2015

Impact of Goodwill Organizations and Community Collaboration on AIDS-Orphans' Needs in Nyanza Province, Kenya

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Abstract

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by

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MD, Windsor University, 2003

MPH, Nova Southeastern University (Summa Cum Laude), 2005

BS, Eastern Kentucky University (Cum Laude), 1989

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

August 2015

Abstract

A number of researchers have explored the toll of AIDS on the children who have become orphans as a result of the disease; others have investigated the roles of aid-giving agencies on the alleviation of the orphans' situation. However, despite researchers' pointing to the germaneness of community and goodwill agency liaison, no study had examined the impact of such collaboration on the resources available to the orphans. To this end, the heads-of-household of 532 AIDS orphans under 18 years old in Kenya's Nyanza province were surveyed to investigate the impact of community-referral on the state of AIDS orphans with regard to homelessness, birth registration, food security, school attendance, and sibling separation. The theoretical framework for the study was rooted on the interplay of resource-availability and stressors on AIDS orphans. Results of regression analysis showed that double orphans ate fewer meals than maternal or paternal orphans. There was an inverse relationship between the number of AIDS orphans in a home and the likelihood of homelessness; older orphans tended to not be separated from their siblings; double orphans were more likely than single orphans to be separated from their siblings; school absenteeism was higher among older orphans and when the head-of-household was female; community-referred, male children, offsprings of the respondents tended to have birth registration. The results of the assessment will be pertinent to stakeholders as a framework to guide program planning and implementation as they address the needs of AIDS orphans in Nyanza province and other similar communities.

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Dedication

I dedicate my doctoral dissertation to the loving memory of my parents, Festus and Esther Nwagbo, who instilled in me the discipline and fortitude that have guided me over the years.

Acknowledgments

This journey was arduous and fraught with many challenges, paramount among which was juggling a medical career along with dissertation writing. Furthermore, I travelled to Kenya on the heels of the West Gate violence, with great trepidation. Added to that was the hardship of data collection which saw me on motorbike rides through treacherous terrains, speeding through bumpy sometimes muddy unpaved pathways while being whipped on the face and arms by low-hanging tree branches and almost being crushed by two trucks from opposite directions that would not yield the right-of-way to each other on a narrow bridge. The experience had me asking God if those were my final days on earth. I certainly would not have come this far but for the Grace of God.

"For what you have done I will always praise you in the presence of your faithful people. And I will hope in your name, for your name is good" (Psalm 52:9).

Many thanks to Reverend Father Fredrick for coordinating my travel and lodging; thanks to Dorcas Orwa in whose house I spent the nights when I was not out conducting surveys. Thanks to Nicholas Ngesa for coordinating the translation of my questionnaire to two local languages. My gratitude also goes to Dr. Shen, my mentor and committee chair, Dr Patrick Tschida, committee member, and Dr. Angela Prehn, University Research Reviewer (URR), for their hard work, guidance, and unceasing dedication that helped me through every milestone in the dissertation process. I am grateful for the support of my family, especially, my daughter and magnum opus, Chinwe Kpaduwa, MD. Many thanks go to my sister and friend, Rev. Sr. Mary Eugene, who has been my emotional and spiritual support.

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Chapter 1: Introduction to the Study

Introduction

Young AIDS orphans, especially those under 10 years old, are particularly vulnerable to malnutrition, lack of medical care, lack of education, and illnesses, as some of them themselves be suffer from the sequelae of HIV infection (Sachs, Sachs, & Jeffrey, 2004). Complicating the issue is the discrimination the orphans face (Gonzalez-Rivera & Baumemeister, 2007). That is especially the case in situations where the orphans suffer from chronic and debilitating illnesses (Sachs et al., 2004). Furthermore, for many of the orphans, along with the loss of their parents and caregivers was the loss of homes, properties, and of financial stability (Harms, Jack, Ssebunnya, & Kizza, 2010).

Guardianship of the AIDS orphans by close family members is often not feasible as aunts and uncles, who are the logical members of the extended families to assume the responsibility of caring for the orphans (Nyambedha, 2007), are themselves afflicted and suffering with the disease or have died as a result of the epidemic. Even in cases where extended family members are alive and well, in Kenya, a country with a 2008 per capita income of $788.10, most extended family members are often not financially capable of taking up the added responsibility of caring for their orphaned relatives (UNdata, 2010). Furthermore, some extended family members who, out of duty, took on the care of these orphans, were often elderly grandparents who were physically too frail and too poor to provide the orphans with the basic necessities, including food and clothing (Drew, Foster, & Chitima, 1996). In many cases, when in the care of extended families, the orphans were subjected to physical and emotional abuse (Nyambedha, 2007; Sachs et al., 2004).

The fates of some of the children included dropping out of school (Mishra, Arnold, Otieno, Cross, & Hong, 2007; Nyambedha, 2007), harsh home life of child labor (Landry, Luginaah, Maticka-Tyndale, & Elkins, 2007), physical and psychological trauma, depression (Harms et al., 2010), sexual exploitation, and child prostitution (Ostergard, 2004).

As a consequence of harsh living conditions and lack of nurturing adult caregivers, some of the orphans ran away from their extended families only to live on the streets and turn to prostitution (Ali, 1998) to earn a living and to fend for themselves and their siblings; worse yet, they engaged in unprotected sex and participated in spreading HIV (Nyambedha, 2007). Nyambedha, Wandibba and Aagarrd-Hanen (2001) opined that adverse circumstances such as homelessness, sexual exploitation, child-labor, and interruptions or cessation of formal education would portend a bleak future for the AIDS orphans.

Various international goodwill agencies responded to orphans' needs, which included procurement of birth registration, food, medical, educational, and social assistance. However rural, the efforts to provide the orphans with such necessities were not sustainable. What was more, logistical constraints prevented the agencies from reaching many of the orphans in impoverished communities (Schenk, 2009). Thurman, Kidman, and Taylor (2011) and Schenk (2009) blamed the dissimilitude in program-implementation for the failures. The uncoordinated endeavors notwithstanding, the noninvolvement of local communities derailed the endeavors, opined Schenk (2009). These factors highlighted the necessity for a consensus on how best to address the needs

the AIDS orphans (Thurman et al., 2011). In the study, I investigated how the referral of AIDS orphans by the local communities to goodwill agencies impacted the amount of resources the orphans received.

Background

AIDS orphans have grown in number since the beginning of the epidemic because of reasons ranging from cultural and socioeconomic to political. Although efforts have been geared toward finding the cure for AIDS, AIDS orphans have often been the forgotten victims of the pandemic. Limited access to antiretroviral treatment has indirectly resulted in the increase in the number of AIDS orphans in a number of countries including Kenya (Ford, Mills, & Calmy, 2009). Of those who had access to treatment, adherence to treatment was as low as 62.5% in a study of 352 HIV sero-positive individuals (Unge et al., 2010). Such low treatment compliance has lent itself to drug-resistant strains of tuberculosis and HIV (Yew & Chau, 1995). Moreover, the practice of limiting treatment to only those in advanced disease states (Ford et al., 2009) has led to an overall increase in the number of orphans left to fend for themselves as the disease has continued to ravage the country (Nyambedha, Wandibba, & Aagaard-Hansen, 2003a). Granted, the Kenyan government in recent years has come to terms with the notion that HIV/AIDS was an epidemic in the country (Kenya Ministry of Health, 2008), but it fell short in the provision of resources with which to adequately address the needs of the orphans who were the consequences of the HIV/AIDS epidemic in Kenya (Nyambedha, Wandibba & Aagaard-Hansen, 2003b).

The Problem Statement

Addressing the plight of the AIDS orphans was the central feature of a number of nongovernmental and faith-based goodwill agencies. However, such efforts have not yielded comprehensive sustainable results (Schenk, 2009) because those efforts have not included local communities. The results of a number of studies have indicated that the AIDS orphans would be better served through collaborative initiatives involving the communities as stakeholders (Donahue & Mwewa, 2006; Schenk, Michaelis, Sapiano, Brown, & Weiss, 2010). No previous study had investigated the impact of how such an approach would reflect on the met needs of the AIDS orphans because some goodwill agencies have not embraced the idea of involving the community due to the limited amount of resources available for distribution to the orphans (Depp, Marunda, & Yates, 2006). Furthermore, research itself would be resource-exhausting (Schenk et al., 2010). Hence, with the help of this study, I sought to discover the extent to which the needs of the Kenya AIDS orphans studied were met when goodwill agencies worked with local communities to address the orphans' needs specifically in the areas outlined in the research questions. The study was targeted to finding out if those AIDS orphans who received assistance from goodwill agencies through community referrals (independent variable) fared better, in terms of school attendance, food security, sibling separation, homelessness, and birth registration, than those AIDS orphans who received resources directly from goodwill agencies. The results were differentiated for paternal, maternal, and double AIDS orphans.

Theoretical Framework

Ensel and Lin (1991) developed a theory that described how the availability of resources mitigated psychological stress. The authors determined

that "stressors and resources in the social environment had a direct impact on depressive symptoms;

- that social resources mediated the effects of social stressors on psychological distress;
- that psychological resources indirectly affected distress in that they enhanced social resources" (Ensel & Lin, 1991, p 321).

Nyamukapa et al. (2008) expounded upon the interplay of stressors and resources especially as they related to AIDS orphans. In their study, Nyamukapu and his coinvestigators shed light on the pathways from AIDS orphanhood to the potential consequences relating to the emotional development of AIDS orphans. The aim of the authors' framework was two-fold; namely

"to identify and improve the understanding of the interrelationship between HIV/AIDS-associated parental illness and death and the psychosocial distress that manifest in children affected by HIV/AIDS, and

to investigate the relationship between children's development and their future life chances" (Nyamukapa et al, 2008, p. 133).

The authors further theorized that an interplay of factors such as a child's age, gender, and resilience at the time of parental death as well as the cause and order of deaths in that family determined how a child fared psychologically (Nyamukapa et al.,

2008). Some of the far-reaching effects of parental death included malnutrition, sibling separation, homelessness, poverty, school absenteeism or dropout, limited or no healthcare access, lack of social support, as well as depression (Nyamukapa et al., 2008).

The result of their study showed how being an orphan was positively related to poverty, school dropout, lack of social support, and psychological problems. The framework developed by Nyamukapa et al. (2008) was the foundation upon which I formulated my dissertation. Most of the variables identified by the Nyamukapa et al. served as the core variables that I employed to develop the research questions for this study. The aim of this study was to investigate whether community affiliation with goodwill agencies served to address the AIDS orphans' needs in order to prevent the long-term unpleasant sequelea theorized by Nyamukapa et al..

Conceptual Framework

Nyamukapu et al. (2008) formulated a framework that described the plight of AIDS orphans. Although the authors' study was on AIDS orphans in Lesotho and Malawi, the impact of the HIV infection and its sequelea were similar to those described in Kenya AIDS orphans (Landry, Luginaah, Maticka-Tyndale, & Elkins, 2007; Mishra, Arnold, Otieno, Cross, & Hong, 2007; Oburu, 2005; Okal et al, 2009). For example, the authors indicated that orphanhood could lead to emotional difficulties, sibling separation, child relocation, lack of social support, malnutrition, material deprivation, school absenteeism, and academic problems, among others. The authors further indicated that the above conditions would predispose the orphans to becoming unfulfilled and nonproductive citizens in adulthood. The unproductive citizens, argued the authors,

would ultimately encumber the political and financial wellness of the country (Nyamukapu et al., 2008). The framework would provide the impetus for stakeholders (community members and goodwill agencies with the AIDS orphans' interest at heart) to focus their joints efforts in order to address the AIDS orphans' plight. Such stance would interrupt the stages and circumstances identified in the framework that could, otherwise, progress to political and economic deterioration.

The rationale for the application of Nyamukapu et al.'s (2008) framework in this study was to use it as a guide for the development of research questions that, when answered, would help determine ways to champion the cause of AIDS orphans. For example, would the orphans receive more assistance if they contacted goodwill agencies directly or through community referral? Also, would the amount of resources received differ among paternal, maternal, and double AIDS orphans? The answers to the research questions would help to advise policy makers as well as benefactors of AIDS orphans on areas to focus efforts as they address the concerns of AIDS orphans.

Research Question and Hypotheses

The following were the research questions and hypothesis developed in light of the information gathered on the plight of AIDS orphans in Kenya. For the purpose of this study, AIDS orphans were categorized as paternal, maternal, and dual orphans. Details of the study methodology are outlined in Chapter 3.

Research Question 1: Did community referral of AIDS orphans to goodwill agencies result in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily?

Directional Hypothesis 1. Community-referral of AIDS orphans to goodwill agencies resulted in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily.

$H_0$1: Community referral of AIDS orphans to goodwill agencies did not result in increased number of maternal, paternal, and double AIDS orphans who ate at least, two meals daily.

H_a1: Community referral of AIDS orphans to goodwill agencies resulted in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily.

In order to address this research question, I calculated the differences in the community referral versus noncommunity referral and how they related to the likelihood that an AIDS orphan ate at least two meals daily. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the likelihood that an AIDS orphan ate at least two meals daily and community referral.

Research Question 2: Did community referral of AIDS orphans to goodwill agencies result in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless?

Directional Hypothesis 2. Community- referral of AIDS orphans to goodwill agencies resulted in fewer numbers of days that maternal, paternal and double AIDS orphans were homeless

$H_0$2: Community referral of AIDS orphans to goodwill agencies did not result in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless.

H_a2: Community referral of AIDS orphans to goodwill agencies resulted in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless.

In order to address this research question, I calculated the differences in community-affiliation of AIDS orphans related to the likelihood of homeless among the orphans. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between homelessness among AIDS orphans and community referral.

Research Question 3: Did community referral of AIDS orphans to goodwill agencies result in decreased number of sibling separation among maternal, paternal, and double AIDS orphans?

Directional Hypothesis 3. Community-referral of AIDS orphans to goodwill agencies resulted in decreased number of sibling separation among maternal, paternal and double AIDS orphans.

$H_0$3: Community referral of AIDS orphans to goodwill agencies did not result in decreased number of sibling separation among maternal, paternal, and double AIDS orphans.

*H*a3: Community referral of AIDS orphans to goodwill agencies resulted in decreased number of sibling separation among maternal, paternal, and double AIDS orphans.

In order to address this research question, I calculated the differences in the enrollment categories and how the type of orphan hood related to the likelihood of sibling separation. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the sibling separation and community referral.

Research Question 4: Did community referral of AIDS orphans to goodwill agencies result in decreased number of absences from school among maternal, paternal, and double AIDS orphans?

Directional Hypothesis 4. Community-referral of AIDS orphans to goodwill agencies resulted in decreased number of absences from school among maternal, paternal and double AIDS orphans.

$H_0$4: Community referral of AIDS orphans to goodwill agencies did not result in decreased number of absences from school among maternal, paternal, and double AIDS orphans.

H_a4: Community referral of AIDS orphans to goodwill agencies resulted in decreased of number of absences from school among maternal, paternal, and double AIDS orphans.

In order to address this research question, I calculated the differences in the enrollment categories and how the type of orphan hood related to the number of AIDS orphans' absences from school. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the school absences and community referral.

Research Question 5: Did community referral of AIDS orphans to goodwill agencies result in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates?

Directional Hypothesis 5. Community-referral of AIDS orphans to goodwill agencies resulted increased number (above 30% Kenya's national average) of in maternal, paternal and double AIDS orphans with birth registration or birth certificates.

$H_0$5: Community referral of AIDS orphans to goodwill agencies did not result in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates.

H_a5: Community referral of AIDS orphans to goodwill agencies resulted in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates.

In order to address this research question, I calculated the differences in the maternal and birth registration categories and how the type of orphan hood related to the changes in such categories. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the birth registration and community referral.

Nature of the Study

Did local community referral foster increased resources for AIDS orphans? If so, to what extent did it occur for paternal, maternal, and double orphans? Those were the foci of this quantitative study, designed with survey questionnaire to help answer the research questions. I explored how the measure of the dependent variables (homelessness, school attendance, sibling separation, food security, and birth registration)

differed in relation to the independent variable (reception of resources through community-referred goodwill agencies). Although the questions pertained to AIDS orphans, the questionnaire was designed for heads-of-household who were in a better position to know whence the resources were received. Furthermore, the questions were fashioned on ratio scales that allowed the respondents to select responses that best represented their opinion about the survey questions. The point scale facilitated statistical computation of the responses and thus helped answer the research questions. In Chapter 3, I outlined a detailed description of the study design.

Definitions

AIDS orphan: An orphan was defined as a child under the age of 18 who had at least one parent die. A child whose mother had died of AIDS was classified as a maternal AIDS orphan whereas a child whose father had died of AIDS was classified as a paternal AIDS orphan. A child who had lost both parents to AIDS was classified as a double orphan (Joint United Nations Programme on HIV and AIDS, 2004). For the purpose of this study an AIDS orphan was a child under 18 years of age whose parent or parents' reported cause of death is AIDS. The respondents' report about the cause of death was regarded as the truth because verification of the cause of death was not feasible.

Community collaboration: cooperative endeavor among entities with a common goal (Innovations, 2011). Community collaboration was measured in terms of the number of entities established to serve the interest of the identified AIDS orphans in each locale.

Education: The act or process of imparting or acquiring general knowledge, developing the process of reasoning and judgment, and generally of preparing oneself or

others intellectually for mature life (Dictionary Reference, 2010). For the purpose of this study, education was considered in terms formal enrollment in an institution of learning for the purpose of acquiring a skill and or intellectual advancement.

Homelessness: without a specific place of abode (Merriam-Webster, 2013). Furthermore, Hillis et al. (2012) included in the group of homeless as individuals who spend a minimum of two out of seven nights away from their established homes. For the purpose of this study, homeless AIDS-orphans described those who, of their own volition, live on the streets for any reason even when they have a place they could call home.

Goodwill and community affiliation: Self-report of the receipt of assistance from any entity that represents the product of community collaboration and serves any of the AIDS orphans' needs.

Head-of-household: an adult who pledges care and sustenance to other adults and or children in the same residence.(Legal dictionary, 2010). For the purpose of this study, the term applied to proprietors and the representatives of orphanages or similar institutions.

Health care access: The "entry or use of the healthcare system" (Mossialos & Thompson, 2002, p. 20). For the purpose of this study healthcare access applied to the ability of the head-of-households to obtain medical care for the HIV-positive AIDS orphans in their care.

Local community members: Community stakeholders comprising of consumers, heads-of-household, families, citizens, and residents of the community.

Medical care: Constant care for HIV-positive patients, received from a physician or nurse or other healthcare professional in a facility such as hospital or stationary or mobile clinic.

Resources: The wherewithal, including personnel, capital, and technology necessary to mitigate the impact of orphaning (UNdata, 2010); resources included but were not limited to the following:

- School supplies (school fees, books, uniform)
- Food and Nutrition Clothing and beddings
- Transportation
- Healthcare access
- Procurement and safe-keep of birth records
- Property rights and right to inherit deceased parents' assets.
- Safety and protection of children

Sibling separation: For the purpose of this study, I defined sibling separation full, half, or step-brothers or sisters who are made to live apart from one another for any length of time as a consequence of their orphanhood. Gong et al. (2009) considered siblings as separated if brothers and sisters live in different households

Stable home environment: For the purpose of this study, stable home environment entailed a place where AIDS orphans' basic of food, clothing, and shelter were met; needs where they felt safe and secure from physical harm, exploitation, or other emotional abuses; a place where their interests were protected and where the orphans felt loved and nurtured.

Street children (homeless children): Males or females less than 18 years of age who roam and live on the streets, unprotected and without adult supervision (Sekandi, 2011)

Purpose of the Study

Nyambedha and Aagaard-Hansen (2007) cited that support network systems established by and comprised of members of the community would mitigate the plight of the orphans because it would provide the necessary resources that would enable the orphans to grow into productive adults of the communities in which they live. A support network system would not be complete without the financial arm that would provide the most tangible resource particularly vital in a country where a majority of the population lives below the level of poverty. The Kenyan government had a stake in the process to ensure adequate supervision of AIDS orphans as well as spearhead the apportionment of resources to appropriate parties. Over 50 international and national governmental and nongovernmental organizations (see Appendix A) worked in Kenya with a view to mollifying the burdens of AIDS orphans. See Appendix B for a list of some of the major organizations along with descriptions of their functions.

The result of the investigation provides quantitative evidence to engender grants, policies, and activities to improve the conditions of Kenya's AIDS orphans. The goal of this study was to quantitatively address the following:

- to discover whether or not the orphans in the communities under study received assistance from any goodwill organizations;

- to evaluate the impact of community referral to goodwill organizations on amount of AIDS orphans' needs that were met.
- to compare the differences in impact in relation to maternal, paternal or double AIDS orphans;
- to objectively and quantitatively measure the outcome indicators through stringently collected data, and;
- to answer the research questions and produce scientifically accurate results that depicted the conditions studied.

Assumptions and Limitations

Because the survey relied on the reports of the heads-of-household, a source of limitation might have arisen in instances where the respondents misrepresented or withheld information regarding their wards. Also, some heads-of-household might have been reticent to divulge personal information that might have distorted the results of the survey. Nevertheless, I anticipated that the large number of true responses would minimize the effects of any distortions. Furthermore, limited resources made it impractical to verify the causes of death of the parents of the orphans. In addition, some of the deaths might have occurred without identified causes; that would probably have reduced the number of orphans included in the study. However, because there was a set minimum number of orphans and households, the only snag was that it took longer to achieve the desired number of individuals eligible for the survey as some households were considered ineligible to participate in the study whereas they might have, in fact,

been eligible. Nevertheless, it did not adversely affect the methodology or result of the study.

However, I encountered limitations in the study methodology as it pertained to the evaluation of AIDS orphans' nutritional state, because the heads-of-households served as surrogates for the AIDS orphans in the study. In addition, the study design did not permit an in-depth assessment of the orphans' actual nutritional status, which might have been evaluated through blood sampling, witnessing of the orphans' daily diet, and measurement of their percentile body mass index (BMI). Hence, the report of the head-of-household sufficed for the study. Other limitations might be those inherent in a study of this nature and caliber.

Scope and Delimitation

As I alluded to in the review of literature, AIDS orphans' plight varied in scope, severity, and dimension. However, for practical reasons, I limited the scope of this study to the investigation of how referral to goodwill agencies through community affiliates changed how AIDS orphans fared as regards homelessness, sibling separation, food security, school attendance, and birth registration in comparison to AIDS orphans who received help directly from goodwill agencies. Practicability was the reason I left out the issue of social support, as an example, because it was a multi-index concept that would be better addressed as a stand-alone research project. Furthermore, social support has both tangible and intangible dimensions that I could not have effectively evaluated through proxy respondents.

The study focused on the issues of orphans of AIDS and excluded all other orphans. The study population comprised exclusively of the AIDS orphans from Nyanza Province of Kenya. However, the results of the study could be generalized to contiguous provinces as AIDS orphans in those provinces have similar characteristics and suffer the same dilemma that would require the same mode of attention.

Study Significance

There is a paucity of research in the area of orphans in Kenya. Some authors argue that singling only orphans for help was unfair because most of the child population in Kenya is equally disadvantaged (Richter & Desmond, 2008). Such a sentiment made light of the stigma and deep psychological impact of orphanage due to AIDS (Cluver & Gardner, 2006; Cluver, Gardner, & Operario, 2007; Cluver & Mark, 2009). Nevertheless, this study called attention to AIDS orphanhood and proposed a comprehensive initiative to help the orphans cope with their losses and thrive to their full potential. Of import was the singular composition of the study population. This study focused on rural communities in areas in Nyanza where the burden of HIV/AIDS was greatest in Kenya (Kenya Ministry of Health¸ 2008) and where invariably, there were the most number of AIDS orphans. Furthermore, this study highlighted a pertinent component that previous Kenya initiatives had lacked (Schenk, 2009; UNICEF, 2005) in that it involved the collaboration of the Kenya government with funding agencies, orphanages, and local communities in a unique working environment that would foster an enrichment of the lives of AIDS orphans in Kenya. Supervision of the process would be a key ingredient in the success of the collaboration.

Hence, this study highlights the importance of integrating orphan care and supervision as well as the collaboration of foster-caregiver with goodwill organizations to provide the material and psychological needs of AIDS orphans. The focus illuminates the momentousness of helping the younger generation who has lost their primary care-givers to gain the opportunity to transcend their situations and live productive lives, with the help of the local communities and goodwill organizations.

Summary

The chapter provided a general description of the of AIDS orphans as the often neglected consequence of the HIV/AID pandemic, with emphasis on the singularity of challenges that abound and only peculiar to them as a segment of the population. In the chapter, I further delved into the responses of aid-giving agencies as well as the Kenyan government stance with regard to AIDS orphans' predicament. Furthermore, I outlined the theoretical and conceptual framework upon which the study was based. In one segment of the chapter, I outlined the research questions and hypothesis that helped me to help formulate a robust research design. In another segment, I discussed the nature and purpose of the study, its assumptions, limitations, scope, and delimitations. Furthermore, the chapter featured the definition of terms used in the study. I concluded the chapter by citing the significance of the study as a tool to encourage the development of comprehensive and sustainable policies and actions to successfully address the long-term needs of AIDS orphans in Kenya.

Chapter 2 is an outline of the justifications for the study by way of literature review on AIDS orphans, with specific emphasis on AIDS orphans in Kenya. In the

chapter, I indicated the strategies that enabled successful literature search for this study. I concluded the chapter with an exploration of initiatives attempted by organizations in Kenya to address the problem, along with the drawbacks of the projects.

Chapter 3 is a discussion of the study methodology and the justification for a quantitative design. Furthermore, the chapter includes the research questions, the study design, sampling, data collection, and analysis in addition to ethical issues in relation to the use of study participants in the research. Issues relating to participant recruitment and confidentiality are also addressed in Chapter 3.

Chapter 2: Literature Review

Introduction

In Chapter 2, I outline the justifications for the study by way of literature review on AIDS orphans, with specific emphasis on AIDS orphans in Kenya. I also indicate the strategies that enabled successful literature search for this study. Following the strategy is an outline of the history and epidemiology on the spread of HIV in Kenya. I explore research material on plight of AIDS orphans, with special emphasis on AIDS in Kenya as well as discusse the initiatives that had been tried by organizations in Kenya and other sub-Saharan nations to address the problem, and their drawbacks. Finally, in the chapter I outline a plan of action that will ensure a successful program that would be sustainable.

Literature Search Strategy

I conducted the search for academic literature on the research subject matter primarily via the Walden University Library, as well as other web-based sources. I procured research material chiefly from the following search engines: Academic Search Complete, PubMed, CINAHL Plus with full text, ProQuest Central, Science Direct, Health Science and Nursing, Health Science and Social Sciences, Multiple disciplinary, SocIndex with Full Text, Dissertation, ProQuest Dissertation & Theses, WHO, UNAIDS, PEPFAR, UNICEF, Kenya Ministry of Health, Kenya AIDS NGO Consortium, Google, Google Scholar. The stringed words and phrases used in the search included but were not limited to *AIDS, Slim disease, AIDS orphans orphans, orphanages, Orphanages in Kenya, Kenya orphans, Kenya AIDS orphans, cultural practices , pregnancy and AIDS, migrant workers, circumcision, HIV, Kenya, sexual cleansing, childhood marriage, AIDS*

orphans, school attendance, AIDS, sibling separation, orphans, social support, AIDS orphans, homelessness, AIDS orphans, social support, AIDS orphans, HIV spread, child-headed households, and *vulnerable children.*

Results of the search yielded over 500 articles from which I selected over 100 articles for reasons ranging from research instead of review articles, research instead of newsletters or newspaper reports, primary reports instead of secondary source citations, peer-reviewed materials instead of nonpeer-reviewed articles, as well as scientific materials instead of lay articles and reports. All the articles included were written in English. It was important to have included articles as far back as the 1980s; this was done to include theoretical and historical perspectives of HIV and AIDS. Nevertheless, most of the articles were published in 2007 and later years.

History and Epidemiology of HIV and AIDS in Kenya

AIDS orphan hood in Kenya emerged against the backdrop of HIV and AIDS in the country; as such, the story of AIDS orphan hood would not be complete without an in-depth exploration of the inception of HIV and AIDS. Kenya reported its first clinical case of AIDS in 1986 (Kenya Ministry of Health, 2008); there was evidence to suggest that 4% of female prostitutes in the Kenyan capital were HIV positive as early as 1981 (Piot et al., 1987). The discovery became apparent when an on-going research into chancroid serendipitously revealed that 5 of the 116 blood samples collected in 1981 from Kenyan female prostitutes tested positive for HIV (Piot et al., 1987).

In industrialized nations such as the United States of America, the spread of HIV was initially predominantly among men-who-have-sex-with-other-men (Gottlieb,

Schanker, Fan, Saxon, & Weisman, 1981), prostitutes, intravenous drug users (Des Jarlais, Friedman, & Hopkins,1985; Des Jarlais & Friedman, 1988; Friedman & Des Jarlais, 1991) and hemophiliacs (Evatt, 2006). In Kenya, population studies have pointed to the predominance of HIV among heterosexual individuals (Kenya Ministry of Health, 2008). Furthermore, studies in homosexual HIV-transmission (Geilbel et al., 2007) have been hampered because homosexuality was practiced clandestinely (Geilbel et al., 2007), considered a cultural taboo (Okal et al., 2009), an unnatural practice, and a criminal offence punishable by up to 5 years of imprisonment in Kenya (Government of Kenya, 2008). Despite cultural norms and the law of the land, research pointed to an increase in HIV-1 among homosexual men (Sanders et al., 2007). The authors reported that 43% of 114 homosexual men and 12.3% of bisexual men sampled were determined to be sero-positive for HIV (Sanders et al., 2007). The sero-positivity of bisexual men, some of whom have sexual relationships with unsuspecting heterosexual women, and the solicitation of prostitution by heterosexual men were to blame for the spread of the virus to married and sexually active single women in heterosexual communities (Sanders et al., 2007).

