



University
of Glasgow

Mensah, Kofi Akohene (2011) *An exploration of evaluation approaches for community based interventions for people living with HIV (PLHIV) with results applied to the 'HOPE' programme in Ghana.*
PhD thesis.

<http://theses.gla.ac.uk/2665/>

Copyright and moral rights for this thesis are retained by the author

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the Author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the Author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given

**An Exploration of Evaluation Approaches for Community Based Interventions
for People Living with HIV (PLHIV) with Results Applied to the 'HOPE'
Programme in Ghana**

BY

Kofi Akohene Mensah, BSc, MSc

This thesis is presented for the degree of Doctor of Philosophy

**Public Health and Health Policy
Centre for Population and Health Sciences
College of Medicine, Veterinary and Life Sciences
University of Glasgow**

June, 2011

Abstract

Background The increase in the number of people living with HIV (PLHIV), especially in sub-Saharan Africa, is a major public health concern. To date, most attention has been paid to prevention strategies and clinical trials of therapy. In comparison, there have been very few studies of care and support programmes. The 'HOPE' programme is a major community-based care and support programme in Ghana. 'HOPE' provides nutritional support, skills training for employment, health education and psychological support for PLHIV and for those orphaned through AIDS. Therefore, it was seen by policy makers in the country as desirable that it should be evaluated. A PhD scholarship was funded and the researcher presenting this thesis was appointed.

Broad Aims The overall aim was to carry out an evaluation of the 'HOPE' programme in Ghana in order to make wider recommendations for evaluation of community-based interventions (CBIs) in Ghana and Africa generally. The timing was less than ideal as many of the major decisions about the intervention had already been made and baseline data had been collected. Therefore, the preliminary aim was to explore a range of possible evaluation methods so that the most suitable approach could be selected. Thereafter, a range of more specific aims, objectives and research questions was identified.

Methods A 'mixed methods' approach was adopted. The first component was a desk-based analysis of the literature on the various evaluation approaches that might, at least in theory, be applied to an HIV/AIDS intervention like 'HOPE'. From this, a decision was made to evaluate 'HOPE' in terms of structure, process and outcome. The second component operationalised this decision by reviewing HOPE's working documents and conducting two pieces of field work: a quantitative and a qualitative study. The quantitative study was a structured questionnaire administered to 200 PLHIV on the 'HOPE' programme. The qualitative study consisted of 14 interviews with stakeholders directly involved in the programme implementation and 8 focus group discussions with the programme beneficiaries.

Results The desk-based analysis achieved three main outcomes. First, it set out in a systematic manner the different approaches to evaluation that could in theory have been applied to 'HOPE'. It identified strengths and weaknesses and the perspectives behind each approach. Second, it set out and then summarised a detailed description of the 'HOPE' programme and the national context in which it operated. Third, it set the above within the context of global literature on HIV, community-based interventions and nutritional support programmes.

The analysis of the quantitative data showed that beneficiaries were being provided with soy-fortified wheat and vegetable fortified oil at the time of the evaluation. On average, beneficiaries gained weight (Mean difference in weight was 2kg with 95% CI (1.1, 2.9), p-value < 0.001) and increased Body Mass Index (BMI) (Mean difference in BMI was 0.8units with 95% CI (0.4, 1.2), P-value < 0.001). Over a third of the beneficiaries (37.5%) was currently unemployed and only one in five of the beneficiaries had been trained in a skill that might have been useful to find employment: this, despite skills training for all being a programme goal. Multivariate analysis showed that the support group to which the beneficiary belonged was the most important determinant of a positive outcome.

Qualitative components demonstrated perceived successes and challenges. Beneficiaries indicated that the anti-retroviral drugs were making them hungry and the food helped to alleviate that effect. They further indicated that the food was nutritious and contributed to their weight gain. Support groups have been sustained and membership increased. Some indicated that food should be more varied and some mentioned selling food to earn money to pay for their medications.

Most of the beneficiaries indicated they were unemployed having lost their jobs as a result of stigmatisation. Only a few benefited from skills training leading to employment because of inadequate budgeting. Some who had been trained could not use their newly acquired skills because of lack of capital to start a business. To compound these weaknesses, most reported that they preferred petty trading to the skills offered.

The monthly education and the training workshops generated hope, and improved knowledge of HIV/AIDS, promoted drug adherence and helped to reduce stigmatisation. The training of the PLHIV as peer educators is an effective method for HIV education and counselling since PLHIV listen to their peers more than health workers.

Respondee predicted dissolution of the support groups when the programme ends. This is because they were not adequately involved in the decision making. Beneficiaries identified participation and cooperation as key prerequisites for sustainability but they also identified important weaknesses in 'HOPE' with respect to these criteria.

Discussion Despite the challenges presented by the timing and context of this study, it has been possible to carry out an evaluation that provides important learning. A mixed methods approach was appropriate and is likely to be useful in many similar evaluations. Beneficial outcomes were identified but these cannot be attributed, without qualification, to the intervention. Nonetheless, the findings indicated that participants were highly satisfied with the food support and monthly education. They were dissatisfied with the numbers trained in new skills and in other aspects of the skills training components. Also, the sustainability of the food component when the funding stops was a concern. However, the educational component could be sustained because peer educators could continue at very low cost. Most importantly, community involvement, using locally available resources, inter-sectoral collaboration and harnessing the motivation of local people were seen as key but underutilised ingredients.

So, the results of the evaluation are encouraging but not conclusive. Nonetheless, care for people living with HIV is such an important problem that the desirability of conducting a cluster randomised controlled trial among a large number of support groups to assess the programme effectiveness on health, nutrition and economic status should be seriously considered despite the practical and ethical challenges implicit in such a recommendation.

Table of Contents

Abstract	2
List of Tables.....	9
List of Figures.....	11
List of Abbreviations	12
Dedication	16
Acknowledgements.....	17
Declaration	19
Chapter one: Introduction	20
1.1 Background	20
1.2 The problem of HIV/AIDS.....	22
1.2.1 The problem of HIV/AIDS in Africa	23
1.2.2 The problem of HIV/AIDS in Ghana	30
1.3 The nature of Africa’s response	34
1.4 The nature of Ghana’s response to HIV/AIDS.....	37
1.5 The importance of evaluating the ‘HOPE’ programme.....	38
1.6 Background of OICI Ghana ‘HOPE’ programme.....	39
Chapter two: Literature review	42
2.1 Evaluations	43
2.1.1 Definitions of evaluation	43
2.1.2 The history of evaluation of health interventions in Africa.....	44
2.1.3 The need for an enhanced capacity for evaluation in Africa.	46
2.1.4 Methods of evaluation	47
2.1.5 Strengths and weakness of various evaluation approaches	60
2.1.6 Applicability and justification of choice of evaluation approach ..	73
2.2 Community-based Interventions.....	74
2.2.1 Definitions of community-based interventions	74
2.2.2 History of community-based interventions	75
2.2.3 Principles of community-based interventions.....	79
2.2.4 Advantages of community-based interventions.....	83

