicate that relationships with non-kin ties developed entirely as a result of factors other than participating in the Bridges intervention. In addition, adolescents were less likely to report initiating relationships by themselves. Indeed, all relationships, apart from those initiated by caregivers were initiated by non-kin and not the adolescents themselves. This finding could be a function of both the young age of adolescents and family norms that discourage children from seeking support from other people outside the family. It may be important to investigate further how these factors influence relationship initiation among poor orphaned children.

Perceived role of the intervention in creating and strengthening relationships with non-kin ties

The current study tested several hypotheses in an attempt to examine the extent to which participating in the intervention was associated with the creation of non-kin support networks among orphaned children. First, the study hypothesized that over time, orphaned children receiving the intervention would report higher levels of non-kin support networks compared to children not receiving the intervention/control condition. Findings from the study partially supported this hypothesis. Specifically, the analysis revealed a statistically significant effect of the intervention on the frequency of contact with non-kin ties and identification of the Bridge intervention as a source of non-kin support (Table 4.6). Given that 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 identification and significance of other supportive relationships with non-kin ties.

The possible explanation for this finding is that 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 is important to orphaned children. Closely related, the lack of a true control condition may have played a role. The Bridges intervention provides school support and financial support (in terms of transport allowance and compensation during interviews) to participants in the control condition, –the kinds of needs that poor families struggle with on a daily basis, yet these are the same needs than orphaned children need to secure their future in society; by providing these needs, the Bridges intervention qualifies as one of the biggest supports for orphaned children and their future. As such, there is no way to tell what the impact of the intervention on non-kin support would have been if the control condition received no supportive services at all.

Second, the study hypothesized that children participating in the intervention would demonstrate an improvement in the measures of psychological wellbeing. This hypothesis was partly supported. Specifically, compared to the control condition, participants in the treatment condition reported an improvement in three out of four measures of psychological wellbeing. Improvements were observed on the measures of future orientation and self-concept at both 12-months and 24-months post study initiation. For the self-efficacy measure, improvements were observed at 24-months only. These findings are consisted with previous findings that investigated a family-based economic

strengthening and mental health functioning among orphaned adolescents (Han, et al., 2013; Ssewamala, et al., 2012). No improvements were observed on the measure of life satisfaction.

Third, the study hypothesized that improvements in participants' psychological outcomes would be positively associated with non-kin support networks, and that psychological outcomes would mediate the relationship between participating in the intervention and non-kin support networks. These hypotheses were however not supported. These findings are consistent with previous studies which did not find any positive or negative influence of asset holding on social networks (Wheeler-Brooks, 2009). Indeed, contrary to findings from Yadama & Sherraden (1996), the current study did not find evidence to indicate that asset holding lead to social connections with neighbors and community organizations other than the Bridges intervention. A few explanations may help shed light on the lack of significant results.

First, the obvious explanation is that no other individuals are there in the community to support orphaned children apart from their family members and relatives. Indeed, almost 18% of study participants did not identify any supportive non-kin relationships. Even during in-depth interviews, participants without non-kin ties reported that there was no one else to support them other than their family and relatives. Other participants identified the Bridges intervention as the only source of non-kin support, indicating that without it, they would have no one else to support them other than their families. Therefore, in the absence of other supports, orphaned children are likely to count on each relationship they encounter, including short-term relationships as long as they receive some of form of support from them.

Second, the intervention is designed to strengthen and empower families economically. Traditionally, issues regarding child upbringing and financial matters tend to be dealt with in the family first and family members will have to exhaust all resources within the family before seeking help from anybody outside of their families. Indeed, some participants reported during in-depth interviews that caregivers were not supportive of relationships outside the home. Therefore, the intervention tends to strengthen relationships between orphaned children and their family members as opposed to individuals outside the family. Indeed, some participants reported that participating in the intervention improved relationships with family members –as caregivers listen to their children more than before. These improvements in child-caregiver relationships are in line with previous findings that reported improved family support, communication and overall family functioning among participants in a family economic strengthening intervention (Ismayilova, et al., 2012).

Alternatively, given the way participants perceive supportive individuals, it is justifiable to note that social support among orphaned children is not about the quantity or the number of people providing support or how much they are giving, rather the quality of relationships with current supportive individuals, including communication with supportive individuals, level of trust and confidentiality, willingness and ability to give/generosity, and the importance placed on the kinds of support received. Therefore, it is possible that participants in the current study were not concerned about support from outside their homes but improvements in the already existing supportive relationships.

Some participants –both in the treatment and control conditions –felt connected to the Bridges staff, although participants spent a few hours with the staff during mentorship

or progress meetings with caregivers. This finding point to implications for programming regarding the feasibility of developing supportive relationships with such a socially isolated group of children, as well as youth-staff development. Specifically, some program staff have the advantage of stepping outside their roles, especially when they meet with adolescents during mentorship or meetings, and can provide a safe context for support and guidance while providing values, advice and perspective. Moreover, given that some of the staff are close in age with the adolescents, have participated in similar studies and went through the same experiences, they are well-positioned to connect with the adolescents. As such, these are the kinds of relationships that should be promoted and encouraged in communities where supportive programs operate.

Findings from this study also point to the interplay between kin and non-kin sources of support. Specifically, participating in the intervention seems to have created a situation where support from the intervention was substituted for support from family members, and family members' resources were redirected to other household needs. This finding indicates that for orphaned children, having multiple sources of support does not necessarily imply getting more supportive services. Instead, support may be redirected and redistributed based on household needs and demands.

Reciprocity

In the context of poverty, reciprocity could be a burden and a source of added stress that hinder social relationships. Specifically, poverty could make it difficult for individuals to maintain relationships with others and to participate in social support networks because they do not have many resources to share and reciprocate (Offer

2012b). Swartz (2009) differentiated between balanced and unbalanced reciprocity. Relationships, especially with non-family support networks often require balanced reciprocity where exchange of help is in equivalent kind or value. This kind of reciprocity is expected over a short period of time. On the other hand, unbalanced reciprocity, such as between children and parents is more generalized and unbalanced, i.e. there is a degree of fairness, less is expected, returns are expected over a long period of time and may be of different kind or value (Connidis, 2010; Hansen 2004; Nelson, 2000; Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002; Swartz, 2009).

Although poverty might have hindered the formation of social relationships with non-kin ties among participants in the current study, reciprocity levels reported among those who identified supportive relationships with non-kin ties seem to be generalized and unbalanced. Specifically, study participants reported that the individuals supporting them (both family/relatives and non-kin) do not expect them to reciprocate right away. Instead children are expected to complete school, become productive adults and support their families and other individuals in the community. Even those who reported performing certain activities in return of the support given, the work they reported is generally expected of children and adolescents to help out around the house. Indeed, relationships between adults and children in general tend to be reciprocal in nature: caregivers provide the basic needs, educational needs and health needs to orphaned children. In turn, children are expected to help with household tasks and other activities as required by the caregivers (Rutakumwa, Zalwango, Richards & Seeley, 2015). Therefore, given its unbalanced nature, reciprocity does not seem to hinder participation

in existing social relationships between adolescent orphans and other non-kin individuals, although it might have hindered the formation of new relationships.

