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**Determinants of Sustainability of HIV/AIDS
Projects in Nyanza Region**

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MBA/0506/09

**Submitted in partial fulfilment of the requirements for the Degree of
Masters in Business Administration at Strathmore University**

Strathmore Business School

Strathmore University

Nairobi, Kenya

June 2014

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other university. To the best of my knowledge and belief, this thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Caroline W. Mutisya

June 2014

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ABSTRACT

HIV/AIDS was declared a national disaster in Kenya in 2000. Since then, the HIV prevalence rate in the country has declined, with national estimates showing that the prevalence among adults (15-49 years) has declined from 10 percent in 1997-1998 to 6.2 percent in 2011. Various projects were initiated to provide care and support to the infected and affected in the society. However, sustainability of the projects has been a problem; projects are consistently seeking funding to continue implementing activities. Minimal studies on project sustainability have been conducted in Kenya previously. This motivated the research objective which was to identify the determinants of sustainability of HIV/AIDS projects in Nyanza region. Previous literature studies on determinants of sustainability of HIV/AIDS projects were analysed. The study done by Mancini and Marek identifies seven sustainability elements and provided the model of community-based program sustainability. This study was used because it is comprehensive and incorporates the drivers of sustainability identified by the other scholars. The research design used was a descriptive survey. The study area was Nyanza region and the population was the HIV/AIDS projects in the Nyanza region. From a total of 427 HIV/AIDS projects in the region, a sample size of 196 was selected using stratified random sampling. A fillable questionnaire was developed based on the variables identified in Mancini and Marek's program sustainability model. The questionnaire was sent to the identified respondents to provide information. The study used factor analysis to identify determinants of sustainability and the output was presented in tables. The study results found the following to be determinants of sustainability of HIV/AIDS programmes: community understanding and prior program evaluation, project strategic funding, staff involvement, program collaboration and program success awareness, program result awareness and staff project evaluation involvement, project leadership, project responsiveness, and project sustainability plan and local collaboration. These factors were considered important for HIV/AIDS project implementers to embrace when designing their projects. The study recommended early adoption processes of these determinants by HIV/AIDS projects so as to remain sustainable, and also embracing other income generating activities to minimize reliance on donor funds. The study faced challenges of respondents replying late to email questionnaires. The study recommended a country wide study to include other regions not covered under the study and also another analytical technique to be used to determine the impact of the sustainability factors.

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LIST OF ABBREVIATIONS

CSSA	Child Survival Sustainability Assessment
DfID	Department for International Development
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GNP	Gross National Product
KAIS	Kenya AIDS Indicator Surveys
KANCO	Kenya AIDS NGOs Consortium
KNASA	Kenya National AIDS Spending Assessment
KNBS	Kenya National Bureau of Statistics
KNASP	Kenya National HIV and AIDS Strategic Plan
MDGs	Millennium Development Goals
NACC	National AIDS Control Council
NGO	Non-Governmental Organization
PEPFAR	President's Emergency Plan for AIDS Relief
USAID	United States Agency for International Development

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Many thanks go to the staff of the sampled HIV/AIDS NGOs for their support and valuable information they provided during data collection. The information they provided remains central to the success of this study.

DEDICATION

I dedicate this work to my sons Conrad and Sidney. I appreciate your patience, perseverance and encouragement during the duration of my studies and research.

CHAPTER 1 : INTRODUCTION

1.0 Background

Health is recognized as a critical agenda as the world seeks to end poverty by the Year 2015 through the Millennium Campaign, which lists eight Millennium Development Goals (MDGs) - an eight-point road map with measurable targets and clear deadlines for improving the lives of the world's poorest people. The eighth M.D.G. emphasizes on the importance of 'Combating HIV/AIDS, malaria and other diseases'. HIV/AIDS is an area of concern because it threatens the achievement of the MDGs (Fox & Van Rooyen, 2004). The first case of HIV was diagnosed in Kenya in 1984 (The Republic of Kenya, 2007). HIV/ AIDS was declared a national disaster in Kenya by the then-president in the Year 1999, declaring that AIDS is a real threat to our very existence (BBC News, 1999). Since then the government has placed emphasis on prevention of the spread of HIV as well as provision of treatment, care and support of persons affected and/or infected by HIV/AIDS. The government coordinates the multi-sectoral response to HIV in Kenya through the National AIDS Control Council (NACC). NACC, in partnership with a wide range of stakeholders developed the Kenya National HIV and AIDS Strategic Plan for 2009/10 – 2012/13 (KNASP III), whose vision is a HIV-free society in Kenya (NACC, 2009). Despite the nationwide efforts by the government, communities, not-for-profit organizations as well as the private sector to manage the disaster, there is no sign that the disease will be conquered any time soon. Furthermore, Kenya has what is known as a "generalized" epidemic, with the virus having spread beyond discrete groups to affect the whole of society (NACC and NASCOP, 2012). The epidemic continues to have far-reaching social, economic, health and population effects.

HIV prevalence in Kenya has been declining in the last two decades, with national estimates showing that the prevalence among adults (15-49 years) has declined from 10 percent in 1997-98 to 6.2percent in 2011 (NACC and NASCOP, 2012). HIV prevalence varies between regions, ranging from a prevalence of 0.9 percent in North Eastern Region to 13.0 percent in Nyanza Region (NACC, 2010). This study focused on the six counties in Nyanza Region, which has the highest rate of prevalence of HIV/AIDS in Kenya.

The uncertainty on the future of funding for HIV/AIDS programmes is a concern that has been raised continually by health sector practitioners. The main concern by health sector practitioners is that the main donors, PEPFAR and GFATM, who contribute more than eighty percent of the HIV programmes in Africa, are likely to reduce funding in most countries. The NACC, which is the organization mandated by the Government of Kenya to spearhead the fight against HIV/AIDS, shares the same concern – *the effect of continuing global financing and economic difficulties* (NACC and NASCOP, 2012) on HIV/AIDS programmes. In the year 2011, GFATM suspended funding for HIV/AIDS in several countries (Avert, 2011). These concerns on continuity of donor funding emphasize the need to explore ways to ensure sustainability of HIV/AIDS programmes.

Scholars have also not been left out of the debate on uncertainty of donor funding. Leger (2005) acknowledged that while most health promotion projects usually contain the word sustainability, many plans do not identify the important aspects of the intervention which are worth sustaining. Parks (2008) recognizes the problem of declining donor funding as well as unpredictable donor funding cycles and challenges donors to improve on the consistency and sustainability of funding. In a study on sustainability of NGOs in Bangladesh, Devine (2008) described sustainable organizations as those that are less reliant on donor funds and have developed diverse resource-mobilization strategies. Mitlin (2002) agreed with this perception by stating that in general terms financial sustainability is generally used to mean that adequate finance can be raised to continue the activities of the project without the use of subsidies from development agencies, or local or national governments. Scheirer (2005) emphasized the importance of the concept of sustainability to funders and implementers of health-related demonstration programs and innovations. He raises the question of what happens after the initial funding for new programs expires. All the authors emphasize the importance of sustainability in health programs and recognize donor funding as one of the factors that affect sustainability.

1.2 Statement of the Research Problem

Kenya receives support for HIV/AIDS projects from the US Government's President's Emergency Plan for AIDS Relief (PEPFAR), Global Fund for AIDS, TB and Malaria (GFATM), World Bank, UK Department for International Development (Did) and a

number of other bilateral donors and foundations. (The World Bank) notes that Kenya depends on external resources to finance health care and as of 2007, 24% of health expenditure was from external resources. (NACC, 2010) estimates that the amount of resources available for the national response to HIV/AIDS has been increasing in the last three years, with bilateral donors contributing over 70% of the funding for HIV/AIDS. (UNAIDS, 2010) in the global report for the year 2010, UNAIDS notes that in low-income countries, 88% of spending on AIDS comes from international funding. These statistics are evidence that Kenya is largely dependent on external resources to finance HIV/AIDS projects and interventions. This study examines the factors that influence the sustainability of HIV/AIDS projects. The study also sought to establish the correlation between funding and sustainability of HIV/AIDS projects.

According to UNAIDS, only a third of countries make the AIDS response a high budgetary priority. As of 2009, Kenya's domestic priority to HIV was estimated at 0.33 which is below average considering the disease burden and national income (UNAIDS, 2010). As of 2000, 75% of the world's new HIV infections were in sub-Saharan Africa, yet only South Africa was spending more on health care than on debt servicing (Poku, 2002). Poku further explores the poverty – debt crisis and the challenge faced by African countries in providing social services and concludes that it is necessary for the countries on the edge of economic marginality to take responsibility for the use of future resources, however limited, in the fight against HIV/AIDS.

In August 2010, Kenya adopted a new constitution after it was approved in a national referendum. The Constitution is expected to bring significant changes, most notably, to bring a more decentralized political system, which will limit the president's powers and replace corrupt provincial governments with local counties (BBC News, 2010). Chapter 11 of The Constitution of Kenya - Devolved Government outlines nine objects of devolution of government, among them *'to recognize the right of communities to manage their own affairs and to further their development'* and *"to promote social and economic development and the provision of proximate, easily accessible services throughout Kenya'*. Under the Constitution, one of the principles of devolved government is that county governments shall have reliable sources of revenue to enable them to govern and deliver services effectively (National Council for Law Reporting, 2010). In an analysis of

counties with the best chances to become economic giants, Muigai (2012) noted that the whole of Nyanza is well endowed and with motivated and visionary leadership the region can achieve stellar economic success (Muigai, 2012). Among others, the author cites the counties of Siaya, Homa Bay, Kisii and Kisumu, all in Nyanza Region, as some of the counties which could thrive under the new devolved system of government.

Baylies (2000) explains that the critical role of African governments in the face of the HIV/AIDS epidemic is to formulate plans, manage programmes and coordinate efforts around HIV/AIDS. He also discusses the need for governments to gain control over the myriad and often disconnected activities of players in the field of AIDS work. NACC cites the role of government in harmonizing donor programmes (NACC, 2010). According to UNAIDS, investments in donor countries should reflect country priorities. This study sought to recommend ways in which county governments can enhance sustainability of HIV/AIDS and other projects within their jurisdiction.