2.2.5	Disadvantages of community-based interventions	84
2.2.6	Application of community-based interventions to HIV/AIDS.....	86
2.2.7	Community-based services for People Living with HIV	87
2.3	Nutrition support for PLHIV	89
2.3.1	HIV and Nutrition.....	89
2.3.2	PLHIV and Body Mass Index	91
2.3.3	HIV/AIDS and Antiretroviral Drugs (ARVs)	92
2.4	Summary of literature review	94
Chapter three: Methods		96
3.1	Introduction	96
3.2	Description of the initial and modified plans.....	96
3.3	Mixed methods approach	98
3.4	Aims and Objectives.....	100
3.5	Research Questions.....	100
3.6	Literature search strategy.....	101
3.7	Set out a range of possible evaluation strategies for the ‘HOPE’ programme and assess strength and weakness.	103
3.8	Developing practical evaluation designs for the programme.....	103
3.9	Evaluate the ‘HOPE’ programme	104
3.9.1	Description of documentary analysis, quantitative and qualitative methods	105
Chapter four: Results		117
4.1	Description of national context and the ‘HOPE’ programme	117
4.1.1	Description of national context	117
4.1.2	Description of local and organisational context of the interventions	120
4.1.3	Detailed description of the ‘HOPE’ programme	121
4.2	Quantitative results	125
4.2.1	Introduction and background of respondents	125
4.2.2	Comparing the relationship between previous and current employment	129
4.2.3	Comparing the relationship between previous and current weight...	130

4.2.4	Comparing the relationship between previous and current BMI...	133
4.2.5	Comparing the relationship between maintained/gained weight versus losing weight and survey variables.....	134
4.2.6	Assessing the effect of maintaining/gaining weight versus losing weight on survey variables	141
4.2.7	Describing the skills offered to the beneficiaries and their desired employment	151
4.2.8	Comparing the relationship between skilled trained versus none and survey variables	151
4.2.9	Assessing the effect of skills trained versus none on survey variables	157
4.2.10	Describing demographic variables by support groups.....	165
4.2.11	Describing what the beneficiaries do with the food and their feelings or opinions on the food rations	165
4.3	People's views and experiences of the programmes	166
4.3.1	Beneficiaries' views and experiences	167
4.3.2	Stakeholders views and experience	176
4.3.3	Broader themes.....	188
Chapter five: Discussion		192
5.1	Summary of documentary analysis, quantitative results and qualitative findings.....	192
5.1.1	Summary of documentary analysis.....	192
5.1.2	Summary of quantitative findings.....	193
5.1.3	Summary of qualitative findings	194
5.2	Strengths and limitations of the study	197
5.2.1	Overall programme of research	197
5.2.2	Methodological strengths and weaknesses	200
5.3	Discussion of the main objectives of the study	207
5.3.1	Objectives 1 - 3.....	207
5.3.2	Evaluation of the 'HOPE' programme (Objective 4)	211
5.3.3	Implications of findings for Ghana and Africa.....	220
5.4	Conclusions, recommendations and reflection	222
5.4.1	Conclusions.....	222
5.4.2	Recommendations.....	224

5.4.3 Reflections225

Appendices227

List of Tables

Table 2-1 Summary of evaluation approaches	62
Table 2-2 Summary of evaluation approaches cont	63
Table 2-3 Summary of evaluation approaches cont	64
Table 2-4 Summary of evaluation approaches cont	65
Table 2-5 Summary of evaluation approaches cont	66
Table 2-6 Summary of evaluation approaches cont	67
Table 2-7 Summary of evaluation approaches cont	68
Table 2-8 Summary of evaluation approaches cont	69
Table 2-9 Summary of evaluation approaches cont	70
Table 2-10 Summary of evaluation approaches cont.....	71
Table 2-11 Summary of evaluation approaches cont.....	72
Table 4-1 Background of respondents	127
Table 4-2 Background of respondents' cont.....	128
Table 4-3 Relationship between previous and current occupation.....	129
Table 4-4 Mean and Standard Deviation of Previous and Current Weight.....	130
Table 4-5 Weight gained by support groups	132
Table 4-6 Mean and Standard Deviation of Previous and Current BMI	133
Table 4-7 Relationships between Current and Previous BMI Proportions.....	133
Table 4-8 Relationship between maintained/gained weights versus losing weight and survey variables	137
Table 4-9 Relationship between maintained/gained weights versus losing weight and survey variables cont	138
Table 4-10 Relationship between maintained/gained weights versus losing weight and survey variables cont	139
Table 4-11 Relationship between maintained/gained weights versus losing weight and survey variables cont	140
Table 4-12 Logistic regressions of maintaining/ gaining weight vs. losing weight	141

Table 4-13 Logistic regressions of maintaining/ gaining weight vs. losing weight	142
Table 4-14 Logistic regressions of maintaining/ gaining weight vs. losing weight cont.....	143
Table 4-15 Logistic regressions of maintaining/ gaining weight vs. losing weight cont.....	145
Table 4-16 Logistic regressions of maintaining/ gaining weight vs. losing weight cont.....	147
Table 4-17 Multiple regression of maintaining/ gaining weight vs. losing weight	149
Table 4-18 Multiple regression of maintaining/ gaining weight vs. losing weight cont.....	150
Table 4-19 Relationship between skilled trained versus none and survey variables	153
Table 4-20 Relationship between skilled trained versus none and survey variables cont.....	154
Table 4-21 Relationship between skilled trained versus none and survey variables cont.....	155
Table 4-22 Relationship between skilled trained versus none and survey variables cont.....	156
Table 4-23 Logistic regressions of skills trained vs. none	157
Table 4-24 Logistic regressions of skills trained vs. none cont	159
Table 4-25 Logistic regressions of skills trained vs. none cont	161
Table 4-26 Multiple regression of skills trained vs. none	163
Table 4-27 Multiple regressions of skills trained vs. none cont.....	164
Table 4-28 Number of times a meal included in a menu	166
Table 4-29 Effect of food rations as perceived by beneficiaries	166

List of Figures

Figure 4-1 Weight trends among PLHIV	130
Figure 4-2 A Scatter Plot of Current Weight and Previous Weight	131
Figure 4-3 A Line Graph of Current and Previous BMI	134

List of Abbreviations

ACSD	Accelerated Child Survival and Development
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
BCC	Behaviour Change Communication
BMI	Body Mass Index
CEA	Cost-effectiveness Analysis
CDC	Centre for Disease Control
CD4	Cluster of Differentiation 4
CI	Confidence Interval
COP	Country Operational Plan
CID	Clinical Infectious Disease
CVD	Cardiovascular Diseases
DA	District Assembly
DCP2	Disease Control Priorities Project
ENHANCE	Enhancement of Household Agriculture, Nutrition, Risk reduction and community enhancement
FANTA	Food and Nutrition Technical Assistance

FBO	Faith-Based Organisations
FHI	Family Health International
GAC	Ghana AIDS Commission
GARFUND	Ghana AIDS Response Fund
GCE	Global Campaign for Education
GHDS	Ghana Demographic Health Survey
GHS	Ghana Health Service
GOG	Government of Ghana
GSS	Ghana Statistical Service
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
HOPE	HIV/AIDS Orphans and Vulnerable Children and PLHIV Care, Support and Economic Enhancement Programme
IEA	Institute of Adult Education
IGAs	Income Generating Activities
ILO	International Labour Organisation
IPPF	International Planned Parenthood Federation
JOICFP	Japanese Organisation for International Cooperation inFamily Planning
JSS	Junior Secondary School

MDA	Ministries, Department and Agencies
M&E	Monitoring and Evaluation
MTCT	Mother-TO-Child Transmission
NACA	National Advisory Commission on AIDS
NACP	National AIDS Control Programme
NAPLUS	National Association of People Living with HIV
NARA	National Archives and Records Administration
NGOs	Non Governmental Organisations
NLM	National Library of Medicine
NSF	National Strategic Framework
OICI	Opportunities Industrialization Center International
OR	Odds Ratio
OVC	Orphans and Vulnerable Children
PEPFAR	U.S President's Emergency Plan for AIDS Relief
PHC	Primary Health Care
PLHIV	People Living with HIV
QALY	Quality Adjusted Life Year
RCT	Randomised controlled trial
SARA	Support for Analysis and Research in Africa

SD	Standard Deviation
SFSG	Soy Fortified Sorghum Grits
SSS	Senior Secondary School
STI	Sexual Transmitted Infection
TBA	Traditional Birth Attendant
U.S	United States
USAID	United State Agency for International Development
UNAIDS	United Nations Programme on HIV and AIDS
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session
UNICEF	United Nations Children's Fund
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation
WSB	Wheat Soy Blend

Dedication

This work is dedicated to my dear parents whose hard-work, love and care has brought me this far. Also to my wife and children in whom I find the reason to work hard.