Complicating the problem were a number of cultural and behavioral practices that perpetuated the spread of HIV infection. Below are highlights of the practices that promoted the proliferation of the disease:

Wife-inheritance, a Luo tradition in Western Kenya, was instituted to engender family continuity and brotherhood (Luginaah et al., 2005); according to the tenets of Luo tradition, when a man died, his widow was inherited by his closest adult male relative or

another adult male deemed by the clan elders to be responsible enough to provide for the dead man's widow and children (Luginaah et al., 2005). Such a tradition not only ensured the welfare of the widow and children but also ensured that the dead man's children remained in their patrilineal community (Luginaah et al., 2005; Gunga, 2009). However, in the midst of HIV the practice of wife-inheritance, tangled within the web of denial about HIV/AIDS, became a means by which HIV-infected widows infected their dead husbands' kinsmen, who invariably passed on the infection to their other wives, thereby perpetuating the spread of HIV/AIDS (Luginaah et al., 2005; Mane & Aggleton, 2001; Patel, 1997; Whitney, 1997).

Another problematic cultural norm linked with the transmission of HIV infection in some East African countries, including Kenya, was sexual-cleansing (Ayikukwei et al., 2007; Malungo, 2001). Sexual-cleansing is a ritual that demands that women engage in sexual intercourse with paid sexual partners or other designated persons in order pacify the ghosts of their deceased husbands and to sanctify the widows, so they can be inherited by their dead husband's kinsmen without incurring the wrath of the deceased men's ghosts. Sexual-cleansing is also performed to wade off evil spirits and bless families and properties; women interviewed in surveys cited fear of retribution as reason for participating in sexual-cleansing (Ayikukwei et al., 2007; Ayikukwei et al., 2008; Mane & Aggleton, 2001). Polygamy and genital-mutilation were some of the practices that subjugate women and perpetuate the spread of HIV, opined Otieno (2007); the consequences of the spread are ultimately death to the afflicted, and the emergence of AIDS orphans.

In another survey in 1997 of 15- to 19-year-old females in Kisumu, Kenya, Clark (2004) noted that although single females were more likely than married females of the same age group (21.1% vs. 4.2%, *p*-value <0.001) to offer men sexual favors in return for financial or material gain, at an odds ratio of 1.76 (*p*-value 0.0036) married females were more likely to be HIV-positive than single young women in the same age group (Clark, 2004). The author surmised that the relatively higher prevalence of HIV among married females was rooted in their tendency to engage in unprotected sexual relationships with their husbands who might have other sexual partners (Clark, 2004). This finding also pointed to how easily double orphans could result after the deaths of the HIV-infected married couples.

Though Yount and Abraham (2007) did not find a direct relationship between genital mutilation in females and increased HIV prevalence, the authors noted that, of the 3,167 females aged 15 to 49 surveyed, genital mutilation was directly related to widowhood or marital estrangement (OR =1.91). The study further revealed the following: for all those HIV-positive female study participants, 4.8% were never married, 4.4% of them had been married to men who were younger or of the same age, 11.7% of them had been married to men who were 10 or fewer years older than them, and 11.3% were married to men 10 or more years their senior ($p = 0.0001$ for chi-squared test of independence). The findings underscored the point that naïve young women married to much older men were exposed to HIV by their more sexually savvy husbands who might have several sexual partners (Otieno, 2007).

In the same year that Otieno (2007) reported on the transmission of HIV from older husbands to their younger brides, a Kenya national survey began to focus on the issue of circumcision and HIV infection. (Kenya Ministry of Health, 2008). Kenya's national sero-survey focused on 9094 females and 6840 males aged from 15 to 64 years of age, from 10,025 eligible household clusters. Of the nearly 6,840 15- to 64-year-old men studied in the national survey, when other variables were considered, 15% were uncircumcised and 85%, circumcised. Furthermore, circumcision rate rose along with increase in age range. Of those in the 15-19 age range, approximately 73% were circumcised and 27%, uncircumcised. It is worthy of note that the 15-19 year-old group was the least sexually active among the groups surveyed probably because sexual activity began much later among that age group; a situation that was not the case for females in the same age group. That seemed to account for why the prevalence of HIV was lowest among the group. Nevertheless, the study did not find a significant difference in HIV prevalence between the circumcised and uncircumcised 15-19-year olds. However, there was an inverse relationship between male-circumcision and prevalence of HIV among other age groups (Kenya Ministry of Health, 2008).

On the one hand, the Province with the highest percentage of circumcised males in all the age ranges surveyed was Northeastern, with a 97.2% circumcision rate. Nyanza, on the other hand, reported the lowest circumcision rate of 46.7%; as depicted in Figure 2 below, Nyanza has the highest HIV-prevalence in Kenya (Kenya Ministry of Health, 2008). In a separate study on the same subject, Shaffer et al. (2007) observed the HIV-infection incidence among circumcised males to be 0.79 (95% confidence interval (CI):

0.46-1.25) compared to 2.48 (95% confidence interval (CI): 1.33-4.21) in uncircumcised males. A similar study on 745 adult males by Baeten et al. (2005) revealed that, regardless of circumcision status, the probability of the study subjects, contracting HIV-1 during a sexual encounter was 0.0063 (95% confidence interval (CI), 0.0035-0.0091); the probability for circumcised vs. uncircumcised was 0.0051 vs. 0.0128 (p= 0.04). Furthermore, Lavery et al. (1999) discovered the hazard rate ratio of HIV infection to be 4.0, (95% confidence interval (CI): 1.9-8.3) (p=0.02) for lack-of-circumcision as an independent risk factor, after variables such as behavior and demographics have been taken into account.

The role of medical practices in the transmission of HIV was investigated in a study of 1620 Kenya women who had become HIV sero-positive after receiving tetanus injections as part of their prenatal care regimen five years prior to the study the results revealed an odd ratio (OR) = 1.89, 95 % CI 1.03-3.47) (Deuchert & Brody, 2006).

The role of migrant workers in the spread of HIV was elucidated in recent studies. In a focus-group-discussion study Mweru (2008) discovered that female migrant workers who were feeling particularly home-sick, isolated from the community and cash-strapped were vulnerable to HIV exposure because they tended to readily enter into relationships, co-habit with their boyfriends and engage in sexual activities infrequently using condoms (Mweru, 2008). In a prospective study of 746 male cross-province truck drivers in Mombasa Kenya, Lavery et al. (1999) noted that just like female migrants workers the truck drivers were vulnerable to HIV infection, as they often stayed away from home for days and made rest-stops in cities where they could engage the services of commercial

sex-workers. The authors reported a HIV prevalence of 3.0% among those investigated (Lavery et al., 1999). It is worthy of note that the authors did not report any HIV-prevalence information on the study group for comparison with the national data.

National data on the prevalence of HIV were revealed in 2003 based on sero-survey of 4183 males aged 15-54 and 4303 females aged 15-49 who were considered eligible for the survey. However, 70.3% of the eligible males and 76.3% of the females participated in the survey. Results indicated 4.7% and 8.7% HIV prevalence for Kenya males and females respectively. The survey also revealed that of those surveyed, females were 1.9 times more likely to be HIV-positive than males. The results were obtained after demographic and behavioral variables had been taken into account; the variables included but were not limited to: age, level of education, employment, income, marital status, exposure to sexually transmitted infection (STI) within the previous year, age at first coital experience, number of sexual partners within the previous year, exchange of sexual favors for money or gifts as well as alcohol and tobacco usage (Mishra et al., 2006).

A further evaluation of the results revealed a relatively higher prevalence of HIV (10.2 vs. 5.6) in urban than rural population. A gender breakdown of the results indicated the 7.8 vs. 3.7 prevalence of HIV was higher among urban males than among their rural male counterparts. Similarly, at 12.3 vs. 7.5, the HIV prevalence among urban-dwelling females in the study was higher than the prevalence among rural-dwelling females (Mishra et al., 2006).

Furthermore, results indicated that of those sampled in the 2007 national survey, 8.7% females and 5.6% males were HIV-positive. Females were 1.6 times more likely to

be infected than males. Furthermore, for those in the 15-19 age range, the prevalence was 4.0% for females and 1.0% for males, for age range 20-24, the prevalence was 8.0% for females and 2.0% for males. The 25-29 age range showed a prevalence of 11.0% and 8.0% for females and males respectively for females and males within the age range of 30-34 years, the study documented 13.0% and 9.0% HIV-prevalence respectively. However, for the age range of 35-39 year, the HIV-prevalence was reported as 12.0% and 10.0% for females and males respectively. Adults 40-44 years of age showed an equal prevalence of 10.0% for both genders (refer to Table 1). Similarly, an equal HIV-prevalence of 8.0% was observed for males and females within the age range of 50-54. However, the study reported that females and males 45-49 years old had HIV-prevalence of 8.0% and 6.0% respectively. The authors attributed the decline in HIV prevalence among the age group to particularly the rise in mortality resulting from a fast progression of untreated or ill-managed sequelea of HIV and also to a slight decline in the incidence of HIV as a result of successful HIV-prevention campaigns. The same factors were cited as responsible for the low HIV-prevalence of 5.0% and 3.0% for females and males respectively in the 55-59 age range. The 60-64-year old males and females show 2.0% and 3.0% HIV-prevalence respectively; (refer to Table 1, Figure1). According to the survey results females aged 30-34 had the highest HIV prevalence, followed closely by females 35-39 years of age (Figure 1); the data indicated that females within the age range of 30 and 39 bore the greatest burden of HIV infection in Kenya. On the contrary, for reasons ranging from giving-versus-receptive sexual intercourse, engaging in sexual intercourse later, the effectiveness of HIV-prevention campaigns with concomitant

decline in HIV-incidence, the 15-19 year old males had the lowest prevalence (Kenya Ministry of Health, 2008).

Table 1

HIV Prevalence Amoung 9,094 Females and 6,840 Males Within 15 to 64 Years of Age from 10,025 Eligible Household-Clusters

Age Group	% of HIV+ Males	% of HIV+ Females	Total HIV+ (%)
15-19	1	4	3
20-24	2	8	6
25-29	8	11	10
30-34	9	13	12
35-39	10	12	11
40-44	10	10	10
45-49	6	8	7
50-54	8	8	8
55-59	3	5	4
60-46	3	2	3

Note. Adapted from: Kenya Ministry of Health (2008). Kenya AIDS indicator Survey; Preliminary report National AIDS and STI control program, Ministry of Health, Kenya. Retrieved from http://www.aidskenya.org/

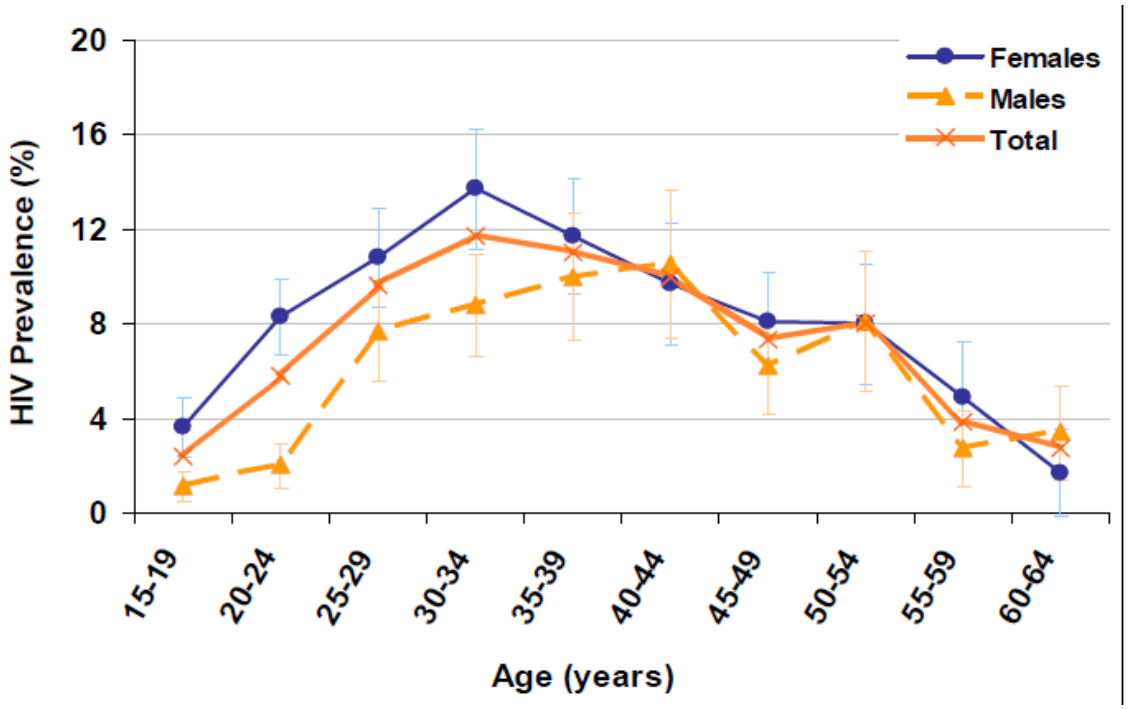

Figure 1. HIV prevalence among 9,094 females and 6,840 males between 15 and 64 years of age from 10,025 household-clusters. (The Depiction represents the natural history of HIV. For instance, the decline in prevalence after age-group 35-39 reflects increase in deaths due to the consequences of HIV infection in the absence of adequate medical care). Adapted from: Kenya Ministry of Health (2008). Kenya AIDS indicator Survey; Preliminary report National AIDS and STI control program, Ministry of Health, Kenya. Retrieved from http://www.aidskenya.org/

The 2007 study results revealed a regional variation in HIV prevalence (see Figure 2.2). For example, after correcting for age and gender, the results indicated that Nyanza province showed the highest prevalence of 15.3% whereas Northeastern province showed the lowest prevalence of 1.0%. There was a 9.0% HIV prevalence in Nairobi, the capital, 7.9% prevalence in the Coast, 7.0% prevalence in Rift Valley province, 5.1% in the Western province, and 4.7% and 3.8% HIV prevalence in the Eastern and Central provinces respectively (Kenya Ministry of Health, 2008).

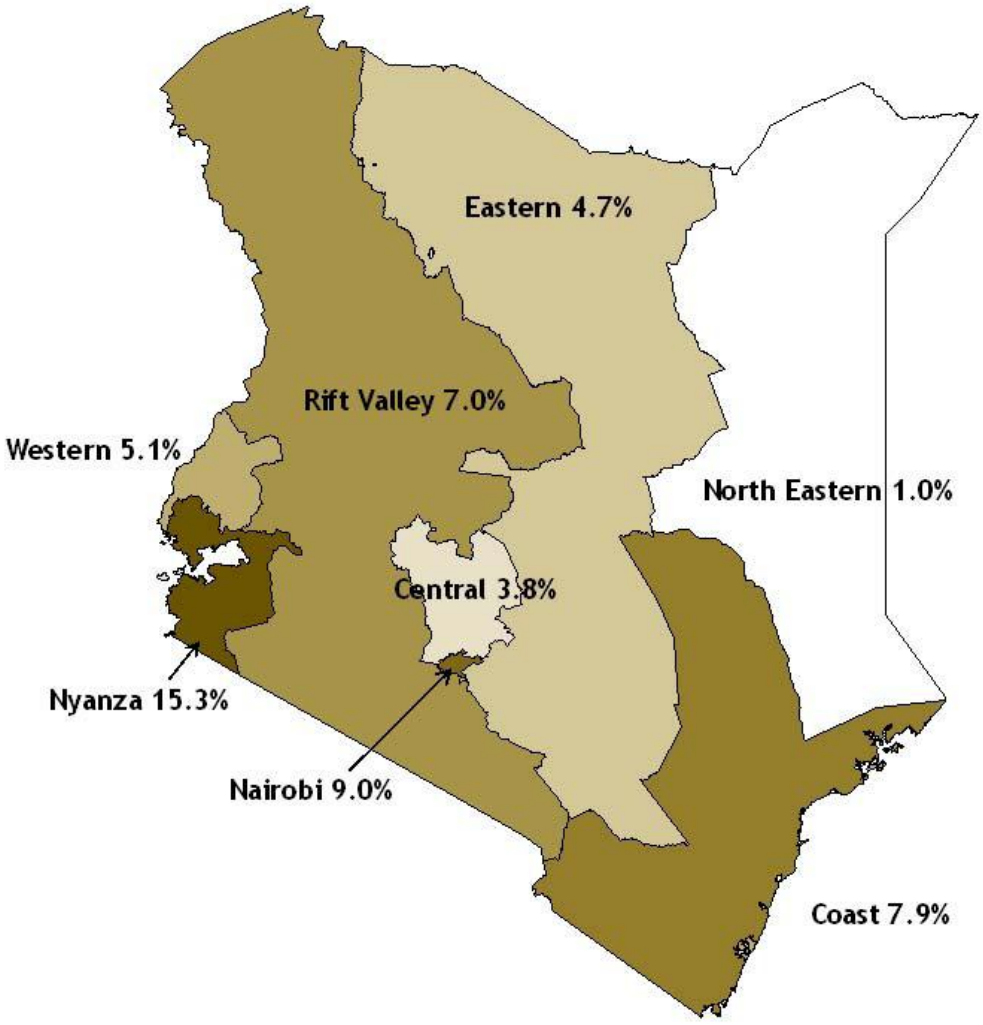

Figure 2. HIV prevalence by province based on sero-survey on about 16,000 persons. Adapted from: Kenya Ministry of Health (2008). Kenya AIDS indicator Survey; Preliminary report National AIDS and STI control program, Ministry of Health, Kenya. Retrieved from http://www.aidskenya.org/

Widowed, divorced and separated women had the highest HIV prevalence among women. For instance, Kenyan ever widowed and currently widowed had 21.2% and 20.7% prevalence of HIV infection respectively, followed by divorced or separated women with a 17% HIV prevalence. (refer to Table 2).

Table 2

HIV Prevalence Among 9,094 Kenya Females and 6,840 Men Aged 15-64 Years

	Female	Male	Total
Marital Status	% HIV infected	% HIV infected	% HIV infected
Currently in Union	7.8	7.4	7.6
Monogamous	7.1	7.9	7.1
Polygamous	11.2	11.4	11.3
Currently not in union	10.3	3.2	7.1
Currently widowed	20.7	19.3	20.5
Currently divorced or separated	17.1	6.4	13.7
Never in union	4.7	2.2	3.3
Ever had sexual intercourse	7.3	2.8	4.6
Never had sexual intercourse	1.8	1.1	1.5
Ever widowed	21.2	N/A*	21.0

Note. Adapted from: Kenya Ministry of Health (2008). Kenya AIDS indicator Survey; Preliminary report National AIDS and STI control program, Ministry of Health, Kenya. Retrieved from http://www.aidskenya.org/
*men were not asked if they were ever widowed

An evaluation of the relationship between educational background and HIV status suggested a higher prevalence of HIV with lower educational attainment. For instance of the almost 16,000 male and female participants sero-surveyed in Kenya, 10% of them who were HIV positive had not attended high school, 7 % had earned their high school

diplomas whereas 4 percent had post-high school education (Kenya Ministry of Health, 2008). Such a trend is echoed in the distribution of AIDS orphan population as will be evident in the discussion that follows.

Effects on AIDS on AIDS Orphans

The preceding paragraphs explored the factors that resulted in the increasing number of AIDS orphans; the subsequent paragraphs will discuss the toll of AIDS on its orphans. Williamson, (2004) chronicled the ramification of HIV on households with children. He reported that the infection would compromise individuals' immune systems and, thus allows microbes, relatively benign in healthy individuals, to cause serious health consequences that would render the victims unable to ensure the economic stability of their households, particularly if they are the breadwinners (Williamson, 2004). The children of such households soon become the caregivers as the disease takes its toll on the heath of the parents or guardians (Williamson, 2004). The situation is particularly complicated if the children have serious illnesses that need frequent medical attention as they too, would undergo rapid health declines due to lack of homecare and healthcare access (Cluver & Gardner, 2007). Along with the rest of the children of such households the sick children would experience lack of adequate nutritional intake (Earnshaw et al., 2009), frequent interruptions from school attendance and possibly, cessation of educational pursuit altogether (Ansell & Young, 2004). The situation leads to stigmatization and exploitation by others, further subjecting the children to emotional trauma and lack of social support (Cluver & Gardner, 2006). The death of parents deals the children a bigger blow when no prior arrangements have been made regarding

property inheritance or placement and continued care of the orphaned children. Exploitation, physical abuse and psychological oppression become the fate of the orphans (Cluver & Gardner, 2006), who sometimes resort to street-living rather than face abuse and oppression. Homelessness and exploitation further place them at heightened physical danger and render the orphans susceptible to HIV-infection. Thus the orphans readily became agents of HIV-infection of others; thereby inadvertently perpetuating the spread of the HIV (Williamson, 2004). Some orphans opt to remain together especially in instances where teenage orphans feel the need to remain with their siblings rather than face sibling separation (Nyambedha, Wandibba, & Aagaard-Hansen, 2003a). The subsequent paragraphs explore issues relating to child-headed households.

Child-Headed Households

Child-headed households, another consequence of AIDS orphan hood, have become common-place among communities most affected by AIDS. In a qualitative study of 1052 orphans in Zambia Schenk et al., (2008) revealed that 15% to 27% of them were from female-headed households 11% to 28% of them were cared for by ailing relatives. As the number of orphans increased, so did the number of child-headed households. Richter and Desmond, (2008) noted a 66-fold increase in 10 years of households in South Africa headed by orphans who were less than 15 years of age. Equally notable was that 64% of such households were run be males. In another study also conducted in South Africa, the gender composition of orphans who were heads-of-households was different; 66.1% of them were females whereas 31.9% of them were males (Mogotlane, Chauke, van Rensburg, Human & Kganakga, 2010). The authors who

interviewed 1528 study participants found that 797 belonged to child-headed homes; with 40.3% of single AIDS-orphans and 43.3% were double AIDS-orphans (orphans whose mothers and fathers have died from AIDS). Of the study participants 91.5% depended on the largess of others or on grants as the orphans could not earn income (Motlane, et al., 2010). Furthermore, in their study of some of Swaziland's most vulnerable population, Earnshaw, Njongwe, English & Worku (2009) noted that many of the orphaned and vulnerable children in 41 child-headed households were disenfranchised from receiving assistance from goodwill agencies because they had little or no knowledge of the types of assistance that such agencies render to the communities. The authors blamed poor outreach mechanisms for the situation. Poor outreach mechanism among child-headed households speaks to the need for community affiliation in efforts to identify and help the orphans meet their needs. Among the orphans' unmet needs is fair and just treatment as accorded to other children whose parents have not suffered from the consequences of HIV infection; this issue is addressed in the following paragraph.

AIDS-Related Stigma

Attell (2013) explored the circumstances that give birth to stigma and how stigma is sustained especially in the aftermath of the AIDS pandemic. According to Attell, (2013) stigma toward those who suffer from AIDS or their relatives thrives because of three primary reasons namely:

1. Since for the most part, the virus that causes AIDS is transmitted through sexual contact, AIDS has come to be seen as a disease brought on oneself through the sufferer's behavior, The notion was born at the beginning of the

AIDS pandemic and has self-sustained in the Sub-Saharan regions where HIV transmission is chiefly through heterosexual intercourse (Attwell, 2013).

2. Stigma is stronger in relation to infectious diseases. This fact was borne through in biblical times when lepers were required to announce themselves so that other people would not cross paths with them. As for HIV and AIDS, despite extensive knowledge and education about the virus, there continues to be a segment of the population that fears that casual contacts with sufferers would transmit the infection (Attwell, 2013).
3. Stigma is fostered when the condition is noticeable as with an AIDS sufferer who suffers AIDS-defining symptoms such as Kaposi sarcoma skin lesions (Atwell, 2003).

Other studies found that AIDS orphans experience stigma because of the cause of their parents' death and more so, if they too suffer from the syndrome (Gonzalez-Rivera & Bauermeister, 2007). The authors observed that regardless of age, AIDS orphans were discriminated against especially if they were known to be suffering from AIDS-related illnesses themselves. Discrimination was also observed when non-orphaned children openly declared to their peers that non-HIV infected AIDS orphans were HIV-positive, an assumption made on the bases of the circumstances surrounding the death of the orphans' parents (Harms, Jack, Ssebunnya & Kizza, 2010). Also, AIDS orphans care-givers reportedly disclosed the HIV status of HIV sero-positive orphans to other members of the community, without concern for the ramifications of the disclosure and without the orphans' consent (Harms et al., 2010). Ansell and Young (2004) reported that seemingly

healthy AIDS orphans who were made to live with other relatives were maltreated and discriminated against by their new caregivers who would favor their own children with gifts of clothing and food when resources were limited. Besides, the biological children already in the household felt territorial and acted negatively toward the newcomers. In some cases, the orphans were regarded and treated as household helps and servants, and as such, were made to endure hard-labor in the house and on the farm.

Such discrimination and stigmatization against AIDS orphans take a psychological toll on the AIDS orphans and instead, would erode the social support needed by the orphans to cope with their losses (Nyamukapa et al., 2010).

Psychological Impact of AIDS on Its Orphans

The loss of a parent, bread-winner and care-giver is devastating and destabilizing to most children; for children whose parents died due to AIDS, the grief and trauma are further complicated by the feeling of shame and stigmatization because of the nature of their parents' death. Hence, some studies have focused on the psychological ramifications and the emotional toll and stigma suffered by AIDS orphans (Cluver & Gardner, 2006; Cluver, Gardner, & Operario, 2007; Cluver & Mark, 2009; Gonzalez-Rivera & Bauermeister, 2007. In a study conducted from 2002 to 2004 in Municaland province, Eastern Zimbabwe Nuamukapa et al., (2010) reported that 36% of paternal orphans were reported to have suffered hardship as child laborers. For example, Schenk, Michaelis, Sapiano, Brown, & Weiss (2010) reported that 55% of the orphans who cared for their siblings tended to be depressed. Furthermore, female orphans were more likely to be depressed (3.15 v 2.72, $p< 0.01$) than male orphans; also female orphans were also more

likely to feel anxious (11.98 vs. 11.11, $p< 0.01$) than male orphans (Cluver et al., 2007; Nyamukapa et al., 2010). Gong et al. (2009) also reported that double orphans separated from their siblings were more likely than maternal or paternal orphans to report feeling anxious, {52.2 (SD:83) vs 48.9 (SD:11.5), $p<0.05$}, suffer from post-traumatic disorder {49.4 (SD:7.4) vs 51.9 (SD:12.0)} or express worries about sexual matters {48.9(SD:8.4) vs 51.7 (SD:11.6)}. In their eastern Zimbabwe study with AIDS orphans, on the root and impact of emotional distress on the study population, Nyamukapa et al. (2010) reported a relationship between orphanhood and depression. The authors indicated that in comparison to control subjects (non AIDS-orphans), AIDS orphans suffered more emotional distress {Coeff: 0.15; 95% CI 0.03-0.26 ($p = 0.013$)}. The study results also reflected a gender variation in the report of psychological distress. More female AIDS orphans than male AIDS orphans suffered emotional distress (Coeff: 0.22; 95% CI 0.15-0.31). Older AIDS-orphans, especially males, showed lower levels of emotional distress (-0.27; 95% CI -0.50 - -0.05) ; the explanation for the lower stress-level reported among older male AIDS-orphans lies in the fact that the orphans probably developed better coping skills, resilience and emotional maturity as they advanced in age (Nyamukapa et al., 2010).

With the aid of a framework Nyamukapa et al., (2008) postulated that AIDS orphans suffer particular adjustment issues that result in further emotional trauma. Factors cited by the authors in a subsequent study as central to the psychological trauma in the lives of AIDS orphans included abuse, improper care, child labor, lack of or tenuous school attendance, stigma and discrimination (Nyamukapa et al., 2010). Orphans

whose mothers had died suffered stigma five-folds (10% vs. 2%, $p = 0.05$) more than non-orphans.

Another often ignored issue is the toll that the care-taking of AIDS orphans impose on care-givers. In a study of AIDS-orphans' primary care-givers, Oburu (2005) found that grandmothers who served as primary caregivers of orphans reported feeling heightened level of stress {(Parenting Stress Index (PSI) score with mean (M) = 126, standard deviation (SD) = 20)} whereas the PSI scores for biological mothers were (M= 97and SD=16). The stress level seemed to increase with the age of the grandmothers. Accounting for this level of stress could be the adjustment from quiet lives to becoming caregivers to children who have been traumatized by the death of their parents and perhaps, who have moved away from their friends and familiar neighborhoods to live in remote locales with grandparents whom the orphans barely knew. Oburu's study also revealed that the stress level reported by the grandmothers positively correlated with the grandparents' assessment of how badly their orphaned grandchildren behaved (Oburu, 2005). Therefore, when the grandparents were worried about the wherewithal to provide a livelihood for their wards, their uneasy state-of-minds modulated how they perceived the orphans' behaviors. Another study in rural China documented that 73.5% of AIDS orphans' caregivers and 48.8% of non-AIDS orphans caregivers, average age, 41.1 years, were rated as depressed ($p = 0.008$), having scored 16 or more points ($p< 0.001$) on the Center for Epidemiology Studies Depression (CES-D) scale. In the assessment of the relationship between the depression and socioeconomic status (SES), the study found that 82.8% of low-SES participants and 17.2% of high SES were depressed ($p = 0.001$) (Lv,

et al., 2010). The study results like the one conducted in Kenya by Oburu (2005), underscored the point that lacking the financial means to provide for the family compounded the stress levels borne by those taking care of AIDS orphan. Furthermore, in a cross-sectional study involving 755 AIDS orphans as well as 404 children as control subjects, Li et al. (2009) reported that AIDS orphans were more likely than the control subjects, to have suffered traumatic events lasting longer in duration and more severe in intensity. In addition, AIDS orphans were more likely to display behavioral problems, be depressed and have low self-esteem when compared with the control group. Cluver et al. (2007) found a similar pattern in their study, where AIDS orphans were more likely (50%) than non-AIDS orphans (30%) and control group (23%) to suffer from post-traumatic stress disorder. The needs of the orphans are so great that the limited community resources can hardly meet them (Nyambedha & Aagaard-Hansen, 2007). Equally important, but often ignored is the emotional health of AIDS orphans (Cluver & Gardner, 2006) as illustrated in the above studies. The above cited studies underscore the importance of material and emotional support as crucial elements that would help attenuate the hardships of the orphans and their care-takers.