1.3 Research Objectives

The main objective of the study is to investigate the determinants of sustainability of HIV/AIDS projects implemented in Nyanza region of Kenya. Specifically, the study seeks to:

1. Identify the determinants of sustainability of HIV/AIDS projects in Nyanza region.
2. Assess the impact of the determinants that influence sustainability of HIV/AIDS projects in Nyanza region.

1.4 Research Questions

1. What are the determinants of sustainable HIV/AIDS projects in Nyanza region?
2. What is the extent of impact of the determinants that influence sustainability of HIV/AIDS projects in Nyanza region?

1.5 Justification

1.5.1 Academic Justification

This study examined the drivers of sustainability of HIV/AIDS projects implemented in Nyanza region of Kenya. The study also sought to establish the extent to which funding

influences the sustainability of projects. Different authors have explored the area of sustainability as well as determined the factors that influence sustainability of projects at a global scale. However, the studies have not focused on the health sector, and in particular HIV/AIDS projects implemented in sub-Saharan Africa, which is most affected by the impact of the HIV/AIDS epidemic. The study aims to contribute to the debate on drivers of sustainability of projects, with particular emphasis on HIV/AIDS projects. Further, the outcome of the study will contribute to existing literature by exploring funding as one of the factors that influence sustainability of HIV/AIDS projects.

1.5.2 Policy Justification

This study was carried out during a time that the country is establishing a devolved governance structure under the Kenya Constitution – 2010. County leadership was elected during the country-wide elections in March 2013. The leadership teams in various counties are working towards establishing policies and strategies, which includes provision of health care within the devolved governance system. The outcome of this study contributes to literature available to county governments for policy formulation. The study demonstrates the extent to which funding influences sustainability of HIV/AIDS projects. This information contributes to efforts aimed at reducing donor dependency and enhancing project sustainability.

Kenya's Vision 2030 identifies health as one of the areas of focus under the social pillar. In particular, the country seeks to achieve devolution of health care as well as lower the incidence of HIV/AIDS. This study contributes to achievement of the social objectives outlined in Kenya's Vision 2030 by contributing knowledge that will enhance implementation of community-based programs that are aimed at lowering the incidence of HIV/AIDS. In addition, the study recommends best practices for the management of HIV/AIDS projects within a devolved governance structure. This ensures that the needs of communities affected and/or infected by HIV/AIDS are addressed and that such populations are able to contribute to the economic growth of their counties and the country at large.

1.6 Scope and Limitations of the Study

This study was carried out in the six counties of Nyanza region of Kenya. Whereas the study does not cover the whole of Kenya, findings from this study contribute to existing literature on sustainability. This is especially so because the Nyanza region has the highest prevalence of HIV/AIDS in the country.

The study focused on HIV/AIDS projects, which is specific to the health sector. Different authors have identified factors that influence sustainability of projects across different sectors of the economy. Accordingly, the findings of this study can be used to understand and enhance the sustainability of projects implemented in other sectors of the economy as well as programs implemented in other sub-sectors within health sector.

1.7 Definition of Key Terms

HIV: Human immunodeficiency virus. The medical dictionary defines HIV as a retrovirus that causes AIDS by infecting helper T cells of the immune system.

AIDS: Acquired immune deficiency syndrome is an infectious disease caused by the human immunodeficiency virus (HIV).

Program: a set of resources and activities directed toward one or more common goals.

Sustainability: program continuation – the ability to deliver an appropriate level of benefits for an extended period of time after major financial, managerial and technical assistance from an external donor is terminated.

1.8 Organization of the Dissertation

This dissertation is organized into six chapters. Chapter one is the introduction which covers the background to the study, statement of the problem, the research objectives, the academic and policy justification as well as the scope and limitations of the study. Review of the literature is presented in Chapter two. Chapter three describes the research methodology that will include a description of the study area, sampling design, data collection procedures and analytical techniques. The results of the study are presented in Chapter four. Chapter five includes a summary of the major findings, and Chapter six gives the conclusions drawn therefrom and the recommendations.

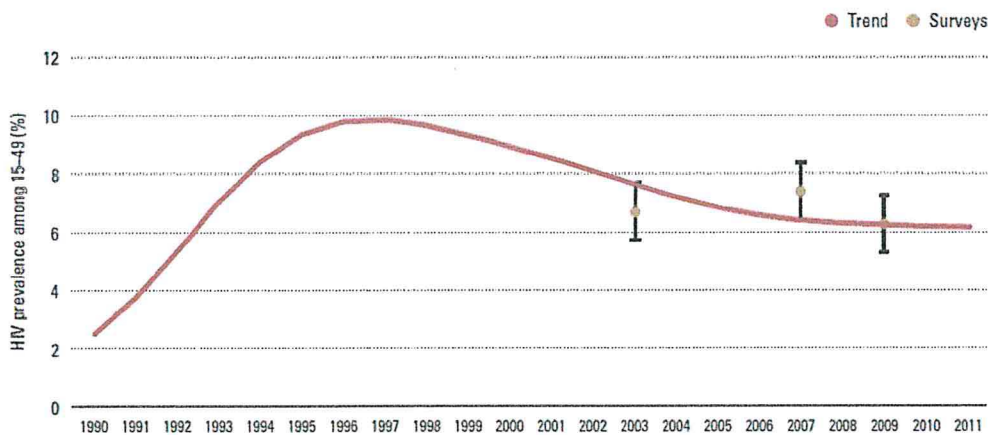
CHAPTER 2 : LITERATURE REVIEW

2.1 Introduction

The first case of HIV was diagnosed in Kenya in 1984. In 1999, the GOK declared the HIV epidemic a national disaster and created the National AIDS Control Council (NACC) under the Office of the President to coordinate a multi-sectoral response to HIV/AIDS (The Republic of Kenya, 2007). NACC, in partnership with a wide range of stakeholders developed the Kenya National HIV and AIDS Strategic Plan for 2009/10 – 2012/13 (KNASP III), whose vision is “An HIV-free society in Kenya” (NACC, 2009). This study explores the efforts by NACC and other stakeholders to deal with the HIV/AIDS pandemic in Kenya.

HIV prevalence in Kenya has been declining in the last two decades, with national estimates showing that the prevalence among adults (15-49 years) has declined from 10 percent in 1997-98 to 6.3 percent in 2008-09 (NACC, 2010).

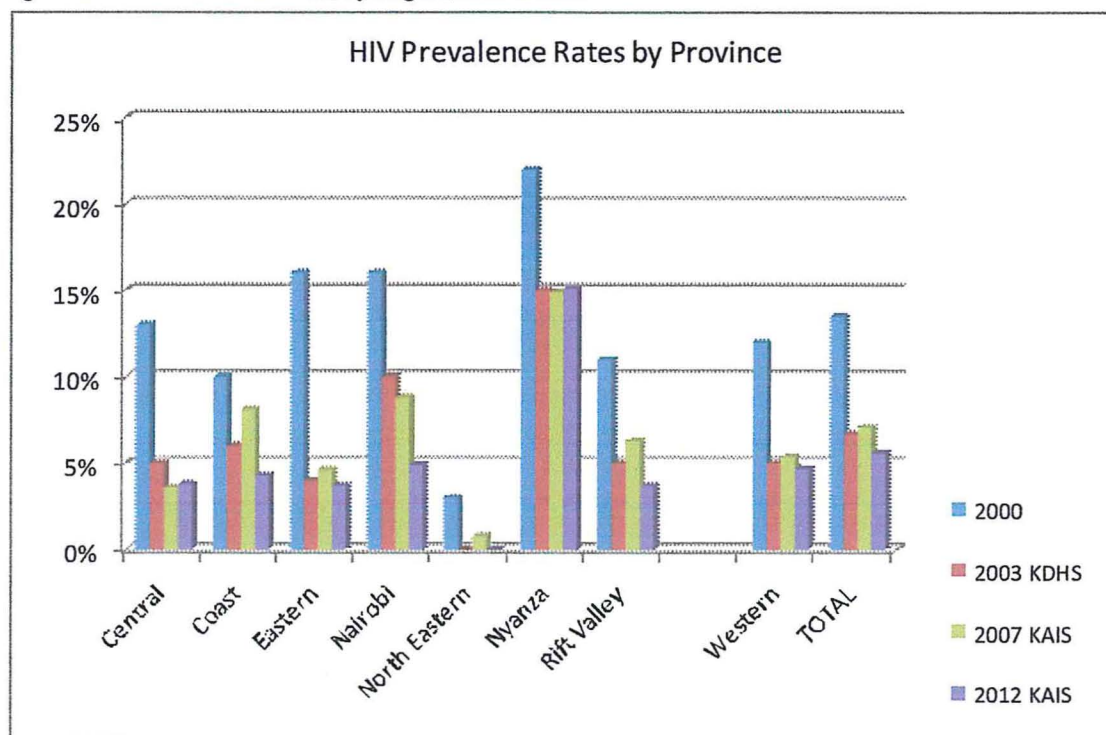
Figure 2.1: Adult HIV Prevalence in Kenya



Source: AIDS in Kenya, 2006

Data from the Kenya AIDS Indicator Surveys (KAIS) shows that HIV prevalence varies between regions, ranging from a prevalence of 0.9 percent in North Eastern region to 13.0 percent in Nyanza region (NACC, 2010). Statistics indicate that Nyanza region of Kenya continues to have the highest rate of prevalence of HIV/AIDS in Kenya. Figure 2.2 (below) shows the trend in HIV prevalence rates among adults (15 – 49 years) by region.

Figure 2.2: HIV Prevalence Rate by Region, 2000 to 2012



Sources: 2000: *AIDS in Kenya, 2001*; 2003: *Kenya Demographic Health Survey*; 2007: *Kenya AIDS Indicators Survey*; 2012: *KAIS Preliminary Findings*

Despite the fact that the prevalence rates across regions as well as nationally has declined over time, from the statistics in Figure 2.1 above, Nyanza region has had the highest prevalence rate in the country throughout this period. In fact, based on preliminary findings, the prevalence rate in the region increased from 14.9% in 2007 to 15.1% in 2012 (Kenya AIDS Indicator Survey, 2012). It is against this background that this study focused on HIV/AIDS projects in the Nyanza region of Kenya.