Acknowledgements

Several people have contributed in various ways towards the completion of this study. For coming this far in my academic life, I say to God is the glory.

Firstly, I am highly grateful to my supervisors Professor Phil Hanlon, Dr. Rebecca Shaw and Dr. James Lewsey who gave me relentless support and encouragement to grow intellectually and develop my research skills during the course of this study.

I would like to acknowledge the tremendous help and excellent supervision from Prof. Phil Hanlon whose experience in the field of Public Health research and development has provided valuable and insightful contributions to this thesis. I thank you Prof. Phil Hanlon for your constant support, encouragement, and critical suggestions which ultimately made this thesis possible. I am particularly grateful for your continuous enthusiasm toward my research, which was a great source of inspiration throughout the whole research process until the completion of this thesis. I would further like to show my biggest gratitude and appreciation to Dr. Rebecca Shaw and Dr. James Lewsey who replaced my initial principal supervisor when she had to take a new appointment in Australia at the crucial time of this study. Their respective support in both the qualitative and quantitative analyses has contributed immensely to this study and I thank them very much. I also have to mention that the encouraging instructions and constructive criticism of Dr. Paula Lorgelly, who was my initial principal supervisor, were of great support to this study and fuelled my ambitions to excel.

I would like to thank the staff at the Public Health and Health Policy at the Centre for Population and Health Sciences, University of Glasgow for their academic, social and logistical support throughout my work. Special thanks to Margaret Ashton whose act of professionalism in my admission processes inspired and motivated me to pursue the study in this University. I wholeheartedly thank all the participants and stakeholders who took part in the study. Without their input, precious time, and help this study could not have been carried out.

My warmest thanks to the Board of Directors, Aninwaah Medical Center in Ghana especially the chairman, Dr. Emmanuel Tuffuor who kindly tolerated my absence from my work. I would also like to express my gratitude to the Ghana Education Trust Fund (GETFUND) for the funding of this study.

Finally, I would like to express my sincere thanks to all those who had an effect on my academic and personal achievements and whom I failed to mention.

Declaration

I, Kofi Akohene Mensah, hereby declare as the named author conducted the research detailed in this thesis. The research was carried out at the Section of Public Health and Health Policy, University of Glasgow, under the supervision of Dr. Rebecca Shaw, Prof. Phil Hanlon and Dr. James Lewsey. I declare that all the materials presented in this thesis are my own work apart from those cited and duly acknowledged.

Chapter one: Introduction

1.1 Background

This thesis presents results from an evaluation of three interventions for people suffering from Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency syndrome (AIDS) in Ghana in West Africa. The original intention had been to undertake a more formal evaluation of Opportunities Industrialization Centers International (OICI) 'HOPE' programme (HIV/AIDS Orphans and Vulnerable Children and PLHIV Care, Support and Economic Opportunities Enhancement programme) employing 'before' and 'after' comparisons that would have used existing baseline data for the programme and new observations made by the researcher. However, as this work progressed, it became apparent that the baseline information that had been promised from the programme was not as comprehensive or as appropriate as had first been suggested.

Yet, it seemed important that interventions of this nature should be evaluated. Almost all evaluation of HIV/AIDS interventions in Africa focus on behavioural change for prevention (MacNeil and Hogle 1998) and clinical trials of therapy (Roger et al. 1998). There are very few studies on care and support for PLHIV (People Living with HIV) (Praag and Tarantola 2006). The OICI 'HOPE' programme offers food supplementation, health education and occupational training for PLHIV and so the author was determined to carry out an evaluation which could inform future work in Africa even if the design was compromised by less than ideal baseline data.

Discussions at this early stage between the researcher and his supervisors also focused on two related issues. First, the political and economic circumstances of countries with high prevalences of HIV and AIDS are often such that research is challenging and data difficult to collect. Second, countries like Ghana need researchers who are trained in a wide spectrum of evaluation methods and can apply these pragmatically while also maintaining scientific rigour. There is a

shortage of evaluation specialists in Africa (World Food Programme 2008). So, the original 'crisis' created by the non availability of data was turned into an opportunity to extend the evaluation skills of the researcher. For this reason, an early decision was made to make the first component of the PhD a formal exploration of the various evaluation approaches that are available for the evaluation of community-based interventions like the 'HOPE' programme in Ghana. The aim was to broaden and improve the researcher's understanding of the range of evaluation approaches for community-based interventions in Africa and to enable the researcher to contribute, more generally, to programme evaluations in Ghana and Africa on completion of his studies.

These early discussions also changed the focus of the PhD. In addition to quantitative evaluation of the 'HOPE' programme, the researcher attempted to gather qualitative information and learn lessons about how best to implement and evaluate support programmes for PLHIV in places like Ghana and, by extension, the rest of Africa. The components of this slightly broader approach are each presented in subsequent chapters.

Chapter 1 outlines the problem of HIV/AIDS globally, in the African continent and in Ghana. Particular emphasis is placed on the various impacts of HIV/AIDS on Africa and Ghana and the nature of African and Ghanaian responses to HIV/AIDS. The chapter then discusses the importance of programmes like 'HOPE' and the background of the OICI Ghana programme.

Chapter 2 examines a broad range of literatures. The first section deals with approaches to evaluation and the second community-based interventions for HIV/AIDS with a particular focus on nutrition.

Chapter 3 deals with methods. It discusses the various methodological and practical considerations that were considered when designing the study that was eventually carried out in the field. It deals briefly with the initial plan and why it proved impractical, discusses briefly mixed methods approaches and further outlines the aims, objectives and research questions of the thesis.

It then describes the literature search strategy that was employed and discusses the desk-based approach that was used to set out a range of possible evaluation

strategies and develop a practical evaluation design within the context of the intervention and the 'HOPE' programme. It then describes the documentary analysis, qualitative and quantitative methods employed and demonstrate how the decisions made about methods flow from the review of literature, evaluation options and awareness of context.

In Chapter 4, the results of the study are presented. These include a detailed description of the national context of the intervention and the 'HOPE' programme. However, the majority of the chapter is a presentation of the quantitative and qualitative findings of the study.

Chapter 5 provides a discussion of the findings and offers conclusions. The discussion reviews the 'structure, process and outcome' model, or Donabedian approach, devised to evaluate the programme. It draws together the lessons learned from the 'HOPE' programme in Ghana and sets these findings within the context of a wider literature while assessing implications for the health sector in Africa more generally.

1.2 The problem of HIV/AIDS

AIDS is a disease which results from a compromise of the immune system caused by HIV (WHO and UNAIDS 2007). This progressive condition reduces the effectiveness of the immune system and leaves individuals susceptible to opportunistic infections and various forms of cancer (Adenrele 2007). Weight loss is also a feature (Piwoz and Preamble 2000) and, untreated, the condition is usually fatal. However, antiretroviral therapy has transformed the prognosis such that, where treatment and support facilities are good, AIDS now has the characteristics of a chronic disease (WHO 2003b). Transmission happens when a mucous membrane or the bloodstream of a susceptible individual comes in contact with a body fluid containing HIV. The most important body fluids for transmission are blood, semen, vaginal fluid, and breast milk (Anthony et al. 2001). Important means of transmission include anal, vaginal or oral sex, as well as blood transfusion or injection with contaminated hypodermic needles (Efere 2004). So called vertical transmission occurs when an infected mother passes the virus onto her child during pregnancy, childbirth or breast feeding.