Network challenges and lack of non-kin ties

Despite adherence to cultural norms that value family, supportive relationships and working together, weaknesses in community resources may prevent poor families from participating in the exchange of social support. Poor individuals and families are at an elevated risk of receiving inappropriate support, reporting lower numbers of close ties and being structurally isolated (Weyers et al., 2008). The relationship challenges reported by participants during in-depth interviews and the lack of non-kin ties may be a reflection of financial constraints, which lessen the ability of individuals to help each other, resulting in a high level of self-reliance among family members. Moreover, it is difficult to count on others for support when those you go to for help also are struggling (Orthner, Jones-Sanpei, & Williamson, 2004).

The primary relationship challenge reported by adolescents in the current study was financial constraints from both relatives and non-kin. Financial constraints were associated with other challenges, including inadequate support, lack of timely support, breakdown in communication between adolescents and their supportive adults, and disruptions in participants' education as they are sent back home for tuition and other scholastic materials. However, these challenges were observed more in relationships with family members that non-kin.

Although financial constraints were a major challenge, the current study also uncovered other factors that limit the identification of and the lack of supportive non-kin

ties among orphaned children. Participants in the current study reported lack of support from current caregivers, mistrust, and feeling uncomfortable asking for help. Given that traditional norms require families to be self-reliant, seeking support outside of the family is often seen as a sign of weakness or not being able to take care of one's family. The lack of support from caregivers might also stem from mistrust regarding the intentions of potential supportive non-kin ties but also as a way of trying to protect orphaned children against stigmatized support. Indeed, one participant reported that the caregiver would be supportive of the relationship if support came from an organization rather than individuals in the community.

However, such caregivers' concerns may have implications for institutional-based support for orphaned and vulnerable children. The preference of institutions as opposed to individuals in the community hinders the development of family and community-based safety nets in the form of social relationships which may be important after such organizations pull out of the community. Indeed, over reliance on organizational support may leave orphaned children and their families more vulnerable to agency policies, budget cuts and social isolation (Dominguez &Watkins, 2003).

In addition, participants also reported stigma and confidentiality concerns among individuals in the community. Yet, previous research has documented that seeking support is associated with interpersonal trust and in turn the likelihood of sharing personal experiences (Mortenson, 2009). As such adolescents value the most trustable and reliable person when seeking for help (Barker, Olukoya, & Aggleton, 2005; Camara, Bacigalupe, & Padilla, 2014). Therefore, as long as orphaned children feel that members in the community cannot be trusted, they will be less likely to pursue social relationships

or seek support from them, even during times of need. Similar barriers have been reported in studies that investigated perceived barriers to mental health help-seeking among young people (Gulliver, Griffiths & Christensen, 2010; Jagdeo, Cox, Stein, & Sareen, 2009; Rickwood, Deane, & Wilson, 2007; Rickwood, Deane, Wilson, & Ciarrochi, 2005).

The lack of supportive non-kin ties may also be attributed to the perceptions of adolescents as "lucky" compared to others in the community. Specifically, community members may feel less obligated to support orphaned children if some of their needs are being met by organizations –in this case, the Bridges intervention. In addition, receiving support from organizations may be associated with resentment and jealousy from other community members. For example, studies investigating barriers to community support for orphans and vulnerable youth in Rwanda documented that orphans and youth-headed household receiving support from NGOs reported adult jealousy of aid received, and the more the youth were involved with the organization, the more marginalized they became (Thurman, Snider, Boris, Kalisa, Nyirazinyoye, & Brown, 2008). Therefore, resentment of organizational support combined with stigma of orphanhood may increase vulnerability and social isolation among poor orphaned adolescents.

Similarly, availability of and the lack of supportive non-kin individuals may be affected by the willingness of community members to become involved in the lives of orphaned children. Moreover, concerns over how caregivers may perceive such relationships is a significant barrier to individuals becoming involved with other people's children (Mannes & Foster, 2004). Some participants pointed out during in-depth interviews that other people are hesitant to support them because they don't want to get in

trouble with the caregivers. There is need for widespread changes in the community views and attitudes towards help seeking and providing support to orphaned and vulnerable children and their families.

5.2. Study Limitations

The current study has several limitations that call for caution in the interpretation of study findings. The study failed to detect a significant relationship between participating in the intervention and the identification of non-kin support networks among orphaned adolescents. The lack of a significant relationship may be attributed to the way non-kin support networks were measured. Specifically, the indicators utilized to measure non-kin support networks may not be appropriate for this particular population –poor orphaned children, with multiple vulnerabilities. For example, measuring the size of non-kin social networks for orphaned children may not be viable given the social isolation of orphaned children. Indeed, the majority of participants identified between 1-2 non-kin ties. In addition, the majority of participants identified material and financial support. Non-material support that includes affection, love, caring and empathy was not identified. Yet, in poor communities, individuals without material support may be able to provide that kind of emotional support. However, this kind of support was not reported during data collection, 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. However, the use of qualitative data helped to explain why the analysis might

have failed to yield a significant relationship i.e. due to issues related to social isolation, poverty, and usual care services provided to the control condition. Besides, previous studies that investigated CDA programs and social networks did not find positive or negative influence of participating in such programs on social networks.

Third, the current study lacked a true control condition by design. Specifically, given that the control condition was designed to provide some form of support i.e. usual care services, participants in the control condition identified the intervention as part of their social support networks. Therefore, it was not possible to examine the net effect of the intervention on non-kin support networks. Future research designs need to consider utilizing true control conditions where participants do not receive any form of assistance.

Fourth, non-kin ties were measured at 12 months and 24-months post intervention initiation. No baseline data was available. Therefore, the availability of non-kin ties prior to joining the intervention is unknown. Although recency of receiving support was utilized to determine how long adolescents had been receiving support from non-kin ties, there is a possibility of adolescents not remembering the timeline accurately. Moreover, data was self-reported by adolescents and might be subjected to social desirability bias. Given the young age of adolescents and their socioeconomic status, the way they understand and define support might be subjective, hence focusing mainly on the sources of material and financial sources of support. However, given that participants had no incentive to inflate or downplay their experiences, social desirability might have been very minimal.

Fifth, the current study was limited by the challenges associated with interviewing young people and adolescents. Specifically, studies have documented that adolescents

and young people possess a wealth of information. However, interviewing them is problematic due to challenges related to cognitive and social development (Weber, Miracle & Skehan, 1994), and unequal power-relationships –especially for orphaned children (Einarsdóttir, 2007). Although the current study attempted to limit these challenges by using research assistants known to the participants, interviewing them at the location convenient to them, as well as using the language they were more comfortable with, some adolescents were still not forthcoming during in-depth interviews. As such, analysis of qualitative data was limited to content-based methods. It is imperative to provide sufficient training to interviewers on the challenges as well as the effective techniques used to interview young people and adolescents, including probing and the use of appropriate follow-up questions. In addition, employing additional techniques such as drawing and captioning (or drawing stories) might be a better alternative of getting young people to talk about their lives and share their experiences.