2.2 Sustainability

The term sustainability was first coined by a German forester to describe how forests should be managed on a long-term basis. The term sustainability gained wider use in the 1980s as environmentalists were keen to show how environmental issues could be linked to mainstream questions of development. Scoones, (2007) defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Badiru, 2010) agrees with this view and defines sustainability as the ability to sustain and maintain a process or object at

a desirable level of utility. The author relates sustainability to prudent resource utilization.

Goodland (2002) differentiates between human, social, economic and environmental sustainability to include (i) human sustainability which means maintaining human capital - a private good of individuals, rather than between individuals or societies; (ii) social sustainability which means maintaining social capital – investments and services that create the basic framework for society; economic sustainability – maintenance of capital, or keeping capital intact. The author concludes that the definition of income as the amount one can consume during a period and still be as well off at the end of the period – can define economic sustainability, as it devolves on consuming value-added (interest), rather than capital; environmental sustainability – seeks to improve human welfare by protecting natural capital - water, land, air, minerals and ecosystem services.

Scheirer (2005), introduces the concept of program sustainability and defines sustainability as the institutionalization or routinization of programs into ongoing organizational systems. In an analysis of nineteen health promotion studies on sustainability, the author suggests factors believed to influence sustainability. The United States Agency for International Development (USAID) considers a development program as sustainable when it is able to deliver an appropriate level of benefits for an extended period of time after major financial, managerial and technical assistance from an external donor is terminated (USAID, 1988).

Shediac-Rizkallah& Bone (1998) refer to sustainability as a multi-dimensional concept of the continuation process. According to the authors, sustainability is defined as the capacity to maintain service coverage at a level that will provide continuing control of a health program. The authors conclude that the definitions of sustainability advanced by leading development agencies emphasize health benefits as being at the heart of the sustainability process. Project sustainability is defined by many economists and international development agencies as the capacity of a project to continue to deliver its intended benefits over a long period of time.

In a study on sustainability of NGOs in Bangladesh, Devine describes sustainable organizations as those that are less reliant on donor funds and have developed diverse resource-mobilization strategies (Devine, 2003). Devine argues that NGOs that have been successful in their pursuit of sustainability have had to secure and extract local revenue. This study focuses on the sustainability of HIV/AIDS projects in Nyanza region of Kenya.

2.3 Theories and Models on Sustainability

Theories on sustainability in this study look at economic sustainability perspective on how community projects can continue without finance from external sources.

2.3.1 Welfarist's Approach

The welfarists emphasize on poverty lending as measured by depth of outreach. That is, reaching not just a large number of clients (breadth of outreach) but a large number of poor clients also known as depth of outreach (Brau and Woller, 2004). Taking the welfarist's view aboard, many groups, especially NGOs argue that there is a trade-off between sustainability (profitability) and targeting the poor (outreach) because the poorest are cost ineffective to reach when profitability is considered and thus, donor support is required to this end (Paxton, 2002). This theoretical approach is relevant to the study as it explains the approach taken by NGOs in Kenya in financing HIV/Aids projects in Nyanza, whether they follow the welfarist approach when providing funds to the community programs.

2.3.2 Institutionalists' Approach

The institutionalist's view on financial sustainability according to Woller, Dunford, and Warner (1999) is that financial deepening is the main objective of microfinance institutions. Here financial deepening refers to creating sustainable financial intermediation for the poor. Institutionalists, according to Brau and Woller (2004) assert that the financial sustainability as measured by financial self-sufficiency (profitability) should be given higher priority by all MFIs. The institutionalists would therefore like to see projects meeting all their costs from self-generated funds with a possibility of making profit (without using any external funds). This is what they would call a sustainable project. This theory will also be relevant to the study since it provides information on one

of NGOs' approach in providing funds to community projects which involves ensuring projects are self-sustainable rather than providing funds just for the sake of reaching the people in need of funds.

2.3.3 Subsidy and Poverty Reduction Approach

According to Woller *et al* (1999), subsidy refers to financial resources received by a project at below market prices. Subsidy (also known as donation) may be received in monetary terms or in-kind contributions. The role of subsidy in reaching the vast majority of poor people is seen differently under the two competing poverty reduction approach theories: the institutionalists and welfarist's theories. The institutionalists approach the sustainability of projects from the institution point of view. Their argument is that, institutional sustainability of a project will be attained when the project is financially self-sufficient, that is, be able to operate without subsidization. Brau and Woller (2004) emphasize that to be sustainable, a project should be able to cover its operating and financing costs with the program revenue. This theoretical approach is relevant to the study as it indicates another approach by NGOs in funding projects. The study will be able to identify whether subsidy and poverty reduction approach is being used by NGOs in Kenya to finance HIV/Aids projects in Nyanza.

2.4 Reasons for program sustainability

Program sustainability is important to any project initiated to tackle some challenges in the society. Shediak-Rizkallah & Bone (1998) identified some of the reasons for program sustainability. Firstly, sustainability is a concern common to many community health programs. Having incurred significant start-up costs in human, fiscal, and technical resources, many projects see their funds withdrawn before activities have reached full fruition. Altman, Endres, Linzer, Korig, Howard-Pitney, & Rogers (1991) noted that program staff, community coalition members, and other representatives from surveyed community health promotion projects identified deficient funding, and the need for a diversified and reliable long term funding base as obstacles to achieving current goals and objectives. Further, securing resources to ensure self-sufficiency and integrating the program in the community to ensure that health promotion remains when funding ends were stated as two future goals by many communities. Secondly, program termination is

counterproductive when the disease that a program was established to address remains or recurs. Many examples may be provided in public health where continuing disease control, for both chronic and infectious disease, is simply essential. Thirdly, new products may encounter diminished community support and trust in communities with a history of programs that were abruptly or inappropriately terminated (Goodman & Steckler, 1988).

2.4.1 Determinants of Sustainability

Different authors have developed sustainability models, ranging from sustainability of innovations to sustainability of community based programs. This section explores available literature on the factors that influence sustainability. Shediac-Rizkallah and Bone (1998) identify and categorize eleven potential influences on sustainability into three major groups of factors: project design and implementation factors, factors within the organizational setting and factors in the broader community environment (Shediac-Rizkallah & Bone, 1998). In their study, the authors identify project financing as one of the factors within the project design and implementation factors. The authors conclude that project financing is probably the most prominent factor in sustainability.

Sarriot, Winch, Ryan, Bowie, Kouletio, Swedberg & Pacque (2004) developed the Child Survival Sustainability Assessment (CSSA) framework which incorporates three dimensions of sustainability: health and health services, organizational and community and social ecological dimensions (Sarriot, *et al.*, 2004). The authors consider organizational viability, which includes financial viability, as one of the drivers of sustainability. Johnson, Hays, Center, & Daley (2004) in a study on building capacity and sustainable prevention innovations identified infrastructure capacity building and sustainable innovation confirmation as factors in a sustainability planning model. Resources such as funding, staffing and computer technology are identified by the authors as one of the capacity building factors.

Recognizing the importance of community-based programs, Mancini & Marek (2004) identified seven elements that are critical to sustain community-based programs: leadership competence, effective collaboration, understanding the community, demonstrating program results, strategic funding, staff involvement and integration and program responsiveness. These seven elements were determined through a series of earlier

studies wherein interviews were held with over 100 community program personnel between 1996 and 1998. Based on these qualitative and quantitative studies, seven elements were identified as consistently contributing to program sustainability.

1. Leadership competence

Leadership is central to the delivery of quality programs. The leadership is responsible for developing and articulating the program's vision and objectives, performing regular needs assessment, ongoing program planning and adaptation, program evaluation, securing funding, fiscal management, supporting and supervising staff and providing staff training. Leadership competence permeates most aspects of an organization, because leaders are the designated instigators for initiatives and provide quality control. Activities that contribute to high-quality programs are the responsibility of leadership and include: clearly developing and articulating a program's vision and objectives; performing regular needs assessments; ongoing program planning and adaptation; program evaluation; securing funding; fiscal management; supporting and supervising staff; and providing staff training (Akerlund, 2000; Blythe, Tracy, Kotovsky, & Gwatkin, 1992; Bossert, 1990; The Finance Project, 2002).

2. Effective collaboration

Programs need to identify relevant stakeholders who actively support program goals and have clearly identified responsibilities. It is important for the stakeholders to have a shared vision in order to sustain the community effort. Effective collaboration involves identification of relevant stakeholders who actively support program goals and who have clearly identified responsibilities (Bamberger & Cheema, 1990). A community's most desired results usually are best accomplished by organizational collaboration (Altman *et al.*, 1991). It is important that the various organizations involved have a shared vision in order to sustain the community effort (Goodman & Steckler, 1989). Collaborative efforts build a broad base of support in the community and of key stakeholders for program implementation, program success, and program sustainability (Altman *et al.*; Bamberger & Cheema; O'Loughlin, Renaud, Richard, Gomez, & Paradis, 1998; Ponzio, Peterson, Miller, & Kinney, 1994).

3. Understanding the Community

According to Mancini & Marek (2004), understanding the community entails having knowledge of community needs and resources, having respect for community members, and involving key community members in programs. Understanding the community context in which programs function has an important influence on program sustainability and success. Programs that are unable to “connect” with the community fail to serve the people whom they ostensibly aim to serve (Altman *et al.*, 1991). Capacities of a community and of programs are increased when connections are substantial, and when the community is committed to its programs (Mancini, Martin, & Bowen, 2003). The community’s commitment level can be a facilitator or an obstacle in sustaining a successful program (Altman *et al.* 1991; Mancini *et al.*, 2003). Factors in the community environment important for sustaining programs include socioeconomic and political considerations, community participation in programs themselves, honouring community values and cultural relevance, cultivating key community leader support, and using indigenous staff (Holder & Moore, 2000; Laken & Hutchins, 1995; Pentz, 2000; Shediak-Rizkallah & Bone, 1998); these assist a community-based program in becoming community engaged.

4. Demonstrating program results

This is the evaluation of program processes and outcomes using acceptable research methods and informing stakeholders of the results of those evaluations. Demonstrating program results often is difficult for community-based programs yet the outcomes of including evaluation of program activities can become important for program success (Mancini, Marek, Byrne, & Huebner, *in press*). To support sustainability, evaluation must assess the intervention and subsequent program modifications, focusing on measurable program results (The Finance Project, 2002; O’Loughlin *et al.*, 1998). Evaluation findings can then be used to leverage current successes for securing future funding and for establishing program professionals among experts in the community (Holder & Moore, 2000; Laken & Hutchins, 1995).