Data on HIV and AIDS is plentiful but of variable and uncertain quality. Much of what is reported below comes from international agencies which collate data provided by each country. Yet, many poor countries have rudimentary systems for data collection and it is almost certain that many of the figures quoted are estimates at best. Nonetheless, more rigorous epidemiological data are available for some geographies and, where these exist, they have been quoted (General Accounting Office 2001).

AIDS is now a pandemic which continues to grow despite the numerous efforts being implemented to curb the spread of the disease (Nzimande 2010). The number of People Living with HIV (PLHIV) continues to increase globally due to continuing spread of the virus, population growth in many high prevalence areas and the life prolonging effect of the antiretroviral therapy (UNAIDS 2006a). Globally, it is estimated that 33.4 million people were living with HIV at the end of 2008 (WHO 2010) while an estimated 2.7 million became newly infected with HIV and 2.0 million lost their lives to AIDS (UNAIDS 2009b).

The manner in which the HIV epidemic has developed varies from continent to continent and country to country. Ghana is on the west coast of the continent of Africa and is part of an extensive region known as sub-Saharan Africa that has, arguably, experienced the most severe manifestations of this global epidemic.

1.2.1 The problem of HIV/AIDS in Africa

Epidemiological data on HIV in sub-Saharan Africa indicate that the spread of HIV probably started in the 1970s although it may have been earlier (Worobey 2008). HIV was then identified in the early 1980s in a geographic band spreading from West Africa across to the Indian Ocean. This bank of infection gradually moved south such that most of sub-Saharan Africa was affected by the late 1980s (Population Division Department of Economic and Social Affairs 2003) .

HIV/AIDS affects more people in sub-Saharan Africa than any other region of the world. By the end of 2008, 22.4 million people were estimated to be living with HIV in sub-Saharan Africa and approximately 1.9 million additional people were newly infected with HIV during that year (UNAIDS 2009a). Up to 2005, the AIDS

epidemic in Africa had claimed the lives of an estimated 20 million people (UNAIDS 2007).

The patterns of the AIDS epidemic vary in different countries in Africa. Whilst some countries like Uganda and Zambia are exhibiting an increase in the prevalence rate, in other countries such as Ghana and Zimbabwe decline appears to be under-way, partly due to effective prevention campaigns. For example, the prevalence rate in Zimbabwe was 24.6% in 2003 and declined to 15.3% by the end of 2008 (AVERT 2009).

Some countries in Africa are still experiencing high HIV prevalence rates even though the prevalence rates appear to be declining. These countries are South-Africa (18.1%), Botswana (23.9%), Lesotho (23.2%), Swaziland (26.1%) and Zimbabwe (15.3%) (UNAIDS 2009b). In Somalia and Senegal the HIV prevalence is under 1% of the adult population, whereas adult HIV prevalence in East Africa exceeds 6% in Uganda and Tanzania (UNAIDS 2007).

Even though the AIDS prevalence rate is comparatively low in West Africa, some counties are still experiencing a higher prevalence rate (Family Health International 2001). HIV prevalence is estimated to be 5.1% in Cameroon, 3.9% in Côte d'Ivoire and 5.9% in Gabon (UNAIDS 2009a).

Also, the HIV prevalence rate which was relatively low in Nigeria (2% in 1993) has recently grown, reaching 3.1% in 2008 (AVERT 2009). In Ghana, the HIV/AIDS situation has improved over recent years, with a reduction in the national prevalence rate from 3.1% in 2004 to 1.9% in 2008 (AVERT 2009).

1.2.1.1 Impact of HIV/AIDS on Africa

This is, of necessity, a brief review of only some of the most important impacts of the epidemic. Formal scientific studies are reported where they exist but much of what we know of the human impact of HIV and AIDS in sub-Saharan Africa comes from international reports and from journalism. The references in this short section are therefore heterogeneous.

To underline what has been said above, it is important to recognise that sub-Saharan Africa contains only 10% of the world's population but is home to nearly two-thirds of the people living with HIV in the world (UNAIDS 2006b). The effects of HIV and AIDS in the continent are most obviously illustrated by data on illness and death but the impact on the health sector, households, schools, workplaces and economies are almost as important.

Some of the effects of HIV/AIDS in Africa are enumerated and discussed below;

Health sector

The deleterious effects of HIV and AIDS on the health sector in Africa are critical and need serious attention. The growing epidemic has created a need for additional health workers at a time when developing countries are being confronted with a shortage of staff (WHO 2006a). The epidemic has diverted resources from other development priorities. For example, the direct medical cost of treating AIDS in sub-Saharan Africa, excluding antiretroviral therapy, is estimated to be US\$30 per year for every person infected. This is true in a context where the total per capita health expenditure is estimated to be less than US\$10 per year in most countries in Africa (UNAIDS 2002).

Furthermore, UNAIDS (2006a) indicates that more than half of the hospital beds in sub-Saharan Africa are occupied by HIV/AIDS patients. In some counties in Africa, it is estimated that HIV/AIDS patients stay in hospital four times longer than other patients and will soon consume 60-70% of the total hospital expenditure if the trend of epidemics remain the same (Kristin 2006).

Health care workers

Developing countries already face a lack of health care workers, for which there are several causes. Budgets constrain the numbers that can be trained in poorer countries and low levels of remuneration for health workers result in substantial proportions seeking employment abroad (the so called 'brain drain') (UNICEF 2000). The unprecedented increase in the prevalence rates of HIV/AIDS has aggravated the pressures that already existed because of a lack of health care workers in most Africa countries. This is in part due to the high number of health

care workers who are themselves affected by HIV/AIDS: a report generated by UNAIDS (2006b) indicated that between 1999 and 2005, 17% of the workforce in Botswana died of AIDS and 40% of the midwives in Zambia were estimated to be living with HIV/AIDS.

Paradoxically, the introduction of antiretroviral therapy, which prolongs the life of HIV/AIDS patients in developing countries, also appears to increase the workload of health care systems and the pressures experienced by the diminished number of health workers. Administration and monitoring of antiretroviral therapy requires special skills and training and staff with this experience are coping with increasing numbers of HIV/AIDS patients in developing countries. For example, it has been established that administration of a full antiretroviral therapy programme in Tanzania would require more than half of the current workforce (UNAIDS 2006b).

Households

HIV and AIDS have caused the dissolution of many households in Africa. A study conducted in rural South Africa revealed that households where adults or parents have died from AIDS were four times more likely to dissolve than those where death had not occurred (Hosegood et al. 2004). According to Hosegood et al. (2004), this dissolution of households usually follows the death of both parents, which then results in children being left in the hands of relatives and close friends. In most cases these children are not properly cared for, either because their new caretakers lack resources or because they themselves are AIDS patients (and therefore might even need care from the children). The consequences of these scenarios are profound and multifaceted. For example, children are at risk of abandoning their education and often engage in anti-social behaviours like gambling, drug and alcohol abuse and even prostitution (OICI Ghana 2003).