Loss of Property

Another plight that AIDS orphans suffer in the aftermath of their parents' death is the loss of property, Harms et al. (2010), were the only researchers to have investigated the property deprivation AIDS-orphans suffer due to the selfishness of their elder clansmen. The authors reported that along with the death of their parents, was the loss of the AIDS-orphans' land and property to clans men who would convert the orphans'

inherited land for their own use; this would leave the orphans with no inheritance and no means of sustenance (Harms et al., (2010). The investigators' report indicated that clansmen appeared to wish for the eminent death of the AIDS-afflicted head-of-households, scamming for what they could get, including house-hold items, all without consideration for the welfare of the surviving children (Harms et al., 2010). Although no study has documented the pervasiveness of the problem, AIDS orphans in rural communities seemed to suffer the most as they would live in closer proximity to their clansmen than suburban or city-dwelling orphans. An insight into the problem is focused upon by Nyambedha, Wandibba and Aagaard-Hansen (2003a) who surveyed a rural community in Western Kenya and observed that 33% of the youth population suffered the death of at least, one parent and 28% of the orphans lived in the care of non-patrilineal relatives because such a system could not accommodate them. The notion is enough prompt local communities and goodwill agencies to address the orphans' sufferings.

School Attendance

Understandably, school-aged AIDS-orphans stay home from school many days during their parents' and care-givers' illness. Quite frequently, despite being moved to live with other families, the orphans continue to have punctuated school attendance. In some instances, the AIDS-orphans were made to cease school attendance altogether for reasons ranging from non-payment of tuition and fees to orphans' work commitments at home (Ansell & Young, 2004). Absenteeism from school was noted to be high among particular groups of AIDS orphans. For example, poor school attendance was particularly

noted more among maternal AIDS orphans and double orphans than among paternal AIDS-orphans (Birdthistle et al., (2009). Furthermore, Nyambedha, Wandibba & Aagaad-Hansen, (2003) found that AIDS orphans in the care of elderly relatives did not attend school and performed poorly acedemically. School drop-out was more often seen among heads-of-households in child-headed households because they were often responsible for providing adult-type care to their siblings so, for them, educational pursuits take back-seat over sibling-care (Mogotlane, et al., 2010). Of the 48% of the families who participated in a study, 84% cited academic difficulties as the primary reason for poor attendance record. On the one hand, the researchers depicted that the pepertuation of poor attendanc led to poor performance and further caused absenteeism from school (Mogotlane, et al., 2010). On the other hand, Birdthistle et al., (2009) found that limited school attendance was associated with increased sexual risk-taking behavior among AIDS orphans. The subsequent paragraph features research studies on the scope and impact of such risky behavior.

Agents of HIV Transmission

As indicated in previous paragraphs, some AIDS orphans were themselves suffering from the ravaging effects of AIDS. However, many more contracted the disease when they engaged in unprotected sexual activities with HIV-infected individuals for reasons ranging from sexual acting out, exploitation, to transactional sex for food or money (Cluver, Orkin, Boyes, Gardner, & Meinick, 2011). In their assessment Cluver et al., (2011) found that female AIDS orphans were six times more likely than their counterparts with healthy parent, to have engaged in sexual intercourse.

Ssewamala, Keun, Neilands, Ismayilavo, & Sperber, (2010) conducted a longitudinal study on adolescent orphans in Uganda to assess whether financial status played a role in the study subjects' tendency to engage in sexual risk-taking behaviors. The treatment group received financial incentives in the form of matched savings and financial planning lectures whereas the control group received nothing. The pre- and post-test results showed a reduction in sexual risk-taking behaviors among the orphans in the treatment group {8.63 (C.I. 7.67-9.60, $p = 0.01$) and 7.74 (C.I. 6.96-8.52, $p = 0.01$)}, but an increase in sexual risk-taking behaviors among members of the control group {6.78 (C.I. 5.97-7.59, $p = 0.01$) and 9.84 (C.I. 8.64-11.01, $p = 0.01$)} (Ssewamala et al., 2010). Furthermore, Cluver et al, (2011) cited physical abuse and nutritional deprivation as the reasons female AIDS orphans performed sexual favors for money.

In a meta-analysis of studies from Russia and nine sub-Saharan countries all of which investigated the relationship between AIDS orphanhood and the prevalence of HIV in the countries, Operario, Underhill, Chuong & Cluver (2011) found that compared to non-orphans, orphans showed more HIV-sero-positivity (OR = 1.97; 95% C.I. = 1.41-2.75).

Robertson, Gregson, and Garnett (2010) developed a framework to investigate the role of AIDS orphans in the perpetuation of HIV infection. The authors reported that in nations with more than 5% HIV prevalence, the adolescent female maternal-AIDS-orphans were more likely than non-orphans of the same age group to be sexually active (OR 1.61; 95% CI 1.13-2-29, $p = 0.009$); by the same token, the double AIDS-orphans

also showed a tendency toward early sexual acting-out than non-orphans (OR 1.41; 95% CI 1.02-1.95, *P* = 0.036).

In another study conducted on 15 to 19 year-old female orphans and non-orphans in Harare, Zimbabwe Birdthistle et al.(2008) reported that orphans were more likely to be HIV-infected than non-orphans {17% vs. 12%, and age-adjusted odds ratio of 1.5 (95% C.I.:1.0-2.3)}. Further evaluation of the results indicated that maternal orphans (aOR = 3.6; 95% CI, 1.7-7.8), followed by double orphans (OR = 2.4; 95% CI, 1.2-4.9), who showed heightened tendency to have engaged in sexual intercourse much earlier in life than non-orphans. Maternal and double orphans more than non-orphan reported having had multiple sexual partners, condoned forced sex and engaged in sexual intercourse without the use of condom (Birdthistle et al., (2008).

Sexual acting-out in the face of HIV pandemic is particularly worrisome for orphans who often lack supervision opined Birthistle et al. (2009). Regardless of the reason for the sexual encounters, heightened sexual risk-taking behavior among AIDS orphans predisposed them to naively and unintentionally becoming the agents of HIV dissemination (Birthistle et al., 2009).

The above analyses were in line with the general impression that the conditions of orphans made them more susceptible to turning into agents of HIV-infection and dissemination. The results of the above analyses also spoke to the urgency needed to address the AIDS orphans' plight.

The subsequent paragraph addresses sibling separation, another feature of AIDS orphans' challenges that warrants attention.

Sibling Separation

Soon after their parents' death, orphans could face the prospect of separation from their siblings for different reasons. Nyamukapa et al., (2010) reported that 25% of orphans whose mothers had died and 24% of orphans who suffered the demise of both parents were also separated from their brothers and sister; in comparison, the percentage of non-orphans who suffered the same fate was 4%, ($p < 0.01$). Separation often caused siblings to lose contact with one another and deprived them the opportunity to see or speak with one another; this was especially true if the siblings were placed in different provinces, within long traveling distances from one another from where they could neither see nor speak with one another (Nyamukapa et al., 2010). Another group of researchers pointed to a break-down in communication among sibling-orphans as an additional psychological burden on sibling- relationships as well as added measure of stressors to the lives of, particularly, double orphans (Gong et al., 2009). The authors concluded that it would be in the interest of AIDS orphans if they were placed together in the same households or in proximal locations that would foster communication among siblings (Gong, et al., 2009)

Relocation/Homelessness

Upon the death of their parent or parents, AIDS orphans were moved to live with relatives (Harms et al., 2010; Nyamukapa et al., 2010), who often times, lived in different districts and provinces, and who, themselves might be too frail to handle the stress of fending for enlarged family. Such a situation made for further instability in the lives of the orphans (Nyamukapa, 2010).

Nyamukapa et al., (2010) found that in Municaland province, Eastern Zimbabwe from 2002 to 2004, compared to non-orphans, a disproportionate number of orphans (61% vs. 19%; $p< 0.001$) lived with people other than their parents. Furthermore, 57% of paternal orphans lived with other family or non-family members who were deathly ill. Relocation seemed to occur more to AIDS orphans than to non-orphans; also orphans whose mothers had died (14%) or those who had lost both parents (14%) were noted to have been relocated to communities other than where they had lived before the deaths; whereas only 4% non-orphans reported relocation ($p< 0.01$) (Nyamukapa et al., 2010). A similar trend was documented by Nyambedha et al. (2003a) in Western Kenya.

Changes in care-giver become par-for-the-course in the lives of AIDS orphans as the AIDS epidemic takes its toll on the adult population. Such changes intensify the quality of stressors on AIDS-orphan children. For instance, Nyamukapa et al., (2010) discovered in their study that 23% of maternal orphans and 28% of double orphans were cared for by different care-givers at different times but only 4% of non-orphans changed care-givers ($p< 0.01$). Orphans brought up in the cities but, on the event of their parents' demise were taken to rural communities to live with their extended family members fared worst as they faced the rigors of rural living involving physical labor and other harsh living conditions (Nyambedha, et al., 2003a) different from what they had been used to in the cities.

As alluded to in one of the preceding paragraphs, the Luo tradition in Western Kenya required that a widow be inherited by a deceased man's clansmen, along with the man's property (Luginaah et al., 2005). The clansman selected to inherit the widow

assumed the responsibility of providing for the widow and orphaned children (Luginaah et al, 2005; Gunga, 2009). However, the consequence of the refusal to be inherited according to traditional custom is that the widow loses the rights to her deceased husband's home, land and household property as well as the privileges and claim to family membership (Ambasa-Shisanya, 2007). Furthermore, by defying her deceased husband's clansmen, she chooses to fend for herself and her children (Ambasa-Shisanya, 2007). When she dies, her children still will have no right to their dead father's property (Ambasa-Shisanya, 2007). Homelessness becomes the only alternative if no other family member or institution volunteers to help the orphan children.

Such a situation is the primary reason many AIDS-orphans became homeless soon after the death of their parents or guardians. Others become homeless due to harsh living conditions at their secondary homes. Irrespective of the reason for homelessness, it exposes AIDS orphans to the yet, harsher conditions of street-living. Hillis et al (2010), cited that 25% of homeless AIDS orphans were themselves, HIV positive; IV drug use was to blame in some of the cases.

Health and Nutritional Status

Kenya is a country with income per capita of approximately $788.1 (UNdata, 2010) as such, it is common place to see people who are malnourished. Isranurug & Chompikul (2009) opined that among the group of individuals particularly affected by nutritional inadequacies were AIDS-orphans; worse yet, were those AIDS-orphans who, themselves were HIV-positive. In their study Isaranurug & Chompikul (2009) found that more HIV-infected AIDS orphans were short for their ages and 42% of them were

underweight. It was worthy of note that since patients lose weight with advanced disease state, the study did not differentiate the weight-loss due to the sequelae of HIV-infection from strict malnutrition-related weight-loss. Nevertheless, the study found that 50% vs. 20% vs. 28% of the infected, non-infected and unknown HIV status respectively were found to be short or slightly short (Isaranurug & Chompikul, 2009). Furthermore, 42% vs. 16% vs. 26 % of the infected, non-infected and unknown HIV status study subjects respectively were noted to be light or under-weight (Isaranurug & Chompikul, 2009). Nyambedha et al., (2003) also found that AIDS-orphans in the care of elderly relatives were often hungry. Earnshaw et al, (2009) stated that AIDS orphans and other vulnerable children depended heavily on extended family for food and did not get much to eat because some of the families were barely providing enough for themselves. The results of the studies underscore the importance of nutrition in the lives of the AIDS-orphans and especially in the lives of HIV-positive orphans.

Birth Registration

The universally embraced 1989 injunction of the 7th article of the United Nations Convention on the Rights of the Child mandated birth registration moments after a child was born (UN, 1989; UNICEF, 2002). However, despite its ratification by most nations of the world, many children in sub-Saharan Africa (Adedini & Odimegwu, 2011), and the rest of the developing countries, including Kenya, hve no birth registration. It was estimated that 40 million children born worldwide were without birth registration (Gupta, Mahajan & Lal, 2009). Kenya had approximately 70% unregistered births (UNICEF, 2002).

The scope of the problem is such that it jeopardizes medical care provision, as estimates of needed services are flawed in such countries (Appia, 2011). Although some regions of the world have cultural and political factors that marr efforts to child birth registration, for Kenya and the rest of the world some ubiquitous features prevail (UNICEF, 2002). For instance, people who live in urban areas and who give birth in health facilities tend to have birth registration for their children; whereas women in rural communities who give birth at home tend to not obtain birth registration for their children (Gupta et al., 2009). Reasons for non-registrations ranged from unknowingness of the relevance of birth certificates (Gupta et al., 2009) to the cost of procurement of the certificates, and the cost in time, travel, and inconvenience involved (UNICEF, 2002). The issue of birth registration cannot be overemphasized for Kenyan AIDS orphans who are the marginalized of the society (Richter et al., 2013) and who need the assistance of the community and goodwill agencies to enable them procure birth certificates that will not only certify them as individuals but also help open doors of opportunities for them in the future.

Social Support

Although Nyamukapa et al. (2010) did not find any relationship between sibling separation and depression, in another study of 327 Kenya AIDS-orphans Okawa et al. (2011) found that the indices for evaluating perceived social support increased for the orphans who showed high self-esteem (p=0.32, p<0.001). The group represented those AIDS orphans who had been placed with their siblings or who had people around them

with whom they had emotional connection. The indices showed an inverse correlation with levels of depression (p= -0.031, p<0.001).

Additionally, in a cross-sectional study of 755 AIDS orphans in China, Zhao et al., (2011) noted that orphans whose relationship with caregivers were rated as trusting, were less likely to be depressed, anxious, or withdrawn. Such orphans were reported as having positive social skills, increased self-esteem and a positive outlook about their future.

Lin et al. (2010) suggested that social support should be an important ingredient in the care package intended for AIDS orphans as well as entire communities with high AIDS prevalence; such a stance, the authors argued, would help lessen the effects of the psychological stressor inherent in AIDS orphanhood. The study results pointed point to the importance of social support as a mitigating factor in the AIDS orphans' condition.

Orphanages

There were been mixed reviews regarding the effects of orphanages on children. A number of researchers decried orphanages' existence, pointing to results of investigations which showed that children cared for in orphanages suffered intellectual and emotional deprivation (van IJzendoorn, Luijk & Juffer, 2008). Yet other researchers lauded the existence of orphanages as close alternatives to home settings in terms of housing, healthcare access, food and nutrition as well as education (Zimmerman, 2005). Although the arguments against orphanages had merit (Li, Kaljee, Fang, Stanton, & Zhang, 2008), a qualitative investigation of an alternative homecare for children revealed

that one setback that the residents expressed was their inability to see their relatives more often (Morantz & Heymann, 2010). However, 89% considered the orphanages as home; majority of the orphans enjoyed the food security, clean abode and no disruptions in their schooling (Morantz & Heymann, 2010). Such facilities as described would not only be alternatives to homelessness but also served to relieve the stress on extended families members who were too poor and or too frail to care for AIDS orphans; as such the importance of orphanages and alternative homes could not be overlooked especially since they represented to many orphans, the only place they considered home.

Some Interventions and Their Shortcomings

Several community interventions were established by various goodwill entities to help mitigate the plight of AIDS orphans in countries south of the Sahara. However, their efforts have yielded less than desired results mostly because they did not engage the community but also because they were varied in their foci on how best to address the orphans' condition (Schenk, 2009). For instance the Kenya and Tanzania interventions funded and engineered by faith-based and non-faith-based organizations were geared toward helping families wean themselves off assistance through volunteerism, care and material provisions; however, the programs fell short of their goal due to logistical issues that made it challenging to provide services to AIDS orphans in remote communities where AIDS-orphans lived distant from one another (Schenk, 2009); worse still, they did not have open enrollment policies for prospective entrants into the program. More importantly, the projects fell short of their goals of enriching and empowering households

of orphans and other vulnerable children because local community members were not engaged as stakeholders (Attawell, K., Chitty, J., & Purvis, G. 2005; Schenk, 2009).

In four faith-centered community interventions in Botswana, Lesotho, Swaziland and Namibia, collaboration with the government was necessary since the government was the main funding source of the projects; government involvement in the programs was instrumental in the longevity of the intervention programs (Rosenberg, Hartwig & Merson, 2008). However, without community participation, such involvement marred the program's success because of leadership conflicts among the government officials directly involved in the programs (Rosenberg et al., 2008).

Kidman, Petrow, & Heymann, (2007) evaluated two other community-based initiatives in Botswana and South Africa; one of initiatives offered care to orphans and other vulnerable children through a focal source whereas the other provided indirect care through various social services. The benefit of the centralized initiative was that the children received all needed services through one office. However, the children often faced the prospect of relocating from their familiar surroundings. On the one hand, the decentralized program was cost-effective in that it ensured that children remained within their locales; on the other hand, the inherent nature of the program brought about difficulty in control and supervision of the program by its coordinators (Schenk, 2009).

Furthermore, the sole purpose of one program in Uganda was to ensure that parents prepared wills that stipulated their wishes for their children's welfare in the event of the parents' death. The program was successful in encouraging parents to appoint

guardians for their children; however, the limit in its scope was its main setback (Horizons, 2004).

A program developed in Tanzania by young males and females under 18 years of age helped them form peer-networks and adult support to help with participants' psychological wellbeing, self-defense, skills training as well as money management skills and HIV-education (Flaherty & Donald, 2005). Nevertheless, the initiative could not on its own change the societal notion that children were subordinate members of the society who had no power to effect change in their communities. Such was an impediment that the program could not dispel; therefore, regardless of how efficaciously the program served the children, it could not change the minds of the adults in the community wherein the children resided (Clacherty & Donald, 2006).

The Zambia Strengthening community Partnerships for the Empowerment of Orphans and Vulnerable Children made the community the central stakeholders who part-took in program-planning and implementation as such, were able to generate funds for the AIDS orphans and other vulnerable children (Donahue & Mew, 2006).

Although the Zambia Bwafwano and Project Concern International did not enroll children early in school, they were successful in preventing children from dropping out, once enrolled. In addition, the intervention programs provided orphans, food, healthcare services, and mental health services (Schenk, 2009). Another Zambian program, the Chikankata program provided training services to members of the community who gave assistance to orphans and other vulnerable children (Schenk, 2009). The major road block to the success and sustainability of the effort centered around the lack of funding and less

than optimal number of community participation (Mulenga, 2002). Also in Zambia was the program, Reaching AIDS-affected People with Integrated Development and Support (RAPIDS) which served displaced and disadvantage families affected by AIDS. AIDS orphans, especially females were able to enroll and continue their education as a result of the comprehensive support they received from RAPIDS. Although the program in Zimbabwe aptly named Support for Replicable Innovative Village/Community level Efforts for Children Affected by HIV/AIDS (STRIVE), engaged the local communities with a view to channeling efforts toward providing material and emotional support for AIDS orphans, diminished financial resources put a strain on its effort (Schenk, 2009). Furthermore, although the community understood the need for childcare and protection, they did not have the wherewithal to address the issues (Depp, Marunda, & Yates, 2006). The Uganda, Rwanda and Kenya chapters of the Association of Volunteers in International Services (AVSI) provided AIDS-orphans and other vulnerable children comprehensive aids that included material and emotional support; in addition, the associations increased community involvement. World Vision also established programs in Uganda and Zambia for orphans and other vulnerable children. The programs embraced the local communities as well as increased school enrollment, established school-meal programs and increased the number of children immunized (Schenk, 2009). In addition, the programs provided food, bed-nets for malaria prevention, along with psychological and social support (Castelli, Oliva, Rovati & Aldrette, 2007).

A resounding theme among all the charity projects evaluated was the lack of robust community involvement, the importance of which was the focus of this research.

Among other things, community involvement would increase participation of community members as well as engage its members to commit to the program tenets (Clacherty & Donald, 2006).

Review and Synthesis of Studies Related to the Research Questions

For the purpose of manageability, this research project focused on five issues that plague the lives of AIDS orphans, namely: punctuated school attendance, homelessness, birth registration, sibling separation and food insecurity.

Researchers discovered that poor school attendance was higher among AIDS orphans relative to the general population (Birdthistle et al., 2009). However, the AIDS orphans in alternative housing facilities could boast of uninterrupted schooling (Morantz & Heymann, 2010). Although alternative housing was not regarded as the solution to AIDS orphanhood, it appeared to serve as a place of solace for many homeless AIDS orphans (Zimmerman, 2005), who had one in four chances of being homeless (Hillis et al., 2010). Moranz and Heymann (2010) opined that alternative housing facilities served as the remedy to homelessness for some of the orphans yet at the backdrop of alternative housing was sibling separation in instances where such facilities could not accommodate all the children from large families or in cases where only certain age groups were deemed eligible for housing. Sibling separation was noted to occur among one in four AIDS orphans (Nyamukapa et al., 2010). Moranz and Heymann (2010) noted that at such facilities, residents reported no anxiety about food shortage because they were well fed. However, that was not the case for AIDS orphans who lived with relatives, some of whom were barely able to provide sustenance for themselves (Earnshaw et al., 2009).

Kenya, like most countries in the developing world lagged behind in the registration of births (UNICEF, 2002). The problem was particularly evident among the marginalized of the society (UNICEF, 2002). AIDS orphans, as members of the marginalized in Kenya (Richter et al., 2013) needed assistance to procure birth registration in order to equip themselves to embrace opportunities that would improve their lives.

Some interventions attempted to address these features of AIDS orphans suffrage yet none addressed all the issues by trying to link the local community with goodwill agencies; hence the importance of this research project which I designed to explore the link between the community and goodwill agencies the effect of the relationship on the amount of resources that AIDS orphans received..

Summary

AIDS has taken a devastating toll on the lives of the citizens of Kenya. However, the voiceless victims of the tragedy were the orphans left behind after the death of their caregivers and guardians. There continues to be an urgent need to address the plight of AIDS-orphans in Kenya in order to alleviate their sufferings and enable them to grow into responsible and productive citizens of Kenya.

In this chapter I explored the history and epidemiology of HIV and AIDS then progressed to the consequences of the AIDS pandemic as they related to Kenya AIDS orphans. The consequences ranged from psychological problem, homelessness, loss of property, interruptions in education, health problems, to sibling separation, among others. AIDS orphanhood had psychosocial consequences that could devastate the entire country

further, if not addressed. For instance, AIDS orphanhood has resulted in orphans' homelessness, school-drop-out, wide-spread malnutrition, sibling separation, child-headed households, severe psychological ramifications and further spread of HIV. The needs of AIDS-orphans were grave, yet there were very limited resources to address them.

In the chapter is a further depiction of intervention measures along with their deficiencies and setbacks. For the most part, programs which thrived in addressing the needs of AIDS orphans did so because they collaborated with local communities and received adequate funding to ensure the sustainability of such programs. Nevertheless, some of the programs could not reach out to AIDS-orphans in remote communities due to logistical barriers; other programs failed in their efforts solely because of their narrow foci which selectively addressed single issues among the several of the pressing issues in the lives of AIDS orphan. There were a number of well-meaning community organizations that worked to address the needs of AIDS-orphans; the organizations' good intentions not with-standing, the unmet needs of the population continued to be a challenge. Furthermore, government involvement seemed pertinent to the success and continuity of the efforts of program initiatives, yet government involvement marred the success of some of the projects due to infighting among agency heads. The reason was rooted in the fact that there had been no set guidelines to delineate the parameters of government participation in those initiatives.

Programs that would be successful in addressing the orphans' needs would have to be comprehensive in scope; they should involve local communities as stakeholders,

who would register and obtain tallies of all the AIDS-orphans in each community, whether rural or urban, and work with government entities under pre-specified and agreed-upon guidelines. The rationale for a multi-system effort to effectively address the plight of AIDS-orphans cannot be over-stated since such effort would be beneficial to all the parties involved. A multi-system collaborative effort would eliminate redundancy and duplication of services. This would in turn, enhance service provision and resource management. In addition, such an effort would ensure that an accurate number of AIDS-orphans is documented. Also, hitherto unreached AIDS orphans would be served and their progress or lack thereof, tracked in such a system. Finally, program evaluation of such an initiative would be effortless, since there would already be ample information for feedback and follow-up purposes. In the literature review I highlighted the need to design a study such as this, to evaluate the impact of the involvement of the community as stakeholders, in addressing the AIDS orphans needs, in collaboration with the goodwill agencies already working in Kenya.

Chapter three focuses on study methodology and the application of variables identified in the chapter two, to quantitatively test the impact of the independent variable on the dependent variables.

Chapter 3: Research Method

Introduction

This chapter contains a description of the study design and methodology along with a discussion of the study sample, instrumentation, data collection, and analysis as well as issues relating to ethics in the conduct of this study. Furthermore, information about the sample characteristics and size is presented as a description of the study instrumentation.

Soon after the proposal was approved by the Walden University Research Review (URR) and the Institutional Review Board (approval number: 05-02-14-0080011), I travelled to Kenya. Data collection lasted approximately 4 weeks although I had planned to stay in Kenya for up to 2 months, in the event there had been a delay in the completion of the study. Once the survey was completed, I input the data, then conducted data-cleaning and subsequently computed the data, then reported the findings.

It is noteworthy that although the review of literature in the previous chapter explored several aspects relating to AIDS orphans' plight, only five of those were chosen for evaluation in this research partly because heads-of-households were the proxy respondents for the orphans and also because of the impracticability of assessing every aspect of the orphans' plight in one single study.

Research Questions

Research Question 1: Did community referral of AIDS orphans to goodwill agencies result in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily?

Directional Hypothesis 1. Community-referral of AIDS orphans to goodwill agencies resulted in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily.

$H_0$1: Community referral of AIDS orphans to goodwill agencies did not result in increased number of maternal, paternal, and double AIDS orphans who ate at least, two meals daily.

H_a1: Community referral of AIDS orphans to goodwill agencies resulted in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily.

In order to address this research question, I calculated the differences in the community referral versus noncommunity referral and how they related to the likelihood that an AIDS orphan ate at least two meals daily. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the likelihood that an AIDS orphan ate at least two meals daily and community referral.

Research Question 2: Did community referral of AIDS orphans to goodwill agencies result in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless?

Directional Hypothesis 2. Community- referral of AIDS orphans to goodwill agencies resulted in fewer numbers of days that maternal, paternal and double AIDS orphans were homeless

$H_0$2: Community referral of AIDS orphans to goodwill agencies did not result in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless.

H_a2: Community referral of AIDS orphans to goodwill agencies resulted in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless.

In order to address this research question, I calculated the differences in community-affiliation of AIDS orphans related to the likelihood of homeless among the orphans. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between homelessness among AIDS orphans and community referral.

Research Question 3: Did community referral of AIDS orphans to goodwill agencies result in decreased number of sibling separation among maternal, paternal, and double AIDS orphans?

Directional Hypothesis 3. Community-referral of AIDS orphans to goodwill agencies resulted in decreased number of sibling separation among maternal, paternal and double AIDS orphans.

$H_0$3: Community referral of AIDS orphans to goodwill agencies did not result in decreased number of sibling separation among maternal, paternal, and double AIDS orphans.

H_a3: Community referral of AIDS orphans to goodwill agencies resulted in decreased number of sibling separation among maternal, paternal, and double AIDS orphans.

In order to address this research question, I calculated the differences in the enrollment categories and how the type of orphanhood related to the likelihood of sibling separation. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the sibling separation and community referral.

Research Question 4: Did community referral of AIDS orphans to goodwill agencies result in decreased number of absences from school among maternal, paternal, and double AIDS orphans?

Directional Hypothesis 4. Community-referral of AIDS orphans to goodwill agencies resulted in decreased number of absences from school among maternal, paternal and double AIDS orphans.

$H_0$4: Community referral of AIDS orphans to goodwill agencies did not result in decreased number of absences from school among maternal, paternal, and double AIDS orphans.

H_a4: Community referral of AIDS orphans to goodwill agencies resulted in decreased of number of absences from school among maternal, paternal, and double AIDS orphans.

In order to address this research question, I calculated the differences in the enrollment categories and how the type of orphan hood related to the number of AIDS orphans' absences from school. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the school absences and community referral.

Research Question 5: Did community referral of AIDS orphans to goodwill agencies result in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates?

Directional Hypothesis 5. Community-referral of AIDS orphans to goodwill agencies resulted increased number (above 30% Kenya's national average) of in maternal, paternal and double AIDS orphans with birth registration or birth certificates.

$H_0$5: Community referral of AIDS orphans to goodwill agencies did not result in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates.

H_a5: Community referral of AIDS orphans to goodwill agencies resulted in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates.

In order to address this research question, I calculated the differences in the maternal and birth registration categories and how the type of orphan hood related to the changes in such categories. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the birth registration and community referral.

From the programs evaluated in the previous chapter, it was evident that regardless of funding status, success as well as sustainability of initiatives dedicated toward ameliorating AIDS orphans' conditions rested upon the embracement of grass-root community participation (Clerchety & Donald, 2006). Community involvement was crucial because as stakeholders, they would help direct the resources toward their intended users; community involvement would minimize the duplication of services to some AIDS orphans, would ensure that many more AIDS-orphans would be reached, and many more would have their needs met (Schenk, 2009).

The role of community members as stakeholders would include helping to identify the AIDS orphans in the community, identify their collective needs, and help to educate the orphans regarding the resources that might be available to them. In addition, community stakeholders would serve as a source of emotional support for the AIDS orphans.