5. Strategic funding

Strategic funding includes having plans and resources in place to support current and prospective program requirements. Strategic funding provides an essential basis for program continuity, particularly for those programs that are not associated with a larger organization (Goodman & Steckler, 1989). Intentional planning for continued funding includes an analysis of short-term and long-term funding needs, developing a range of financing options, and recognizing that sustainability is enhanced when there is diversity in funding support (Akerlund, 2000; The Finance Project, 2002). Diverse sources of funding increase the odds of having sufficient funding for short-term and long-term program development and implementation (Goodman & Steckler, 1989).

6. Staff involvement and integration

Staff involvement and integration is the inclusion of committed, qualified staff in program design, implementation, evaluation, and decision making. Staff involvement develops a culture that values broad-based participation in working toward program sustainability and success (Goodman & Steckler, 1988). Supporting program goals occurs more readily when staff is important components in the organization and make the organization their own. Having staff that are indigenous to the community being served strengthens the ties between staff and the environment (Holder & Moore, 2000). Further, program longevity is increased when staff education and training are matched with program goals and needs, and when staff possesses competent performance levels (O'Loughlin et al., 1998).

7. Program responsivity

Program responsivity is the ability of a project to adapt programming to meet changes in community needs. Sustained and successful programs are flexible rather than static (Bamberger & Cheema, 1990; The Finance Project, 2002), and although programs may maintain their overall program goals, activities and priorities may need adjustment to address evolving issues and contexts (Holder & Moore, 2000; Laken & Hutchins, 1995). An important consideration in program development is the degree to which it can be modified to continually meet changing community contexts (Akerlund, 2000).

2.4.2 Measuring sustainability

It has been noted that although successful program implementation does not always guarantee sustainability, a program is worth institutionalizing if it has been shown to be effective (Goodman & Steckler, 1989). Sustainability is a matter of degree rather than an all or none phenomenon. For sustainability to be effectively measured, indicators are needed for planning what is to be sustained, how or by whom, how much and by when. These indicators serve as sustainability objectives that may be monitored during and after the project. Public health activities such as case finding and contact tracing should be done in order for a disease to be kept under control or eliminated (Reichman, 1993).

The Program Sustainability Index (PSI), formulated by Mancini, is used to assess sustainability elements, with items being grouped in the seven conceptual framework elements identified. These seven elements that were used for measurement in the study were determined through a series of earlier studies where interviews were held with over 100 community program personnel between 1996 and 1998. The results informed a survey that focused on a wide variety of areas thought to influence sustainability. From the literature, it was seen that these elements are in alignment with the study objectives and will assist in the formulation of the questionnaire which answered the research questions.

2.5 Knowledge gap

Most of the literature focuses on development of sustainability models, including determining the factors that influence sustainability. However, none of the studies seeks to determine the extent to which each of the factors influences sustainability. It is imperative that policy makers, funders, implementers of programs and communities distinguish the critical factors that influence sustainability, hence the motivation of this study. Some studies have been done on project sustainability (Chenga *et al.*, 2006; Shediak-Rizkallah and Bone 1998; Scheirer 2005) but have not been able to look at a social perspective in the Kenyan or African context. This study focuses on the factors that influence sustainability of HIV/AIDS projects and therefore seeks to contribute to this knowledge gap.

It is evident that the effects of the HIV/AIDS epidemic have been most severe in the African continent. This drives the concentration of international funding to HIV/AIDS

programs implemented in Africa. In Kenya, the prevalence of HIV/AIDS is highest in the Nyanza region, which receives significant funding from international donors. Despite this, available literature on sustainability is generally based on global populations, without specific focus to community-based programs in sub-Saharan Africa. So far, no study has assessed the drivers of sustainability of HIV/AIDS projects in Nyanza, specifically the extent to which project funding influences sustainability of projects. HIV/AIDS has social and economic impact on affected populations. Such effects are likely to be more long term and devastating in an area such as the Nyanza region where a significant proportion of the population is affected by the HIV/AIDS epidemic. HIV/AIDS projects in such areas would be more sustainable if the policy makers as well as project funders and implementers are aware of the drivers of sustainability of HIV/AIDS projects in such a region. This study sought to contribute to filling this gap in literature by studying HIV/AIDS projects in Nyanza region of Kenya.

The drivers of sustainability as identified by the referenced authors are summarized below.

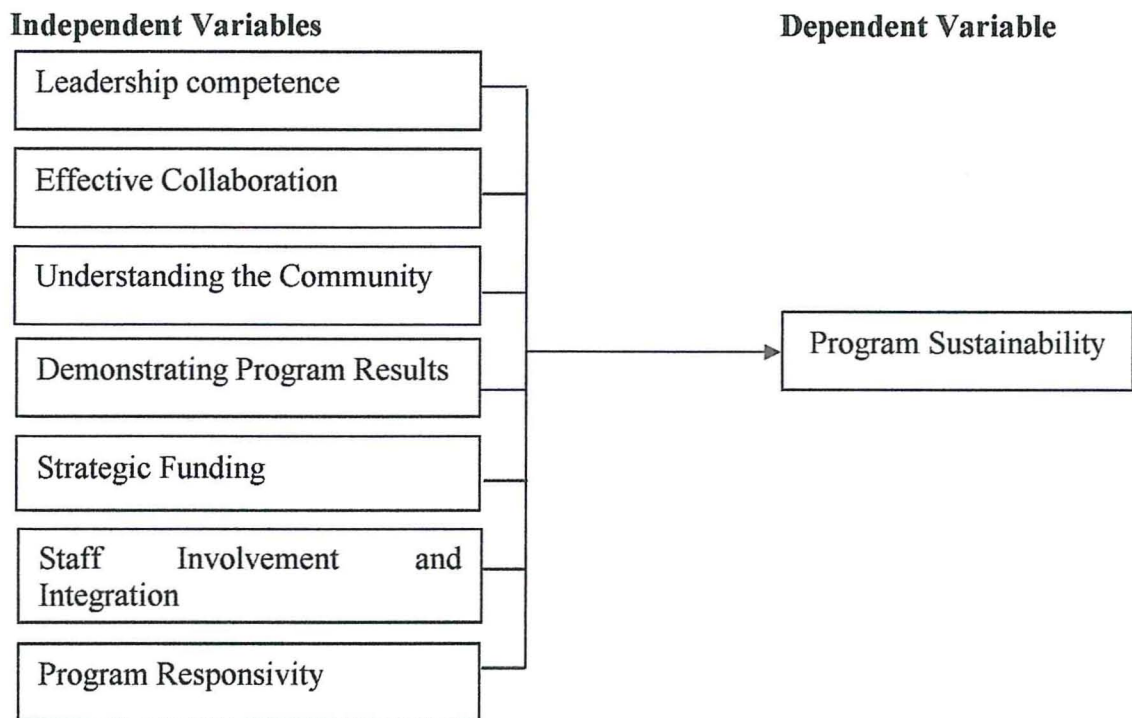
Table 2.1: Comparative Analysis of the Determinants of Project Sustainability

Shediac-Rizkallah and Bone	Sarriot et al	Johnson et al	Mancini and Marek
<u>Project design & implementation</u> <ul style="list-style-type: none"> • Project negotiation process • Project effectiveness • Project duration • Project financing • Project type • Training 	<u>Health & health services</u> <ul style="list-style-type: none"> • Health outcomes • Health and social services approach and quality 	<u>Capacity building</u> <ul style="list-style-type: none"> • Structures and formal linkages • Champion roles and leadership action • Resources • Administrative policies and procedures • Expertise 	<u>Leadership competence</u>
<u>Organizational setting</u> <ul style="list-style-type: none"> • Institutional strength • Integration with existing programs/services • Program championship/leadership 	<u>Organizational</u> <ul style="list-style-type: none"> • Local organizational capacity • Local organizational viability 	<u>Sustainable innovation</u> <ul style="list-style-type: none"> • Alignment • Relationship among key stakeholders • Implementation quality and integrity • Effectiveness • Ownership among stakeholders 	Effective collaboration
<u>Broader community environment</u> <ul style="list-style-type: none"> • Socioeconomic & political considerations • Community participation 	<u>Community & socio-ecological</u> <ul style="list-style-type: none"> • Community competence/capacity • Ecological, human, economic, political and policy environment 		Understanding the community
			Demonstrating program results
			Strategic funding
			Staff involvement and integration
			Program responsiveness

2.4 Conceptual Framework

Following a review of available literature on sustainability, this study applied Mancini and Marek's model of program sustainability. This is because the model is comprehensive and incorporates the drivers of sustainability identified by the other scholars. Further, the model is focused on community-based programs which were also the focus of this study.

Figure 2.3: Conceptual Framework



From the model, program sustainability for HIV projects in Nyanza as a dependent variable can be determined from leadership competence, effective collaboration, understanding the community, demonstrating program results, strategic funding, staff involvement and integration, and program responsivity. From these drivers, factors will be identified which are relevant HIV-Aids projects in Nyanza region.

CHAPTER 3 : RESEARCH METHODOLOGY

3.1 Introduction

This chapter looked at the methodology used in the study. This included the research design, the target population and the sampling procedure, data collection instruments and procedures, and the data analysis methods used.

3.2 Research Design

The study employed a descriptive survey research design to answer the research questions. According to Cooper and Schindler (2003), a descriptive study finds out the who, what, where, and how of a phenomenon which is the aim of this study, while the inferential part helps the study to determine the important associated variables. The descriptive design enabled the study to define the unit of analysis and provide characteristics of the determinants of sustainable HIV/AIDS programmes. This was appropriate for the study since the researcher had collected detailed information through descriptions, which was useful for identifying variables.

3.3 Study Population

The Nyanza region of Kenya has the highest rate of HIV prevalence in the country. The Nyanza region consists of six counties: Homa Bay, Kisii Central, Kisumu, Migori, Nyamira and Siaya. This study was carried out in the six counties of Nyanza. The study was conducted in Nyanza region since it has the highest rate of HIV/AIDS prevalence.