Sixth, the current study did not explore caregiver's perspectives regarding social support available to them and the children under their care. Given that these are the primary caregivers, they are in a better position to provide information on the availability of social support in their communities, how the children under their care are able to thrive amidst all the difficulties, provide insights on the kinds of support services available/lacking in their communities, and support programs and intervention that might help ease the challenges of taking care of orphans and vulnerable children in their households and communities. Future research should explore and investigate this line of inquiry.

Another limitation that should be highlighted concerns the ability to generalize the findings from the current study. The study utilized data collected from a sample of orphaned adolescents, enrolled in school, in a rural setting. Results may be different for orphaned adolescents out of school and those living in urban settings. Therefore, these results cannot be generalized on all orphaned or vulnerable adolescents.

5.3. Implications for programing and policy

Results from the current study point to several implications for programming and policies that provide support to orphaned and vulnerable children, as well as their caregiving families, especially in sub-Saharan Africa. Although the infrastructures for economic support are important, programs should also work to strengthen the relational and social assets of orphaned children and their families within the communities they serve. Programs should understand the interconnection between strengthening families economically, socially and relationally. Relationship assets such as communication, problem solving and social support (including emotional, financial, instrument /in-kind and informational support) have been documented to predict positive outcomes for low income families (Orthner, et al., 2004). Moreover, previous research has documented that children facing adversity, such as loss of a parent(s) have found the most significant positive influence to be a close, caring relationship with an important adult –whether a guardian or a supportive non-relative in their social world who believed in them (Walsh, 2015). There is no doubt that families caring for orphaned children need help in acquiring economic resources, however, the value of strengthening relationships between

families and the larger community should be given equal attention by those who support them.

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. According to Putnam (2000), bonding social networks involves connecting individuals or groups that are homogenous. On the other hand, bridging social networks involve connecting individuals or groups that are heterogeneous to encourage interaction beyond their daily lives and communities. Among orphaned and vulnerable children, bonding social networks may occur through encouraging orphaned children and their caregivers to form relationships with each other, especially with individuals working toward the same goals. Poor families have different strengths and resources, including knowledge, relationships outside of their communities and unique lived experiences. These strengths and resources once pooled together could help improve the wellbeing of children and families. It should be noted however that for bridging social support networks to succeed, individuals and families should have shared goals, agree on shared actions needed to achieve the goal, share similar lived experiences –in this case as poor families caring for orphaned and other vulnerable children, and share a willingness to help one another succeed while working to improve their communities (Freeman & Dodson, 2014).

On the other hand, bridging social networks among poor families might not function in the way Putnam (2000) suggested. This is because the gap between low income individuals and the rich or those in positions of power might be too wide that the

possibility of developing relationships is nonexistent (Freeman & Dodson, 2014). As such, bridging relationships might only 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. Through their work with the communities, these individuals plan an important role in accumulating internal social capital at the grassroots levels and are at the forefront in accruing external social capital through partnerships with outside elites (Purdue, 2001). As such, participants should be encouraged to utilize opportunities that bridge relationships with program staff or key personnel working in their communities. Such individuals have access to information related to education, employment opportunities and skill training within and outside the community, and may be prepared to share this information and resources to orphaned children and their families. Therefore, by bridging relationships with program staff, supportive programs not only provide services to poor orphaned children and their families, but may also offer opportunities for social leverage (Dominguez & Watkins, 2003; Rhodes, 2004).

In Uganda, the national policies established to support orphans and vulnerable children and their caregiving families recognize caregiving and support from the community as second in line from the family to provide care and support to orphans and vulnerable children, and that community support is needed to make sure that the family does not disintegrate further in the face of HIV and AIDS (The Republic of Uganda, 2011; 2004a). However, even with this plausible recognition, the existence of policies, legislations, institutional frameworks and the overall institutional capacity for

coordinating and implementation of the national orphans and vulnerable children interventions is still poor.

Public programs and policies including anti-poverty programs that are implemented selectively do not help orphaned children or their families get ahead because they are usually implemented in communities that are less vulnerable. Family-based economic strengthening programs and interventions on the other hand have proved to benefit children and their households on a range of economic, social, health outcomes and overall family functioning. There is need for policy and programmers to adopt similar interventions that are targeted enough to benefit the most vulnerable but have the potential to produce multiple outcomes for children and their families, and can be sustained for a long time.

Equally important, orphaned children who are not enrolled in school or dropped out of school need supportive services as well. Economic strengthening programs working with poor and vulnerable children –including the Bridges intervention tend to target children and adolescents enrolled in school, neglecting those who dropped out of school. It should be noted that the majority of adolescents drop out of school before the age of 18 due to a variety of push factors including poverty, geographical location, household responsibilities and child labor (Komakech & Osuu, 2014), factors beyond their control. Yet, studies have documented that by leaving school, adolescents risk being excluded from and not being able to act as full-time members of their communities, they are more likely to be stigmatized and to be considered failures (Openjuru, 2010, Tukundane, Zeelen, Minnaert & Kanyandago, 2014).

These negative perceptions limit their future opportunities and expose them to various forms of social exclusion and marginalization with very limited life options. As such, support interventions are needed for orphaned children to rebuild their self-image and equip them with the necessary practical skills, especially through vocational training to help them overcome vulnerability and social exclusion –over and above addressing the risk factors that cause adolescents to drop out of school in the first place.

5.4. Implications for theory and future research

There are two major implications for theory. First, although asset theory emphasizes the creation of social benefits in the form of social contacts and social networks to the asset owner/program participants, findings from the current study indicate that this may not always be the case. This may be due to the characteristics of program participants as well as program features. Specifically, given that program participants in the current study were young orphaned children –below the age of 18, it could be that this age is less attractive to potential non-kin social contacts, since the children's financial obligations largely depend on and are controlled by the caregivers.

Second, program features and restrictions might affect potential social networks. For example, it would be easier for participants in a non-conditional transfer program to attract social networks because there are no obligations tied to the contribution and expenditure of the program funds. Given that the CDA 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 youth who participate in the CDA as having resources to

share reciprocally. Future research should investigate how specific program features influence and/or restrict participation in social support networks among participants.

Consisted with social network theory and the study of social support and interactions, the current study documented instances where participants had engaged in unsupportive interactions with members of their social networks. Some participants identified conflicts with their caregivers regarding relationships with non-kin, breakdown in communication, supportive adults acting cold and unfriendly, receiving late support, stigmatized support- all of which are considered unsupportive interactions and could potentially affect the psychological wellbeing of orphaned children. Future research should explore both the positive and negative sides of social relationships, and their effects on the psychological wellbeing of orphaned children.