Research Design and Approach

The study investigated the differences in instances of sibling separation, school absenteeism, homelessness, birth registration, and nutrition among AIDS orphans who were community-referred to goodwill agencies in comparison with the AIDS orphans who were not community-referred to goodwill agencies. The independent variable was community referral to goodwill agencies whereas the dependent variables were the indicators outlined above and enumerated in the research questions. For the purpose of this study, the dependent variables were classified into measurable categories; namely availability of birth record, sibling separation, school attendance, homelessness, and nutrition (defined as a minimum of two meals per day). Evaluation of the dependent variables in relation to the independent variable helped address and answer the research questions. The information on the resources received by the orphans was garnered with the aid of a modified version of a survey instrument designed to evaluate the needs of children (Rogers & Surrency, 2001). The responses obtained from the study participants pointed to areas of the study participants' unmet needs as well as identified the resources that were available to them. The questionnaire (refer to Appendix C) focused on the living conditions of each AIDS orphan in the household; the head-of-the-household

(anyone in charge of running the household) were asked to respond to the survey questions. I read the survey questions to the respondents and recorded their responses.

Table 3

List of Study Variables

Variable	**Definition**	**Variable**	**Variable type**
Child's age	Age at last birthday	Control	Continuous
Child's gender	How child identifies self	Control	Categorical
Orphan Classification	Maternal, paternal or double orphan	Independent	Categorical
Food	if an AIDS orphan eats, at least, two meals per daily	Dependent	Nominal
Birth record	Available of birth registration or certificate	Dependent	Category
Homelessness	Number of days child lived on the street within the last 30 days.	Dependent	Interval
Sibling separation	Report of child living separate from sibling for any number of days within the last 30 days.	Dependent	Nominal
School attendance	Number of days child has been absent within last 30 days (excluding holidays and vacations periods)	Dependent	Interval
Community referral	"Yes" (if community referral to any goodwill agency was responsible for assistance received.) And "no" if no community referral was involved.	Independent	Categorical

The survey addressed the following core issues:

- Child's age
- Child's gender
- Orphan classification

- Food/nutrition
- Homelessness
- Sibling separation
- School attendance for the each school-aged child (5-18 years of age)
- Community referral to goodwill agencies

Operational Definition of Variables

AIDS-orphan was defined as a child who had lost at least one parent due to AIDS. It was evaluated in terms of single or double orphanhood.

Adequate food: was defined as availability of at least, two meals, with no complaint from the child about needing more to eat, after a meal.

Birth record/registration: was defined the heads-of-household's statement of awareness of the registration of the child's birth and the availability of a record.

Homelessness: defined as "having no home or permanent place of residence" (Merrian-Webster, 2013. It was measured in terms of the number of nights with the past week and within the past months that the child had slept somewhere other than a residence. For example, if the respondent indicated that the child regarded the residence as his or her home, the score was (1) for "yes", but the score was (2) for "no" and (3) for "unknown" responses. The next step was to assess the number of days that the child had slept somewhere else within one week, and within the previous month. If the child had spent more than two nights away from home within one week, and eight or more nights within one month, the child was considered homeless and scored as such.

Sibling separation: For the purpose of this study, sibling separation was defined as full, half of step brothers or sisters less than 18 years of age, who were made to live apart from one another as a consequence of their orphanhood. If an AIDS orphan had a sibling with whom he is she did not live in the same house, the condition was considered sibling separation. Sibling separation was assessed by inquiry as to the number of siblings that fit the selection criteria and well as how many of them live in the same household.

School attendance: was defined for a child older the five years old, who had not earned a high school diploma or its equivalence, as the number of days (excluding schools holidays) within the previous week and previous month the child had been absent from school.

Community referral: respondents' self-report of the receipt of assistance from any entity which represented the product of community collaboration and served any of the AIDS-orphans' needs.

The survey was evaluated with the aid of regression analysis designed to assess the relationship between the dependent variable and the independent variables. For this study the regression analysis determined the extent to which goodwill agencies' collaboration with communities affected the type and amount of resources (see definition) received by AIDS orphans.

Setting and Sample

The setting of the study was in households or orphanages with AIDS orphans less than 18 years of age, in Nyanza province of Kenya. Although, the subjects of the research were AIDS orphans, the survey was a proxy survey whereby the AIDS orphans' heads-

of-household served as proxy respondents. Orphanages would have been regarded as households whereby the designated leaders would have responded to the questionnaire as proxies to the orphans, I did not encounter any orphanage during the survey. The goal of sampling was not the number of households but the number of eligible AIDS orphans in the households. The rationale for choosing Nyanza province was that it had the highest HIV prevalence (15.3%) as indicated in preceding chapter. Nyanza had a population of approximately 39 million; it would have been challenging to obtain a representative sample of such a large number of people (Kenya, 2009). Nevertheless, I obtained a population data that depicted the geographical distribution of the population from which clusters of study samples was garnered. The following procedure was used to identify the households surveyed:

- The sampling frame was determined with the help of the Kenyan data on population distribution as well as a personal digital assistant (PDA) connected to a global positioning device (GPS);
- The GPS and PDA devices served to delineate and define the boundaries of the location to be studied as did Hightower et al., (2010).
    - The population map was delineated into 107 clusters or grids in rural and urban communities.
    - The homes selected for sampling were randomly identified from each cluster or primary sampling unit (PSU).
    - All eligible members (secondary sampling units) of any household identified were included in the study

- The process continued for the remaining randomly selected clusters in Nyanza province;
- The PDA and GPS devices enabled me to locate homes surveyed.

As outlined above, the process of cluster sampling was a one-stage design whereby secondary sampling units (SSU) were identified from primary sampling clusters. In order to make the sampling robust, I included as numerous clusters as were feasible for the study. For the purpose of this study, 107 clusters seemed like an appreciable number of clusters. I also identified a small number of households in each cluster, and had a constant take-size from each cluster to achieve sampling fidelity.

In as much as the study was about AIDS orphans, it was the heads of household who responded to the survey questions and did so separately for every AIDS orphan in their care. To estimate an adequate sample size or to determine the number of AIDS orphans to include in the study in order to achieve an effect size of at least, 0.8, alpha was set at 0.05 for a two-tailed test of samples; with power set at 80 % (0.8), using Cohen's d at .329, the sample contained a minimum of 176 orphans. The Kenyan government estimate of the average household size was 5.1(KIHBS) (2005/2006). Since it had not been possible prior to the start of the survey to determine the number of orphans in each household or the number of households with AIDS orphans the cluster-sampling continued to include approximately three times the number of orphans needed for the study (528 eligible AIDS orphans). I had anticipated that although some heads-of-household taking care of AIDS orphans might decline to participate in the survey and yet

some others might start but not want to complete the survey, there would still have been more than the minimum number of respondents for the survey.

Study Population

The study population comprised of heads of households (units of related and non-related AIDS orphans and adults living in the same house) and managed by one or more members of each unit. A separate survey was conducted for each eligible AIDS orphan in a household. Respondents to the survey were the heads-of-household and AIDS orphans' adult care-givers. The study participants were selected based on the following criteria:

That they were adults (18 years of age and older),

- That they were residents of Nyanza
- That they provided care for an eligible AIDS orphan
- That they were willing and capable of responding to the survey questions
- That participation in the survey served as consent.

AID orphans were determined eligible to participate in the survey (via proxy) if they met the following criteria:

- They were residents of Nyanza Province
- they were less than 18 years of age
- One or both of their parents had died of AIDS

The respective criteria enumerated in the preceding paragraphs were employed to evaluate the eligibility of the orphans as well as the heads-of-household. On the day of the study, once I arrived at the homes of prospective respondents, I requested permission to speak with the heads-of-household and soon after evaluated their eligibility to

participate in the study as proxies for any eligible AIDS orphans in their household. Once the subject of eligibility was addressed and eligibility ascertained, I handed the heads-of-household printed consent information about the survey; the information was provided to the heads-of-household in English, Swahili or Dholuo, according to their preferences. The printed material focused on the study objectives as well as its voluntary nature. Also included in the information handed to the heads-of-household were ethical issues pertaining to the study. Soon after they had read the consent form I asked the heads-of-household questions about what they understood about the study and their potential involvement in the survey process. Such questions helped me know if the heads-of-household understood the information they had just read. Subsequently, I invited them to ask me questions about the survey and any concerns they might have. I answered the questions to the satisfaction of the potential study participants. Once the heads-of-households indicated that all their questions had been answered to their satisfaction, and had expressed willingness to participate in the survey, I informed them that their participation in the survey would be regarded as consent as such, they did not have to sign the consent form if they so desired (refer to Appendix C).

The survey lasted approximately 10 minutes for each eligible AIDS orphan in a household. There was no requirement or indication for a follow-up survey.

Once the survey was completed, I offered the respondents the physical Kenya address where I was stayed for the duration of the survey and where I could be reached in the event they had further questions for me to address. I also provided them with my local phone number or my email address, if they had internet connection, to enable them to

communicate with me regarding any aspect of the survey about which they might have concerns or needed clarification. For study participants interested in the result of the study, I obtained their addresses and promised to send them the information soon after the information was available for publication.

Instrumentation

The survey instrument (refer to Appendix E) was a modified version of the questionnaire developed to assess the needs of children affected by the HIV/AIDS pandemic. Although phrased differently from the core national level indicator conceptualized by Piot and Bellamy (2004), the survey instrument addressed the pertinent AIDS orphans' needs outlined in the preceding chapter. The modification was necessary to address the specific areas under investigation and for ease of quantitative analysis; also the modification was made so that the research questions could be addressed without the involvement of the AIDS orphans. Sensitive matters like the HIV status of the AIDS orphans or queries that required the child's presence for any part of the questionnaire were not addressed in the survey. Therefore, no AIDS orphan's approval was required in order for the adult heads-of-household to respond to the survey. For instance, the aspect of the original survey which sought to identify the heights and weights of the children was removed. Also, since the object of this research did not involve the determination of whether the AIDS orphans received nutritional meals, I modified the section in order to evaluate if the child, ate at least, two meals daily. Furthermore, I added a few questions that addressed the issue of enrollment with community-referred goodwill agencies. It is worthy of note, that I requested and received authorization from the author of the survey

to modify as well as use the modified version of the survey for this research (Appendix G).

Since, according to the author of the original survey instrument, there was no information on the validity or reliability of the survey tool (appendix D). However, on the tool-kit the authors indicated that they had conducted a pilot study in Zimbabwe prior to the publication of the questionnaire (Rogers & Surrency, 2001). Nevertheless, I conducted another pilot study with the first 18 households the goal of which was to survey the proxies of a minimum of 36 (20% of minimum required sample size) eligible AIDS orphan. The procedure for the pilot study was the same as with the main study. I ascertained eligibility of prospective study participants; subsequently, I handed them information about the study written in one of the three languages spoken in the area, namely, English, Swahili and Dholuo(Luo). I asked the heads-of-household to read the information about the survey as well as the ethical implications involved. I gave them the opportunity to ask me questions about the survey and I, in turn answered the questions to their satisfaction. The heads-of-households' agreement to participate in the survey served as consent; so their signatures were not necessary. The respondents took a separate survey on behalf of each eligible AIDS orphan in their care.

Later, I evaluated the survey responses with the aid of regression analysis; in order to consider the effects of the variables on the covariables (age, gender and orphan classification) I conducted a further evaluation by way of logistic regression. The pilot study served to determine how robust the construct validity was and helped to test the feasibility of the main study; this in turn, pointed to areas of the survey questionnaire that

needed modification. It was only after the pilot study had been concluded, that the survey proper commenced; none of the participants in the pilot study was included in the main study.

Data Analysis

Once I had completed the survey I proceeded to cleanse the data. Data cleaning entailed throwing out survey responses that were ineligible or difficult to decipher, as well as destroying partially completed, incorrect or irrelevant responses. The rationale for the modification was to rid the data of inconsistencies. The following measures were employed to purge the data of inconsistencies:

1. I conducted a visual inspection of the plotted data to note any extreme lack of variations or outliers;
2. I determined why the responses were out of range in a scatter plot or graph;
3. I investigated to see if the data were markedly different with regard to location, days or times the data were collected; I discarded any data that resulted from changes in conditions of the test.
4. I located any parametric values that were markedly out of range
5. I attempted to find an explanation for any inconsistency and if I could not find any explanation, I did not purge the data.
6. I computed the standard error of mean by using the ratio of the square root of the variance and the sample size; if the value I derived was small, I surmised that the computed mean was close to the actual mean of the population; as

such, I characterized the result as the true performance of the population under study.

7. If the variance computed was high, (large standard error of means), it negated the conclusion of true population performance; however, since the sample size was large I had confidence in the result

Subsequently, I coded the variables as numbers; for instance, community-referred "1" was assigned to an affirmative response to the reception of resources through community referral, whereas "2" was assigned to response that implied non-community referral affiliation to goodwill agencies. Two questions addressed sibling separation; the first question inquired if there was any sibling not living in the same household , if the answer was "no", the respondent was instructed to skip the second part of that section which helped identify the number of siblings separated,. "1" for one sibling, "2" for two siblings and so on. As with sibling separation, two questions addressed school attendance. All the responses had corresponding numerical values that were analyzed as described in the subsequent paragraphs. The aim of data analysis was to answer the research questions as follow:

Research Question 1: Did community referral of AIDS orphans to goodwill agencies result in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily?

Directional Hypothesis 1. Community-referral of AIDS orphans to goodwill agencies resulted result in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily.

$H_0$1: Community referral of AIDS orphans to goodwill agencies did not result in increased number of maternal, paternal, and double AIDS orphans who ate at least, two meals daily.

H_a1: Community referral of AIDS orphans to goodwill agencies resulted in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily.

In order to address this research question, I calculated the differences in the community referral versus noncommunity referral and how they related to the likelihood that an AIDS orphan ate at least two meals daily. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the likelihood that an AIDS orphan ate at least two meals daily and community referral.

Research Question 2: Did community referral of AIDS orphans to goodwill agencies result in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless?

Directional Hypothesis 2. Community- referral of AIDS orphans to goodwill agencies resulted in fewer numbers of days that maternal, paternal and double AIDS orphans were homeless

$H_0$2: Community referral of AIDS orphans to goodwill agencies did not result in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless.

H_a2: Community referral of AIDS orphans to goodwill agencies resulted in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless.

In order to address this research question, I calculated the differences in community-affiliation of AIDS orphans related to the likelihood of homeless among the orphans. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between homelessness among AIDS orphans and community referral.

Research Question 3: Did community referral of AIDS orphans to goodwill agencies result in decreased number of sibling separation among maternal, paternal, and double AIDS orphans?

Directional Hypothesis 3. Community-referral of AIDS orphans to goodwill agencies resulted in decreased number of sibling separation among maternal, paternal and double AIDS orphans.

$H_0$3: Community referral of AIDS orphans to goodwill agencies did not result in decreased number of sibling separation among maternal, paternal, and double AIDS orphans.

H_a3: Community referral of AIDS orphans to goodwill agencies resulted in decreased number of sibling separation among maternal, paternal, and double AIDS orphans.

In order to address this research question, I calculated the differences in the enrollment categories and how the type of orphan hood related to the likelihood of sibling separation. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the sibling separation and community referral.

Research Question 4: Did community referral of AIDS orphans to goodwill agencies result in decreased number of absences from school among maternal, paternal, and double AIDS orphans?

Directional Hypothesis 4. Community-referral of AIDS orphans to goodwill agencies resulted in decreased number of absences from school among maternal, paternal and double AIDS orphans.

$H_0$4: Community referral of AIDS orphans to goodwill agencies did not result in decreased number of absences from school among maternal, paternal, and double AIDS orphans.

H_a4: Community referral of AIDS orphans to goodwill agencies resulted in decreased of number of absences from school among maternal, paternal, and double AIDS orphans.

In order to address this research question, I calculated the differences in the enrollment categories and how the type of orphan hood related to the number of AIDS orphans' absences from school. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the school absences and community referral.

Research Question 5: Did community referral of AIDS orphans to goodwill agencies result in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates?

Directional Hypothesis 5. Community-referral of AIDS orphans to goodwill agencies resulted increased number (above 30% Kenya's national average) of in maternal, paternal and double AIDS orphans with birth registration or birth certificates.

$H_0$5: Community referral of AIDS orphans to goodwill agencies did not result in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates.

H_a5: Community referral of AIDS orphans to goodwill agencies resulted in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates.

In order to address this research question, I calculated the differences in the maternal and birth registration categories and how the type of orphanhood related to the changes in such categories. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the birth registration and community referral.

Altogether, there were five dependent variables to be evaluated, namely "food" adequacy, "homelessness", "sibling separation", "school attendance/absence", "birth records". For all except "food", higher numerical scores corresponded with the likelihood of no birth records, increased incidence of homelessness, increased instances of sibling separation and increased number of days missed from school. With "food", lower numerical score corresponded with lower number of times AIDS orphans ate. Data analysis involved an evaluation of whether the independent variable (community referral) changed the measure of each of the dependent variables (the likelihood of having eaten at

least, two meals a day, homelessness, sibling separation, school attendance and the availability of birth registration). To this end, the responses in each category were compared in terms of whether the AIDS orphans receive the resources through community referral or not.

I conducted regression analysis with each of the five main dependent variables, (food, homelessness, sibling separation, school absenteeism and birth records) in relation to the independent variables (community referral). The scores I obtained from the survey were garnered for use to conduct regression analysis with a view to estimating a regression model with all the outcome variables.

The regression analysis also tested the null hypothesis of no difference. Ho=HA; where the best fit line was a horizontal line and a slope (M) = zero (0). If, for instance, the regression analysis depicted a non-zero positive slope for birth-registration, I interpreted the result as a positive correlation between the independent variable (birth-registration) and the dependent variable, (community referral). Put simply, AIDS orphans who received referral through their community were more likely than those who did not, to have records of their birth. Similarly, a negative slope for the same variable implied a relationship but in the opposite direction; in the case of birth-registration, I inferred from a negative slope that community referral was negatively correlated to birth registration; in other words, community referral was related to the non-availability of birth registration. By the same token, a horizontal line relationship implied that there was no relationship between community referral and availability of birth registration. Similar interpretations were made when the remaining four variables were input. The y-axis was for the

dependent variable (community referral) whereas the x-axis denoted each of the independent variables (x1 for food, x2 for birth record, x3 for homelessness, x4 for sibling separation, x5 for school attendance). The research questions pivoted on how to predict y in relation to the x's.

Furthermore, variables such as child's age, gender, and orphan classification served as co-variables in the analysis. The evaluation of the variables with the covariables (child's age, gender, and orphan classification) facilitated a fuller comprehension of the study results. Indeed, although age, gender and orphan classification were not among the five independent variables of interest, I wanted to find out how each of them influenced the result of my analysis. Therefore, I conducted a partial analysis with the variables and covariables using regression analysis. The analysis enabled me to statistically control for the effects of the coviariables, yet allowed me to evaluate the effects of the independent variable on the dependent variables. In this instance, I assessed the relationship between the residuals of the regression of independent variable on each of the five main dependent variables as well as the correlation of the independent variable on the covariables. The addition of the co-variables in the analysis addressed the question of: by how much, if any, did a characteristic such as age, gender or orphan classification influence the result of the relationship between the dependent and independent variables? What was more? The analysis yielded between-group variance scores, reduced error variance as well as increased statistical power.

The entire survey was analyzed via SPSS statistical instrument which was akin to Epi Info that had been suggested by the tool kit creators, Rogers and Surrency of World

Bank. A permit, allowing me the use and modification of the survey instrument is attached in Appendixes E and G. However, since the survey was conducted by way of cluster sampling, a special computer-based evaluation tool, the Sample Planning Wizard was employed to determine the survey precision, obtain an estimate of the population parameters, standard errors as well as test for each of the five hypotheses.

Threats to Validity

Threats to external validity of the research could occur if the results of the survey were generalized to the population as well as across population in relation to survey context and time of survey. The result of the survey could easily be generalized to the Nyanza population and perhaps the adjacent communities because the communities have similar social and cultural impediments with regard to AIDS orphans' plight. In order to curb the generalization threat, the subject selection process was carried out by way of cluster sampling so as to get a representative sample of the study population. However, generalization to a wider population such as city-dwelling AIDS orphans in Kenya would be erroneous because the city-dwelling AIDS orphans probably would not have problems relating to birth registration if they were all born in the city. To address a likely external validity threat regarding location and time of study, I conducted the survey on weekdays as well as on weekends, from morning to early evening because such a schedule ensured that everyone had equal opportunity to be surveyed; the schedule also eliminated any potential threat factors.

In summary, to improve upon external validity, I identified many clusters for my sampling units; I also randomized the process by which I identified the households to be

sampled from each cluster. Furthermore, I conducted the surveys in the respondents' homes, at times that were convenient to them and when they were likely to participate in the study. That ensured a high participation rate among those eligible to participate in the study, it was hoped that the large number of participants and small cluster samples sizes along with large number of clusters made insignificant, any effect of external validity threats.

Threats to Internal Validity

Three threats to internal validity were foreseeable in such a study, namely: history, repeat testing and the issue of proxy respondents. A history-centered threat might be applicable when participants inform others about the survey and the other respondents were influenced by the information to respond to the survey, in a particular way. Since there was no way to prevent people from informing others, I hoped the number of people with prior information about the content of the survey did not influence the result of the survey significantly. Repeat testing might be a threat to validity in that, in households with several AIDS orphans, the heads-of-household responded to the first surveys with care and accuracy but simply filled in the same information for the subsequent surveys on behalf of the rest of the orphans in such households without having given much thought to the accuracy of the information they provide. To address this threat, I encouraged the respondents to give particular thought to remembering specific information about each AIDS orphan in their care. Use of proxy respondents could feature as an internal validity threat because the heads-of-household responded to the questionnaire on behalf of the AIDS orphans. However, Poulter, Chang, Farley and Marmot (1996) found no significant

difference in a case versus control study. The authors opined that friends and relatives could be reliable in giving accurate information about target subjects. Nelson, Longstreth, Koepsell, Checkoway and van Belle (1994) indicated that an increase in the number of respondents would nullify any differences that might arise when, as proxies, some respondents gave inaccurate information. This study intended to do just that, by increasing the number of respondents by, at least two times the empirical estimate determined for the study.

Threat to Statistical Validity

Two threats that might have threatened statistical validity were sample size estimation and power. To address these, I used the "Cohen-d" to compute sample size, in addition, I tripled the estimated sample size to account for subject refusal and other unforeseen circumstances that might have decreased the total number of people surveyed. The one variable that influenced power significantly was sample size; sample size increase ensured robustness in power of the study result.

Ethical Considerations

I sought and obtained approval from the Walden University Institutional Review Board. In addition, the study participants were informed of the voluntary nature of the study and asked to volunteer as participants in the study. Furthermore, I handed the consent form to the legal guardians to read or in some cases, read it to them if they asked me to do so. Soon after, I responded to questions or concerns the prospective study participants had; once I ascertained that the potential respondents understood the content and context of the forms, I proceeded to ask them for verbal agreement to participate in

the study. I also informed them that their participation in the survey served as consent and that answering the survey questions made it unnecessary for them to append their signature on the consent forms; but that participating in the survey did not preclude them from appending their signatures on the consent forms if they so desired.

The consent form stated (refer to Appendix C) that survey questions would investigate how much resources children received when goodwill organizations and the local community collaborated to help children in need. Sample questions were depicted in consent form to enable the adults know the nature of questions in the survey. The form also stated that participation in the survey was voluntary and that each adult head-of-household was at liberty to object to responding to any question. The form also stated that identifying information about the respondent would be removed and issues of confidentiality addressed. Finally, a space was provided for the signature of the head-of-household. The primary respondents to the study questionnaire were parents and guardians in households with AIDS orphans under 18 years of age.

Potential Risks of the Study

Due to the nature of the study and in the light of the fact the questions elicited responses relating to the orphanhood of the study participants, the researcher anticipated the following: (i) that some of the heads-of-household might still be grieving the loss of their relatives (parents of the orphans) and might need more time to take the survey, (ii) that the questions might evoke strong emotional responses that were long since buried, (iii) the nature of the study and the prospect that any part of the survey might elicit deep emotional responses from the survey participants.

In the event that the survey process evoked strong emotional reaction from the respondent, I would have offered the respondent the opportunity to continue the process a day later and would have spent time with the respondent for debriefing and would refer him or her for further help, to any available social support services in the community.

Summary

In order to evaluate the impact of collaborative efforts between goodwill agencies and the local communities in Nyanza Kenya, this chapter identified the research questions, the study design as well as the pertinent variables with their definitions and classifications. The setting of the study as described was the homes of eligible AIDS orphans and the sample size was statistically determined from the study population. The study instrumentation was developed for the World Health Organization and used in previous studies as an assessment tool to evaluate AIDS orphans' needs. Ethical considerations and potential risks of the study were addressed as they were necessary in order to treat the study population humanely and with dignity. The following chapter, chapter 4, focuses on data analysis and interpretation of the results.

Chapter 4: Results

Introduction

The focus of this chapter is data analyses of the pilot and main studies of the AIDS orphans of Nyanza Province in Kenya. The chapter outlines the characteristics of the survey participants, location and time of the survey, along with a discussion on recruitment issues. The chapter features the results of the pilot study and addresses the implications of the pilot study on the main survey. The chapter concludes with a report of the main study as well as data interpretation.

The study was designed to evaluate the effects of community referral on the amount of resources received by AIDS orphans. Design-based assumption was met via cluster sampling and randomization during the survey. The study answered research questions as well as addressed the hypotheses formulated to address the questions. The following were the research questions along with their hypotheses:

Research Question 1: Did community referral of AIDS orphans to goodwill agencies result in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily?

Directional Hypothesis 1. Community-referral of AIDS orphans to goodwill agencies resulted in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily.

$H_0$1: Community referral of AIDS orphans to goodwill agencies did not result in increased number of maternal, paternal, and double AIDS orphans who ate at least, two meals daily.

H_a1: Community referral of AIDS orphans to goodwill agencies resulted in increased number of maternal, paternal and double AIDS orphans who ate at least, two meals daily.

In order to address this research question, I calculated the differences in the community referral versus noncommunity referral and how they related to the likelihood that an AIDS orphan ate at least two meals daily. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the likelihood that an AIDS orphan ate at least two meals daily and community referral.

Research Question 2: Did community referral of AIDS orphans to goodwill agencies result in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless?

Directional Hypothesis 2. Community- referral of AIDS orphans to goodwill agencies resulted in fewer numbers of days that maternal, paternal and double AIDS orphans were homeless

H_02: Community referral of AIDS orphans to goodwill agencies did not result in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless.

H_a2: Community referral of AIDS orphans to goodwill agencies resulted in fewer numbers of days that maternal, paternal, and double AIDS orphans were homeless.

In order to address this research question, I calculated the differences in community-affiliation of AIDS orphans related to the likelihood of homeless among the orphans. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between homelessness among AIDS orphans and community referral.

Research Question 3: Did community referral of AIDS orphans to goodwill agencies result in decreased number of sibling separation among maternal, paternal, and double AIDS orphans?

Directional Hypothesis 3. Community-referral of AIDS orphans to goodwill agencies resulted in decreased number of sibling separation among maternal, paternal and double AIDS orphans.

$H_0$3: Community referral of AIDS orphans to goodwill agencies did not result in decreased number of sibling separation among maternal, paternal, and double AIDS orphans.

H_a3: Community referral of AIDS orphans to goodwill agencies resulted in decreased number of sibling separation among maternal, paternal, and double AIDS orphans.

In order to address this research question, I calculated the differences in the enrollment categories and how the type of orphan hood related to the likelihood of sibling separation. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the sibling separation and community referral.

Research Question 4: Did community referral of AIDS orphans to goodwill agencies result in decreased number of absences from school among maternal, paternal, and double AIDS orphans?

Directional Hypothesis 4. Community-referral of AIDS orphans to goodwill agencies resulted in decreased number of absences from school among maternal, paternal and double AIDS orphans.

$H_0$4: Community referral of AIDS orphans to goodwill agencies did not result in decreased number of absences from school among maternal, paternal, and double AIDS orphans.

H_a4: Community referral of AIDS orphans to goodwill agencies resulted in decreased of number of absences from school among maternal, paternal, and double AIDS orphans.

In order to address this research question, I calculated the differences in the enrollment categories and how the type of orphan hood related to the number of AIDS orphans' absences from school. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the school absences and community referral.

Research Question 5: Did community referral of AIDS orphans to goodwill agencies result in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates?

Directional Hypothesis 5. Community-referral of AIDS orphans to goodwill agencies resulted increased number (above 30% Kenya's national average) of in maternal, paternal and double AIDS orphans with birth registration or birth certificates.

$H_0$5: Community referral of AIDS orphans to goodwill agencies did not result in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates.

H_a5: Community referral of AIDS orphans to goodwill agencies resulted in increased number (above 30% Kenya's national average) of maternal, paternal, and double AIDS orphans with birth registration or birth certificates.

In order to address this research question, I calculated the differences in the maternal and birth registration categories and how the type of orphan hood related to the changes in such categories. Specifically, I used regression analysis to evaluate the direction and extent of the relationship between the birth registration and community referral.

In accordance with the research design, the pilot study was conducted prior to the data collection for the main survey. The survey took place in Nyanza Province, Kenya during the month of June 2014. The province was subdivided into clusters from which the participants were randomly selected. The homes were randomly identified from each cluster or primary sampling unit; all eligible members of any selected household (secondary sampling units) were included in the study. The process continued for all the primary sampling units delineated in the province. Altogether, there were seven primary sampling units for the pilot study and 100 primary sampling units or clusters for the main study. Instead of evaluating a constant number of AIDS orphans in each household, I conducted my survey on every eligible AIDS orphan in every household. This created variability in the number of surveyed AIDS orphans in each household. AIDS orphans in each household ranged from one to six with an average of three AIDS orphans per

household. Nevertheless, the robustness of the selection process ensures that results from the main study could be generalized to a wider population with similar demographics.

The participants were the heads-of-households of AIDS orphans in 7 clusters (for pilot study) and 100 clusters (for main study) in Nyanza Province. The head-of-households participated only for the AIDS orphans who were 17 years old or younger and were residents of Nyanza Province

Determination of eligibility was made on the following bases: the respondents were heads-of-household who were above 18 years of age who self-identified as the caretakers of AIDS orphans. The AIDS orphans were less than 18 years of age. In addition, the respondents and their wards were residents of Nyanza Province, Kenya. The pilot study was conducted on the last weekend of May 2015 and was completed 1 day before the main study began; the sample size for the pilot study was 37.