3.4 Sampling Procedure

The study used stratified random sampling to ensure that HIV/AIDS programs implemented in different counties in the Nyanza region were represented in the study. The population for the study was drawn from HIV/AIDS programs implemented in the six counties of Nyanza region. The NGO Coordination Board maintains a database of registered NGOs that are implementing projects in the country, by county. As of January 2014, the NGO Board's database included a list of 2, 252 organizations implementing HIV/AIDS projects in Nyanza region (NGO Coordination Board, 2014). The list was reviewed and revised to eliminate duplicates, that is, organizations implementing projects in more than one district. Based on this, a total of 427 HIV/AIDS projects are

implemented in Nyanza and were randomly targeted for this survey. A stratified random sample was drawn from each of the six counties.

Saunders, Lewis & Thornhill (2009) provide a rough guide to the different minimum sample sizes required from different sizes of population:

Table 3.1: Sample sizes for different sizes of population at a 95-confidence level

Population	Margin of error			
	5%	3%	2%	1%
50	44	48	49	50
100	79	91	96	99
150	108	132	141	148
200	132	168	185	196
250	151	203	226	244
300	168	234	267	291
400	196	291	343	384
500	217	340	414	475
750	254	440	571	696
1 000	278	516	706	906
2 000	322	696	1091	1655
5 000	357	879	1622	3288
10 000	370	964	1936	4899
100 000	383	1056	2345	8762
1 000 000	384	1066	2395	9513
10 000 000	384	1067	2400	9595

Source:(Saunders, Lewis, & Thornhill, 2009)

Based on the above, given a confidence level of 95%, a sample size of 196 is required for a population of 427. To ensure that all the counties were represented in the sample, stratified random sampling was used to select the sample of 196 projects in the study area.

3.5 Data Collection

The survey strategy was used to collect data for the study. Saunders, Lewis and Thornhill describe surveys as popular because they allow the collection of a large amount of data from a sizeable population in a highly economical way. Further, when sampling is used, use of a survey will make it possible to generate findings that are representative of the whole population (Saunders, Lewis, & Thornhill, 2009).

Questionnaires were developed to collect data on factors that influence sustainability of projects. The questionnaire was based on the seven factors identified in Mancini and Marek's program sustainability model. Considering that the sample was randomly selected from projects spread across the six counties of Nyanza, self-administered questionnaires were sent to the respondents by email. To ensure that the intended respondents completed the questionnaires, these were sent to individual email addresses rather than organizational email addresses. In instances where the respondents were not reached by email, they were contacted through phone and requested to provide alternative email addresses. The questionnaire was in a fillable portable document format (PDF) that required respondents to only tick the relevant answer, save the document, and then email back the responses.

3.5.1 Pilot Test

A pilot test was carried out before administering the survey questionnaire to identify and correct any problems that the respondents encountered in understanding the survey questions. The survey questionnaire was tested on a sample of project managers drawn from NGOs implementing HIV/AIDS projects in the country. Feedback received from the managers was used to revise the questionnaire, and thus improve on the clarity of questions in the questionnaire.

3.6 Data Analysis

The first objective of the analysis was to analyse the descriptive data, which was elaborated on the questionnaire. These characteristics were then inferred on the population. The second objective of the data analysis was to examine how closely the various variables form factors e.g. sustainability of HIV/AIDS projects will comprise the following: leadership competence, effective collaboration, understanding the community, demonstrating program results, strategic funding, staff involvement and integration, and program responsiveness. The third objective was to come up with suggestions on how sustainability of HIV/AIDS projects will be improved. Data analysis was done using both descriptive methods (means and standard deviation) and multivariate method (factor analysis).

3.6.1 Factor Analysis

Factor analysis is used for data reduction purposes to get a small set of variables (preferably uncorrelated) from a large set of variables (most of which are correlated to each other) and to create indexes with variables that measure similar things (conceptually) (Yong and Pearce, 2013). The study employed factor analysis so as to come up with new distinct variables that would explain the determinants of sustainability of HIV/AIDS projects in Nyanza from a set of independent questions. The study therefore employed factor analysis among the set of independent variables adopted from previous studies: leadership competence, effective collaboration, understanding the community, demonstrating program results, strategic funding, staff involvement and integration, and program responsiveness. The new factors extracted from 34 questions were then used as the new variables, which were the new identified determinants of sustainability of HIV/AIDS projects. These now became the determinants that affect sustainability of HIV/AIDS projects in Nyanza.

3.7 Presentation of Findings

Following the analysis of data, the finding of the study was presented using tables and pie charts. This was to enable proper elaboration and interpretation of the result finding. Further, output was generated and presented based on the factor analysis output and correlation.

3.8 Ethical considerations

The study ensured that the dignity of the respondents was protected at all times. The participants provided information voluntarily, with no one being forced or coerced to answer any question(s). To ensure confidentiality, the research data was secured throughout the research period.

CHAPTER 4 : PRESENTATION OF RESEARCH FINDINGS

4.0 Introduction

The main purpose of this study was to identify the determinants of sustainability of HIV/AIDS projects implemented in Nyanza region of Kenya. This chapter contains the findings and the interpretation of the study results that attempted to answer the research questions as derived from the objectives. It is organized based on research questions which were provided in the research questionnaire. The first part was the demographic data which provided general information and was analysed using descriptive techniques.

4.1 Response Rate

The study target population was 427 NGOs in Nyanza region, with a sample size of 196 respondents (Saunders, Lewis, & Thornhill, 2009). Of this target, 119 respondents participated by filling and returning the questionnaire. This yielded a response rate of 60%. The other 40% of the target population may not have responded to the questionnaire as a result of lack of up to date data on current contact addresses.

4.2 Descriptive Data

A profile of the respondents was analysed so that meaningful information can be used to describe the data.

Table 4.1: HIV/AIDS NGO data

	N	Mean	Std. Deviation
Full time staff	119	5.87	2.487
Years in existence	119	9.02	3.173
Annual Budget (mn.)	119	3.966555	1.1987857

Table 4.1 above shows the mean and standard deviation of number of staff, years of NGO existence, and their annual budget. The table shows that an NGO has an average of approximately six full time employees, while it has been in existence for an average of nine years with a standard deviation of 3.1 years. The HIV/AIDS NGOs have had an average budget of Ksh.3.96 million per year with a standard deviation of Sh.1.2 million.

Figure 4.1: Other funding sources apart from donors

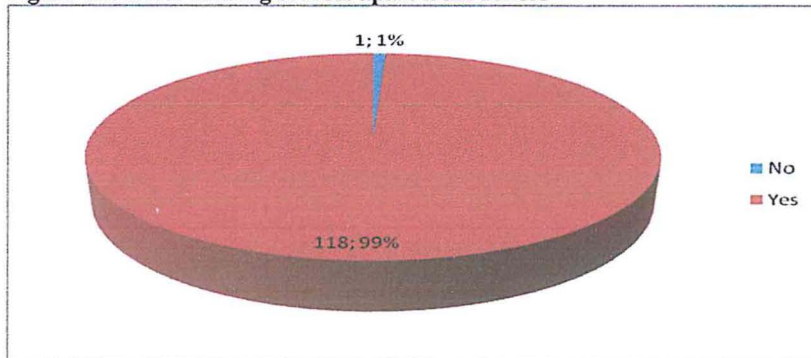
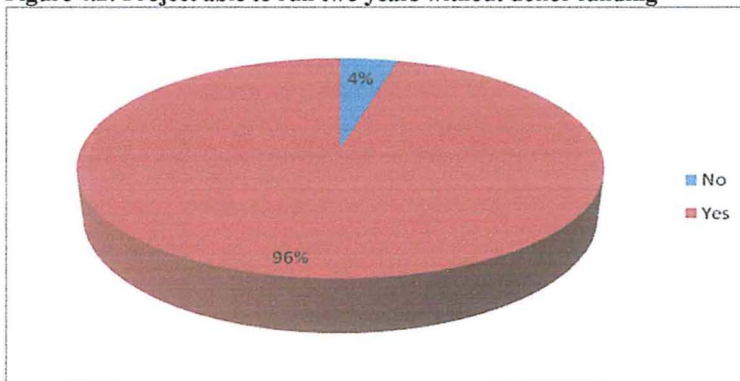


Figure 4.1 above presents information on whether the NGOs have other sources of funds apart from donors. From the analysed data, it can be seen that almost all HIV/AIDS NGOs in Nyanza region have other sources of income with 99.2% (N=118) indicating that they do have other sources of income.

Figure 4.2: Project able to run two years without donor funding



The study also undertook to analyse whether the HIV/AIDS NGOs from Nyanza are able to run in the short term without donor funding. Figure 4.2 above showed that a majority of the NGOs are sustainable in the short term with 95.8% (N=114) indicating that their project could run in the next two years without financial support from donors.

Figure 4.3: Local and National Government Financing

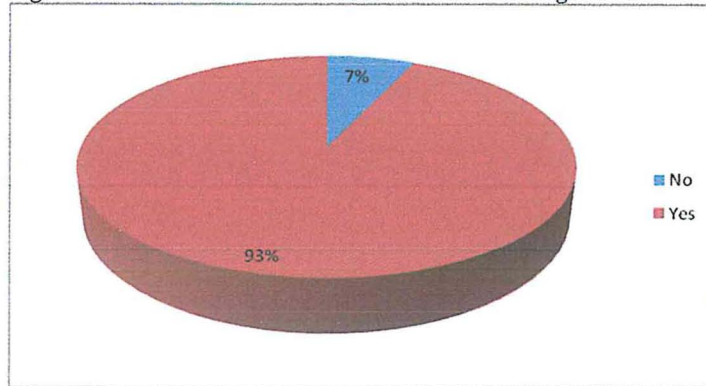


Figure 4.3above also shows the distribution of whether the HIV/AIDS NGOs receive funding from the local and National governments. From the response given, 93.3% (N=111) receive some form of finance from either the local or national government, or both.