Greater attention to identify the strength of poor families, especially those providing care and support to orphaned children is needed. 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 addition, findings from the current study point to the need for cognitive interviewing for questions and concepts that may not directly translate into other cultures and languages, especially among children and adolescents living in low-resource

communities. Cognitive interviewing enables the investigator to determine the level of comprehension of difficult questions or concepts by the respondents, the retrieval from memory of relevant information, and the evaluation of both the decision and responses processes among respondents (Tourangeau, 1984). Moreover, given that the utilization of qualitative data in the current study allowed for the understanding of both the context and meaning associated with the perceptions of social support among orphaned children within their families and communities - something that the analysis of quantitative data would not achieve, researchers should consider incorporating qualitative components in their investigations.

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 addition, future research designs should incorporate true control conditions, where participants do not get any supportive services. This would enable the evaluation of the net effects of programs and interventions on participants' outcomes.

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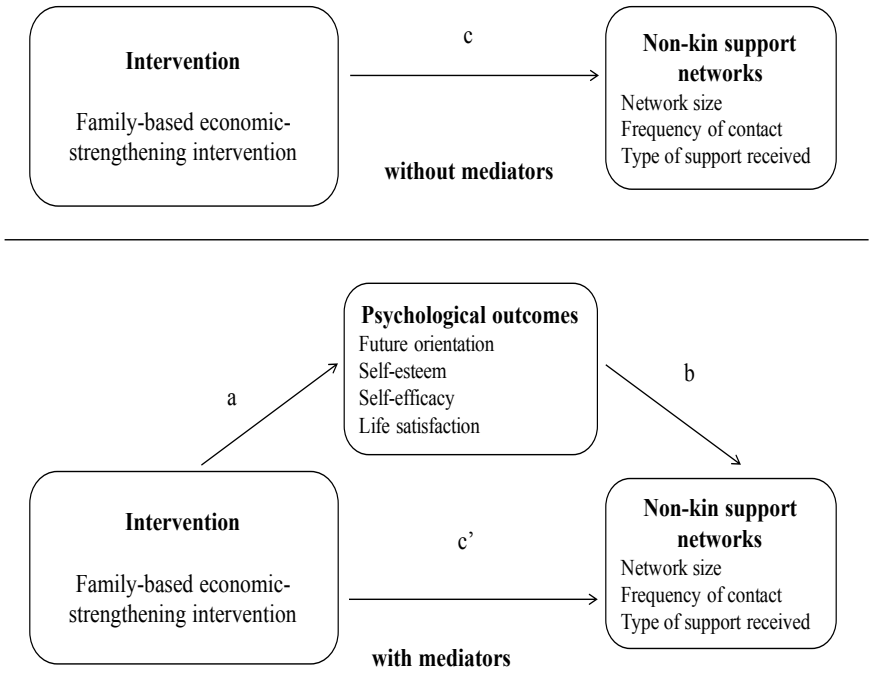
APPENDICES

Appendix A.

Figure 1.

Conceptual Model



Notes:
a – the direct effect of the intervention on psychological outcomes.
b – the direct effect of psychological outcomes on non-kin support networks
c – the total effect of the intervention on non-kin support networks
c' - the effect of the intervention on non-kin support networks controlling for the mediators

Appendix B. Description of Measurements

Table B. 1.

Tennessee Self-Concept Scale

I'm going to read a set of questions that ask about how you see yourself as a person. Please tell me if you think that the statement is Always True, Usually True, Sometimes True/Sometimes False, Usually False or Always False.

Statement	Always True 5	Usually True 4	Sometimes True/Sometimes False 3	Usually False 2	Always False 1
1. I like the way I look.					
2. I have a happy family.					
3. I don't sleep well.					
4. It's hard for me to do what's right.					
5. I know as much as the other children in my class.					
6. I'm happy with who I am.					
7. I don't feel as well as I should.					
8. It's hard for me to be around other people.					
9. I don't do well in school, even when I try.					
10. I really care about my family					
11. I'm as nice as I should be.					
12. I don't feel happy when I'm with other people.					
13. It's hard for someone to be my friend.					
14. My family doesn't trust me.					
15. My teacher thinks I am smart.					
16. I get along well with other people.					
17. I hate myself.					
18. I'm not the person I would like to be.					
19. I am an honest person.					
20. I feel good most of the time.					

Table B. 2.

Beck Hopelessness Scale

Now I am going to read some statements that describe your attitude for the past week including today. Please let me know if the statement is TRUE or FALSE.

		True	False
1.	I look forward to the future with hope and enthusiasm.		
2.	I might as well give up because there is nothing I can do about making the things better for myself.	T	F
3.	When things are going badly. I am helped by knowing that they cannot stay that way forever.	T	F
4.	I can't imagine what my life would be like in ten years time.	T	F
5.	I have enough time to accomplish the things I want to do.	T	F
6.	In the future, I expect to succeed in what concerns me most.	T	F
7.	My future seems dark.	T	F
8.	I happen to be particularly lucky, and I expect to get more of the good things in life that the average person.	T	F
9.	I just can't get breaks, and there is no reason I will in the future.	T	F
10.	My past experiences have prepared me well for the future.	T	F
11.	All I can see ahead is unpleasant rather that pleasant.	T	F
12.	I don't expect to get what I really want.	T	F
13.	When I look ahead to the future, I expect that I will be happier than I am now.	T	F
14.	Things just won't work out the way I want them to.	T	F
15.	I have great faith in the future.	T	F
16.	I never get what I want, so it's foolish to want anything.	T	F
17.	It's very unlikely that I will get any real satisfaction in the future.	T	F
18.	The future seems vague and uncertain to me.	T	F
19.	I can look forward to more good times that the bad times.	T	F
20.	There no use in really trying to get anything I want because I probably won't get it.	T	F

Table B. 3.

Community Satisfaction

Now, I'm going to read a list of statements about where you live. For each statement, please tell me how often the statement applies to you.

Statement	Almost Always 4	Often 3	Sometimes 2	Never 1
a. I like where I live.				
b. I wish I lived in a different house.				
c. I wish I lived in another village.				
d. I like my village.				
e. I like my neighbors.				
f. This village is filled with not nice people.				
g. My family's house is nice.				
h. There are a lot of fun things to do where I live.				

Table B. 4.

School Satisfaction

This section is about your experiences at school. Please select how often are the following statements apply to you.

Statement	Almost Always 4	Often 3	Sometimes 2	Never 1
3a. I look forward to going to school each day.				
3b. I like being in school.				
3c. School is interesting.				
3d. I wish I didn't have to go to school.				
3e. There are many things about school I don't like.				
3f. I enjoy school activities.				
3g. I learn a lot at school.				
3h. I feel bad at school.				

Table B. 5.

YOUTH SELF-EFFICACY SURVEY[1]

In this part, we are interested in what you think you can do when you try. This is not at test. There are no right or wrong answers. Everyone is different and all will have different answers. You should answer each question as best you can.

1. You will read a statement and then decide whether you are more like the people on the LEFT side who would rather play outside (point to the left side) or whether you are more like the people on the RIGHT side who would rather stay inside (point to the right side). First, decide which kind of person is MOST like you and go to that side of the sentence. Which is more like you?

Some kids would rather play outside in their free-time,	BUT	Other kids would rather stay inside and watch TV and listen to the radio.