The entire survey lasted approximately one month in May and June 2014 and the response rate was 100% as all the eligible heads-of-household willingly participated in the survey. All of the surveys occurred in the respondents' (heads-of-household) homes where the respondents either recorded their responses on the questionnaire or responded verbally for me to record after they had read each question. Although the heads-of-household had read and asserted that they understood issues relating to confidentiality, they permitted other members of the household, and in some cases extended family members, to sit in during the survey.

Because the survey instrument was an adaptation of another instrument (Rogers & Surrency, 2001) and had never been used in its current state, a pilot study was deemed

necessary. For feasibility purposes, the readability of the questionnaire was evaluated with a Flesch Reading Ease Score of 77, which represented its ease of readability. The questionnaire was self-administered and as such my skill as the investigator did not play a part in the responses the study subjects gave.

Content Validity

The original form of the questionnaire was developed and used by the Centers for Disease Control and Prevention (CDC) officials to evaluate the needs of orphans (as cited in Rogers & Surrency, 2001). Although the officials did not provide documentation regarding the validity of the survey, the authors indicated that they had conducted a pilot study with the questionnaire in Zimbabwe prior to publication (Rogers & Surrency, 2001). As such the questionnaire had been reviewed and accepted as adequate in terms of its content prior to its application. Therefore, I considered their decision to use it for the desired purpose as their expression of confidence in the validity of the questionnaires for the purpose for which it was used. Although I removed some questions because my hypotheses did not address them and added the question about community-goodwill affiliation, the adjustments did not significantly alter the content of the questionnaire as it pertained to the areas my hypotheses addressed. Moreover, the individuals who translated the questionnaire from English to Swahili and Lou and back to English agreed that the questionnaire was adequate to address the study's hypotheses.

Test-Retest Reliability Analysis

Data collection for the pilot study occurred on two separate occasions, one day apart. Test-retest analyses were conducted to investigate the reliability of the different

questions in the questionnaire. On the one hand, Spearman's correlation analysis was employed to evaluate the ordinal variables; on the other hand, Kappa coefficient analysis was used to evaluate the test-retest reliability of the nominal variables. Table 4 depicts a summary of the test-retest reliability coefficients of the questionnaire items.

Table 4

Test-Retest Reliability of the Questionnaire Items (N = 37)

Item	Spearman's Rank	Kappa	*P*-value
Household size	1.000	-	<.001
Number of AIDS orphans in household	1.000	-	<.001
Gender of head of household	-	1.000	<.001
Child's relationship to head of household	-	1.000	<.001
Child's age group	-	1.000	<.001
Child's gender	-	1.000	<.001
AIDS orphan classification	-	1.000	<.001
Birth record availability	-	1.000	<.001
Number of times fed	1.000	-	<.001
Number of times child complains of hunger	1.000	-	<.001
Was child homeless	-	1.000	<.001
Number of days child was homeless	0.930	-	<.001
Sibling separation	-	1.000	<.001
Number of days separated	1.000	-	<.001
Is child of school age	-	1.000	<.001
Was child absent in the past 30 days	-	1.000	<.001
Number of days absent	0.991	-	<.001
Was child enrolled with goodwill agencies	-	0.881	<.001
Did child receive any resources	-	0.787	<.001
Was child referred by the community to goodwill agencies	-	0.687	<.001

The result of the test-retest reliability revealed that the coefficients ranged from 0.687 for the variable "whether child was referred by the community to goodwill agencies" to 1.000 for most of the other variables. All the test-retest reliability coefficients were statistically significant, an indication that there was considerable reliability.

Bar diagrams were used to observe the patterns of distributions of responses at the two testing times. Figures 3 to 22 (also see Table 4) present frequency distributions of the background characteristics of the study sample at the two testing times. Almost all variables exhibited similar response pattern at the two testing times. Slight variations in responses were noted for variables "number of days child was homeless", "number of days absent", and "whether child received any resources". Nevertheless, these minute variations were not strong enough to affect the reliability of the data as displayed on Test Retest reliability analyses in Table 4.

The utility of a pilot for this study was several-fold; it served as a blueprint for the main study because it helped to ascertain the feasibility of the large scale study in areas of survey design, subject selection, survey conduction as well as evaluation of the results; the pilot also pointed to areas of refinement and revisions of the large scale study (Leon, Davis, & Kraemer, 2011). For instance, some respondents voiced their choices of answers yet selected numbers that did not correspond with their responses. I had to ask them to ignore the numbering and simply choose the best responses for their situations. For the main study, I simply crossed out the numbers; so all the respondents had to work

through was the choice of responses that best fitted their wards on whose behalf they were participating in the survey.

In addition to feasibility assessment, the pilot study enabled me to avoid deleterious consequences which might have derailed the main study. For instance, if I had not deleted the numberings the result of the survey would not have been representative of the respondents' accurate choices of answeres. Furthermore, by not insisting that respondents address the survey with one other person, I allowed them to have as many people as they wished to be in the same room with them during the survey. There were also instances where the other people in the household chimed in with responses especially when the question was about school absenteeism and homelessness, to name a few. My flexibility in allowing entire households including co-wives and adult children to collectively answer the questions made for more accurate and complete picture of the orphans' condition. In addition, the pilot study was designed to assess the reliability and validity of the questionnaire.

Summary for Pilot Study

Overall, the pilot study served its purpose as a mini precursory study that served to advise the main study and suggest areas of modification. The survey was conducted according to the pre-determined stipulations; no deviations in the protocol were necessary or implemented. That the pilot study was conducted without the survey instrument needing modifications (except for the deletion of the numberings) points to its feasibility and adequacy as a survey tool for which it was designed. These factors serve to booster the posit that results obtained from the use of the survey tool can be generalized to the

greater population of Nyanza Province, contiguous provinces as well as other communities with similar demographics. The responses to the survey during the pilot study, indicated that the questionnaire was adequate as designed, to address the study hypotheses.

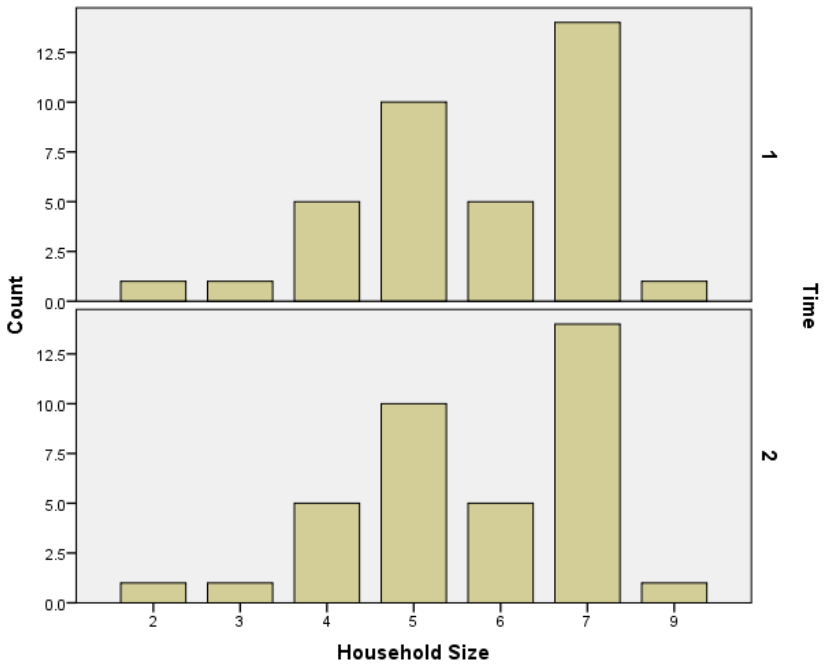

Figure 3. Bar diagram showing household size at two testing times.

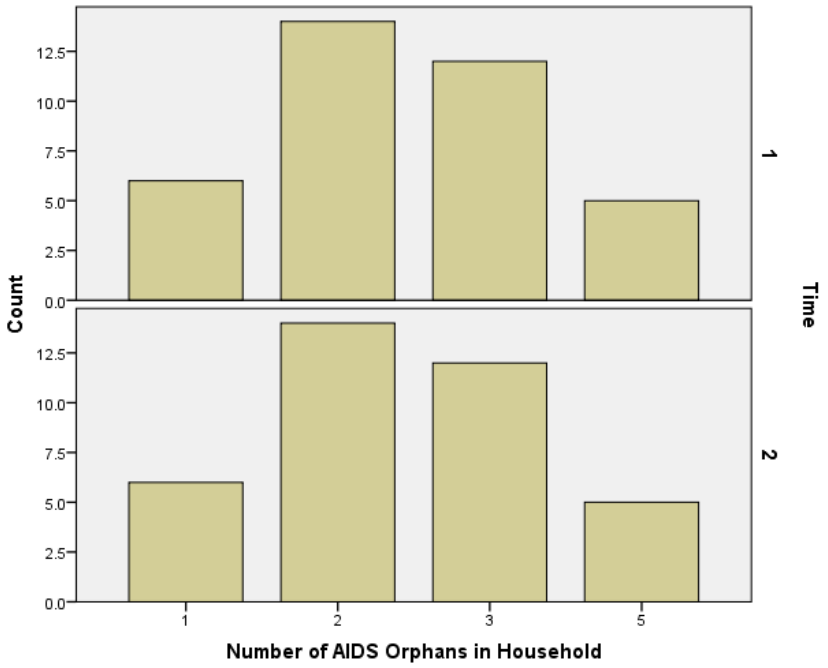

Figure 4. Bar diagram showing number of AIDS orphans in household at two testing times.

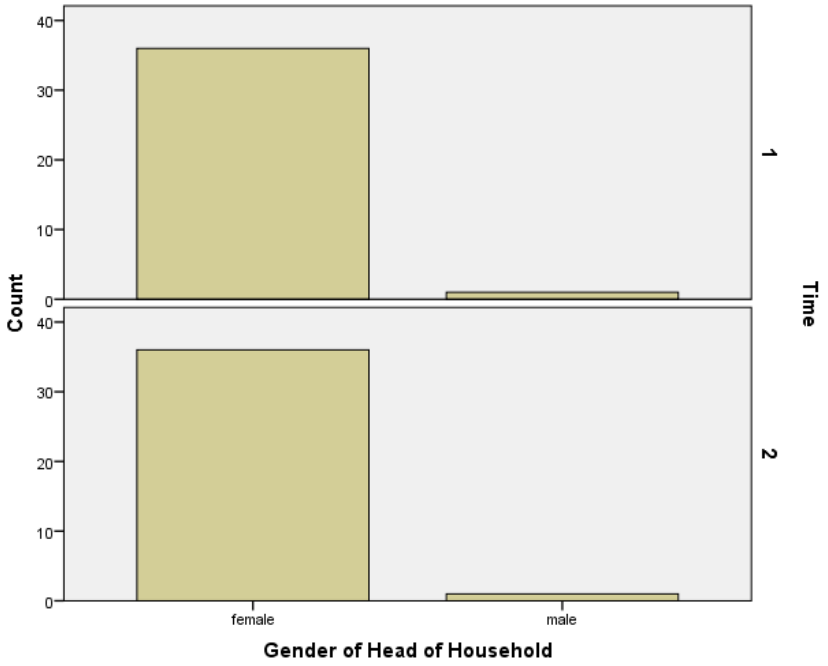

Figure 5. Bar diagram showing gender of head of household at the two testing times.

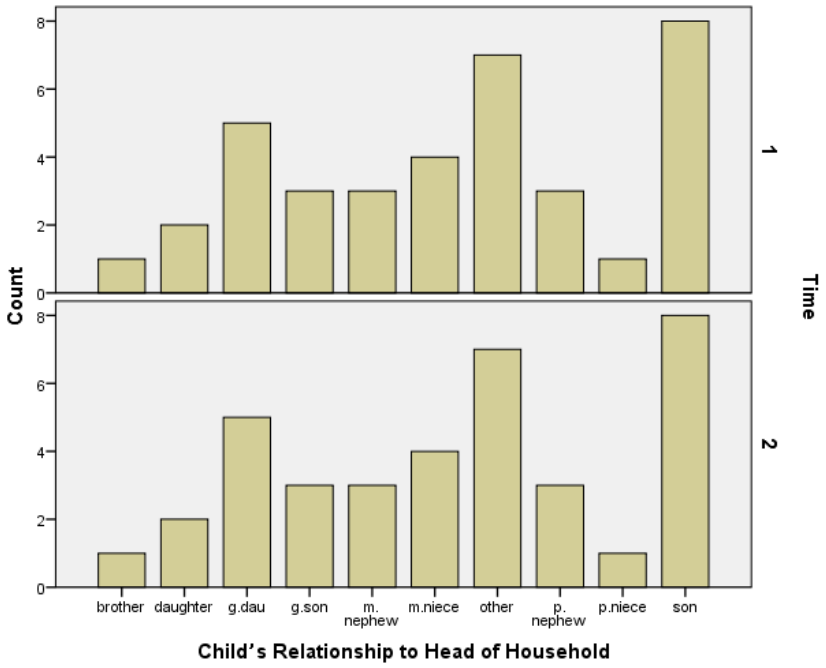

Figure 6. Bar diagram showing child's relationship to head of household at two testing times.

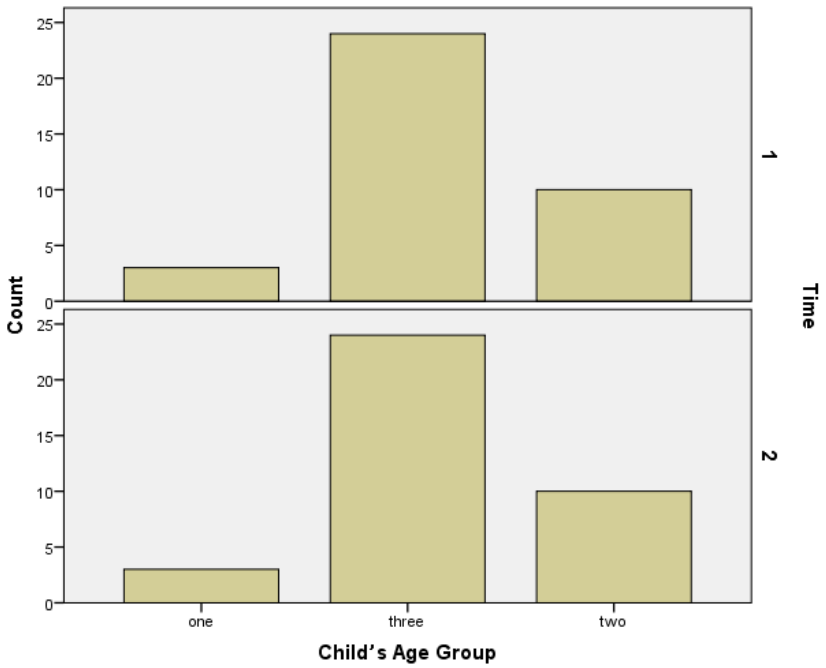

Figure 7. Bar diagram showing child's age group at two testing times.

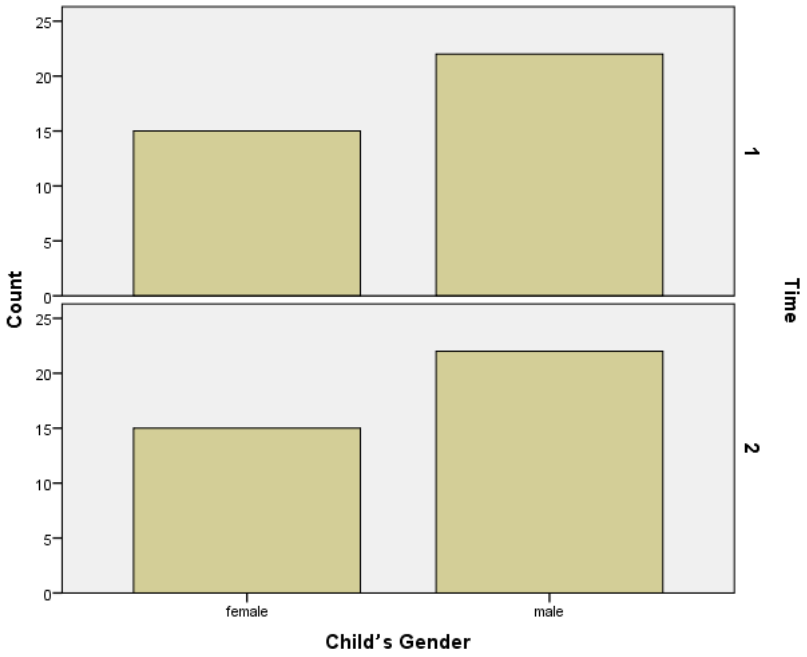

Figure 8. Bar diagram showing child's gender at two testing times.

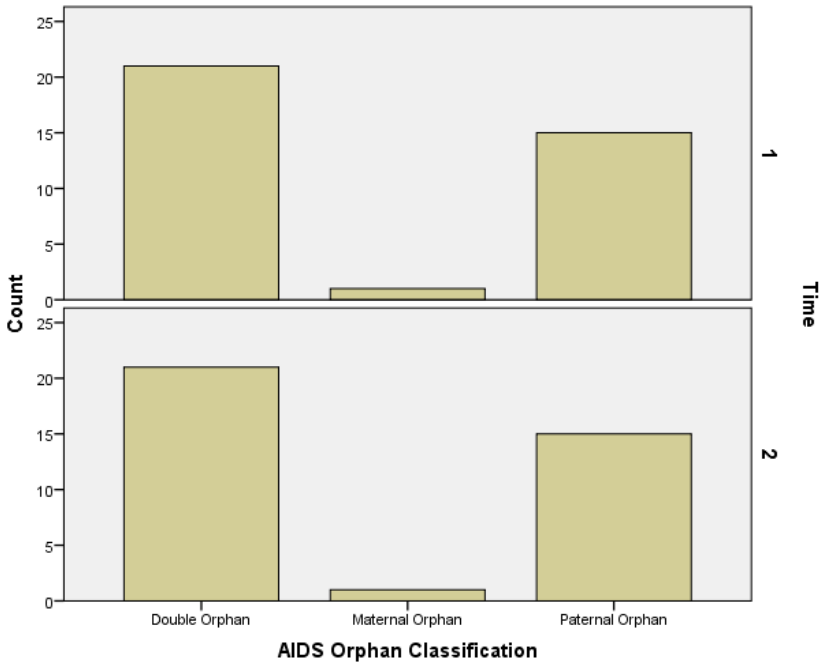

Figure 9. Bar diagram showing AIDS orphans' classification at two testing times.

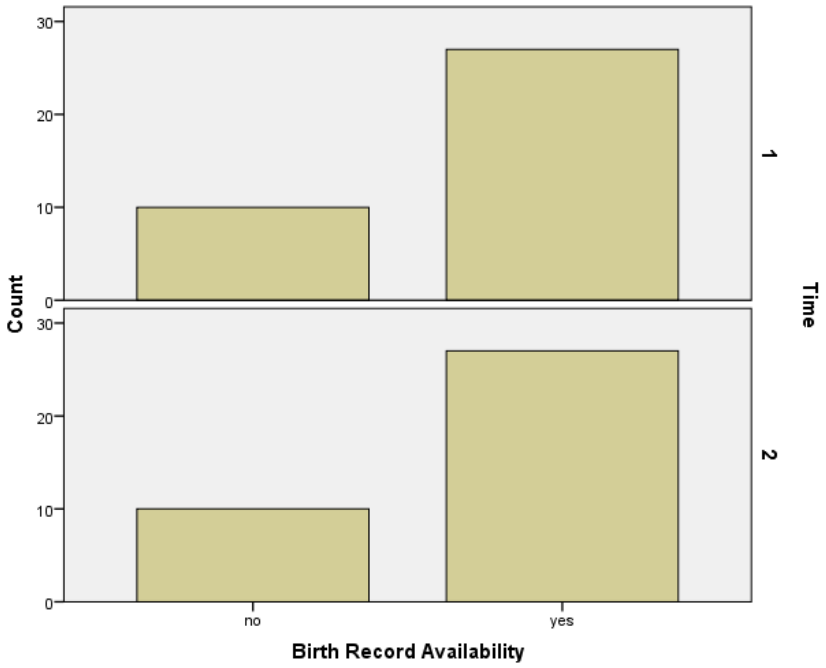

Figure 10. Bar diagram showing birth record availability at two testing times.

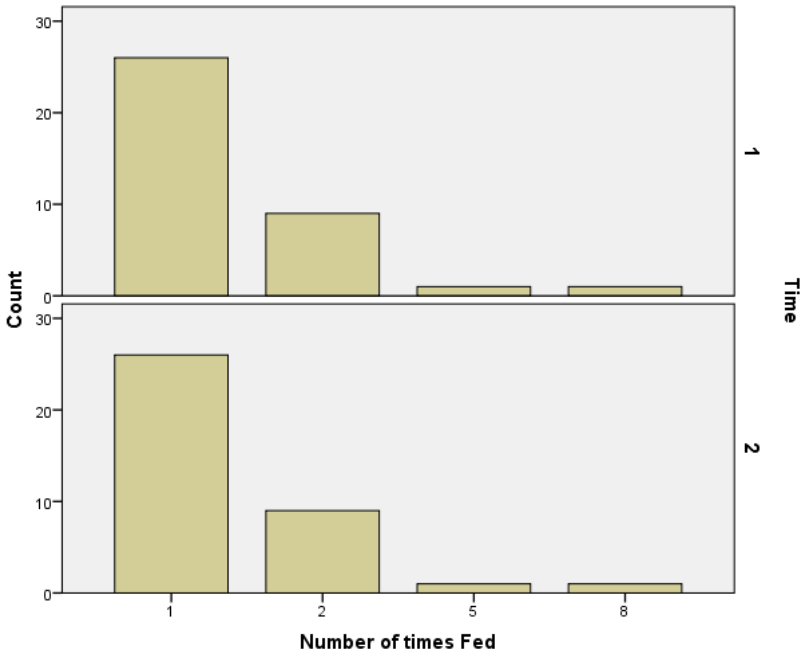

Figure 11. Bar diagram showing number of times fed at two testing times.

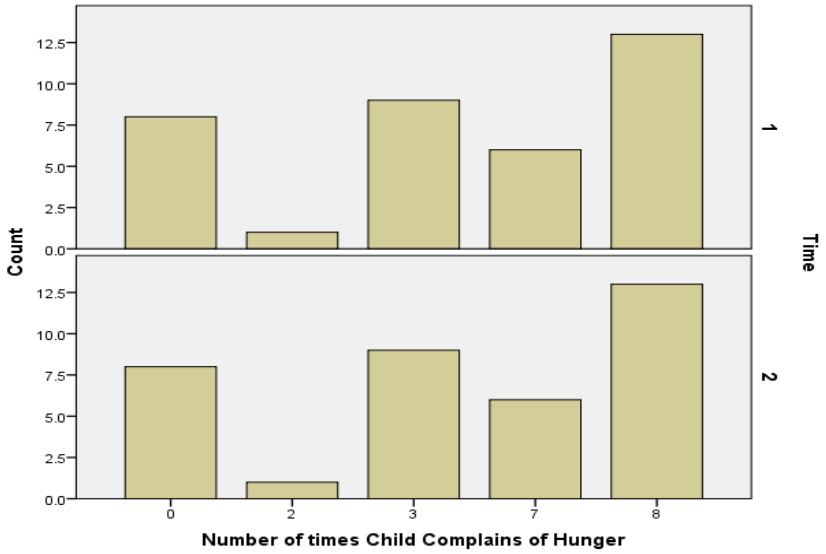

Figure 12. Bar diagram showing number of times child complained of hunger at two testing times.

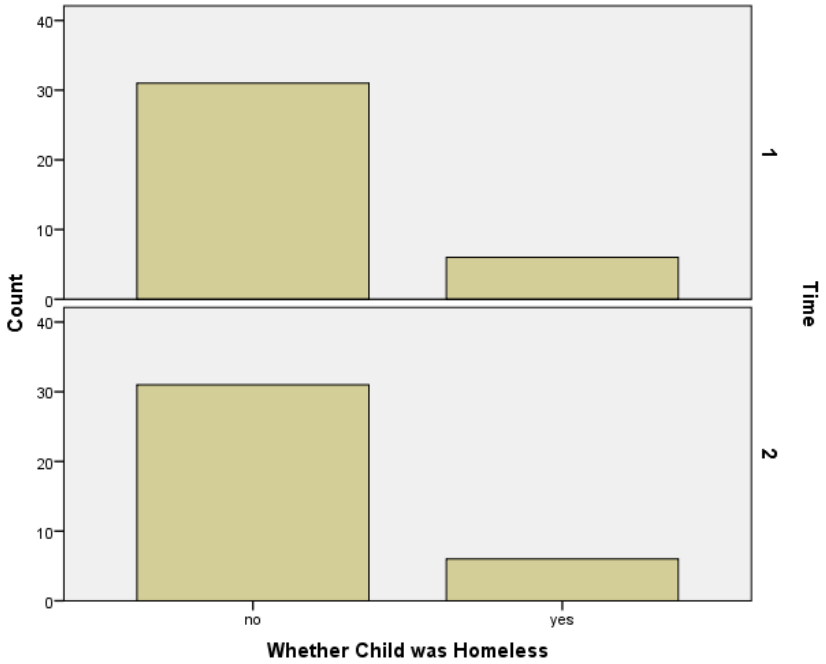

Figure 13. Bar diagram showing whether child was homeless at two testing times.

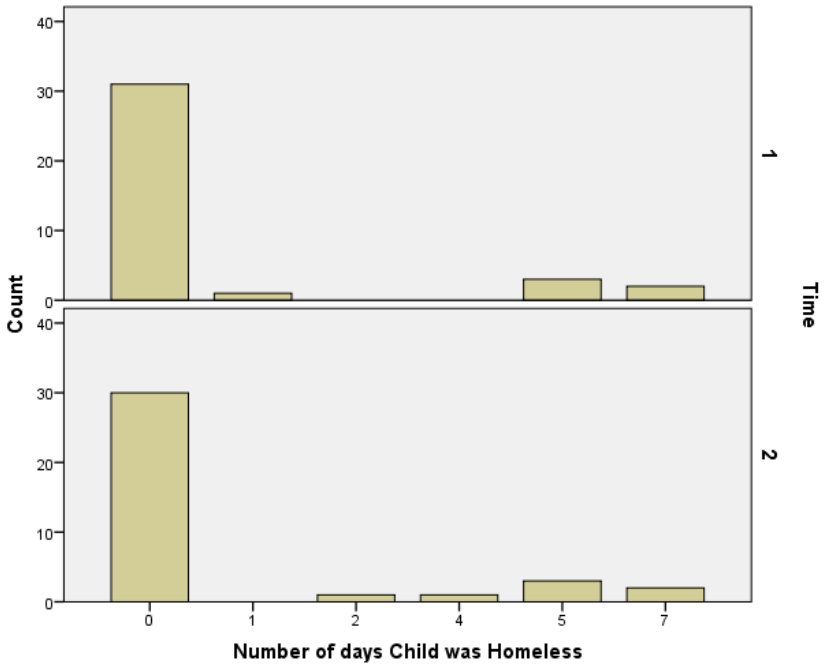

Figure 14. Bar diagram showing number of days child was homeless at two testing times.

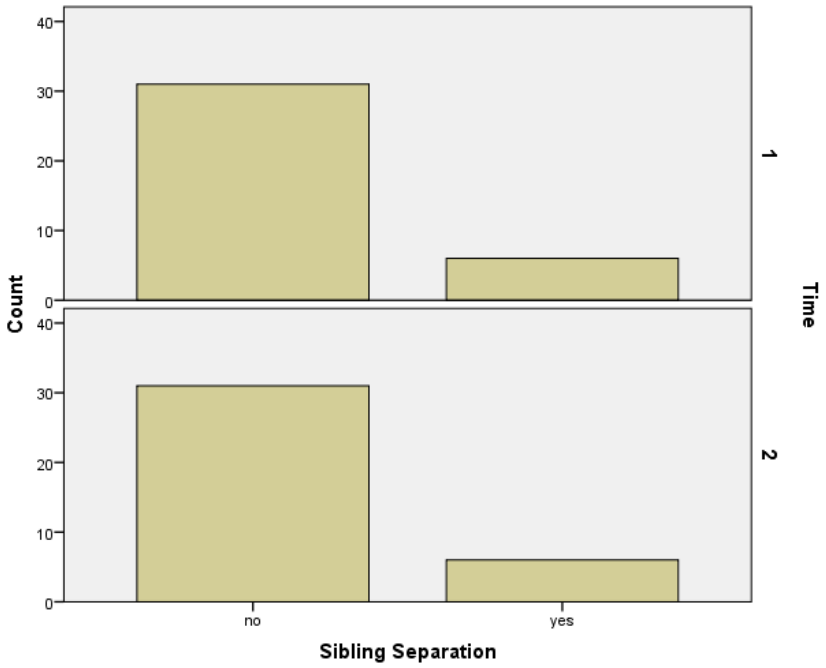

Figure 15. Bar diagram showing sibling separation at two testing times.