Figure 4.4: International donor financing

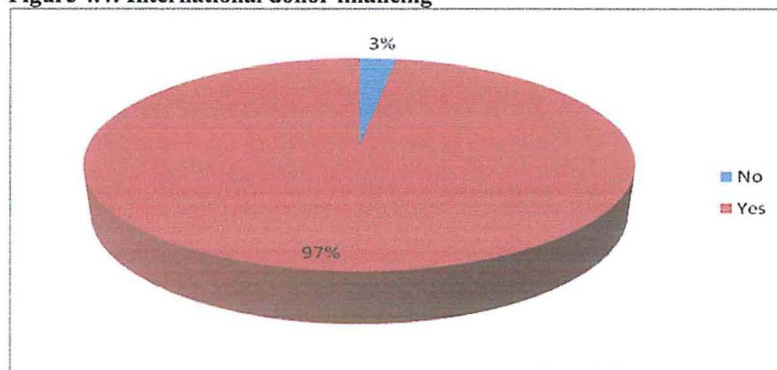
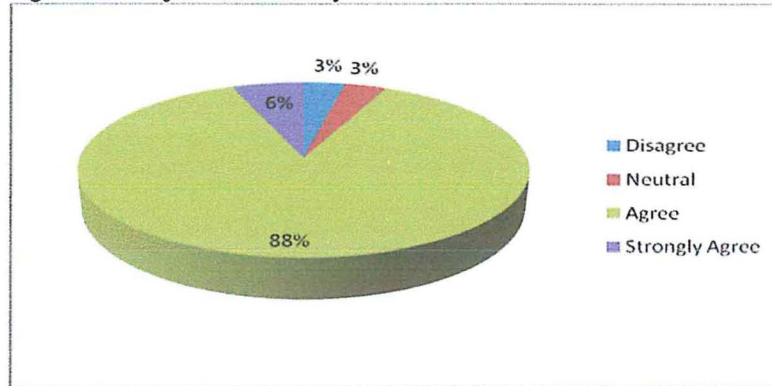


Figure 4.4above shows the distribution of international donor financing levels by the HIV/AIDS NGOs in Nyanza region. From the above table, it can also be seen that a majority of NGOs in the region have international donor support with 97.5% (N=116) indicating to the affirmative.

Figure 4.5: Project sustainability



One of the objectives of the study was to check whether in general the HIV/AIDS projects in Nyanza region are sustainable. They responded by indicating from a continuum of strongly disagree (1) to strongly agree (5). From figure 4.5 above, majority of the respondents agreed that the projects are sustainable with 87.4% (N=7) indicating that they agree, 5.9% (N=7) stating that they strongly agree, while only 6.7% of the total respondents either being neutral or disagreeing.

4.3 Impact of HIV/AIDS determinants on project sustainability

Respondents were asked to indicate the impact of these determinants using a five level Likert scale where a value of 1 represented strongly disagree and 5 represented the respondents who strongly agreed. This was done from an ordinal scale and results were as shown in Table 9 below.

Table 4.2: Determinants of sustainability and their impact

Determinants of sustainability	N	Mean	Std. Deviation
HIV/AIDS project is sustainable	119	3.96	.476
The project leaders have a clearly established mission and vision.	119	3.90	.458
The project has a clear sustainability plan	119	3.92	.435
Leaders have identified alternative strategies for project survival	119	3.84	.451
Leaders develop and follow a realistic project plan	119	3.92	.323
Leaders plan within the first year for sustaining the project	119	3.92	.358
Local decision makers are project collaborators	119	3.66	.644
Collaborators are involved in program design and implementation	119	4.04	.273
Collaborators are involved in program evaluation	119	4.05	.255
Collaborators share responsibility for providing program resources and share credit for project success	119	4.01	.206

Collaborators have clearly defined roles and responsibilities	119	4.05	.255
Community needs are assessed regularly	119	4.00	.344
Community members are involved in program design and implementation	119	3.86	.456
The project addresses key community needs	119	3.98	.318
Project goals are matched with community resources	119	3.96	.377
The project accounts for diversity in the community	119	3.98	.390
Project effectiveness is demonstrated through evaluation	119	4.03	.379
Project evaluations are conducted on a regular basis	119	3.98	.260
Project evaluation results are used to modify programming	119	3.93	.465
Evaluation plans are developed prior to implementing programs	119	3.92	.415
Project successes are made known to the community	119	4.05	.387
Current funding is sufficient for project operations	119	3.92	.435
There are plans for obtaining additional funds	119	3.93	.385
There is adequate funding for hiring and retaining quality staff	119	3.96	.354
There are other sources of income apart from grants	119	3.90	.420
The budget covers long term period	119	3.80	.530
Staff are involved in program design	119	3.97	.421
Staff are involved in project decision making	119	3.99	.356
Staff are committed to the project mission, vision and goals	119	3.98	.390
Staff are involved in project valuation	119	3.93	.385
Staff are qualified to work on the project	119	4.04	.399
Programs are eliminated when they do not meet community needs	119	3.75	.556
New programs are developed when community needs change	119	3.85	.383
Project sites are consolidated as necessary	119	3.79	.449
New programs are integrated with the existing programs	119	3.92	.415

The descriptive statistics gives us the nature and characteristics of the data. The mean rankings show the degree with which the respondents agree or disagree with the questions and are based on the mean of the responses. From the table, from the mean values calculated, collaboration with the local community had a major impact on sustainability of HIV/AIDS projects in Nyanza with all the factors (mean \geq 3.8 and a

lower standard deviation). Also, making project success known to communities, staff being qualified to work also had a big impact on sustainability (Mean \geq 4).

4.4 Factors Affecting Sustainability of HIV/AIDS Projects in Nyanza

There are a number of factors that determine the sustainability of HIV/AIDS projects. These factors are important since they are required by institutions that implement these projects in various parts to ensure sustainability.

4.4.1 KMO and Bartlett Test Table

Table 4.3: KMO and Bartlett's Tests

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.730
Bartlett's Test of Sphericity	Approx. Chi-Square	2473.032
	Df	561
	Sig.	.000

The KMO test measures the strength of relationship among variables. From Table 4.3 above, the Kaiser-Meyer-Olkin measure has a value of 0.730. Kaiser (1974) recommends accepting values greater than 0.5. This indicates that the variables will yield distinct and reliable factors which can be analysed independently.

The Bartlett's Test measures the null hypothesis that the original correlation matrix is an identity matrix. For factor analysis to work we need some relationships between variables and if the R-matrix were an identity matrix then all the correlation coefficients would be zero. Therefore, a significance test (value less than 0.05) is important as it tells us that the R-matrix is not an identity matrix, and hence there are some relationships between the variables. From Table 4.3, the Bartlett's test of sphericity shows a significance value of 0.000 indicating that the original correlation matrix is not an identity matrix.

4.4.2 Communalities

Communalities in factor analysis show how much of the variance in the variables has been accounted for by the extracted factors.

Table 4.4 below shows the variance accountability of each variable in the study. From the table, 66% of the variance in *the project leaders have clearly established mission and*

vision (Lead.1) is accounted for, 62% of variance in *local decision makers are project collaborators* (Collab.1) is accounted for.

Table 4.4: Communalities

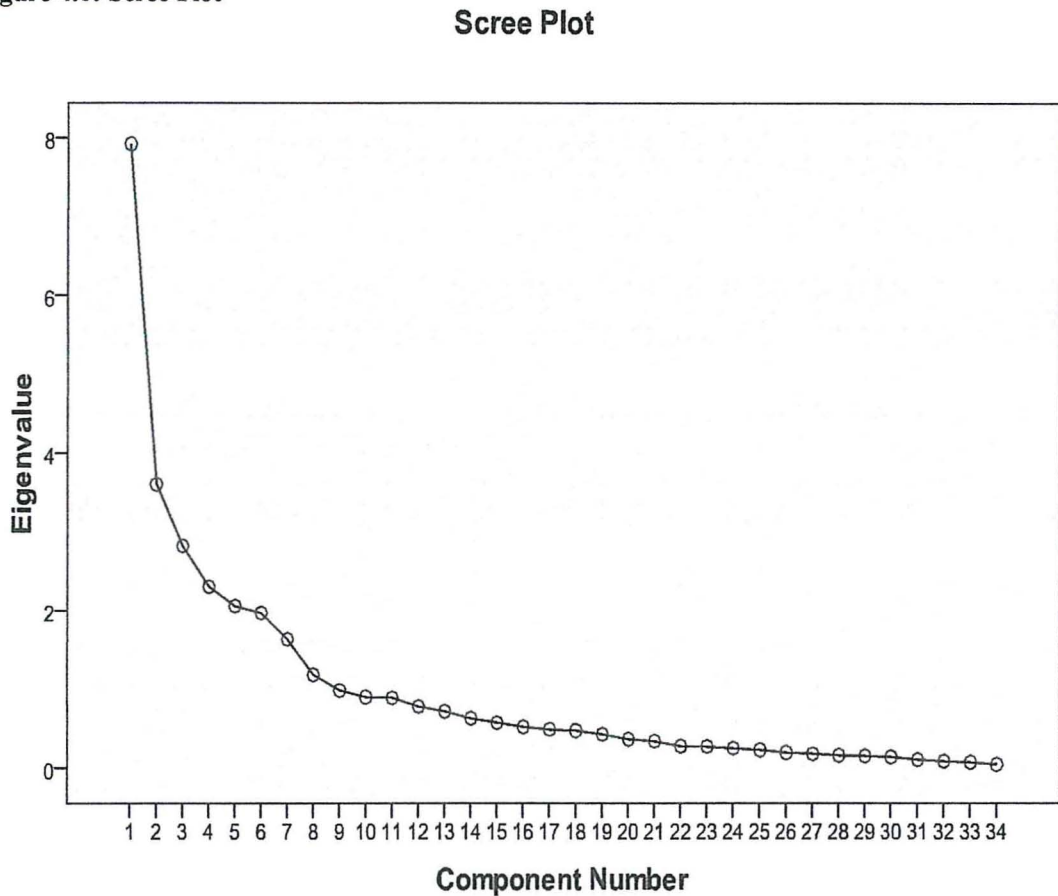
	Initial	Extraction
Lead_1	1.000	.660
Lead_2	1.000	.689
Lead_3	1.000	.784
Lead_4	1.000	.800
Lead_5	1.000	.571
Collab_1	1.000	.620
Collab_2	1.000	.666
Collab_3	1.000	.644
Collab_4	1.000	.496
Collab_5	1.000	.751
Comm_Und_1	1.000	.782
Comm_Und_2	1.000	.631
Comm_Und_3	1.000	.785
Comm_Und_4	1.000	.820
Comm_Und_5	1.000	.790
Dem_result_1	1.000	.809
Dem_result_2	1.000	.436
Dem_result_3	1.000	.833
Dem_result_4	1.000	.625
Dem_result_5	1.000	.685
Strat_fund_1	1.000	.642
Strat_fund_2	1.000	.700
Strat_fund_3	1.000	.629
Strat_fund_4	1.000	.678
Strat_fund_5	1.000	.574
Staff_involv_1	1.000	.845
Staff_involv_2	1.000	.723
Staff_involv_3	1.000	.658
Staff_involv_4	1.000	.758
Staff_involv_5	1.000	.721
Prog_resp_1	1.000	.715
Prog_resp_2	1.000	.643
Prog_resp_3	1.000	.695
Prog_resp_4	1.000	.666

Extraction Method: Principal Component Analysis.