The challenge HIV/AIDS poses to most households even before the dissolution occurs are enormous. The income earners in the household who become infected often lose their jobs and then the household members lose what assets they have because they are forced into selling to earn enough simply to survive (Adenrele 2007). UNDP (2003) indicated that AIDS would not only reverse the

progress made in poverty reduction in countries like Burkina Faso, Rwanda and Uganda, but would increase the percentage of people living in extreme poverty from 45% in 2000 to an estimated 51% in 2015, if the trend of epidemics in these countries remain the same.

Food Production

HIV/AIDS continues to affect the agricultural workforce in developing countries which, in turn, impacts on agricultural outputs. This has resulted in high food insecurity in Africa countries like Malawi (Mutharika 2005). According to UNAIDS (2006b), Malawi's agricultural workforce will be reduced by 14% and countries like Mozambique, Botswana, Namibia and Zimbabwe will see declines of over 20% by 2020 if the trend of epidemics in those countries remain the same.

Effects on household agricultural outputs depend on the sex of the victim. The death of a male head of household reduces cash crops like coffee, tea and sugar cane, whilst a female death reduces grain and other crops for household consumption (UNAIDS 2006b).

Healthcare expenses and funeral costs

The emotional stress as a result of taking care of AIDS patients is compounded within the household by resource depletion. Typically, a household affected by AIDS spends most of its income on medical bills and AIDS related care expenses: it is estimated that one-third of a household's monthly income is spent on HIV/AIDS related-care in most countries in Africa (Steinberg et al. 2002). The outcome is that ongoing household budgeting and the maintenance of medical care expenditure over the longer term is challenging at best and impossible in many circumstances (ILO 2004). Also, the expense of medical care is, as was observed above, compounded by loss of income resulting from reduced working hours: either to be able to care for relatives with AIDS or because they, themselves, are AIDS patients and, therefore, not able to cope with long working hours. The interaction of all these factors simply makes households poorer.

Households survive either by selling their assets or relying on other relatives or close friends for assistance (Food and Agriculture Organization of the United

Nations 2001). The burden typically falls heavily on women who are observed to be most determined and resilient in their actions to ensure the survival of the households (Food and Agriculture Organization of the United Nations 2001). As a result, women tend to take up responsibilities beyond their traditional domestic chores in order to earn income to support the household. In some parts of Zimbabwe it has been reported that women have started engaging in male dominated activities like carpentry to earn income to support the household. One consequence, of course, is that they have less time for domestic chores and care of their families (Food and Agriculture Organization of the United Nations 2001).

Finally, household expenditure on funerals as a result of death of close relatives or friends due to AIDS in developing countries is a major burden. In some parts of South Africa, it is estimated that families spent three times more than their average monthly income on funerals (Rowan 2003).

Education Sector

Good quality education increases social mobility, is a resource that improves resilience and helps to equip individuals and communities to counter the epidemic. Studies conducted by the Global Campaign for Education (2004) indicate that young people with little or no education are more than twice as likely to be infected with HIV compared with those who have completed primary education.

There is a vicious cycle that can be observed in the interaction between AIDS and the educational sector. High AIDS prevalence impacts adversely on the educational sector which, because lack of education opportunities impacts adversely on the risk taking behaviour of young people, increases the incidence of transmission (Anthony, Steinberg, & Whiteside 2001).

The AIDS epidemic has had an adverse impact on school enrolment. In many cases children have to abandon their school to take care of sick family members or engage in other income-generating activities (Global Campaign for Education 2004). Also, the AIDS epidemic does not only affect children or pupils, but has a devastating effect on an already inadequate supply of teachers in some Africa

countries. In South Africa, UNAIDS (2006a) reported that 21% of the teachers aged 25-34 are living with HIV, and in Tanzania it is reported that 45,000 additional teachers are needed to replace those who have died or left work due to AIDS (UNDP 2005).

The economic impact

More than any other single factor, the AIDS epidemic has played a key role in the reversal of human development (UNDP 2005). A key mechanism for this damage is through the economy of affected countries. The tragedy is that these economic impacts further degrade the affected country's ability to respond to the crisis.

The pathways between the AIDS epidemic and adverse economic effects are multiple. First, a reduced labour force due to increased mortality and illness associated with AIDS has resulted in a decline in productivity in several Africa countries (ILO 2004). Second, the AIDS epidemic has contributed to the decline in government revenues: tax revenues decline due to a decrease in business activity and reduced employment. Third, governments have to increase health and other care budgets to deal with the crisis associated with the AIDS epidemic (Anthony, Steinberg, & Whiteside 2001).

The reduction in labour supply as a result of the AIDS epidemic can make labour more expensive, which reduces the profit margins of businesses in affected countries in Africa. This makes investment in Africa less lucrative and attractive and, therefore, threatens the foundation of future economic development in Africa (Rosen et al. 2004).

Also, the AIDS epidemic has simply added to the many economic challenges which were already confronting most countries in Africa prior to the epidemic. The yearly impact of AIDS on sub-Saharan Africa's gross domestic product is an estimated annual loss of 1% (Bureau for Economic Research 2006). Importantly, this impact can be reduced through the provision of antiretroviral therapy to all people living with HIV. For example, in South Africa, it has been estimated that the negative effect of the epidemic on economic growth would be reduced by

17% if antiretroviral therapy were to be expanded to cover 50% of those in need (Bureau for Economic Research 2006).

1.2.2 The problem of HIV/AIDS in Ghana

The first case of AIDS in Ghana was diagnosed in 1986 and, by the year 2000, UNAIDS (2000) estimated that 330,000 adults and 14,000 children had been infected by the HIV virus.

Since then, the epidemic in Ghana has exhibited a different pattern from that found in many other parts of sub-Saharan Africa. HIV prevalence rates increased from 2.6 percent in 2000 to 3.6 percent in 2003 (UNAIDS 2007), but then declined to 1.9 percent in 2008 (AVERT 2009). The epidemic has made its greatest impact on young adults. The result has been a reduction in life expectancy and a diversion of scarce resources from other pressing development problems (NACP 2005).

A National Advisory Commission on AIDS (NACA) and a National AIDS Control Programme (NACP) were established in 1985 and 1987 respectively by the Government of Ghana. In 2000, the Ghana AIDS Commission (GAC) was inaugurated followed by the implementation of the country's National Strategic Framework (NSF) on HIV/AIDS for 2001-2005 (GAC 2004b).

1.2.2.1 Social and economic impact of AIDS in Ghana

The following discussion will centre on the impacts on orphans, mortality, population size and growth, health care, and sectoral impacts. Much of this discussion repeats and re-emphasises what has already been observed for Sub-Saharan Africa as a whole.

Orphans

An AIDS orphan is any child below the age of 15 years whose parents have died as a result of AIDS (Piot 1999). In Ghana, the virus is spread predominantly through heterosexual transmission which increases the risk of being orphaned as both parents are commonly infected (GAC 2009). However, most orphans are not

themselves infected (OICI Ghana 2003). An increase in orphans as a result of parental death to AIDS has placed enormous strains on the social system of the country as formal and informal mechanisms have evolved to provide needed care and support. The government has diverted resources to create orphanages and provide healthcare and school fees to support orphans (NACP 2004). Most orphans in Ghana are left in the hands of their grandparents, close relatives or friends of their deceased parents. For a variety of reasons, these new caretakers might not accord the same attention and care that would have been provided by their biological parents. The consequence is an upsurge of street children and child labour as orphans struggle to survive (OICI Ghana 2003).