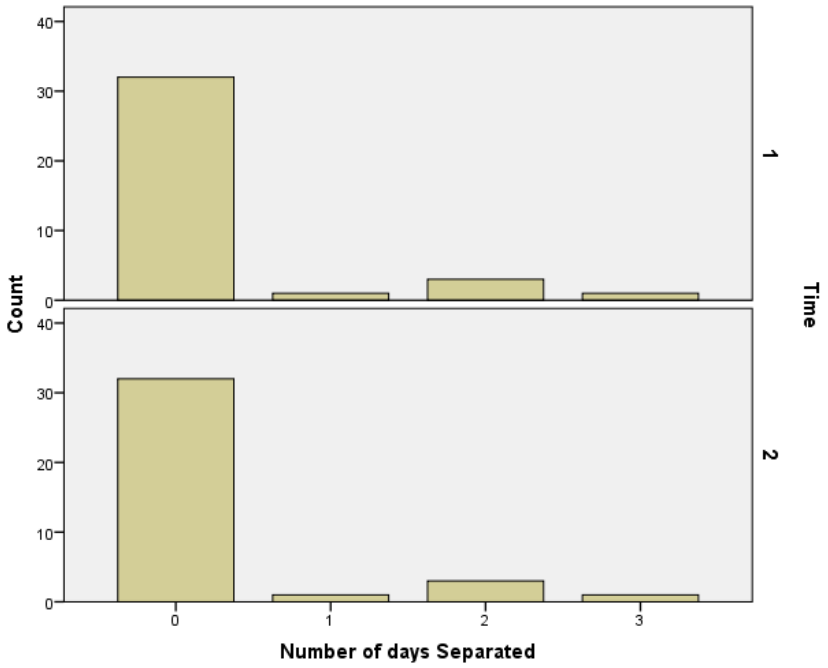

Figure 16. Bar diagram showing number of days separated at two testing times.

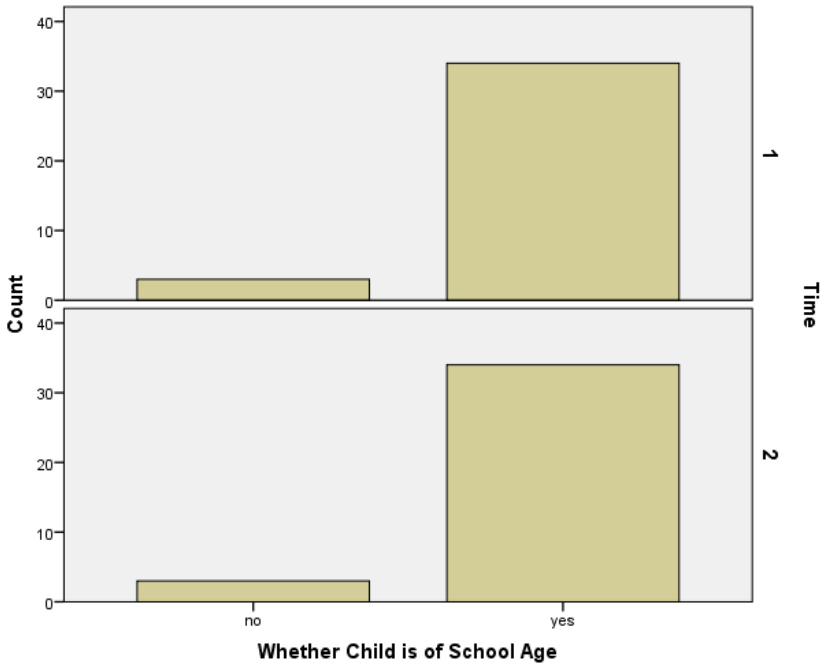

Figure 17. Bar diagram showing whether child was of school age at two testing times.

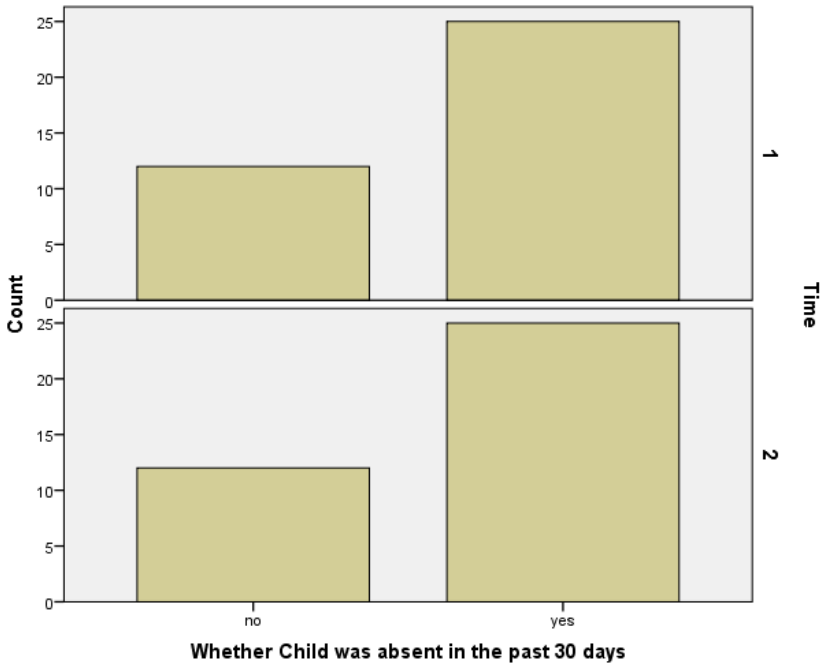

Figure 18. Bar diagram showing whether child was absent in past 30 days at two testing times.

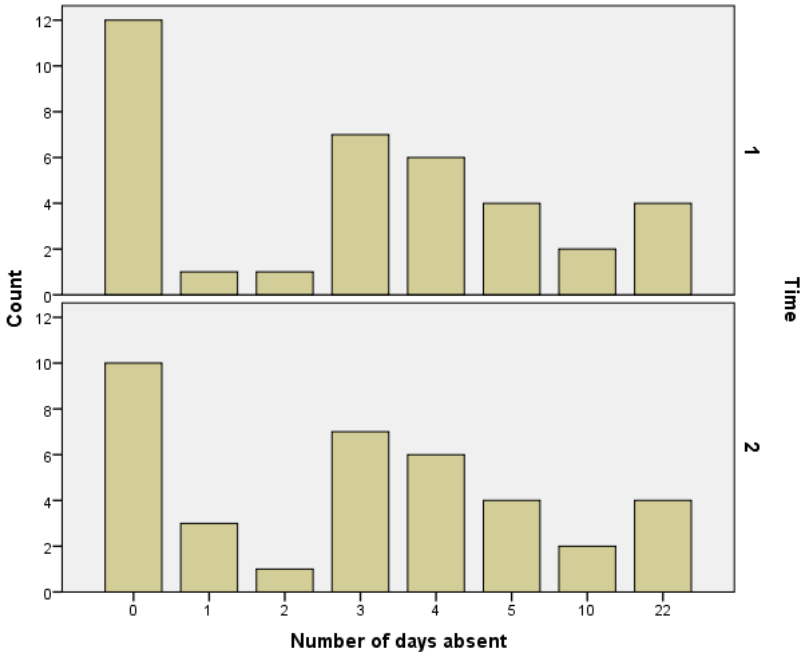

Figure 19. Bar diagram showing number of days absent at two testing times.

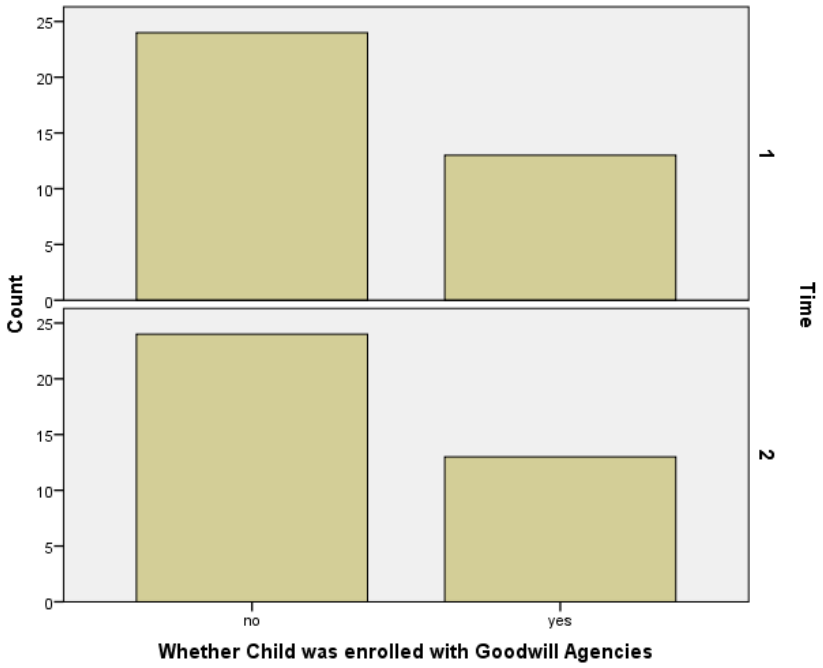

Figure 20. Bar diagram showing whether child was enrolled with goodwill agencies at two testing times.

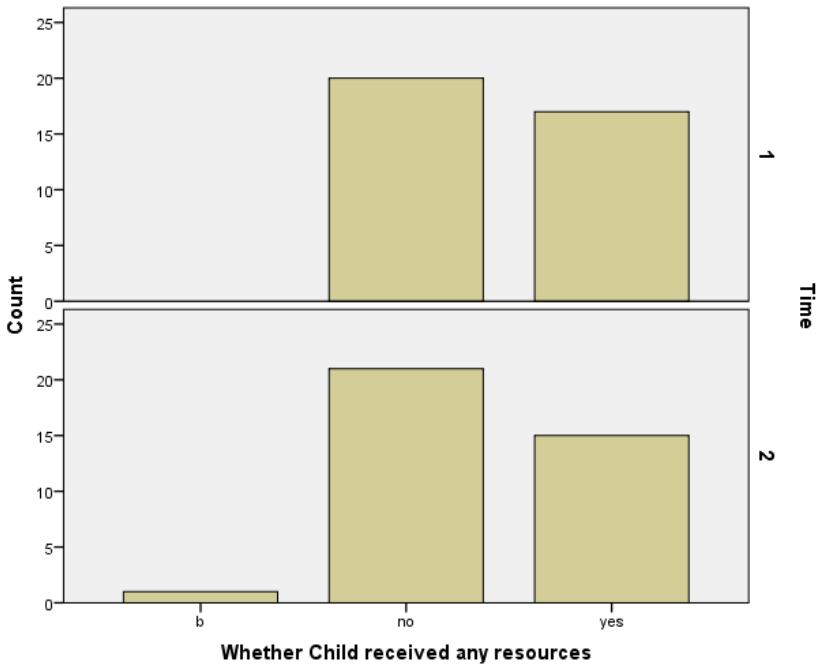

Figure 21. Bar diagram showing whether child received any resources at two testing times.

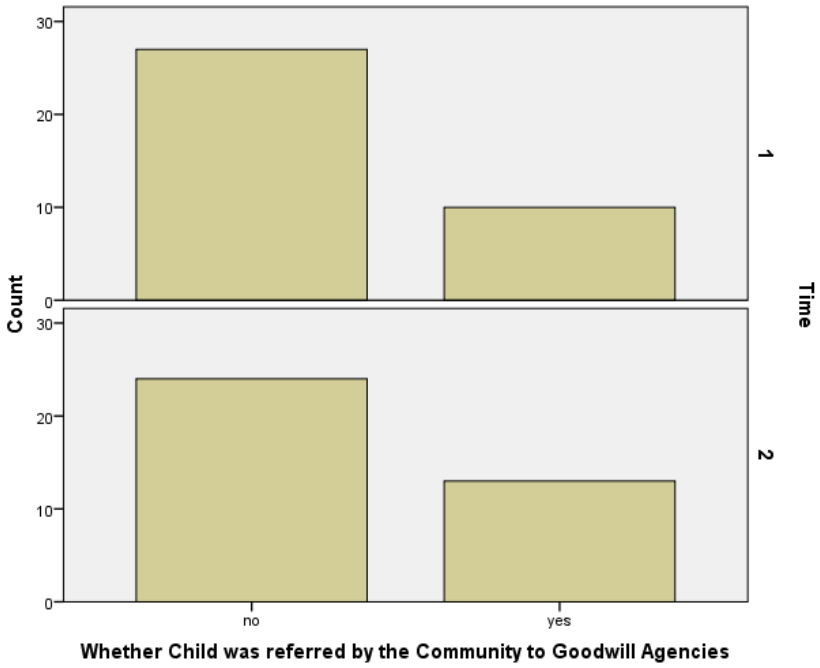

Figure 22. Bar diagram showing whether child was referred by community to goodwill agencies at two testing times.

Main Study Results

Descriptive Statistics

Demographic variables. The frequencies and percentages for the demographic variables are shown in Table 5. A majority of the heads of household was female (85.5%). Close to half of the orphans were sons/daughters of the respondent (49.8%). More than half of the sample of orphans was between 11 and 17 years old (53%). More than half of the orphans were female (54.3%) and were paternal orphans (53.8%). Majority had access to their birth records (59%), ate two or more meals a day (81.6%), were not homeless (92.3%), were not separated from their siblings (73.3%), were of school-age (86.7%) but were frequently absent (57.7%) and did not receive community referrals (86.7%).

Table 5

Frequencies and Percentages for the Demographic and Study Variables (N = 532)

Variable	Frequency	Percentage
Gender of head-of-household		
Male	77	14.5
Female	455	85.5
AIDS orphan's relationship to head-of-household		
Son/daughter	265	49.8
Brother/sister	12	2.3
Grandson/grand-daughter	128	24.1
Maternal nephew/niece	52	9.8
Paternal nephew/niece	25	4.7
Other relative	43	8.1
Non-relative	7	1.3
Gender of orphan		
Male	243	45.7
Female	289	54.3
Age (in years) range of AIDS orphan		
0 to 4	71	13.3
5 to 10	178	33.5
11 to 17	283	53.2
Classification of orphan		
Maternal orphan	65	12.2
Paternal orphan	286	53.8
Double orphan	181	34.0
Availability of birth record		
No	218	41.0
Yes	314	59.0

(table continues)

Variable	Frequency	Percentage
Fed two or more times daily		
No	98	18.4
Yes	434	81.6
Homeless		
No	491	92.3
Yes	41	7.7
Separated from siblings		
No	390	73.3
Yes	141	26.5
Orphan of school age		
No	71	13.3
Yes	461	86.7
Absenteeism from School of School-age AIDS Orphans		
No	154	33.4
Yes	307	66.6
Community referral		
No	461	86.7
Yes	71	13.3

Study variables. The descriptive statistics for the study variables are summarized in Table 6; Figure 23 depicts the means of the variables studied with community-referred versus non-community referred results juxtaposed in different colors for comparison. Household size ranged from two to nine; the mean number of individuals residing in one home was 5.73 (SD = 1.45). The number of AIDS orphans per household ranged from

one to five; the mean number of AIDS orphans per household was 2.57 (SD = 1.19). The number of times the orphans complained of hunger ranged from zero to eight; the mean number of complaints was 4.73 (SD = 3.36). The number of days the AIDS orphans were homeless ranged from zero to 20; the mean number was 0.81 (SD = 2.04). The number of days the AIDS orphans were separated from their siblings ranged from zero to three; the mean number of days separated was only .32 (SD = .78). The number of days AIDS orphans were absent from school ranged from zero to 22; the mean number of days the orphans were absent from school was 4.76 (SD = 6.59).

Most of the variables were not normally distributed, as shown in the histograms in Appendixes P-W. Kline (2011), postulated that a variable is not normally distributed if its skewness index is above three. Since these variables were not normally distributed, they were transformed via a natural log function. The skewness index for the transformed Household Size and Number of AIDS Orphans in the Household variables dropped below three; thus, the transformed variables were used in subsequent procedures. Because the variables – Days Spent Homeless, Days Separated from Siblings, and Days Absent from School – remained highly skewed even after they were transformed, the binary variables (homeless for any number of days or not homeless) were used in subsequent procedures.

Table 6

Descriptive Statistics for the Study Variables

Variable	*Range*	*M*	*SD*	*Skewness*
Household size	2 to 9	5.73	1.45	5.34
No. of AIDS orphans in household	1 to 5	2.57	1.19	5.87
No. of times AIDS orphan complained of hunger	0 to 8	4.73	3.26	-2.51
Days spent homeless	0 to 7	0.81	2.04	58.19
Days separated from siblings	0 to 3	0.32	0.78	19.68
Days absent from school	0 to 22	4.76	6.59	24.27

Note. Skewness = skewness statistic/SE.

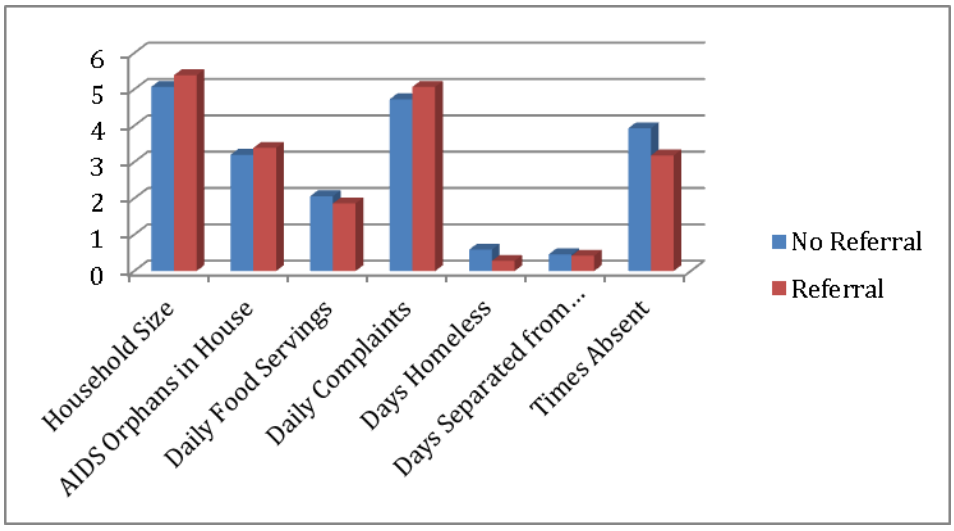

Figure 23. Means for study variables across community referral groups.

The Relationship Between Community Referral and Number of Times AIDS Orphan is Fed (First Hypothesis)

I hypothesized that, after controlling for demographics, community referral of AIDS orphans to goodwill agencies would lead to an increase in the number of orphans who eat at least two meals per day. Since the first hypothesis sought to determine whether there was an increase in the number of orphans who are fed one or more times and at a minimum of two times per day (dependent variable), the dependent variable was coded into a binary variable: one feeding vs. two or more feedings. A binary logistic regression analysis was conducted in consideration for the binary dependent variable.

The findings in Table 7 reveal that community referral did not lead to an increase from a single feeding to at least two feedings per day, OR = 1.16, p = .671. Therefore, the first null hypothesis was not rejected. Note, however, that orphan type significantly predicted the likelihood of increasing feeding time from one to two or more; In comparison to double orphans, maternal and paternal orphans fared better in terms of the number of times feed, OR = .51, p = .023.

Table 7

Logistic Regression Analysis Results for the Daily Feedings Model Coded as Less Than Two Versus Two or More Times AIDS Orphan was Fed Each Day

Variable	B	SE	OR	SIG.
Male vs. female respondent	-.23	.34	.80	.509
Ten or younger vs. eleven or older (orphan)	-.42	.24	.66	.076
Male vs. female orphan	.22	.23	1.24	.345
Maternal or paternal vs. double orphan	-.67	.30	.51	.023**
Son/daughter vs. all other relationships	.29	.29	1.34	.316
Number of orphans in household	-.15	.23	.86	.505
Not referred vs. referred by community	.15	.34	1.16	.671

Note. ** $p < 0.05$, OR = odds ratio. Overall model fit was X2(7) = 11.38, $p = .123$. Nagelkerke R2 = .034, N = 532.

The Relationship Between Community Referral and Number of Days the AIDS Orphans Spent Homeless (Second Hypothesis)

I hypothesized that, after controlling for demographics, community referral of AIDS orphans to goodwill agencies (independent variable) would result in fewer number of days the orphans were homeless (dependent variable) within 30 days prior to the study. A test of the normality of The Number of Days AIDS Orphans Were Homeless disclosed a highly skewed variable as such the binary variable (homeless versus non-homeless) was used as the dependent variable. Since the dependent variable was a measurement of the home-bound versus homelessness of AIDS orphans during the 30 days preceding the test date, a logistic regression analysis was conducted.

The findings in Table 8 indicate that community referral did not lead to a decrease in the number of days AIDS orphans spent homeless, OR = .54, p = .317. Accordingly, the second null hypothesis was not rejected. But number of AIDS orphans in the household significantly predicted the likelihood that an AIDS orphan would be homeless, OR = .45, p = .007. The more AIDS orphans there were in the household, the lesser was the probability that the AIDS orphan would be homeless.

Table 8

Logistic Regression Analysis Results for the Homeless Model

Variable	B	SE	OR	SIG.
Male vs. female respondent	.15	.46	1.17	.736
Ten or younger vs. eleven or older (orphan)	.55	.36	1.74	.123
Male vs. female orphan	-.03	.34	.97	.933
Maternal or paternal vs. double orphan	.29	.42	1.34	.490
Son/daughter vs. all other relationships	.23	.43	1.25	.596
Number of orphans in household	-.80	.30	.45	.007**
Not referred vs. referred by community	-.62	.62	.54	.317

Note. ** p< 0; OR = odds ratio. Overall model fit was X2(7) = 15.77, p = .027. Nagelkerke R2 = .070, N = 532.

The Relationship Between Community Referral and Sibling Separation (Third Hypothesis)

I hypothesized that, after controlling for demographics, community referral of AIDS orphans to goodwill agencies (independent variable) would result in fewer numbers of days the AIDS orphans would be separated from siblings within the last 30 days following the test date (dependent variable). Since assessment of the dependent variable indicated skewness, it was represented as a binary variable (separated vs. not separated) to allow for the conduction of logistic regression analysis.

The findings in Table 9 suggest that community referral did not lead to a decrease in the likelihood that AIDS orphans would be separated from their siblings, OR = .90, p = .739. Thus, the third null hypothesis was not rejected. However, AIDS orphans' age significantly predicted the likelihood of sibling separation, OR = .54, p = .006. In comparison to the orphans 11 years and older, those who were aged 10 years old and younger were more likely to be separated from their siblings; the likelihood of sibling separation for older orphans decreased by .54. Orphan type also significantly predicted the likelihood of sibling separation, OR = 2.49, p = .000. Double orphans were 2.49 times more likely to be separated from their siblings in comparison to maternal or paternal orphans. In effect, maternal and paternal orphans were kept together in the same household more than double orphans. In addition, the relationship type significantly predicted the probability of sibling separation, OR = 1.93, p = .013. AIDS orphans' close kinship (son or daughter) to the heads-of-household was associated with sibling-togetherness whereas distant or no kinship to the heads-of-household was associated with

increased sibling separation; the odds that orphans who were not sons or daughters of the respondent were separated from siblings increased by 1.93. Lastly, the number of AIDS orphans in the household significantly predicted the likelihood that an AIDS orphan would be separated from their siblings, OR = .37, p = .000. The more AIDS orphans there were in the household, the less likely the probability that they were separated from their siblings.

Table 9

Logistic Regression Analysis Results for the Separation from Siblings Model

Variable	B	SE	OR	Sig.
Male vs. female respondent	-.26	.29	.77	.384
Ten vs. younger vs. eleven or older orphan	-.62	.22	.54	.006**
Male vs. female orphan	.08	.22	1.09	.701
Maternal or paternal vs double orpnan	.91	.26	2.49	.000**
Son/daughter vs. all other relationships	.66	.26	1.93	.013**
Number of orphans in household	-.99	.21	.37	.000**
Not referred vs. referred by community	-.11	.33	.90	.739

Note. **p< 0.05; OR = odds ration. Overall model of fit was $\chi 2(7) = 76.67$, p = .000. Nagelkerke R2 = .197, N = 532.

The Relationship Between Community Referral and School Absenteeism (Fourth Hypothesis)

I hypothesized that, after controlling for demographics, community referral of AIDS orphans to goodwill agencies (independent variable) would result in fewer number of days the AIDS orphans spent out of school within the 30 days preceding the study (dependent). Because the dependent variable sought to measure regular school attendance versus absenteeism of the AIDS orphans within the preceeding 30 days, a regression analysis was conducted.

The findings in Table 10 indicate that community referral did not predict the likelihood of absenteeism, OR = .66, p = .130. Therefore, the fourth null hypothesis was not rejected. However, most of the respondents were females and female rather than male heads-of-household significantly predicted the odds of an orphan being absent from school, OR = 2.04, p = .010. In addition, age of AIDS orphan significantly predicted the likelihood of absenteeism, OR = 3.89, p = .000. In comparison to orphans 10 years or younger, the odds that orphans 11 years old or older were absent from school increased by 3.89 folds.

Table 10

Logistic Regression Analysis Results for the Absenteeism Model

Variable	B	SE	OR	SIG.
Male vs. female respondent	.71	.28	2.04	,010**
Ten or younger vs. eleven or older (orphan)	1.36	.20	3.89	.000**
Male vs. female organ	.12	.19	1.13	.526
Maternal or paternal vs. double orphan	-.32	.24	.73	.184
Son/daughter vs. all other relationships	-.16	.23	.86	.491
Number of orphans in household	.30	.19	1.36	.102
Not referred vs. referred by community	-.42	.27	.66	.130

Note. ** $p < 0.05$; OR = odds ration. Overall model fit was X2(7) = 61.77, $p = .000$. Nagelkerke R2 = .148, N = 461.

The relationship Between Community Referral and Birth Record Availability (Fifth Hypothesis)

I hypothesized that, after controlling for demographics, community referral of AIDS orphans to goodwill agencies would lead to increase in the availability of birth records. Since the dependent variable sought to measure whether or not the AIDS orphans had available birth records, a logistic regression analysis was conducted.

The findings in Table 11show that, after controlling for demographics, community referral significantly predicted birth-record availability, OR = 2.20, p = .007. In comparison to those who were not referred to the community, the likelihood that AIDS orphans referred to the community would have available birth records increased by 2.20. Therefore, the null hypothesis was rejected.

In addition, several variables predicted the likelihood of increased instances of available birth records. First, gender of orphan significantly predicted the probability of access to birth records, OR = .66, p = .028. In contrast to male orphans, the odds that female AIDS orphans had available birth records decreased by .66. Second, type of orphan also significantly predicted the likelihood of birth record availability, OR = 2.91, p = .000. Paternal and maternal orphans were more likely than double orphans to have available birth records. Third, relationship with respondent also significantly predicted the chances of having access to birth records, OR = .05, p = .003. Sons and daughters of the respondents tended to have available birth records in contrast to AIDS orphans who were not sons or daughters of the respondents. Fourth, the number of orphans in the household significantly predicted the likelihood of increased access to birth records OR =

.53, p = .001. The more orphans there were in the household, the less likely it was that the orphans' birth records were available.

Table 11

Logistic Regression Analysis Results for the Availability of Birth Records Model

Variable	B	SE	OR	SIG.
Male vs. female respondent	-.59	.31	.55	.053
Ten or younger vs. eleven or older (orphan)	.37	.19	1.44	.053
Male vs. female orphan	-.42	.19	.66	.028**
Maternal or paternal vs. double orphan	1.07	.25	2.91	.000**
Son/daughter vs. all other relationships	-.69	.23	.50	.003**
Number of orphans in household	-.64	.19	.53	.001**
Not referred vs. referred by community	.79	.29	2.20	.007**

Note. ** p< 0.05; OR = odds ratio. Overall model fit was $\chi 2$ (7) = 58.88, p = .000. Nagelkerke R2 = .142, N = 532.

Summary

In the preceding paragraphs of this chapter I presented the results of the pilot study as well as those of the main study. However, the chapter began with an overview of the chapter, continued with the restatement of research questions, null and alternative hypotheses. Following was an illustration of the survey process, reliability and validity issues of the pilot study and a display of the numerical, pictoral representation of the pilot study along with explanations of the results. A description of the study proper which followed was presented in sequence, first was the descriptive statistis, study variables and

the nuances of the results of the analyses that emanated from the five hypotheses of the study.

The result of the survey points to an association between community referral and availability of birth records. Furthermore, double orphanhood, male gender, decreased number of orphans in the household, closeness of kinship of AIDS orphans to the respondents all lead to a greater likelihood of birth record availability. Results also indicate that community referral was not positively associated with the chances that AIDS orphans ate at least, two meals daily or complained of hunger; double AIDS orphans fared worse than maternal or paternal orphans in relation to the number of times hungry or fed at least, two meals daily. Also community referral did not positively correlate with the number of days AIDS orphans were homeless but the increase in the number of AIDS orphans in the household negatively correlated with homelessness.

Community referral did not lead to decreased sibling separations. However, the older the AIDS orphan, the less likely the occurrence of sibling separation in the household. Double orphans were also more likely to experience sibling separation than their counterparts. Sons and daughters of the respondent tended to stay together in the same household as opposed to other distant relatives. The survey result reflected that larger composition of AIDS orphans in a household positively correlated with sibling separation.

Finally, the result did not support the hypothesis that link community referral to decreased school absenteeism, but female gender of the respondent and increase in age of the AIDS orphan were positive correlates of absenteeism.

In sum, the findings were significant in that the result showed that only 13.3% of the AIDS orphan received community referral. Because there was a paucity of community referral as well as a punctuated flow of resources to the orphans, community referral did not seem to have significant effect on the resources received by AIDS orphans. Indirectly, the study results highlight the need for community referral coupled with consistent flow of resources as pertinent ingredients to the successful resolution of AIDS orphans' predicament. The results of this study echoes the findings of earlier studies regarding the issue. The next chapter will address in detail, the ramifications of the result of the survey as well as point to areas that warrant further research.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

Researchers have posited that collaborative endeavors involving community stakeholders was the pivotal element to addressing the plight of AIDS orphans (Nyambedha & Aagaard-Hansen, 2007). The cooperation between community members and care-giving agencies is a germane facet of engagement that had been lacking in previous initiatives (Schenk, 2009). To this end, I investigated the effects of collaborative efforts between local community members and goodwill agencies on the value of resources that AIDS orphans in Nyanza Province Kenya receive. One hundred households comprising of 532 AIDS orphans participated in the study. Of the 532 AIDS orphans, 65 (12.2%) were maternal orphans, 286 (53.8%) were paternal orphans, and 181 (34.0%) were double orphans. The heads-of-household served as proxy for the AIDS orphans and, as such, completed the survey on behalf of the orphans. One hundred percent of the heads-of-household deemed eligible to participate willingly did so ; all who began the survey dutifully responded to the entire survey questions.