2. Now, the second thing you do is to decide whether this is only SORT OF true for you OR VERY true for you. If it's only sort of true, then put an X in the box under 'Sort of true'; if it's very true for you, then put an X in the box under 'Very true'. Is this sentence sort of true or very true of you?

Very true	**Sort of true**	Some kids would rather play outside in their free-time,	BUT	Other kids would rather stay inside and watch TV or listen to the radio.	**Very true**	**Sort of true**

3. For each sentence you can only check ONE box. Sometimes it will be on one side of the page, another time it will be on the other side of the page, but you can only check ONE box for each sentence. You CANNOT check both sides, just the ONE side that is most like you.

4. That one was for practice. Now we have some more sentences that I am going to read out-loud. For each one, you will mark your answer. Check only one box for each statement, the one that describes best what you are most like. Let's start with number one, on the next page:

[1]Questions in this survey are adapted from the Project on Human Development in Chicago Neighborhoods, Earls et al., 1997.

Table B.5. (Continued)

Very true	Sort of true	Statement	BUT	Statement	Very true	Sort of true
		1. Some kids feel they can understand math if they work at it,	BUT	Other kids feel that no matter how hard they work at it, it is still very hard to learn math.		
		2. Some kids think that if they try, they can always find a friend to do things with,	BUT	Other kids think that even when they try, they have trouble finding a friend to do things with.		
		3. Some kids feel that they can figure out ways to do things safely in the community with their friends,	BUT	Other kids feel that no matter what they do, they cannot do things with their friends in the community safely.		
		4. Some kids feel that no matter what they do, they can NOT get their parent(s)/guardian(s) to listen to them,	BUT	Other kids feel that if they work at it, they can get their parent(s)/guardian(s) to listen to them.		
		5. Some kids feel that they can NOT figure out the answers in school even when they try,	BUT	Other kids feel that they can usually figure out the answers in school if they try.		
		6. Some kids feel that they have control over what will happen to them in the future,	BUT	Other kids feel that they do NOT have control over what happens to them in the future.		
		7. Some kids find that even when they try, it is hard to get people their age to like them,	BUT	Other kids think that if they try, they can get people their age to like them.		
		8. Some kids think that no matter how hard they try, they can NOT do the work expected in school,	BUT	Other kids think that they can do the work that is expected of them in school if they try.		
		9. Some kids feel that they can NOT avoid bad groups/kids in their community even if they try,	BUT	Other kids feel that even though it may not be easy, there are things they can do to avoid bad groups/kids.		
		10. Some kids feel that they can get their parents to do things with them that they like to do,	BUT	Other kids feel that no matter what they do, they can NOT get their parents to do things they like to do.		
		11. Some kids think that there is no reason to try, because they will NOT be able to make their lives better,	BUT	Other kids think that if they try, they can make their lives better.		
		12. Some kids feel that they can understand what they read if they work at it,	BUT	Other kids find it hard to understand what they read even they work at it.		

Table B.5. (Continued)

Very true	Sort of true	Statement	BUT	Statement	Very true	Sort of true
		13. Some kids think there are things they can do to get people their age to listen to them,	BUT	Other kids think that even when they try, they have trouble getting people their age to listen to them.		
		14. Some kids feel they can NOT do well in school even when they try,	BUT	Other kids feel that if they try to work hard then can do well in school.		
		15. Some kids feel that there are NOT things they can do to keep from getting scared going to school or coming home from school,	BUT	Other kids feel that there are certain things they can do to keep from getting scared going to school or coming home from school.		
		16. Some kids think they can become a successful person if they work at it,	BUT	Other kids think they should not bother trying because they will not be successful.		
		17. Some kids feel that they can get help from their parent(s)/ guardian(s) if they want it,	BUT	Other kids feel that even if they wanted it, they can NOT get their parent(s)/ guardian(s) to help them.		
		18. Some kids think they can usually finish their assignments and homework if they try,	BUT	Other kids think they can NOT finish their assignments and homework no matter how hard they try.		
		19. Some kids find that even if they try, they have trouble making new friends,	BUT	Other kids think there are thing they can do to try to make new friends.		
		20. Some kids feel safe when they are alone in their community because they know how to take care of themselves,	BUT	Other kids feel there is nothing they can do to feel safe in their community when they are alone.		
		21. Some kids feel they can talk with their parent(s)/guardian(s) when they want to, about things that make them feel bad,	BUT	Other kids feel they can NOT talk with their parent(s)/guardian(s) about things that make them feel bad.		
		22. Some kids feel that they can make things better for themselves in school if they try,	BUT	Other kids feel they will NOT be able to make things better for themselves at school even if they try.		
		23. Some kids can be themselves with their parent(s)/guardian(s) when they want to,	BUT	Other kids have trouble being themselves with their parent(s)/guardian(s) even when they would like to.		

Table B.5. (Continued)

Very true	Sort of true	Statement	BUT	Statement	Very true	Sort of true
		24. Some kids feel that they can get adults to listen to them when they try,	BUT	Other kids think that even when they try, they have trouble getting adults to listen to them.		
		25. Some kids feel they will go far in the world if they try,	BUT	Other kids feel that no matter how hard they try, they will NOT be able to do much in the world.		
		26. Some kids feel they have trouble avoiding fights in their community even when they try,	BUT	Other kids feel they can figure out ways to avoid getting into fights in their community.		
		27. Some kids feel they can make things better at home with their parent(s)/guardian(s) if they try,	BUT	Other kids feel that no matter what they do, they can NOT make things better with their parent(s)/ guardian(s) at home.		
		28. Some kids think that even if they try, they have trouble getting people to help them when they have a problem,	BUT	Other kids think they can get other people to help them when they want help with a problem.		
		29. Some kids feel that it does not matter what they do, they will NOT be able to make themselves happy in the future,	BUT	Other kids feel that they can do things to make themselves happy in the future.		

Appendix C I. Interview Guide

Introduction

1. Support or assistance from individuals may take different forms. It can be tangible [material] support or intangible [non-material] support. Please tell me, what does support mean to you? What constitutes support to you? Who do you consider a supportive person?