Mortality

Ghana has limited resources and numerous health challenges. Some of these health challenges with public health concern are malaria, HIV/AIDS and malnutrition. Malaria is the leading cause of mortality among children under five and a significant cause of adult mortality in Ghana (Asante and Asenso-Okyere 2003). In Ghana, the Ministry of Health reports between 3.1 and 3.5 million clinical cases of malaria each year (Family Health International 2007). However, HIV/AIDS is one of many health challenges which has received special attention from policy makers and planners because of its devastating effects on the country (NACP 2006). Part of the reason for giving special attention to the epidemic is the long incubation period from the time of the infection to the development of symptomatic disease. As a result, many Ghanaians are living with the virus without knowing their status (NACP 2009). Also, many of the people with AIDS do not die directly but suffer from other opportunistic infections like tuberculosis. In addition, the AIDS epidemic in Ghana has been aggravated with malnutrition which is an endemic problem for decades (GAC 2009). Research suggests that malnutrition increases the risk of HIV transmission from mother to babies and progression of HIV infection (Piwoz & Preamble 2000). For these reasons, it is estimated that the worst mortality from AIDS lies in the near future, not the past. In 1994, for example, AIDS accounted for only about 4.6 percent of all deaths in Ghana. It is estimated that AIDS will be responsible for 28 percent of deaths by 2014 if the trend remains the same (NACP 2004).

Population size and growth

Rising mortality from AIDS may impact on the future growth of the Ghanaian population mainly through a decline in fertility rates (NACP 2005). Ghana's population was predicted to increase to about 25 million persons in 2014 without the AIDS epidemic but that projection falls to 23.8 million persons under the influence of a high HIV prevalence rate. This is a difference of 1.2 million persons who will not be alive to contribute to the development of the country (NACP 2004).

Health care

The cost of clinical care for AIDS patients in Ghana is calculated to include direct clinical care, the cost of treatment of opportunistic infection and antiretroviral therapy (NACP 2009). The cost of treating opportunistic infections from AIDS is very expensive in Ghana and, it is feared, might drain the coffers of a health services already confronted with a limited budget (GOG 2005). A study conducted in Ghana estimated that the annual cost of treating opportunistic infections experienced by an AIDS patient was in the region of US \$595. Furthermore, national expenditures to treat opportunistic infections will rise from about US \$8,358,000 in 1999 to US \$23,657,500 in 2014 (Nabila et al. 2001). It was also estimated in this study that the cost of full anti-retroviral treatment for one AIDS patient would be more than the cost of treating complications. Based on actual experiences at Korle-Bu Teaching Hospital in Ghana, the cost estimates suggest that full treatment would result in huge increases in health care expenditures. The Ghanaian government is faced with a difficult choice : either increase funds for AIDS care which threatens to divert spending from other important health care needs or leave many AIDS patients with inadequate care. Even though the full cost of antiretroviral therapy has been subsidised greatly, what can be afforded by a county like Ghana is still unclear and the subject of national debate.

1.2.2.2 Sectoral impacts

The HIV/AIDS epidemic in Ghana is identified not only as a health problem but as a social and economic problem that affects the development effort and requires

a multi-sectoral response. A review of the response to HIV/AIDS in Ghana strongly recommended strengthening of a multi-sectoral approach (GAC 2004a).

Education

The impacts on the education sectors discussed for the whole of Africa above are evident in Ghana. Skilled teachers are becoming either too weak to work due to AIDS or are dying of HIV related illnesses (Global Campaign for Education 2004). To train more teachers to replace the lost ones puts a financial strain on the educational sectors and the new teachers are, by definition, less experienced (Anthony, Steinberg, & Whiteside 2001). Also, as has already been noted, children abandon their education because of the death of supporting adults or engage in other income generating activities to take care of themselves and sometimes their sick parents (ILO 2004). Currently, data on the impact of HIV/AIDS on the educational sector in Ghana has not been collected.

Labour

The hardest struck firms are those that require skilled and trained employees (Bollinger et al. 1999). The overall consequences of AIDS to these firms are an increase in expenditure and a decrease in revenue. The increase in expenditure emerges as a result of the costs incurred on health care: this is especially true for firms with health care benefit for its employees. Also, costs associated with burial fees, and the need to train and replace lost employees contributes to expenditure increments. Finally, the replaced employee may be less experienced, rendering the firm less productive. The decrease in revenue is compounded by absenteeism due to HIV related illness as well as the need to attend the funeral ceremonies of loved ones and co-workers. The number of working days lost as a result of HIV related illness by an individual ranges between 30 and 240 days in a year (WHO 2005a).

Economy

The economic impact of the AIDS epidemic is felt first by individuals in the household and then spreads outwards to the macro-economy (Bollinger, Stover, & Antwi 1999). In Ghana, the effects are felt as soon as a member of the

household begins to suffer from HIV-related illness (Bollinger, Stover, & Antwi 1999) and is more severe when the affected person is the breadwinner of the household (Asamoah-Odei et al. 1995). The affected individuals either depend on their own financial resources or receive support from their extended family. A study conducted in Ghana among 141 AIDS patients revealed that 56% of the patients were supporting themselves whilst the rest were relying on their families and friends (Anarfi 1995). It is difficult to assess the impact of AIDS on a macroeconomic level. In Ghana the best that has been done is to outline some of the mechanisms that may be involved in reducing macroeconomic outputs. These include a reduced work force, the cost of replacing workers, the loss of productivity due to loss of experience and rises in labour costs due to increased competition for labour. All of these factors seem to impact adversely on Ghana's national competitiveness (Nabila, Antwi, Yeboah, & Kwankye 2001).

Agriculture

Most of the agricultural sector in Ghana is subsistence farming (Antwi 1999). Evidence from other countries suggests that the decline in labour supply due to morbidity and mortality from HIV/AIDS has a negative impact on production and, thus, on the food supply for households, increasing the incidence of malnutrition. In addition, there may be a shift from labour-intensive export crops to food crops (NACP 2004). Production may also suffer as the timing of general agricultural tasks is disrupted as workers fall ill and as others need to take time off to care for them.

1.3 The nature of Africa's response

The quality and effectiveness of interventions to reduce new infections in developing countries continue to attract much attention (Family Health International 2001). The intervention approaches in Africa can be considered under three headings: prevention, treatment and care, and support.

HIV prevention in Africa

The documentation of success in some of the heavily HIV/AIDS affected countries in Africa is an indication that prevention efforts are increasingly

becoming effective. For instance, in Senegal and Somalia, the adult HIV prevalence rate is less than 1%: a result that has been attributed to effective educational campaigns (UNAIDS 2009a). Also, evidence from Uganda suggests that its widespread epidemic was curtailed through effective preventive measures: Uganda has experienced a decline in prevalence rate from 15% in the early 1990s to around 5% by 2001 and that decline seems to be continuing (UNAIDS 2007).

Even though countries like Uganda have documented progress, the prevalence rates in countries like Swaziland, South Africa, Lesotho, Mozambique remain relatively high (UNAIDS 2006b).

Condom use & HIV

Condom use is identified as an effective tool in curtailing new HIV infection worldwide (Karen and Susan 1999). Though certain social, cultural and practical factors may deter condom use, they remain a very cheap and cost-effective tool in curtailing new infections. As a result, condom usage is promoted in Africa and its usage, although hard to determine, is probably increasing. Studies conducted between 2001 and 2005 by UNAIDS (2006b) revealed that eight out of eleven countries in sub-Saharan Africa reported an increase in condom use. Also, the distribution of condoms in certain countries in Africa have improved: the UNFPA (2005) report indicated that condom provision by donors to Sub-Saharan Africa in 2004 was equivalent to 10 for every man as compared to 4.6 in 2001 (Shelton and Johnston 2001).