The survey was conducted on the following premises:

- that community affiliation (described as community referral of AIDS orphans to goodwill agencies) would result in increased number of AIDS orphans with available birth records;
- that community affiliation would lead to fewer instances of AIDS orphans' absenteeism from school;

- that community affiliation would result in fewer instances of sibling separation
- that community affiliation would negatively correlate with homelessness;
- that community affiliation would correlate with food security for the AIDS orphans.

One salient feature of the result was that relatively few AIDS orphans (13.3%) admitted to having ever received outside resources or been referred by the community to goodwill agencies for help.

Data analysis revealed that although community referral did not lead to increased food provision, less food was available to double AIDS orphans in comparison to paternal and maternal AIDS orphans. Community referral was positively associated with availability of birth records, and male AIDS orphans were more likely to have birth records than their female counterparts. Moreover, the closer the kinship an AIDS orphan shared with the respondent, the more likely the availability of birth records for the orphan; there were more instances of birth record availability for sons and daughters of the respondents than for all other AIDS orphans. However, increased number of orphans in a household negatively correlated with availability of birth records.

In addition, community referral was not shown to be correlated with decreased instances of homelessness among AIDS orphans but homelessness negatively correlated with households with increased number of AIDS orphans.

Results of data analysis indicated that community referral was not correlated with sibling separation; albeit, sibling separation tended to occur among younger AIDS

orphans in comparison with older AIDS orphans. In as much as sibling separation was not correlated with community referral, double orphans suffered more sibling separation than paternal or maternal orphans. Not surprising, closeness in kinship to the respondent negatively correlated with sibling separation to the extent that sons and daughters of the respondents tended to stay together in the same household with their parents whereas distant relatives tended to be separated from their siblings.

Evaluation of school absenteeism among the AIDS orphans denoted more absenteeism among older children and children whose heads-of-household were males, more than was the case among younger children or children who lived with female heads-of-household. Older children who did not attend school regularly were a particular vulnerable group with regard to sexual risk-taking (Birdthistle et al., 2009) and HIV transmission (Robertson et al., 2010).

Interpretation of the Findings

One discernible feature of the respondents was the preponderance of females among them, a factor that may be explained in a number of ways:

- that adult females were more likely than adult males to offer their services as guardians or accept guardianship responsibilities of their relatives' children;
- that ailing and dying parents tended to hand over care of their children to their female relatives;
- that more men than women in the region died as a result of the AIDS pandemic; To bolster the argument for the idea of relatively higher death rates among men than women were the presence of burial sites in their family

homesteads, accompanied by living room walls adorned with photographs of deceased loved ones who were predominantly males in the prime of their lives.

Another salient aspect of the survey was that there were very few AIDS orphans who received aid or were enrolled with aid-offering agencies. Many of them indicated that the AIDS orphans were not deemed eligible for aid because the heads-of-households were able-bodied. Only one respondent, a retired physician, indicated that he did not seek resources for his wards because he would feel guilty if he received anything on their behalf in light of the fact that many other AIDS orphans in the community needed the resources more than the children in his care did.

A cogent reason for why community affiliation did not reflect better food security when compared to noncommunity affiliation was that within the population, there was generalized deprivation (Isaranurug & Chompikul, 2009; Nyambedha & Aagaard-Hansen, 2007; UNdata, 2010); also, the flow of resources to the orphans was infrequent (Schenk, 2009).

To the extent that community referral failed to have a correlation with homelessness among AIDS orphans, the more AIDS orphans in a household, the lower the chances that anyone of them would have been homeless within the previous 30 days. The result could be construed as relating to the idea that as long as the children stayed together, they developed strong emotional bonds that helped them thrive and stay together despite difficult situations (Okawa et al., 2011).

Community referral did not appear to be correlated with decreased school absenteeism, probably because school remittances made to the schools on behalf of the AIDS orphans whose fees were subsidized arrived at irregular intervals and sometimes did not arrive at all; in such circumstances, the AIDS orphans were sent home from school (Glennersteri, Kremer, Mbiti, & Takavarasha, 2011).

However, that school absenteeism was a correlate of female gender as heads-of-household was an indication that majority of female heads-of-household lacked the wherewithal to provide tuition, uniform, examination fees, and lunch for their wards, the AIDS orphans, due to gender-role inequality in the culture (Ngubane, 2010). The male heads-of-household had higher earning power than their female counterparts and were more likely to afford tuition, uniform, school lunches, or examination fees for the AIDS orphans in their care (Ngubane, 2010). The reason for the relatively higher absenteeism among older AIDS orphans rather than their younger counterparts might be two-fold: increased school-related expenses in higher grade levels relative to lower grade levels coupled with decreased government subsidies (Glennersteri et al., 2011). Furthermore, the guardians of older children may have kept them from school because the older orphans provided much needed physical labor around the house and in farmlands (Ansell & Young, 2004); this was akin to the findings of Nyambedha et al. (2003a). School absenteeism could have occurred among AIDS orphans whose caregivers were aged and or ailing. The latter factor is especially significant because majority of the heads-of-households were middle to advance-aged (Ansell & Young, 2004). An easily overlooked factor that may have influenced the result of this aspect of the survey was the exemption

of AIDS orphans who were age-eligible yet not eligible for the survey because of their marital status; this group was exempt from the study because they were females considered emancipated adults by virtue of the fact that they were married teen heads-of-household. Evaluation of a subset of this population would have offered comprehensive insight into why more boys than girls were absent from school. Regardless of the reasons for punctuated school attendance, one should not overlook that it could provide opportunities for sexual risk-taking among AIDS orphans and further spread of HIV, as alluded to by previous researchers (Birdthistle et al., 2009; Robertson et al., 2010).

That community affiliation was shown to be positively related to increased birth records in this study could be interpreted as community affiliation with NGOs leading to easing of the roadblocks that stood in the way of birth certificate procurement for the population; such roadblocks include the costs of travel, the cost of the application as well as the inconvenience involved in obtaining birth certificates (UNICEF, 2002). Furthermore, community affiliation could have resulted in the education and awareness of the families who receive services on the importance of birth certificates because it was regarded as a requisite to the aquicition of any type of aid from goodwill agencies (Richter, et al., 2013). However, that there was a preponderance of male orphans with available birth records might suggests that more of them attended school or required assistance or simply that as a cultural norm, they were made ready for education and future employment much more than was the case for female AIDS orphans (Ngubane, 2010). That closer kinship was related to increased chances of birth record availability was not a surprise because the caregivers were alive and were able to procure the

necessary birth registration for their children. The orphans' birth might have been registered but because of their parents' illness and subsequent death, no arrangement was made to locate and hand over the pertinent documents to the prospective caregivers. That issue was particularly applicable in many communities because it was against tradition to discuss impending death or arrange for the orphans' livelihood accordingly.

That sibling separation was observed to occur more among younger AIDS orphans relative to older ones could be construed in light of the fact that younger orphans need more care and attention than older orphans, as such the labor and responsibility of caring for them are shared among relatives of the deceased (Akresh, 2005). Additionally, older orphans provide unfettered source of help around the house and farm and are likely to be kept together for their value as house helpers (Akresh, 2005). Sibling separation is particularly problematic psychologically (Gong et al., 2009) for younger AIDS orphans because it invariably results in physical and emotional distance from siblings; this is especially true when distance between siblings is intertwined with caregivers' poverty and inability to affect logistics that will ensure frequent communication between siblings.

A local non-governmental agency elucidated on the apparent lack of sustainability in project- implementation; that small non-governmental organizations have to periodically apply for grants for the same projects, and are often denied. Such denials abruptly prematurely halt the continuity of any projects regardless of their target beneficiaries or desired results (Ibrahim, 2012). The sentiment was echoed by respondents who indicated that they had received aid in the past but there was no consistency about the resources; the issue was elucidated in a case study by Ibrahim,

(2012). For example, the most common reason cited by the respondents for school absenteeism of their wards was school fees. For those whose wards received school fees, they explained that the funds only covered partial tuition. The respondents also indicated that even the partial fees were paid infrequently. Other respondents indicated that the AIDS orphans in their care were absent because he or she did not have uniforms or the funds to pay for school meals. Only five respondents stated that their wards had missed school because of illness. School absenteeism could be related to meals in that the more likely a child attended school, the more likely the child would eat at least, two meals on week days when school is in session. The circuitous relationship between school attendance and the opportunity to eat more than one meal per day on school days, make food security an important component of AIDS orphans resources in terms of nutrition and education.

In summary, for all but one issue investigated, community referral did not mitigate the plight of the orphan generally because the resources the orphans received did not arrive consistently enough to have made any substantial changes in the AIDS orphans' lives. The study reveals that the sustainability in the flow of resources continues to be the key to addressing the needs of the orphans.

Limitations of the Study

On salient limitation of this study was the exclusion of AIDS orphans in child-headed households, of which there were many. They were all deemed ineligible for the survey because of the age of the caregivers. Although this survey did not evaluate the number of child-headed households excluded from the study in the communities

surveyed, earlier investigations have cited exponential increase in the emergence of child-headed households among AIDS orphans (Richter, & Desmond, 2008). Such a group had deeper social and psychological impediments (Schenk Michaelis, Sapiano, & Weiss, 2010), that were beyond the scope of this study.

The respondents read the consent form which stated that the result of the study would serve to advise policy makers and other interest groups on how best to address the needs of the AIDS orphans; the disclosure was a necessary aspect of the consent form. However, the disclosure might have influenced some of the respondents who had received resources for their wards to deny the fact in the belief that such a response was an expression of their need. The study had no way of verifying the responses for their authenticity.

Also of import was the fact that in a few cases the female respondents invited their co-wives, mothers-in-law or adult children to sit in with them during the survey. In such instances, the respondents sometimes conferred with their rekatives before answering somes questions. It is worthy of note that these were all members of the larger household or compound and the answers they offered were usually agreed upon by the respondents and the companions. The dynamic played out around questions relating to accuracies in say, number of days that the AIDS orphans in the household had been absent from school or had been homeless. It was only in one instance that a respondent changed her response because her mother-in-law claimed that her grandson (the younger woman's son) was in her care and not in his mother's because the teenager had chosen to live with his grandmother instead of his mother and siblings. All the other cases involved

cooperation between respondents and other members of the household. Since in all cases, group responses involved only females, there was no gender disparity in play. However, issues relating to the relationship of the respondents to the AIDS orphans as well as group dynamics could be cited as having affected the validity of the responses and implicitly, the results of the survey. Nevertheless, the extent to which these matters contributed to the soundness of the responses was not clear. Also, tea is a stable breakfast component in the diet of the people of Nyanza Province. The questionnaire did not query whether AIDS orphans who had tea and nothing else in the morning were reported as having had breakfast; if that was the case, it is highly likely that many in such a situation would have aberrantly inflated the number of meals the AIDS orphans ate daily.

Another major limitation of the study is that the responses to the survey were rendered by care-givers of AIDS orphans who could have provided some of the information if they thought that it would be to their ward's benefit to do so. However, there was no way to check the veracity of the responses; all responses were accepted as trust-worthy and valid. Nevertheless, the number of AIDS orphans for whom the respondents participated in the survey was 532. The respondents were the AIDS orphans' heads-of-household who were randomly selected from 100 cluster samples. Such a large number of subjects points to the robustness of the study's power. This fact and the meticulous subject selection process imply that, within reason, the result can be generalized to the general population of Nyanza province and to similar communities.

A comprehensive evaluation of the effects on resources received by the AIDS orphans in Nyanza Kenya as well as an evaluation of charitable organizations servicing

the orphans in the same location would have shed better light on the impediments on resource-flow; that would in turn, point to ways to ensure sustainability of resources for the AIDS orphans. All these were beyond the scope of this study.

Another limitation was that the study was structured on the assumption that many of the AIDS orphans actually received resources from goodwill agencies. However, the field work indicated that there were very few of the orphans who had either received resources from any agency or had been referred by the community to any NGO. Furthermore, those who received school fees only received tuition, no school uniform, or school lunch; as such, such AIDS orphans were absent from school like the others who could not afford to attend and were equally as hungry as the others. Simply put, AIDS orphans who received partial resources fared as badly as the others in all the categories investigated in this study. The state of affairs was suggestive of a lack of adequate infrastructure to support not only resource-provision but also sustainability of the infrastructure that would ensure continued flow of basic amenities and services to the benefit of the AIDS orphans. Furthermore, investigation of the AIDS orphans' nutritional status would have been best conducted if in addition to the questionnaire, their Body Mass Indices and other health indices were measured for health correlation; but this study was constrained in the sense that it could not survey the orphans directly and restricted me from testing the orphans because of the sensitivity of the nature of the study and its potential to cause psychological harm on the AIDS orphans.

Recommendations

This study highlights the fact that AIDS orphans continue to be a disenphranchised and indigent segment of the population in Nyanza Province, Kenya. The findings suggest that not much has been done in terms of collaboration between community members as stakeholders and goodwill agencies. The findings are akin to the assertions by previous authors in their investigations of factors relating to AIDS orphans (Donahue & Mwewa, 2006; Schenk, Michaelis, Sapiano, Brown, & Weiss, 2010). For instance, AIDS orphans would be absent less frequently if the community and goodwill agencies worked together to provide full school-related fees for the children. All of the AIDS orphans would have the opportunity to be educated if they all had available birth records, had no worry about being sent home from school for failure to pay school fees(Apland, et al., 2014) . The availability of birth certificate for a child bestows some inexplicable rights to that child, including but not limited to evidence of existence, access to medical care, school registration and attendance, property inheritance and the right to be protected from physical or psychological abuse or exploitation (Apland et al., 2014).Furthermore, there were in place, several self-help groups mostly comprised of women who contributed money to micro-lend to its members for their emergencies or businesses, since the groups are self-monitored and based on honor system, they serve for some women as respite in times of financial need (Hospes, Musings & Ong'aya, 2002). However, when it was time for tuition and fees for the school children, the group's funds could not service every member's needs as all members were equally in need; more importantly, only one member received funds during a disbursement period (Hospes et.

Al., 2002; Ouma & Rambo, 2013). Since such groups were already established and were as functional as their limited funds allowed them to serve their collective purpose, such groups would be an asset if they were engaged as stakeholders and their contribution harnessed in various collaborations that would relief the plight of the AIDS orphans. The community members were poised for any self-help project that will enhance their community by way of aid to the AIDS orphans. Therefore, goodwill agencies should work directly with them rather than with smaller non-governmental organizations working on other projects, in order to place special focus on the welfare of AIDS orphans.

Recommendations for Future Studies

Since the fecundity of partnership between NGOs and community members as stakeholders to assuage the plight of AIDS orphans has been proven through research (Schenk, 2009), future studies should investigate whether NGO are reticent to embrace community members' involvement. Furthermore, investigations geared toward the identification of the road-blocks to NGO-community collaborations would be beneficial. Further research should probe into the relationship between gender and school absenteeism versus dropout. A follow-up study that includes non-AIDS orphans as control subjects would help differentiate the factors due to penury and further consequences of orphanhood. Further studies should also include child-headed households in research in order to explore the unique nuanced challenges that confront this population.

Implication for Social Change

This study should raise world's consciousness to the continued need to effectively address the plight of AIDS orphans as well as increase the will to action for the benefit of the orphans. Furthermore, the result of the study will help to shape the conversation on how best to provide services for the orphans. First and foremost, goodwill agencies should work directly with communities whose members better know how the AIDS orphans challenges and how best to work through with identifying all those who are eligible for grants and other resources. Also, children are not allowed in school if they do not have lunch money or examination fees. Therefore, addressing the issue of school attendance should involve providing free tuition, testing charges, lunch, uniforms and stationery supplies for each school-age AIDS orphans.

Since aid programs are hampered due to infrequent access to resources, a viable way to address the orphans need would be to offer each household life-stock or seed money for business and to encourage them by offering incentives to use the proceeds for multiplicative purposes.

Concluding Statement

I designed the survey to probe the aggregate hypothesis that cooperative efforts between the community and goodwill agencies to address the needs of AIDS orphans would reflect a generalized increase in resources available to the orphans in Nyanza, Kenya. I hypothesized that community referred AIDS orphans would have fewer days of school absenteeism, fewer instances of sibling separations or homelessness, increased number of AIDS orphans with available birth records and decreased food insecurity

among the AIDS orphans. I used regression analysis to evaluate the survey information I garnered from 100 guardians of 532 AIDS orphans. The findings were more somber than expected in that the concept of community affiliation with goodwill agencies was a rare phenomenon in the localities surveyed. This study pointed to a dire need for resources for AIDS orphans and a dearth of community affiliated aid-offering agencies from which the orphans could receive the type of help that would ease their state of deprivation and despondency but instead, enable them to become educated and productive members of their communities and the global society at large.

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Appendix A: Goodwill Organizations in Kenya

Abbott Global AIDS Care
Advance Africa,
P O BOX 14507 - 00100,
NAIROBI GPO, KENYA.
Tel. + 254 723 040 015

African Medical and Research Foundation (AMREF)
Amref Health Africa Headquarters, Langata Road,
P.O Box 27691 - 00506,
Nairobi, Kenya.
Tel: +254 20 6993000,
Fax: +254 20 609518
Email: http://amref.org/#sthash.VxiZAmfU.dpuf

Aga Khan Foundation
Aga Khan Foundation East Africa Regional Office
P.O. Box 40898 ICEA Building (8th floor)
Kenyata Avenue
Nairobi Kenya

AIDS Population and Health Integrated Assistance ii (APHIA)
General Accident House, Ralph Bunche Road, Nairobi, Kenya
Tel: +254 20 2713 480,
Fax: +254 20 2713 479
Email: info.nairobi@popcouncil.org

American Foundation for Children with AIDS .
Tanya Weaver, Executive Director
6221 Blue Grass Avenue
Harrisburg, PA 17112
Telephone: Tel: (888) 683-8323, (888) 683-8323, Tel: (717) 489-0206
Fax: (717) 489-0214
Email: info@AFCAids.org

AVERT
4 Brighton Road,
Horsham, West Sussex,
RH13 5BA**,** UK
Telephone: +44 (0)1403 210202,
E-mail: info@avert.org

Bil and Melinda Gates Foundation
Greg Shaw
Phone: 072.673.203
Email: gshaw@ssk.com

Canadian Foundation for Children with AIDS
Tanya Weaver, Executive Director
Canadian Foundation for Children with AIDS
1 Yonge Street, Suite 1801,
Toronto, Ontario, M5E 1W7
Tel: 1-(416)-619-9267,
Email: info@cfcaids.org

Elizabeth Glaser Pediatric AIDS Foundation
Ariel House
Westlands Avenue
Off David Osieli Road
P.O. Box 13612 – 00800
Nairobi, Kenya

Elton John AIDS Foundation: KENYA
Blythe Road
London, W14 0HG
United Kingdom
Tel: +44 (0) 20 7603 9996,
Fax: +44 (0) 20 7348 4848
Phone: +254 20 44-54-081/2/3
Fax: +254 20 44-54-084

Ford Foundation
P.O. Box 41081 Nairobi, Republic of Kenya
Phone: 254-2-710444 Fax: 254-2-719729
Email: h.ahere@fordfound.org

KANCO - Kenya AIDS NGOs Consortium
Jabavu Lane off Argwings Kodhek Rd,
Silver Pool Office Suites – A11 & A12

P.O. Box 69866-00400, Nairobi – Kenya
Mobile: +254722203344 , +254733333237,
Email: kanco@kanco.org

Matibabu Foundation Kenya
P.O Box 230 – 40607
Ukwala, Kenya
Tel: +254 0728 068496, +254 0728 068496
Nairobi Office:
Tel: +254 202 223953/7, Mob: +254 728 069 526,
info@matibabukenya.org

Rockefeller Foundation
International House
13th Floor
Mama Ngina Street
Nairobi, Kenya
P.O. Box 47543
Nairobi, Kenya
Email: jsmith@rockfound.or.ke

The Margaret Okari Children's Foundation
KENYA OFFICE
Kwamboka Okari
P.O.Box 400-40200
Kisii, Kenya
Phone: +254.713.69.55.97
Email: okari@okarichildren.org

The President's Emergency Plan for AIDS Relief (PEPFAR),

Contracting Office Address:

Unit #64102
APO, 09831-4102

Place of Performance:

USAID Kenya
P.O. Box 629
Village Market 00621
Nairobi, Kenya
Nairobi,
Kenya

Primary Point of Contact.:

Margaret W. Rukwaro,
Acquisition and Assistance Specialist
mrukwaro@usaid.gov
Phone: 254-20-862-2481, Fax: 254-20-862-2680

The World Health Organization
Dr Custodia Mandlhate
WHO Representative
Tel: +254 20 2717902 , +254 20 2717902
GPN: 35064
Mob:+254 20 0733 608 429
Fax:+254 20 2717732
Email: mandlhatec@ke.afro.who.int

UNICEF
UN Offices,
"Block F" and part of E"
Gigiri United Nations Avenue
Limuru Road
Nairobi, Kenya
Tel: 254-20-762-1234
Fax; 254-20-762-2678, 254-20-762-2679
Email: unicefesaro@unicef.org

World Vision
Karen Road, off Ngong Road,
P.O. Box 50816-00200
Nairobi, Kenya
E-MAIL: wv_kenya@wvi.org
Mobile/Cell: +254 732 126 000, +254 732 126 000
OR: +254 711 086 000, +254 711 086 000

Appendix B: Roles of Some Goodwill Organizations

Abbott Global AIDS Care partners with various non-governmental organizations, including Catholic Medical Mission Board which provides services to 70 facilities in Kenya. Abbott's focuses on maternal-child HIV prevention, support for Children with HIV, fostering healthcare systems and expanding HIV screening and treatment services (Abbotglocalcare, 2010)

AIDS Population and Health Integrated Assistance ii (APHIA) : is funded by United States Agency for International Development (USAID) to enhance the health of the citizens of Kenya. The program promotes individual via community empowerment (APHIA, 2010).

African Medical and Research Foundation (AMREF) is involved in community partnerships, capacity building and intervention programs aimed at improving access to healthcare. (AMRE, 2010).

American Foundation for Children with AIDS (AFCA) provides disadvantaged AIDS-afflicted children and their caregivers with medication and nutritional and emergency supplies. (AFCA, 2010).

Avert Organization partners with local organization to focus on HIV/AIDS prevention and treatment. Also helps meet the needs of AIDS orphans and other vulnerable children (Avert, 2010).

Bill and Melinda Gates Foundation: seeks to enhance health and welfare of impoverished people (Gates Foundation, 2010).

Canadian Foundation for Children with AIDS has offices in Kenya and provides assistance to AIDS orphans, and HIV-infected children and their guardians in the areas of education, nutrition and agriculture CFCAIDS (, 2010).

Elizabeth Glaser Pediatric AIDS Foundation has offices in 17 countries including Kenya where it focuses of the prevention and treatment of HIV/AIDS in children in particular and families in general (EGPAF, 2010).

Elton John AIDS Foundation : KENYA This is a grant-making foundation which funds community-targeted programs aimed at preventing the transmission and spread of HIV/HIV/AIDS as well as reducing the impact of the disease on the underserved populations. (EJAF, 2010)

Gilead Foundation: Gilead funds Kenya initiatives through New York University and Sahaya International to promote health care access for the underserved (Gilead, 2010) .

KANCO - Kenya AIDS NGOs Consortium –is a network of over 1000 organizations whose mutual goal is to eradicate HIV/AIDS and tuberculosis in Kenya. It also forms liaisons with international organizations. (KANCO. 2010).

Lahash International partners with local organizations and churches to advocate and care for deprived adults and children (Lahash, 2010).

Red Hot Organization is an international organization that participates in the war against HIV/AIDS by raising funds through music.(RedHot, 2010)

Save the Children: is an independent organization that trains healthcare workers in vulnerable communities help foster sustainable change in the lives of children. To this

effect, the organization ensures that children have access to healthcare and education, and are safe from exploitation (Safe the Children, 2010).

Silas Christian Foundation (SCF) is a group of 8 volunteers in the Silas slums near Eldoret, Kenya who have joined together to form an HIV/AIDS awareness and assistance team to serve the community there (SCF, 2010).

The Margaret Okari Children's Foundation is a safe home and educational center for AIDS orphans in Kenya (MOCF, 2010)

The President's Emergency Plan for AIDS Relief (PEPFAR) it is the largest funding source toward the fight against HIV/AIDS as well as care of orphans and vulnerable children (PEPFAR, 2010)

The World Health Organization: takes leadership vis-à-vis world-wide health-related issues. It sets the standard for healthcare practice and oversee global health matters (WHO, 2010).

The United Nations Children's Fund (UNICEF): Have resources in capacity building in civil society partnerships, children's rights, protection, nutrition, birth registration, and HIV intervention programs (UNICEF, 2010).

W.K. Kellogg Foundation: provides funding for children-centered community healthcare initiatives (WKKF, 2010)

World Vision: is a Christian organization geared toward eradicating poverty and injustice among children, families and communities (World Vision, 2010).

Appendix C: Screening Questions

ARE YOU THE HEAD OF THIS HOUSEHOLD?

Yes-----
No ---- (if "no" stop the screening).

HOW MANY PEOPLE LIVE IN THE HOUSEHOLD? --------

ARE THERE ANY ORPHANS IN THE HOUSEHOLD?

Yes ------
No ---- (if "no" stop the screening).

ARE THERE ANY AIDS ORPHANS IN THE HOUSEHOLD?

Yes ------
No ---- (if "no" stop the screening)

NUMBER OF AIDS ORPHANS IN THE HOUSEHOLD: -----

……
FOR INTERVIEWER USE ONLY

Cluster number:

Interview visits:

Date:

Next visit: (if asked to return)

Appendix D: Screening Questions - Swahili Translation

JE, WEWE NDIYE MKUBWA WA NYUMBA HII? ARE YOU THE HEAD OF THIS HOUSEHOLD?

Ndiyo- yes
laa iwapo laa, komesha maswali – no (if "no" stop asking questions*).*

NI WATU WANGAPI HUSHI KATIKA NYUMBA HII- HOW MANY PEOPLE LIVE IN THE HOUSE--------

JE, KUNAO MAYATIMA WOWOTE KATIKA NYUMBA HII? ARE THERE ANY ORPHANS IN THE HOUSE? -

Ndiyo- Yes ------
laa - iwapo laa, komesha maswali). No ---- (if "no" stop asking questions

JE, KUNAO MAYATIMA KUTOKANA NA JANGA LA UKIMWI KATIKA NYUMBA II? ARE THERE ANY AIDS ORPHANS IN THIS HOUSE?

Ndiyo- Yes ------
laa, - iwapo laa, komesha maswali) No ---- (if "no" stop the asking questions

IDADI YA MAYATIMA KUTOKANA NA JANGA LA UKIMWI KATIKA HII NYUMBA NUMBER OF AIDS ORPHANS IN THIS HOUSEHOLD: ----- -
……
KWA MATUMIZI YA MHOJI PEKEE - FOR INTERVIEWER USE ONLY-

nambari ya kikundi- *group number:*

matembezi ya mahojiano- *Interview visits:*

tarehe- *Date:*

matembezi ya baadaye (- iwapo utaulizwa kurudi)- *later visits: if asked to return*

Appendix E: Screening Questions - Luo (Duluo) Translation

ARE YOU THE HEAD OF THIS HOUSEHOLD? *BE IN E WUON ODNI MADUONG?*

Yes-----*kamano*
No ---- *ooyo* (if "no" stop the screening- *ka ooyo to we penjo*).

HOW MANY PEOPLE LIVE IN THE HOUSEHOLD? -------- *GIN JI ADI MODAK EI ODNI?*

ARE THERE ANY ORPHANS IN THE HOUSEHOLD? *TO BE NITIERE NYITHIND KIYE EI ODNI?*

Yes ------kamano
No ---- *ooyo* (if "no" stop the screening- *kaa ooyo to we penjo*).

ARE THERE ANY AIDS ORPHANS IN THE HOUSEHOLD? *TO BE NITIERE NYITHIND KIYE NIKECH TUO MAR AYAKI?*

Yes ------*kamano*
No ----*ooyo* (if "no" stop the screening- *kaa ooyo to we penjo*)

NUMBER OF AIDS ORPHANS IN THE HOUSEHOLD: ----- *GIN KIYE ADI?*

……
FOR INTERVIEWER USE ONLY

Cluster number:

Interview visits:

Date:

Next visit: (if asked to return)

Appendix F: Survey

PROVINCE:
DISTRICT:
CLUSTER NUMBER:
HOUSEHOLD ID.:
HOUSEHOLD SIZE:
NUMBER OF AIDS ORPHANS IN HOUSEHOLD

Gender of head-of-household
1=male
2=female

****

Relationship of AIDS orphan to the head-of-household

01=son/daughter
02=brother/sister
03 =grandson/daughter
04=maternal nephew/niece
05=paternal nephew/niece
06=brother- /sister-in-law
07=wife/husband
08=co-wife/co-husband
09=other relative
10=non-relative
11=foster-son/-daughter
12=adoptive-son/-daughter

I. AIDS ORPHAN'S AGE RANGE

0-4

5-10

11-17

II. AIDS ORPHAN'S CHILD'S GENDER

1. Male
2. Female

III AIDS'S ORPHAN CLASSIFICATION

1. Maternal orphan
2. Paternal orphan
3. Double orphan

IV. BIRTH RECORDS

Does the child have a birth certificate or record?

1. Yes
2. No or unknown

VI. FOOD AND NUTRITION

How many times does the child eat daily

1. Once or none
2. Twice
3. Three times
4. four or more times a day

V11. How many times has the child stated that he or she is hungry after a meal in the past week?