Sources of Social Support

2. Tell me about the people that support you or provide you with any form of assistance. These may be people you are related to [family and relatives], and those you are not related to [such as your friends, neighbors, teachers, church leaders or any other individuals in your community]. Probe
    a. What kinds of support do you receive from these individuals?
    b. For how long [years or months] have you been receiving support from these individuals? How often do you receive this support? [For example: daily, weekly, monthly, every school term, annually, etc.] **[For those without non-kin ties, skip to question 4]**
    c. Would you say that the kinds of support you receive vary from person? For example: does the support you receive from your relatives differ from the support you receive from non-relatives? In what ways? **[Skip to question 5]**

For participants who identified the Suubi/Bridges study ONLY

3. Tell me about your relationship with Suubi/Bridges. Did you know any member of the Suubi team before you joined the study? If yes, who? How did you get to know this individual?
    a. Are there specific individuals from Suubi/Bridges you consider supportive to you? Who are these individuals and what kinds of support do they provide?
    b. Apart from material support, what other kinds of support/assistance [if any] have you received as a result of participating in the Suubi/Bridges study? **[Skip to question 6]**

For participants without non-kin support networks ONLY

4. You indicated in third survey interview that you have no other individuals apart from you family and relatives who support you or provide you with any form of assistance. Is this still the case or has it changed? **[Interviewer: If nothing changed, continue with part 4a. If there is a change, ask who these individuals are and skip to question 5]**
    a. What do you do in situations when your current guardian cannot provide you with the support you need? How are you able to cope and do the things you do (well) without this support? Who do you turn to for support?
    b. What could be the reasons [if any] why you don't have any other person to offer you assistance besides your family and relatives?
    c. Who do you think should be there to help you but they are not there? What kinds of support do you think they should be providing?
    d. What kinds of support do you miss that you wish you could get? **[Skip to Question 8]**

Relationship Initiation with Non-Kin

5. Now, let's talk about your relationships with the people you are not related to that support you. Tell me about how you got to know these people and how your relationship with them developed. Probe
    a. If you initiated the contact yourself, tell me what influenced your decision to contact these individuals?
    b. If these individuals contacted you instead, what could be the reasons why? If somebody else introduced you to them, who was this person and how did it happen?
    c. Would you say that your relationships with these individuals [or some of them] began before or after you joined the study? How so?
6. How supportive is your family/caregiver regarding your relationship with these individuals? [For example: encourage you to remain in contact with them, call them, check on them, etc.] If your family/caregiver is not supportive, what could be the reasons why?
7. Do these individuals support other children in your household apart from you? If yes, in what ways?

Perceived Role of the Study

8. Thinking about all the people that support you [both relatives and non-relatives], how do you think that your relationships with them have changed [if changed at all] since joining the study? Probe

a. Would you say that the same people who supported you before you joined the study are still supporting you now or have they changed? If they have changed, in what ways?
b. Apart from the individuals that support you, tell me about the other aspects of your relationships that might have changed since joining the study [if any]. For example: how often you receive support, the types of support, and the amount of support that you receive. **[If no changes, skip to question 9]**
c. What do you think are the reasons for these changes [changes in the number of people that support you and the support you receive], if any?

Reciprocity

9. Sometimes, when people give you assistance or help you with something, you are expected to do something for them in return. Other times, people don't expect anything in return when they provide support. How does this apply to you and your relationships? Probe
    a. Would you say that most people who help you expect you to return the favor or does it vary from person to person? Tell me more about these expectations.
    b. Tell me about the things you do in return for the support/ assistance you receive from the people you identified. If any, what kinds of things do you do? How often do you do them?

Network Challenges

10. Tell me about some of the difficulties you have faced or might be facing in your relationships with the people that support you [For example: these may be related to availability of support, communication with the individuals, family not supportive, etc.] Probe
    a. Would you say that you face more difficulties in your relationships with some people than others? Tell me more about this.
    b. What do you think are the sources of these difficulties?
    c. How do you usually deal with these difficulties?

11. Is there anything else about your relationships with the individuals you identified that we have not talked about? Is there anything else you want to add on what we have talked about?

Thank you so much for your participation.
You did a fantastic job!

Appendix C II. Code Book

Code name	Description
Attributes	Participants' descriptive characteristics, including study condition (treatment or control), gender (female or male), current grade level (primary school, secondary school or out of school), and study group based on non-kin ties identified.
Meaning of social support	Any form of assistance given or received in times of need, including specific examples of social support and who is considered a supportive individual.
Sources of support	Sources of support include individuals (family/relatives and non-kin), organizations whether community based or non-governmental organizations, including the Bridges intervention that provides any form of support to participants and their families.
Received support	A description of the kinds of support that participants receive from family/relatives and non-kin ties. These may include material, financial, and non-material support such as informational, emotional and in-kind support
Duration of receiving support	Number of years/months/days that the participant has been receiving support from both family/relatives and non-kin ties.
Frequency of receiving support	Number of times the participant receives support from the identified sources i.e. daily, weekly, monthly, annually or every school term.
Support variation	Variations in the kinds of support received from family/relatives and non-kin ties, including the amount of support received.
Relationship with the Bridges study	A description of how the relationship between the participant and Bridges intervention was initiated, i.e. how participants were introduced to the study and whether participants had prior relationships with any of the staff prior to joining the intervention.
Supportive program staff	Identification of staff whom the participants consider more supportive and the reasons why i.e. whether they provide any additional support over and above the standard support provided by the intervention protocol.
Relationship initiation with non-kin ties	A description of how relationships with non-kin ties were initiated including the reasons for initiating the relationship and whether the relationship began prior or after joining the Bridges intervention.
Perceived family support	A description of ways through which family/relatives support the relationship between the child and non-kin ties i.e. encourage them to communicate/keep in touch with them, etc. This also includes reasons for the lack of family support, in case family members are not supportive of relationships with non-kin ties.

Code name	Description
Support for other children	Whether non-kin ties support other children in the household and what kinds of support they provide.
Lack of non-kin sources of support	Reasons for the lack of supportive non-kin or supportive relationships other than family members and relatives.
Alternative sources of support	A description of other sources of support adolescents turn to when the current guardians are unable to provide them with the support they need.
Unmet needs	A description of participants' needs that they should be getting including the individuals who should be there to provide support.
Perceived role of the study	A description of how the relationship between the child and supportive individuals (both relatives and non-relatives) might have changed after joining the intervention i.e. changes may be related to the number of supportive individuals, kinds of support received and frequency of receiving support.
Reciprocity	A description of current activities that adolescents perform in return of the support given to them, including future expectations from both family/relatives and non-kin.
Network challenges	A description of relationship challenges/difficulties that participants face in their relationships with both family/relatives and non-kin, including the perceived reasons for these challenges/difficulties.
Coping mechanisms	A description of how participants overcome or cope with the challenges/difficulties they experience in their relationships with both relatives/family and non-kin

Appendix D. Extended Tables

Table D. 1.

Description of participants' non-kin support networks at 12-months and 24-months post intervention initiation.