4.4.3 Scree Plot

The scree plot is a graph that assists in determining how many of the extracted factors to retain. The point at which the curve begins to flatten or has an inflexion is the point which indicates the number of factors we should pick. From the scree plot below, we should take eight factors. This is also explained by the total variance explained table, which extracted eight factors.

Figure 4.6: Scree Plot



4.4.4 Rotated Component Factor Matrix

The components matrix table shows the loadings of the variables on the factors extracted, which is eight in number. The higher the absolute value of the loading the more the factor contributes to the variable.

Table 4.5: Rotated Component Matrix

Critical success factors	Component							
	1	2	3	4	5	6	7	8
Lead_1						.602		
Lead_2								.718
Lead_3						.722		
Lead_4						.878		
Lead_5								.530
Collab_1								.758
Collab_2				.790				
Collab_3				.755				
Collab_4				.608				
Collab_5				.819				
Comm_Und_1	.819							
Comm_Und_2								
Comm_Und_3	.706							
Comm_Und_4	.877							
Comm_Und_5	.876							
Dem_result_1					.806			
Dem_result_2								
Dem_result_3					.888			
Dem_result_4	.521							
Dem_result_5				.524				
Strat_fund_1		.704						
Strat_fund_2		.803						
Strat_fund_3		.705						
Strat_fund_4		.719						
Strat_fund_5								
Staff_involv_1			.884					
Staff_involv_2			.738					
Staff_involv_3			.704					
Staff_involv_4					.805			
Staff_involv_5			.804					
Prog_resp_1							.775	
Prog_resp_2							.764	
Prog_resp_3							.794	
Prog_resp_4							.669	

Table 4.6: Total Variance Explained

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.926	23.311	23.311	7.926	23.311	23.311	4.044	11.894	11.894
2	3.606	10.605	33.916	3.606	10.605	33.916	3.176	9.340	21.235
3	2.824	8.307	42.223	2.824	8.307	42.223	3.070	9.029	30.263
4	2.305	6.780	49.003	2.305	6.780	49.003	3.010	8.852	39.115
5	2.060	6.058	55.062	2.060	6.058	55.062	2.904	8.541	47.657
6	1.972	5.800	60.862	1.972	5.800	60.862	2.635	7.750	55.407
7	1.640	4.825	65.687	1.640	4.825	65.687	2.569	7.557	62.964
8	1.191	3.502	69.189	1.191	3.502	69.189	2.116	6.224	69.189
9	.994	2.922	72.111						
10	.906	2.666	74.776						
11	.898	2.640	77.416						
12	.788	2.318	79.734						
13	.725	2.133	81.867						
14	.636	1.871	83.738						
15	.580	1.706	85.444						
16	.529	1.557	87.001						
17	.497	1.462	88.463						
18	.480	1.412	89.876						
19	.435	1.281	91.156						
20	.373	1.097	92.254						
21	.348	1.024	93.278						
22	.285	.839	94.117						
23	.281	.827	94.945						
24	.260	.764	95.709						
25	.236	.694	96.402						
26	.204	.599	97.002						
27	.188	.554	97.555						
28	.169	.497	98.053						
29	.163	.481	98.534						
30	.148	.436	98.969						
31	.117	.344	99.314						
32	.097	.285	99.598						
33	.081	.237	99.835						
34	.056	.165	100.000						

Extraction Method: Principal Component Analysis.

As shown in Table 4.6, in a rotated matrix, the number of factors is reduced on which variables have high loadings. From this, the eight factors that can be created from this are community understanding and prior program evaluation, project strategic funding, staff involvement, program collaboration and program success awareness, program result awareness and staff project evaluation involvement, project leadership, project responsiveness, and project sustainability plan and local collaboration. These were the new variables that were used to study determinants of sustainability of HIV/Aids projects in Nyanza region.

The percentage of variance tells us how much of the total variability (in all of the variables together) can be accounted for by each of the factors. From the total variance explained table, factor 1 (Community understanding and prior program evaluation) contributed to a variance of 23.3% of the total variance while factor 2 (project strategic funding) contributed to a variance of 10.6% of the total variance, and so on. This will continue until we have a cumulative variance of 100%. The extracted factors from the rotated matrix should have an Eigenvalue greater than 1 for it to be accepted, with the corresponding variance that is attributed by each factor. From the extracted eight factors a total variance of 69.2% can be attributed to them.

CHAPTER 5 : DISCUSSION

5.1 Introduction

This chapter begins by looking at the interpretations of the findings in Chapter 4. The findings of the study and the implications of the results are also included. The data was analysed using factor analysis to identify the determinants of sustainability of HIV/AIDS projects in Nyanza region.

5.2 Discussion

The study's first objective was to identify the determinants of sustainability of HIV/AIDS projects in Nyanza region. From the study findings, these were community understanding and prior program evaluation, project strategic funding, staff involvement, program collaboration and program success awareness, program result awareness and staff project evaluation involvement, project leadership, project responsiveness, and project sustainability plan and local collaboration.

Factor No.1 – Community understanding and prior program evaluation. Understanding the community and prior program evaluation is an important aspect in sustainability of a project. The needs of the community need to be properly understood and incorporated in the project design. Further, the community should be involved in the design, implementation and evaluation of the project. When NGOs implement HIV/AIDS projects in various regions in the country and more so in Nyanza, Kenya where HIV/AIDS prevalence is high, the project managers need to ensure evaluation plans are developed prior to program implementation. Similar projects implemented previously need to be evaluated before implementing programs in order to understand the success factors and challenges of such projects. This enables project managers to develop relevant project plans, ensuring that community needs are understood and addressed and communities are involved at all stages of the design, implementation and evaluation of projects. Earlier studies (Mancini & Marek, 2004; Shediak-Rizkallah & Bone, 1998) indicated that capacities of a community and of programs are increased when collaboration is optimal, and when the community is committed to its programs.

Factor No.2 –Project strategic funding. For any project to be sustainable there has to be adequate funding to sustain its activities. Strategic funding of a project is therefore

important in HIV/AIDS program sustainability to ensure that the needs of project beneficiaries are addressed, and to improve the lives of the people and the community. Previous literature states that strategic funding is critical for program continuity, particularly for those programs that are not associated with a larger organization. Also, diverse sources of funding increase the chances of having sufficient funding for short term and long-term program development and implementation. Soni & Gupta (2009) recommend new approaches to funding to address funding challenges noted and ensuring provision of HIV/AIDS treatment is sustainable.

Factor No.3 – Staff involvement. The implementation of projects is usually undertaken by the staff, which shows the level of importance of staff involvement in the management of the projects. From the study, having involved staff is good enough while having involved qualified staff is very key to ensure sustainability of any project. HIV/AIDS projects' sustainability is no exception when it comes to having qualified staff involved in its running and management. Previous literature indicates that supporting program goals occurs more readily when staff are important components in the organization and make the organization their own.

Factor No.4 –Program collaboration and success awareness. Program collaboration and success awareness is identified as an important element in project sustainability. Collaboration involves working with the local leaders and other stakeholders to achieve the program's objectives and meet the community's needs. The successes of the project should also be communicated to the community and stakeholders. Literature from past studies indicates that collaborative efforts build a broad base of support in the community and of key stakeholders for program implementation, program success, and program sustainability.

Factor No.5 – Result awareness and staff involvement in project evaluation. Project result is good for a program in order to know whether things are on track or not, while its evaluation by all stakeholders is another crucial aspect in project sustainability. Program results awareness is often difficult for community-based programs since many of them are non-quantifiable, yet the outcomes of including evaluation of program activities can become important for project sustainability (Mancini, Marek, Byrne, & Huebner, in

press). Evaluation findings and staff involvement in evaluation can then be used to leverage current successes for securing future funding and for establishing program professionals as experts in the community.

Factor No.6 – Project leadership. Leadership is a success element for projects, programs, and even in institutions. Leaders in any setting will guide the others towards achieving the set goals and objectives. The respondents in the study indicated that project leadership is important in ensuring sustainability of HIV/AIDS projects in the Nyanza region. Prior literature indicates that activities which contribute to high-quality programs are the responsibility of leadership and include clearly developing and articulating a program's vision and objectives, performing regular needs assessments, ongoing program planning and adaptation, program evaluation, securing funding, fiscal management, supporting and supervising staff, and providing staff training.

Factor No.7 – Project responsiveness. Project responsiveness is the ability of a project to adapt to the needs of a community. With the changing needs of a community, a project should be able to adapt to these changes in order to fully cater for the community needs. It is therefore important when designing a program to consider changes in the environment so as to ensure that changes that occur can be catered for through project modification. Previous studies indicated that sustained and successful programs are flexible rather than static (Bamberger & Cheema, 1990; The Finance Project, 2002), and although programs may maintain their overall program goals, activities and priorities may need adjustment to address evolving issues and contexts.

Factor No.8 –Project sustainability plan and local collaboration. From the study, a sustainability plan is important if the project is to continue in a foreseeable future with managers planning within the first year for sustaining that project. Also, the local leaders should be involved in the project management as they understand the community well and they would assist in coming up with a clear sustainability plan.