1. Once or none
2. Twice
3. Three times
4. Four
5. Five
6. Six
7. Seven
8. Eight times

VII. HOMELESSNESS

Has the child spent the night on the streets within the last 30 days?

1. Yes
2. No (skip to question VIIA)

A. How many days has the child spent the night on the streets away from home during the past 30 days?

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30

VII.SIBLING SEPARATION

A. Does the child have other sibling/s younger than 18 years, old who does/do not live in this household?

1. Yes
2. No (skip to question VIIIA)

B. How many of the child's siblings, who are younger than 18 years old do not live in this household?

1	2	3	4	5	6	7
8	9	10	11	12	13	14

VIII. SCHOOL ATTENDANCE

A.Is the child's age between 5 and 18

1. Yes
2. No (skip to question IXA)

B. Has the child been absent from school during the past 30 days, not including holidays?

i. Yes
ii. No (skip to question IXA)

C..How many days has the child been absent from school during the past 30 days, not including holidays?

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

1 Community Referral

1. Is the AIDS orphan enrolled with any goodwill agency?

    1. Yes (identify which, if known)
    2. No or unknown (if no or unknown, skip question B)

2. Has child received any resources such as safety and protection, food, clothing, money, transportation, procurement or safe keep of birth records, healthcare access, and transportation from of the listed goodwill agencies?

1. Yes (identify which, if known)

2. No or unknown

3. Did the child get community referral to any goodwill agency?

    1. Yes
    2. No or unknown

Appendix G: Survey - Swahili Translation

••• Identification- KITAMBULISHO
PROVINCE- MKOA
DISTRICT- WILAYA
LOCATION/TOWN- MTAA/MJI
.CLUSTER NUMBER: NUMBARI YA KUSANYIKO
HOUSEHOLD NUMBER: NUMBARI YA FAMILIA
NUMBER OF AIDS ORPHANS IN HOUSEHOLD- NAMBARI YA MAYATIMA WA JANGA LA UKIMWI KATIKA FAMILIA

Gender of head-of-household- jinsia ya mkubwa wa familia
1=male - mume
2=female-kike

INTERVIEW VISITS: MATEMBEZI YA MAHOJIANO
DATE: TAREHE
RESULT: MATOKEO

1 = Completed- Kukamilika
2 = Not at Home- asiye nyumbani
3 = Postponed- kuhairisha
4 = Partially Completed – kumaliziwa nusu
5 = Refused - kukataa
6= Not Eligible- kutohitimu
NEXT VISIT (if asked to return for survey at a later date) MATEMBEZI YAJAYO (kama ume ulizwa kurudi kwa uchunguzi kwa tarehe ya baadaye)
****
Relationship of child to the head-of-household- uhusiano wa mtoto na mkubwa wa nyumba

01=son/daughter- mwana wa kiume/mwana wa kike
02=brother/sister- kaka/dada
03 =grandson/daughter- mjukuu kiume/mjukuu kike
04=maternal nephew/niece- mpwa kwa upande wa mama/
05=paternal nephew/niece- mpwa kwa upande wa baba/mpwa
06=brother- /sister-in-law- shemeji/ wifi
07=wife/husband- mke/mume
08=co-wife/co-husband-mke mwenza/mume mwenza
09=other relative- jamaa wa kando
10=non-relative- sio jamaa
11=foster-son/-daughter- mwana wa kambo wa kiume/ mwana wa kambo wa kike
12=adoptive-son/-daughter- mwana wa kujinunulia wa kiume/ mwana wa kujinunulia wa kike

CHILD'S AGE- UMRI WA MTOTO

1. 0-4
2. 5-10
11-17

CHILD'S GENDER- JINSIA YA MTOTO

Male- mume
Female- kike

CHILD'S ORPHAN CLASSIFICATION- AINA ZA UYATIMA WA MTOTO

Maternal orphan- aliye poteza mama
Paternal orphan- aliye poteza baba
Double orphan- aliyepoteza wazazi wote

BIRTH RECORDS- REKODI ZA KUZALIWA

Does the child have a birth certificate or record? Je, mtoto ana cheti cha kuzaliwa au rekodi?

Yes- naam
No or unknown- hapana au hajulikani

FOOD AND NUTRITION- CHAKULA NA LISHE BORA

How many times does the child eat daily – je, mtoto huyu hula mara ngapi kwa siku
Once or none- mara moja au laa
Twice- mara mbili
Three times- mara tatu
four or more times a day- mara nne au zaidi

How many times has the child stated that he or she is hungry after a meal in the past week? Ni mara mtoto ame lalamikia njaa baada ya kula katika wiki moja iliyopita?

Once or none- mara moja au hamna
Twice- mara mbili
Three times- mara tatu
Four- mara nne
Five- mara tano
Six- mara sita

Seven- mara saba
Always- kila mara

HOMELESSNESS- UKOSEFU WA PAHALA PA KUISHI

A.Has the child spent the night on the streets within the last 30 days? Je, mtoto amewahi lala njee kwa barabara kati ya siku 30 (thelathini) zilizo pita?

Yes- naam
No- hapana (skip to question VIIA- ruka hadi swali nambari saba A)

How many times within the past 30 days has the child spent the night on the streets away from home? Ni mara ngapi kati ya siku thelathini zilizopita ambayo mtoto ameweza kulala njee kwa bara bara mbali na nyumbani?

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30

SIBLING SEPARATION- UTENGANO WA NDUGU ZANGU

A. Does the child have other sibling/s younger than 18 years, old who does/do not live in this household? Je, mtoto ana ndugu au dada zake walio chini ya miaka kumi na nane, ambao hawaishi katika hii nyumba?

Yes- naam
No- hapana (skip to question VIIIA- ruka hadi swali nambari nane A)

How many of the child's siblings, who are younger than 18 years old do not live in this household? Ni kaka au dada wangapi wa mtoto walio chini ya miaka kumi na nane, ambao hawaishi katika hii nyumba?

1	2	3	4	5	6	7
8	9	10	11	12	13	14

SCHOOL ATTENDANCE – UHUDHURIAJI WA SHULE.

Is the child's age between 5 and 18- Je, mtoto ana umri kati ya miaka tano na kumi na nane?

Yes- naam
No- hapana (skip to question IXA- ruka hadi swali tisa A)

B. Has the child been absent from school during the past 30 days, not including holidays?- je, mtoto ame wahi kosa kuhudhuria shule kati ya siku thelathini zilizopita, pasipo na siku rasmi za mapumziko?

Yes- naam
2 No – hapana (skip to question IXA- ruka hadi swali nambari tisa A)

C..How many times has the child been absent from school during the past 30 days, not including holidays? Ni, mara ngapi mtoto amewahi kosa kuenda shule kati ya siku thelathini zilizopita, pasipo na siku rasmi za mapumziko?

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

Community referral – Rufaa Jamii

Is the AIDS orphan enrolled with any goodwill agency?

Yes (identify which if known)- naam (taja ni gani kama wajua)
No or unknown- hapana au haijulikani

Has the child received any resources such as safety and protection, food, clothing, money, transportation, procurement or safe keep of birth records, healthcare access, and transportation from of the listed goodwill agencies? Je, mtoto ame wahi pokea vitu vyovyote kwa njia ya usalama, chakula, mavazi, fedha, usafiri, ununuliaji au uhifadhi wa rekodi za kuzaliwa kutoka kwa mashirika yoyote ya misaada?

Yes (identify which if known)- naam (taja ni gani kama wajua)
No or unknown- hapana au haijulikani
Were local community members involved in linking child to goodwill agency for assistance? Je, wakaaji wa hii jamii yenu walihusika katika kupatanisha mtoto na mashirika ya misaada kwa usaidizi wowote?

Yes- naam
No or known- hapana au haijulikani.

Appendix H: Survey - Luo (Duluo) Translation

••• Identification
PROVINCE
DISTRICT
LOCATION/TOWN
CLUSTER NUMBER:
HOUSEHOLD NUMBER: NAMBA MAR OT
NUMBER OF AIDS ORPHANS IN HOUSEHOLD- KAR ROM MAR KIYE KALUWORE GI AYAKI E OT
Gender of head-of-household(Kit chuech mar wuon ot)
1=male- dichuo
2=female- dhako

INTERVIEW VISITS: LIMBE MAG PENJO
DATE: TARIK
RESULT: DUOKO
1 = Completed(otiek tim nonro)
2 = Not at Home(oonge edala)
3 = Postponed(ochual mbele)
= Partially Completed (otim nus)
5= Refused
6 = Not Eligible(otamre)

NEXT VISIT (if asked to return for survey at a later date) Tarik kopo uwimjre niduog bang'e
****
Relationship of child to the head-of-household (tudruok mar nyathi gi wuon ot

01=son/daughter- wuoda/nyara
02=brother/sister- owadwa/nyaminwa
03 =grandson/daughter- nyakwara mawuoyi/nyakwara manyako
04=maternal nephew/niece- nyakewa mawuowi makanyaminwa /nyakewa manyako makanyaminwa
05=paternal nephew/niece- nyakwewa mawuowi maka owadwa/ nyakewa manyako makaowadwa
06=brother- /sister-in-law- owad gi jaoda/ nyamin jaoda
07=wife/husband/ jaoda/chuora
08=co-wife/co-husband- nyieka/ nyieka madichuo
09=other relative- watna machielo
10=non-relative-onge wat
11=foster-son/-daughter- wuoda ma bathe/nyara mabathe
12=adoptive-son/-daughter- wuoda manyiewo/ nyara manyiewo

CHILD'S AGE (NYATHI EN JAHIGNI ADI?)

0-4
2.5-10
11-17

CHILD'S GENDER(KIT CHuECH MAR NYATHI)

Male- wuowi
Female- nyako

CHILD'S ORPHAN CLASSIFICATION (EN KICH EYO MANE)

Maternal orphan- min gi onge
Paternal orphan- wuon gi onge
Double orphan- jonyuolne onge duto

BIRTH RECORDS(ANDIKE MAG NYUOL)

Does the child have a birth certificate or record?(nyathin nikod oboke kata andike mar nyuol)

Yes- kamano
No or unknown- ooyo kata ok on'gere

FOOD AND NUTRITION(CHIEMO KOD NDHANDHU)

How many times does the child eat daily (nyathini chiemoga didi pile ka pile)
1.Once or none- dichiel kata onge
2.Twice- diriyo
Three times- didek
four or more times a day- din'gwen kata mokalo kanyo

How many times has the child stated that he or she is hungry after a meal in the past week?(en didi ma nyathini osega wacho ni kech kaye bang chiemo e kind wik achiel mokalo)

1. Once or none- dichiel kata onge
2.Twice- diriyo
Three times- didek
Four- din'gwen

Five- dibich
Six- diuchiel
Seven- dibiryo
Always- seche duto

HOMELESSNESS (ONGE KAR DAK)

A.Has the child spent the night on the streets within the last 30 days?(To be nyathini osega nindo oko epap ekind ndalo piero adek mokalo?)

Yes- kamano
No- ooyo (skip to question VIIA- kaa ooyo to dhi e penjo namba VIIA)

How many times within the past 30 days has the child spent the night on the streets away from home? (en didi manyathini osega nindo oko epap ekind odiechienge 30 mokalo?)

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30

SIBLING SEPARATION (POGO NYITHINDO)

A.Does the child have other siblings who are younger than 18 years, old who do not live in this s household?
(To be nyathini nitiere kod jowadgi moko mantie piny mar higni apar gaboro maok odak eotka?)
Yes- kamano
No- ooyo (skip to question VIIIA- dhi e penjo namba VIIIA)

How many of the child's siblings, who are younger than 18 years old do not live in this household? (Gin adi mantie ebwo higni apar gaboro maok odak ka?)

1	2	3	4	5	6	7
8	9	10	11	12	13	14

SCHOOL ATTENDANCE (DIMBRUOK KOD SKUL)

A.Is the child's age between 5 and 18 (nyathini hike ni ekind abich kod apar gaboro)

Yes- kamano
No- ooyo (skip to question IXA- kaa ooyo to dhi e penjo namba IXA)

B. Has the child been absent from school during the past 30 days, not including holidays?(to be nyathini oselewo ne skul ekind ndalo piero adek(30) mokalo kopogore kod odiechienge yueyo

Yes- kamano
No- ooyo (skip to question IXA- kaa ooyo to dhi e penjo namba IXA)

C..How many times has the child been absent from school during the past 30 days, not including holidays? (oselewo didi ekind ndalo piero adek mokalo?)

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

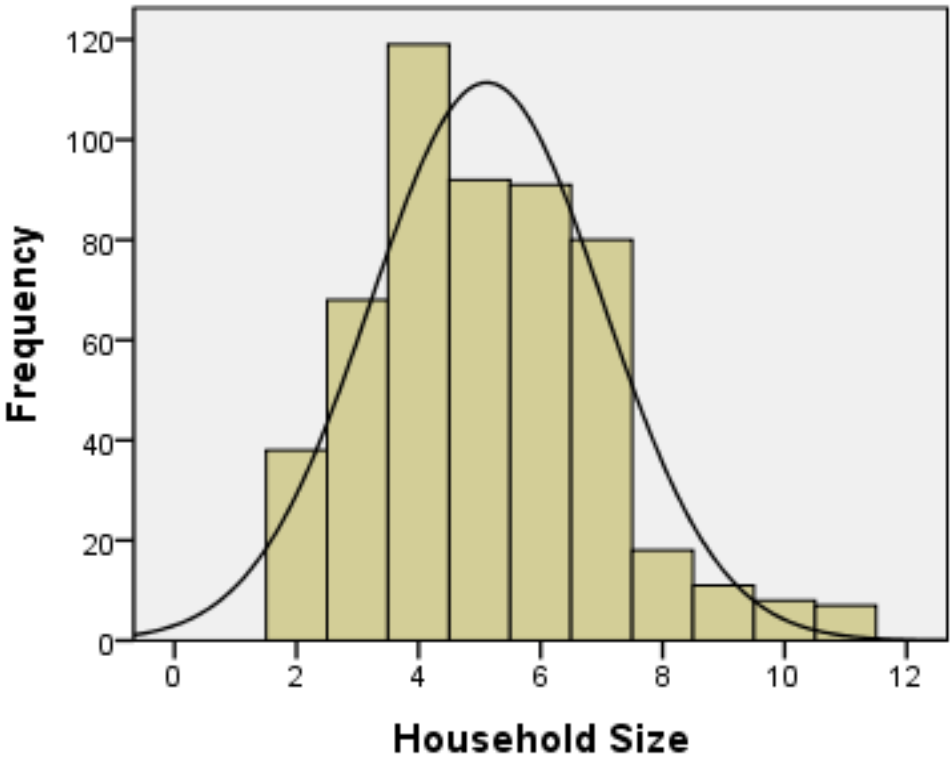
Community Referral – (NONRO KORKA RIURUOK MAKONYO OGANDA)

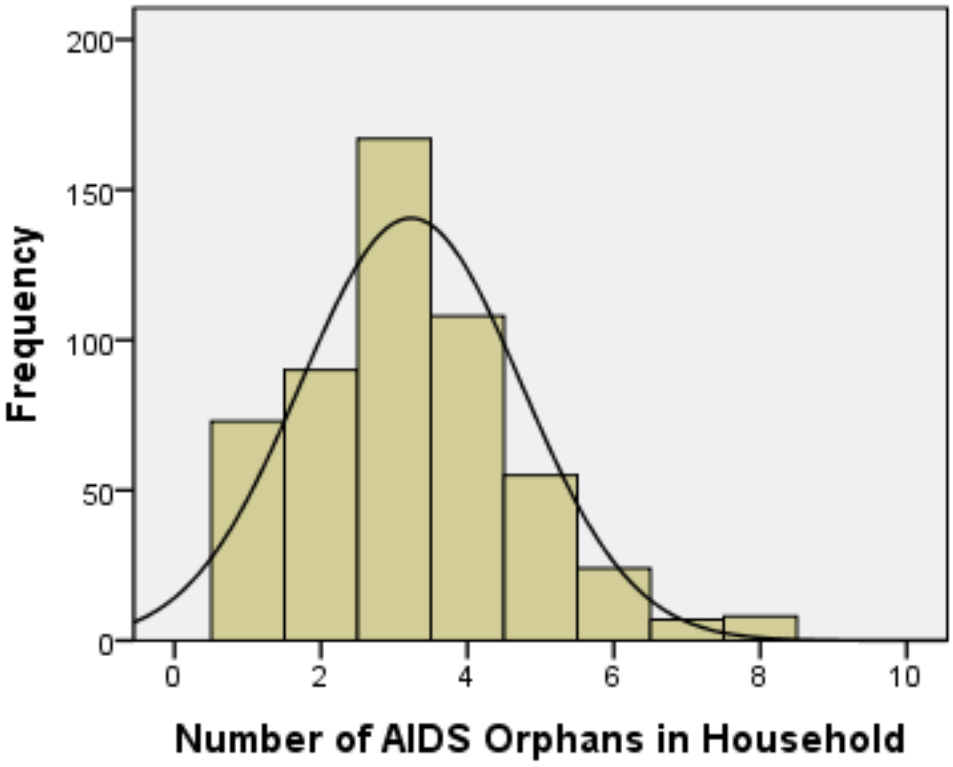
Has the child received any resources such as safety and protection, food, clothing, money, transportation, procurement or safe keep of birth records, healthcare access, and transportation from of the listed goodwill agencies? (to be nyathini osega yudoe kony machalo arita makare,chiemo,leuni,pesa,yor wuoth,kano barup nyuol,yor thieth kowuok kuom migepe makonyojigi?

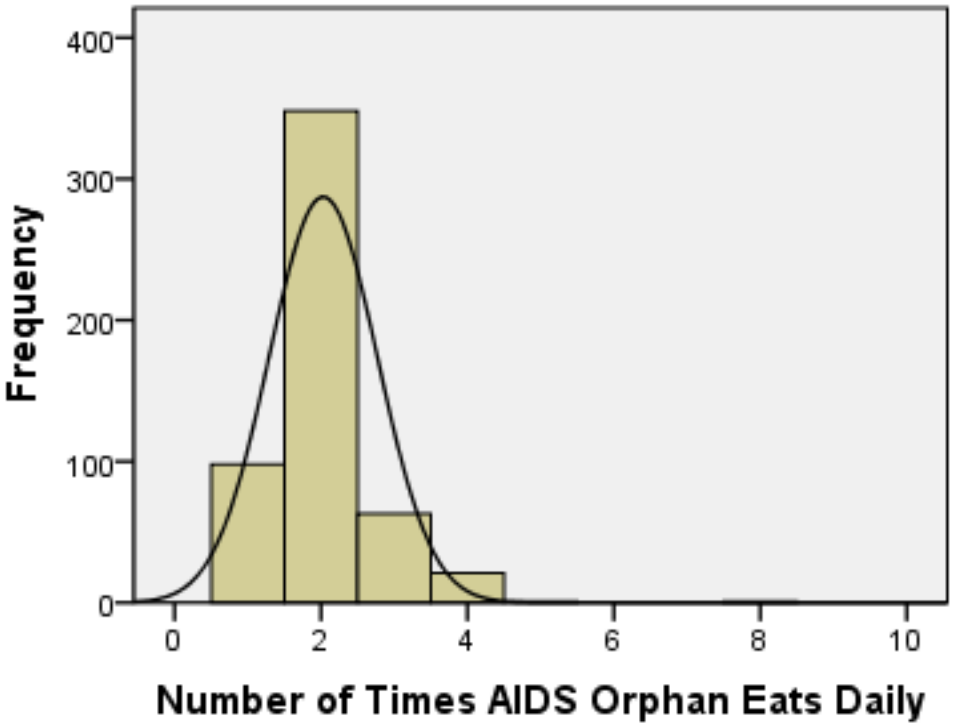
1Yes- kamano (identify which if known- fwenyie ni gin mage)
No or unknown- ooyo kata ok on'gere
Were local community members involved in linking child to goodwill agency for assistance?(to be jopiny ne onywak etudo nyathi kod migawo makonyo ogandagi?)

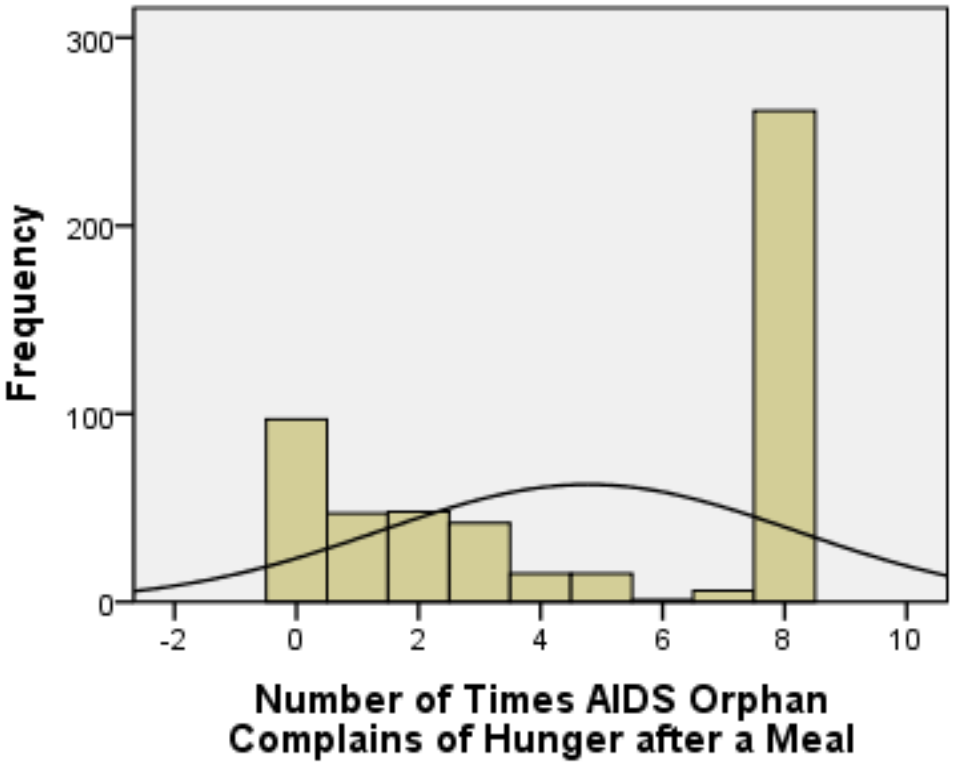
Yes-kamano
2.No or known- ooyo kata ok on'gere

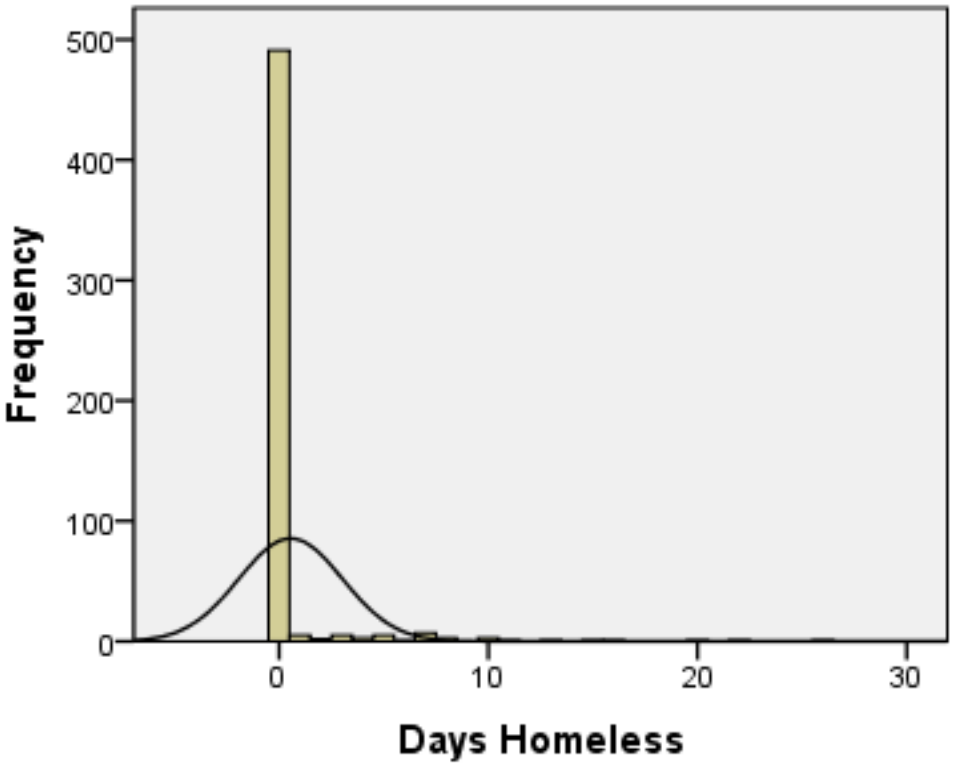
Appendix I: Histograms for Study Variables

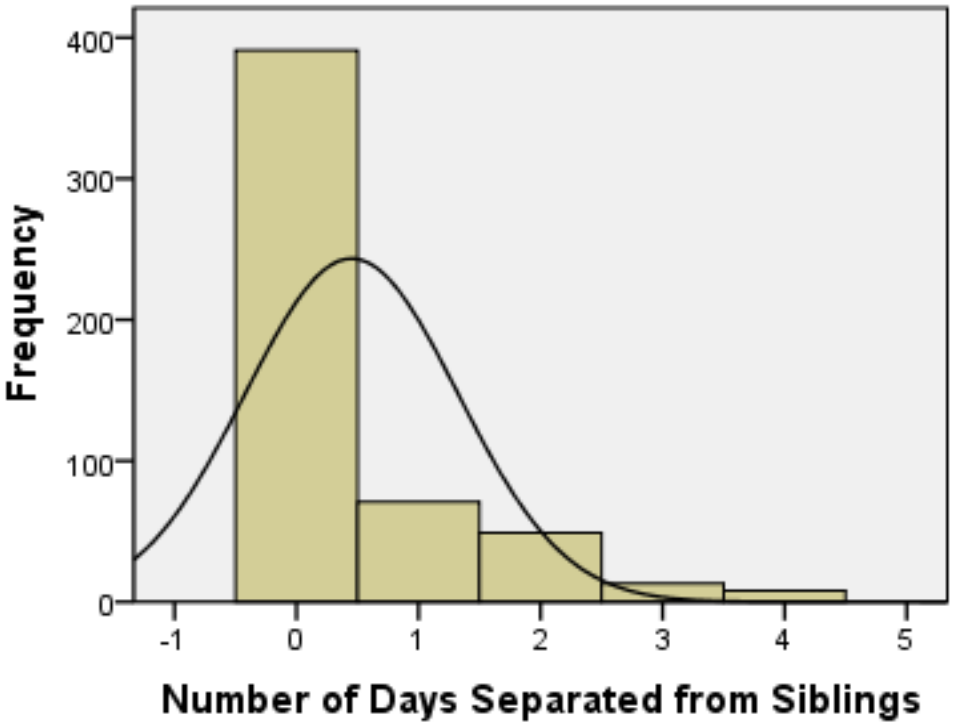


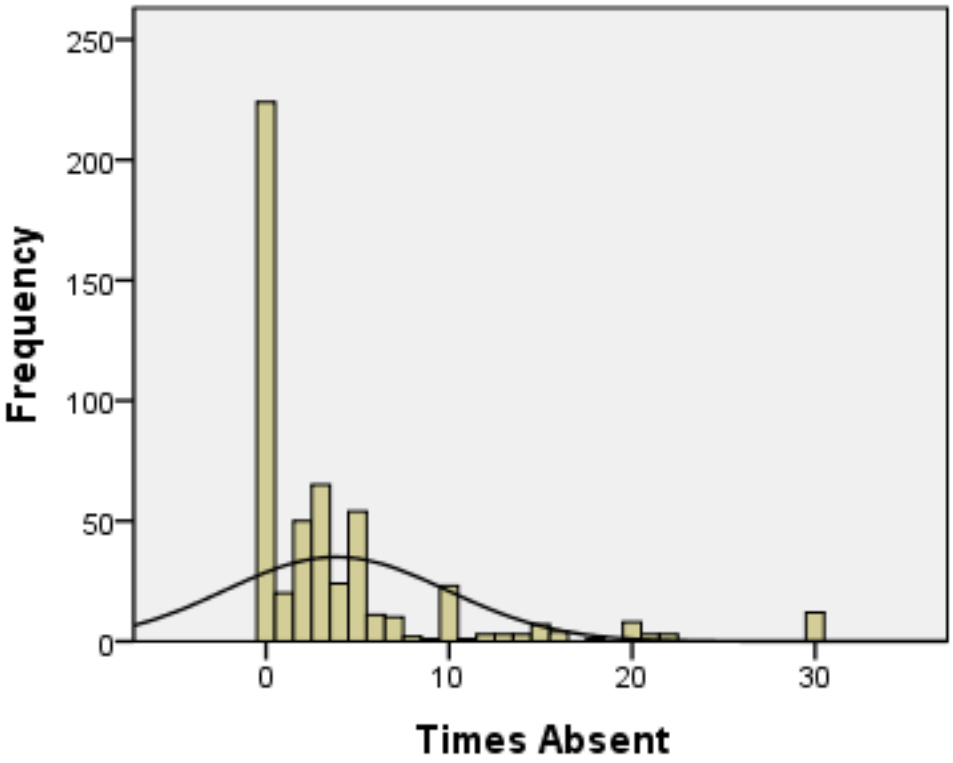

Frequency
200
150
100
50
0
0
2
4
6
8
10
Number of AIDS Orphans in Household


Frequency
400
300
200
100
0
0
2
4
6
8
10
Number of Times AIDS Orphan Eats Daily


300
200
100
0
Frequency
-2
0
2
4
6
8
10
Number of Times AIDS Orphan
Complains of Hunger after a Meal


500
400
300
200
100
0
Frequency
0
10
20
30
Days Homeless


400
300
200
100
0
Frequency
-1
0
1
2
3
4
5
Number of Days Separated from Siblings


250
200
150
100
50
0
Frequency
0
10
20
30
Times Absent