	12-months (N=1321)				24-months (1221)		
Network Information	Number (Percentages)				Number (Percentages)		
Individual Identified	1	2	3	4	1	2	3
Yes	1086(77)	183(13)	19(1.3)	1(0.1)	956(67.8)	93(6.6)	4(0.3)
No	235(16.7)	903(64)	1067(75.7)	18(1.3)	265(18.8)	863(61.2)	89(6.3)
Not Applicable	0	235(16.7)	235(16.7)	1302(92.3)	0	265(18.8)	1128(80)
Missing	89(6.3)	89(6.3)	89(6.3)	89(6.3)	189(13.4)	189(13.4)	189(13.4)
What is your relationship with this person?							
None	9(0.6)	10(0.7)	0	0	0	1(0.1)	0
Friend	36(2.6)	15(1.1)	2(0.1)	0	12(0.9)	8(0.6)	0
Neighbor	46(3.3)	10(0.7)	0	0	20(1.4)	4(0.3)	0
Teacher/school related	21(1.5)	4(0.3)	0	0	8(0.6)	2(0.1)	0
Priest/church related	10(0.7)	6(0.4)	2(0.1)	0	4(0.3)	1(0.1)	1(0.1)
NGO/Community group	60(4.3)	37(2.6)	3(0.2)	1(0.1)	45(3.2)	27(1.9)	2(0.1)
Suubi/Bridges	865(61.3)	89(6.3)	9(0.6)	0	850(60.3)	42(3)	0
Related/Fictive?	39(2.8)	12(0.9)	3(0.2)	0	17(1.2)	8(0.6)	1(0.1)
Not Applicable	235(16.7)	1138(80.7)	1302(92.3)	1320(93.6)	265(18.8)	1128(80)	1217(86.3)
Missing	89(6.3)	89(6.3)	89(6.3)	89(6.3)	189(13.4)	189(13.4)	189(13.4)

Table D.1. (Continued)

Description of participants' non-kin support networks at 12-months and 24-months post intervention initiation.

	12-months (N=1321) Number (Percentages)				24-months (N=1221) Number (Percentages)		
For how long have you been receiving support from this person?							
Within 12 months	967(68.6)	134(9.5)	14(1.0)	0	913(64.8)	68(4.8)	2(0.1)
More than 12 months	118(8.4)	49(3.5)	5(0.4)	1(0.1)	43(3)	25(1.8)	2(0.1)
Not applicable	235(16.7)	1138(80.7)	1302(92.3)	1320(93.6)	265(18.8)	1128(80)	1217(86.3)
Missing/No response	90(6.4)	89(6.3)	89(6.3)	89(6.3)	189(13.4)	189(13.4)	189(13.4)
On average, how many times per month do you contact this person?							
0 or less than 1 time	26(1.8)	4(0.3)	0	0	67(4.8)	13(0.9)	1(0.1)
1 time	240(17)	53(3.8)	7(0.5)	0	332(23.5)	26(1.8)	1(0.1)
2times	302(21.4)	38(2.7)	2(0.1)	0	213(15.1)	21(1.5)	0
3 times	210(14.9)	29(2.1)	3(0.2)	0	183(13)	15(1.1)	0
4 times or more	297(21.1)	56(4)	7(0.5)	1(0.1)	154(10.9)	18(1.3)	2(0.1)
Not Applicable	235(16.7)	1138(80.7)	1302(92.3)	1320(93.6)	265(18.8)	1128(80)	1217(86.3)
Missing/No response	100(7.1)	92(6.5)	89(6.3)	89(6.3)	196(13.9)	189(13.4)	189(13.4)
What kind of support do you receive from this person?							
Material	105(7.4)	43(3)	7(0.5)	1(0.1)	44(3.1)	21(1.5)	1(0.1)
Material and Financial	924(65.5)	114(8.1)	9(0.6)	0	879(62.3)	58(4.1)	1(0.1)
Financial only	36(2.6)	16(1.1)	3(0.2)	0	27(1.9)	12(0.9)	2(0.1)
Other [in-kind and emotional]	20(1.4)	9(0.6)	0	0	6(0.4)	2(0.1)	0
Not Applicable	235(16.7)	1138(80.7)	1302(92.3)	1320(93.6)	265(18.8)	1128(80)	1217(86.3)
Missing	90(6.4)	90(6.4)	89(6.3)	89(6.3)	189(13.4)	189(13.4)	189(13.4)

Table D. 2.

Description of participants' non-kin support networks between study groups at 24-months post intervention initiation: n (%)

Variable	Total Sample (N=1221)	Control Condition (n=427)	Treatment Condition (n=794)	Design-Based F
Non-kin tie identified				2.69
Yes	956(78.3)	321(75.18)	635(79.97)	
No	265(21.7)	106(24.82)	159(20.03)	
Relationship with non-kin tie				2.31
Suubi/Bridges	850(69.62)	277(64.87)	573(72.17)	
Other	106(8.68)	44(10.3)	62(7.81)	
No non-kin tie	265(21.7)	106(24.82)	159(20.03)	
Recency of receiving support				1.51
Within 12 months	913(74.77)	303(70.96)	610(76.83)	
More than 12 months	43(3.52)	18(4.22)	25(3.15)	
No non-kin tie	265(21.7)	106(24.82)	159(20.03)	
Frequency of contact [monthly]				
At least 2 times	612(50.41)	221(52.12)	391(49.49)	3.43*
3 times or more	337(27.76)	97(22.88)	240(30.38)	
No non-kin tie	265(21.83)	106(25)	159(20.13)	
Kind of support received				1.85
Financial & material	950(77.81)	320(74.94)	630(79.35)	
Other support	6(0.49)	1(0.23)	5(0.63)	
No non-kin tie	265(21.7)	106(24.82)	159(20.03)	

Note: *p≤.05

Table D. 3.

Correlations between indicators of participants' non-kin support networks, psychological outcomes and demographic characteristics.

Variable	1	2	3	4	5	6	7	8
1. Intervention	1							
2. Non-kin tie identified	0.0554	1						
3. Relationship [Bridges]	0.0524	0.6407*	1					
4. Relationship [other non-kin]	-0.010	0.2085*	-0.6173*	1				
5. Recency of support [within 12 months]	0.0512	0.7703*	0.8331*	-0.2717*	1			
6. Recency of support [more than 12 months]	-0.0055	0.1458*	-0.432*	0.7006*	-0.5186*	1		
7. Freq of contact [at least 2 times]	-0.0251	0.0472	0.0684*	-0.0389	0.0542	-0.0203	1	
8. Freq of contact [3 times or more]	0.0799*	0.0427	0.0004	0.0432	0.0226	0.0217	-0.625*	1
9. Type of support [financial & material]	0.0529	0.9511*	0.6747*	0.1159*	0.7731*	0.079*	0.0459	0.0348
10. Type of support [other support]	0.0016	0.0577*	-0.171*	0.2774*	-0.085*	0.2073*	-0.0021	0.0204
11. Self-concept	0.1029*	0.0522	0.0477*	-0.0073	0.0296	0.0239	-0.0062	0.0433
12. Future orientation	-0.1124*	-0.0897*	-0.0845*	0.0157	-0.0749*	-0.0048	-0.0488	-0.0043

Table D.3. (Continued)

	1	2	3	4	5	6	7	8
13. Life satisfaction	0.0253	0.0975*	0.0518	0.0339	0.0599*	0.0376	0.0696*	0.0478
14. Self efficacy	0.0676*	-0.0047	-0.0067	0.0037	-0.0356	0.0491	0.0472	-0.0303
15. Age group	0.0305	0.0497	0.015	0.0318	0.0114	0.0485	-0.0027	0.0879*
16. Gender	0.0136	0.1681*	0.1463*	-0.0141	0.1300*	0.0244	0.0836*	0.0603*
17. Double Orphan	-0.0675*	-0.0376	-0.0563*	0.0332	-0.0627*	0.0472	-0.061*	0.0294
18. No. of people	-0.0294	0.0044	0.0392	-0.0455	0.0248	-0.0324	-0.0053	-0.0205
19. No. of children	-0.0069	-0.0027	0.0364	-0.0492	0.0191	-0.0332	0.0025	-0.0099
20. Primary caregiver	-0.0396	-0.0346	-0.0063	-0.0274	-0.009	-0.0326	-0.0257	0.0093
21. Family assets	-0.0233	0.0131	0.0043	0.008	0.0166	-0.0082	-0.0145	0.0004