However, the quantities of condoms distributed to many African countries remain inadequate. For instance, the annual requirement of condom usage in Uganda is estimated to be between 120 and 150 million, but only 40 million were provided in 2005 (Kaisernetwork 2005).

Provision of Voluntary HIV Counselling & Testing (VCT)

The provision of Voluntary HIV Counselling and Testing (VCT) is now integrated in the national programmes of most African countries. The introduction of rapid HIV testing means that the provision of VCT is cheap, easy and individuals can

know their status the same day. In Africa, it is noted that individuals who test positive through VCT are less likely to transmit the infection to others, as a result of their referral to care and support services (Mpumalanga department of health and social sciences 2002). The establishment of these support services is generating hope for HIV patients and helping them stay healthier. VCT also helps individuals who test negative to change their behaviour (Mpumalanga department of health and social sciences 2002).

Though VCT is now accessible in most African countries, it needs to be expanded to more deprived areas (WHO 2007).

Mother-to-child transmission of HIV

The majority of children in Sub-Saharan Africa who are infected with HIV contracted their infection from their infected mothers during pregnancy and through being breastfed (WHO 2005a). UNAIDS (2009a) indicated that over 2 million children, representing 85% of the worldwide children living with HIV, were in sub-Saharan Africa at the end of 2008. Mother to child transmission (MTCT) of HIV is avoidable. It is established that, without intervention, pregnant mothers have a 20-45% chance of infecting their unborn babies. However, the risk can be reduced significantly with intervention (WHO 2007). In the developed world, appropriate interventions have contributed to the virtual elimination of MTCT. However, countries in sub-Saharan Africa are confronted with the challenges of inadequate drug supply, services and information on MTCT as well as inadequate testing facilities. As a result, less than 5% of pregnant women in sub-Saharan Africa received MTCT services in 2005 (UNAIDS 2006c). However, the situation improved to 45% due to rapid up scaling of inputs (WHO et al. 2009).

HIV/AIDS related treatment and care in Africa-Antiretroviral drugs

The provision and widespread availability of antiretroviral drugs started in 1996 in the developed world (World Bank 2003). However, antiretroviral services are less available in developing countries and, as a result, fewer than one in six people in need have access (WHO 2006b). The provision of antiretroviral therapy requires money to purchase drugs, an efficient health system and health care workers, all of which are lacking in developing countries (UNAIDS 2006c).

Nonetheless, the situation seems to be improving as a result of increased support from the international community, coupled with domestic governmental support (WHO, UNICEF, & UNAIDS 2009). In 2003, the World Health Organization (WHO) initiated a '3 by 5' programme, aiming to provide three million people in developing countries with antiretroviral therapy by 2005 (WHO 2005b). The programme brought considerable improvement by doubling the number of people on antiretroviral therapy in 2005 (UNAIDS 2006c). Even though the target was not reached, a number of African countries made substantial progress under the scheme. For instance, in Botswana by the end of 2006, 84,000 people were on treatments, representing 95% coverage, whilst Rwanda and Namibia had about 70% of their people on treatment (WHO 2007).

However, coverage in countries like Ghana, Mozambique, Nigeria, the United Republic of Tanzania and Zimbabwe was less than 20%; Cameroon, Côte d'Ivoire, Kenya, Malawi and Zambia was between 25% and 45%; and in South Africa was 33%. The variation in coverage was due to stigmatization, discrimination and underdeveloped health systems (UNAIDS 2007). However, it is expected that the latest international target, 'All by 2010' aiming at universal access to treatment during 2010 will make significant progress in those countries (WHO 2007).

Other forms of treatment and care

Apart from antiretroviral therapy, medical care of the condition itself and appropriate treatment of intercurrent infections, there are other important elements of treatment and care of HIV in Africa. These include provision of food and management of nutritional effects. Of equal importance is voluntary counselling and testing with appropriate follow-up counselling. All these services are now being provided as resources and infrastructure permit (Piwoz & Premble 2000).

1.4 The nature of Ghana's response to HIV/AIDS

Ghana has one national strategic framework coordinated by the Ghana AIDS Commission (GAC). The national response has been in two phases : the National Strategic Framework (NSF) I 2001-2005 (GAC 2004b) and the National Strategic Framework (NSF) II 2006-2010 (GAC 2005). The National Strategic Framework

(NSF) I generated policies and guidelines for the effective delivery of HIV/AIDS services. In response to the lessons learnt from the National Strategic Framework I (2001-2005), coupled with the changing nature of the epidemic, the socio-economic environment and the emerging HIV/AIDS treatment technologies, the National Strategic Framework II was developed for the period of 2006-2010 (GAC 2006). The National Strategic Framework II (2006-2010) has seven key interventions the implementation of which is coordinated by the Ghana AIDS Commission (the national coordinating authority). The two national responses are to be found in Appendix 5. However, because the seven frameworks of the current strategic framework are so important to an understanding of the evaluation that was carried out, its major components are reported in the results section of this thesis.

1.5 The importance of evaluating the ‘HOPE’ programme

To summarise, the HIV/AIDS pandemic continues to have a devastating effect on sub-Saharan Africa (UNAIDS 2009b). The response to date has been a major concern (56% of victims were not accessing relevant care and support services to enable them to live positively, due to stigmatisation, discrimination and limited services (Okine 2010)).

A study conducted by OICI in Ghana prior to the implementation of the ‘HOPE’ programme indicated that most of the resources available for HIV/AIDS by the Government of Ghana through the Ghana AIDS Commission, local and international NGOs were primarily focussed on prevention (OICI Ghana 2003). In addition, technical and financial support available to build the capacity of health workers and caregivers and to provide care and support for PLHIV and OVC were inadequate. These limited care and support services coupled with misconceptions about the pandemic generated high level of stigmatisation and discrimination against PLHIV (GSS et al. 2009). The high level of stigmatisation and discrimination prevented an estimated 50,000 PLHIV from accessing treatment in Ghana (Okine 2010). At the same time an increasing numbers of AIDS orphans (estimated to be over 200,000) were needing care (USAID 2003). These children often lacked food, shelter, economic and medical support, guidance and education (USAID 2003). These facts prompted a change in focus of

AIDS strategies in Ghana. There was a clear need to cater for the PLHIV and Orphans and Vulnerable Children (OVC). It is against this background that OICI instituted the 'HOPE' programme, with support from the Development Assistance Programme of the United States Agency for International Development. The objective was to provide and improve care, support and economic opportunities for the PLHIV and OVC in four high HIV/AIDS prevalence regions in Ghana (OICI Ghana 2003).

1.6 Background of OICI Ghana 'HOPE' programme.

OICI Ghana, in partnership and with funding from the United States Agency for International Development (USAID / Ghana), is implementing a five year food insecurity reduction programme called ENHANCE (Enhancement of Household Agriculture, Nutrition, Risks Reduction and Community Empowerment). ENHANCE has a special HIV/AIDS programme component named 'HOPE'. The goal of the 'HOPE' programme is to improve care and support and economic opportunities for OVC and PLHIV in high HIV / AIDS prevalence areas of the Ashanti, Eastern, Greater Accra and Western Regions. It is a 5 year programme which began in 2004.

The Target Groups include:

- (i) PLHIV and association members
- (ii) AIDS Orphans and other vulnerable children (street)
- (iii) Community Health Workers
- (iv) Home Care and support providers
- (v) Traditional Healers and Queen Mothers
- (vi) OIC Ghana counsellors.