From the factor analysis test done, eight factors were extracted which were used as factors that impact the sustainability of HIV/AIDS projects in Nyanza. These new factors were not very different from the previous literature, which had more or less the same

variables. These factors had high mean scores and were deemed to affect the sustainability of HIV/AIDS projects in Nyanza region. From the previous studies, the Program Sustainability Index (PSI) created seven factors from an initial 29 items which also had high means and low inter-correlations amongst them.

The second objective of the study was to assess the impact of determinants that influence sustainability of HIV/AIDS projects in Nyanza. From responses collected during the study, the factors that were used in analysing the sustainability of the HIV/AIDS projects were significant with all the factors having a mean greater than 3.5, with some factors even having a mean greater than 4. Factors such as involvement of collaborators in program evaluation, project successes being made known to the community, and having qualified staff on the project had high mean responses indicating they had high effects on project sustainability. The respondents showed that their projects are indeed sustainable with very few of them indicating that their projects are not sustainable.

This study corroborates previous studies on factors that impact the sustainability of HIV/AIDS projects. Soni & Gupta (2009) emphasize the need to adopt new approaches to funding HIV/AIDS projects as a way to enhance program sustainability. This is through making an important priority in bridging the resource gap of making high-quality treatment as affordable as possible by increasing the efficiency with which funds are deployed. The architecture of funding should continue to shift from a proposal followed by a grant, to an ongoing compact between implementers and funders. This compact would be guided by and adapted to national plans and budgets, while remaining performance-based.

CHAPTER 6 : CONCLUSION AND RECOMMENDATION

6.1 Introduction

This chapter draws conclusions and offers recommendation for the study. The data was analysed using descriptive statistics and factor analysis. These techniques are believed to provide useful information in finding out the determinants of sustainability of HIV/AIDS projects in Nyanza.

6.2 Conclusion

The management of HIV/AIDS projects in Nyanza region has been a challenge especially with the high prevalence of HIV/AIDS. This has led to a large number of orphans and child-headed households. This has greatly affected the economic situation of the region since limited resources are utilized to provide for care and treatment of the affected and infected persons. Due to this, the NGOs have been at the forefront in assistance in management through provision of funds to these projects so as to ensure their sustainability.

The main objective of the study was to identify determinants of HIV/AIDS projects' sustainability in Nyanza region. This was after identifying a research gap in the subject area and identifying Nyanza as study focus since HIV/AIDS prevalence is high in the region. With the objective of the study, literature review was carried out and relevant journals and materials were reviewed, with similar studies carried out and analysed, with important aspects of project sustainability being identified. From the data analysis, important variables that were brought out and impacted the sustainability of HIV/AIDS projects were community understanding and prior program evaluation, project strategic funding, staff involvement, program collaboration and program success awareness, program result awareness and staff project evaluation involvement, project leadership, project responsiveness, and project sustainability plan and local collaboration.

Primary data was collected through a questionnaire, which was structured to answer the research objectives, and sent to respondents. Based on the questionnaire, the study sought to identify the determinants of sustainability of HIV/AIDS projects. Data analysis was done through descriptive analysis and factor analysis. The sample size of 196 HIV/AIDS

projects was used from a population of 427 projects in Nyanza region and their responses analysed.

The study identified 8 new factors from a set of 34 questions that were administered to the respondents. The new factors identified using factor analysis were community understanding and prior program evaluation, project strategic funding, staff involvement, program collaboration and program success awareness, program result awareness and staff project evaluation involvement, project leadership, project responsiveness, and project sustainability plan and local collaboration. These new factors should be considered to enhance sustainability of HIV/AIDS projects in Nyanza region.

6.3 Recommendations of the Study

Projects globally have been able to adhere to some form of management tenets for them to be sustainable. This study has shown that for projects to be sustainable they must embrace the factors that impact sustainability. The study firstly recommends that the concept of project sustainability should be incorporated early in the project's life cycle. This includes being aware of the factors that enhance project sustainability and ensuring that these factors are incorporated during project design, implementation and evaluation. Project staff should be trained on the factors that impact project sustainability in order to ensure that these are incorporated at all stages of the project life cycle. In addition, project implementers should have an understanding of the community's needs and ensure that communities are involved in the design, implementation and evaluation of projects.

Secondly, the study recommends that project managers ensure that strategic project funding is available for HIV/AIDS projects. The study has shown that a large percentage of the revenues are from other stakeholders, and a smaller percentage from their own revenue programs. The study therefore recommends that project funding is diversified to include a variety of funding sources rather than relying on a single funding source. This ensures that in the event that one source of funding is interrupted or withdrawn, project activities would continue with support from the other sources of funding. HIV/AIDS projects should be able to identify profitable and meaningful initiatives at the community level so that they are not too dependent on local and international donors to sustain their

activities. To facilitate this, the study recommends collaboration with the communities in order to identify alternative funding sources for HIV/AIDS projects within their locality.

In terms of policy implementation, the government and the NGOs should ensure that social and community projects have a checklist to ensure sustainability before they are funded. These requirements would include some of the sustainability factors identified in the study. HIV/AIDS projects implemented in Nyanza and other regions would improve in reducing HIV/AIDS incidents in a bid to achieve the social objectives outlined in Kenya's Vision 2030.

6.4 Limitations of the study

The study provided an opportunity to examine the determinants of sustainability of HIV/AIDS projects in Nyanza and in the course of the study, few limitations were encountered. Firstly, the administration of the questionnaires was a challenge with the respondents initially not responding to emails. The respondents had to be followed up through telephone calls to request them to complete and submit the questionnaire. Also, the study looked at the sustainability of HIV/AIDS programs and the quantification of the sustainability factors was also a challenge for the study. Measurement of leadership impact on sustainability as compared to effective collaboration may have been a challenge but this provides an opportunity for further research.

6.5 Suggestions for further research

The study suggests other research to be done on sustainability of HIV/AIDS projects and ways of the impact being able to be quantified. The study used the Mancini and Marek model in analysing sustainability of HIV/AIDS projects in Nyanza. The study therefore proposes further studies using other models to analyse sustainability of these projects. This may help in comparing the models in order to come up with alternative options to enhance sustainability of projects.

This study was conducted in the Nyanza region of Kenya. Further studies on sustainability of HIV/AIDS projects are proposed to cover other regions in the country. This would help in identifying whether the factors affecting sustainability of projects vary or are similar across different regions in the country. Further, such studies would allow

for determination of factors that impact sustainability of HIV/AIDS projects across the country.

Finally, additional studies may be conducted that apply other analytical techniques such as regression analysis or correlation tests to determine the extent to which the factors impact on project sustainability. This will not only provide the information on what factors affect project sustainability, but also the extent to which specific factors impact project sustainability.

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APPENDIX – RESEARCH QUESTIONNAIRE

SECTION I – Demographic Data

Organization's name:	Location:
County/District:	Division:
Annual Budget (Kenya Shillings):	Source(s) of Funding:
Staffing: Number of full time staff: Number of part time staff/consultants: Number of Volunteers	Number of years the organization has been in existence: Year of implementation of the HIV/AIDS project:

SECTION II – Project Financing

1) Does the organization have income generated from other sources other than donors?

Yes No

If you answered NO to Question 1, please proceed to Question 4 below.

2) List below the other sources of funding for your organization:

3) How does the organization apply/utilize income from other sources (as listed in Question 2 above)?

4) Do you see your project being able to run in the next two years without funding from donors?

Yes No

5) What are the current sources of funding for your HIV/AIDS project(s)? *[Tick all that apply]*

a) Self-Financing

i) Membership fees and subscriptions	
ii) Fees for services (e.g. training and consultancy)	
iii) Income generating activities (IGA's)	
iv) Investment income from reserves and endowment funds	

b) Local Financing

i) National government grants/partnerships (e.g. NACC/TOWA)	
ii) Local (Devolved) Government e.g. Constituency Development Fund (CDF), Community Development Trust Fund (CDTF), Local Authorities Transfer Fund (LATF), Constituency HIV/AIDS Fund, Poverty Eradication Fund	
iii) Individual donors or supporters	
iv) Corporate donors or sponsorships	

c) International Donor Financing

i) International Donors (e.g. Global Fund, PEPFAR/USAID, AMREF)	
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d) Other (please specify) _____

6) What proportion of your HIV/AIDS project's total funding is contributed by each of the following sources of funding? *[Tick as appropriate]*

Source of Funding	0-40%	41-80%	Above 80%
a) Self-Financing			
b) Local Financing			
c) Devolved Government			
d) International Donor Financing			
e) Other (please specify) _____			

SECTION III – Program Sustainability

Indicate to what extent you agree or disagree with each of the following statements as they apply to the HIV/AIDS program (project) implemented by your organization.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Leadership Competence					
1) The project leaders have a clearly established mission and vision.					
2) The project has a clear sustainability plan					
3) Leaders have identified alternative strategies for project survival					
4) Leaders develop and follow a realistic project plan					
5) Leaders plan within the first year for sustaining the project					
Effective Collaboration					
6) Local decision makers are project collaborators					
7) Collaborators are involved in program design and implementation					
8) Collaborators are involved in program evaluation					
9) Collaborators share responsibility for providing program resources and share credit for project success					
10) Collaborators have clearly defined roles and responsibilities					
Understanding the Community					
11) Community needs are assessed regularly					
12) Community members are involved in program design and implementation					
13) The project addresses key community needs					
14) Project goals are matched with community resources					
15) The project accounts for diversity in the community					

Demonstrating Program Results					
16) Project effectiveness is demonstrated through evaluation					
17) Project evaluations are conducted on a regular basis					
18) Project evaluation results are used to modify programming					
19) Evaluation plans are developed prior to implementing programs					
20) Project successes are made known to the community					
Strategic Funding					
21) Current funding is sufficient for project operations					
22) There are plans for obtaining additional funds					
23) There is adequate funding for hiring and retaining quality staff					
24) There are other sources of income apart from grants					
25) The budget covers long term period					
Staff Involvement					
26) Staff are involved in program design					
27) Staff are involved in project decision making					
28) Staff are committed to the project mission, vision and goals					
29) Staff are involved in project valuation					
30) Staff are qualified to work on the project					
Program Responsivity					
31) Programs are eliminated when they do not meet community needs					
32) New programs are developed when community needs change					
33) Project sites are consolidated as necessary					
34) New programs are integrated with the existing programs					