Note: *p≤.05

Table D.3. (Continued)

	9	10	11	12	13	14
9. Type of support [financial & material]	1					
10. Type of support [other support]	-0.2535*	1				
11. Self-concept	0.0377	0.0431	1			
12. Future orientation	-0.0968*	0.0323	-0.4826*	1		
13. Life satisfaction	0.0926*	0.0053	0.2824*	-0.2153*	1	
14. Self efficacy	-0.007	0.0074	0.3673*	-0.3602*	0.1946*	1
15. Age group	0.0207	0.0877*	0.0226	-0.0025	0.1850*	0.0067
16. Gender	0.1784*	-0.0508	-0.0518	0.0185	0.1039*	0.0254
17. Double orphan	-0.0259	-0.0335	-0.0245	0.0323	-0.0655*	-0.0743*
18. No of people	0.0139	-0.0313	-0.0503	0.0459	0.012	-0.0163
19. No of children	0.0058	-0.0276	-0.0454	0.0317	0.0101	-0.0157
20. Primary caregiver	-0.0187	-0.0468	-0.0524	0.0817*	-0.051	-0.0884*
21. Family assets	0.0179	-0.0175	0.0325	-0.0144	0.013	0.0748*

Table D.3. (Continued)

	15	16	17	18	19	20	21
15. Age group	1						
16. Gender	0.2033*	1					
17. Double Orphan	-0.045	-0.0672*	1				
18. No of people	-0.0092	-0.0076	0.1108*	1			
19. No of children	-0.0042	0.014	0.0677*	0.8704*	1		
20. Primary caregiver	-0.047	0.021	0.3941*	0.1452*	0.0789*	1	
21. Family assets	-0.0338	-0.0848*	0.0378	0.2182*	0.1647*	0.1548*	1

Note: *p≤.05

Table D.4.

Relationship between the Bridges intervention and key indicators of non-kin support networks at 12-months post intervention initiation (OR, 95% confidence intervals)

	Network identification	Frequency of contact per month [a]		Type of support received [a]	
Variable		At least 2 times	3 times or more	Financial & Material	Other support
Study condition (control)					
Treatment	1.32(0.89, 1.93)	1.13(0.85, 1.50)	1.04(0.81, 1.33)	1.30(0.89, 1.89)	1.13(0.38, 3.37)
Age group (13 & older)					
Below 13 years	0.95(0.72, 1.25)	0.83(0.67, 1.04)	1.24(1.00, 1.53)*	0.89(0.68, 1.17)	6.38(2.74, 14.8)***
Gender (male)					
Female	2.56(1.85, 3.56)***	1.66(1.25, 2.21)***	1.06(0.83, 1.36)	2.76(2.02, 3.77)***	0.26(0.10, 0.69)**
Orphanhood status (single orphan)					
Double orphan	0.92(0.62, 1.36)	0.84(0.63, 1.12)	1.13(0.86, 1.50)	0.96(0.64, 1.44)	0.54(0.12, 2.44)
Primary caregiver (biological parent)					
Grandparent	0.98(0.66, 1.46)	1.00(0.74, 1.36)	0.99(0.75, 1.31)	1.01(0.68, 1.49)	0.84(0.31, 2.33)
Other relative	0.77(0.51, 1.17)	0.94(0.66, 1.34)	0.91(0.66, 1.26)	0.83(0.56, 1.24)	0.44(0.69, 2.86)
Family composition					
No of people in HH	1.04(0.93, 1.17)	1.03(0.95, 1.11)	1.01(0.92, 1.09)	1.05(0.94, 1.17)	0.93(0.69, 1.27)
No of children in HH	0.95(0.84, 1.08)	0.99(0.90, 1.09)	0.98(0.87, 1.09)	0.95(0.85, 1.07)	0.98(0.69, 1.40)
Asset ownership					
Family assets	1.02(0.98, 1.07)	0.98(0.94, 1.01)	1.04(1.0, 1.07)*	1.02(0.98, 1.07)	0.98(0.84, 1.13)
Constant	1.99(0.81, 4.90)	0.63(0.40, 0.99)*	0.41(0.26, 0.64)***	1.55(0.86, 2.81)	0.03(0.03, 0.21)***
Design-Based F(df)	5.30***(10, 38)	1.77(10, 38)	0.84(10, 38)	5.18*** (10, 38)	4.53***(10, 38)

Table D. 4. (Continued)

	Recency of receiving support		Relationship with non-kin ties	
Variable	Within 12-months	More than 12-months	Suubi/Bridges Intervention	Other non-kin ties
Study condition (control)				
Treatment	1.25(0.88, 1.78)	0.96(0.53, 1.74)	1.24(0.88, 1.75)	0.95(0.59, 1.51)
Age group (13 & older)				
Below 13 years	0.92(0.74, 1.14)	1.36(0.87, 2.11)	0.93(0.73, 1.17)	1.20(0.87, 1.67)
Gender (male)				
Female	1.82(1.34, 2.47)***	1.19(0.75, 1.88)	1.86(1.42, 2.45)***	0.93(0.64, 1.36)
Orphanhood status (single orphan)				
Double orphan	0.71(0.52, 0.99)*	1.96(1.09, 3.54)*	0.75(0.54, 1.06)	1.44(0.90, 2.30)
Primary caregiver (biological parent)				
Grandparent	1.11(0.77, 1.59)	0.73(0.47, 1.14)	1.09(0.79, 1.51)	0.85(0.60, 1.19)
Other relative	1.02(0.70, 1.50)	0.55(0.29, 1.05)	1.02(0.73, 1.42)	0.72(0.51, 1.02)
Family composition				
No of people in HH	1.04(0.97, 1.12)	0.98(0.86, 1.12)	1.04(0.97, 1.12)	0.98(0.89, 1.09)
No of children in HH	0.97(0.89, 1.06)	0.96(0.81, 1.15)	0.99(0.91, 1.08)	0.95(0.83, 1.10)
Asset ownership				
Family assets	1.02(0.98, 1.05)	1.01(0.95, 1.07)	1.01(0.97, 1.04)	1.02(0.98, 1.06)
Constant	1.35(0.82, 2.24)	0.10(0.04, 0.23)***	0.96(0.61, 1.50)	0.23(0.13, 0.40)
Design-Based F(df)	4.49***(9,39)	1.21(9, 39)	4.19***(9,39)	1.18(9,39)

Notes:
[a] The reference group is "No non-kin tie"
*p≤.05, **p≤.01, ***p≤.005