The objectives and expected results of the programme are to:

(i) Build the capacity and to increase the knowledge and skills of 2000 PLHIV and OVC care and support providers

(ii) Train 1500 OVC in vocational skills, entrepreneurial and business development at OIC Ghana's skills training centres in Accra, Takoradi, Kumasi and a vocational school in the Eastern region through an "orphan scholarship programme"

(iii) Increase the nutritional intake of 5,600 PLHIV and 3,785 OVC through the distribution of monthly household food rations (USAID/Food for Peace/Title II resource). OICI will request in its 5-year Title II Development Assistance Programme proposal direct food aid to support this programme. The commodities to be selected are iron-fortified bulgur and vitamin A fortified vegetable oil.

The interventions include the provision of monthly dry micro-nutrient dense food rations composed of Soy Fortified Sorghum Grits, Wheat Soy Blend and Vegetable Oil to PLHIV and OVC households in selected districts of the Ashanti, Eastern, Greater Accra and Western Region.

In addition, the programme seeks to build the capacity and increase the knowledge and skills of the beneficiaries through vocational skills, entrepreneurial and business development to sustain livelihoods and behaviour change communication for improved health, disease prevention and care for the sick and orphaned to alleviate severe malnutrition and other diseases and hardships (OICI Ghana 2005).

The programme started in 2004 with 400 beneficiaries and now has over 1000 beneficiaries.

As a precursor to rolling out the programme, a baseline survey was conducted to serve as a reference point. The purpose of the baseline study was to:

(i) Gather data on the current status of the target population and establish benchmarks to assess and compare future data to be collected during the mid-

term and final evaluation and the life of the project in order to determine changes and impacts attributable to project interventions

(ii) Determine current values of indicators in the performance indicator tracking table and to revise targets over the life of activity

(iii) Gather information and data to refine the monitoring and evaluation plan

(iv) To identify a reference point for refining project implementation plans, activities, and strategies for successful achievement of program targets

(v) Identify and/or confirm priority needs, problems and constraints of the target population

(vi) Identify most vulnerable and needy “beneficiaries” and communities.

A rigorous evaluation of these interventions is the subject of this thesis but, before turning to a detailed description of methods and results, the output of three reviews of literature is presented. The first is the fruit of the researcher’s need to review approaches to evaluation. This was motivated, first, by the need to expand the researcher’s skills in evaluation to better make decisions about how best to proceed with this body of research and equip him for work when he returns to Ghana (in short, it was part of the ‘research training’ of a PhD). The second literature review was concerned with community based interventions for HIV and AIDS in Africa and their evaluation. Finally, literature on nutritional interventions for people living with HIV and AIDS was reviewed.

Chapter two: Literature review

This chapter reviews a wide range of literature pertinent to this thesis. These are grouped into three parts. The first part is on evaluation, followed by community-based interventions and, lastly, nutritional support for PLHIV.

The origins of the first part on evaluation were explained in the previous chapter. The author needed to devise a new evaluation strategy because the original plan could not be implemented. A piece of desk based work was, therefore, introduced into the PhD. The broad aim was to review possible approaches to evaluation and select the approach that would best meet the evaluation needs of the 'HOPE' programme within the constraints dictated by data availability, timing and resources.

Consequently, this first part was designed to improve the researchers' understanding of the range of evaluation methods or approaches useful for community-based interventions in Africa and the philosophy behind the emergence of evaluation in Africa. Also, it is intended to help devise an evaluation for the 'HOPE' programme in Ghana based on available options within the current context. As a result, a broad range of literature on evaluation was reviewed. These include; definitions of evaluation as proposed by theorists and practitioners, history of evaluations of health interventions in Africa and the need for an enhanced capacity for evaluation in Africa. In addition, various methods of evaluation, strengths and weaknesses of the methods and justification of the choice of evaluation approaches for the 'HOPE' programme were examined.

The second part is to broaden and improve the researchers' understanding of the concept and principles of community-based interventions in Africa. Also, it is intended to help the researcher to apply lessons learnt from the 'HOPE' programme for broader issues of evaluation strategy for future community-based interventions in Ghana and Africa more generally. As a result, definitions of community-based interventions, history of community-based interventions and the principles of community-based interventions were reviewed. In addition, advantages and disadvantages of community-based interventions, applications of

community-based interventions to HIV/AIDS and community-based services for PLHIV were examined.

The last part on nutrition support for PLHIV is to broaden and deepen the researcher's awareness of the effects of nutrition on HIV/AIDS. As a result, literature on HIV and Nutrition, PLHIV and Body Mass Index and HIV/Antiretroviral drugs were reviewed.

2.1 Evaluations

2.1.1 Definitions of evaluation

At its simplest, evaluation means determining the value. However, several definitions of evaluation have been proposed by theorists and evaluation practitioners. Some practitioners define evaluation as a process attributing value to an intervention by collecting reliable and valid information about it in a systematic way, and by making comparisons (Øvretveit 1998). Patton (1990) defined it as a measure of any attempt to increase human effectiveness in a systematic and empirical manner through careful data collection and analysis.

In evaluations, data are collected for the purpose of valuing an intervention. The intended data to be collected depends on the purpose of the evaluation (e.g. to describe, to explain, to judge any effects), the criteria of valuation (e.g. effectiveness, equity, cost, etc), the nature of the intervention (e.g. Treatment, Service, Policy or Intervention to an organization) and the perspective taken by the evaluator (e.g. experimental, economic, developmental and managerial) (Øvretveit 1998).

During an evaluation, the evaluator carefully defines what is to be evaluated, and the information needed, as well as the selection and use of appropriate methods for collecting and analysing the information. The subject of an evaluation is an intervention, and evaluations will do one or more of the following: describe the intended and actual intervention, describe or measure its consequences, provide information for judging the value of the intervention and explain why what was described did or did not occur. There may be a difference between the intended intervention and what was actually done and we need to

know exactly what was done and evaluated to be able to interpret and apply the findings (Koplan 1999).

2.1.2 The history of evaluation of health interventions in Africa

Information on the history of evaluation in terms of who introduced evaluation into Africa, the first evaluation study and the initial approaches to evaluation in Africa are scarce. A review of the literature on evaluation in developing countries revealed that evaluation became rooted in Africa when the need came to justify whether interventions in developing countries were making a difference in terms of improving the life of the beneficiaries in order to continue to maintain global political will and resources directed to interventions in developing countries (Kellogg Foundation 2004).

Most of the published evaluation studies in developing countries measure the effectiveness of the intervention using randomised controlled trials and quasi-experimental designs. A review of studies has indicated that the effectiveness of these approaches are not only constrained by inadequacy of facilities, financial and manpower resources, but by unclear definitions of objectives and inappropriate designs (Florentino 2003).

In addition to the problems associated with the approaches to evaluation enumerated above, further problems have been identified with evaluation in developing countries. A summary of 83 evaluation reports of health service programmes in developing countries noted problems which are common in many types of evaluations (Engelkes 1993). These include; lack of baseline data, project objectives being too vague or too ambitious to use as criteria for evaluation and insufficient time to carry out a thorough evaluation study.

Few of the evaluated projects have in-built systems for evaluation and monitoring although, at the formation of projects, these had often been planned. Also, a study conducted by the Global Fund that aimed to identify the correlations between programme evaluation scores and the characteristics of evaluation as a result of funds earmarked for AIDS, Malaria and Tuberculosis in developing countries revealed that most of the government agencies that

benefited had weak initial evaluation proposal in place to address the key needs of the beneficiaries (Radelet and Siddiqi 2007).

Until recently, quantitative designs were being used predominantly as an approach to evaluate the effectiveness of interventions in Africa. The use of both quantitative and qualitative designs as a combined approach is now increasingly becoming a popular approach. Qualitative insights broaden understanding and help to direct the use of data for decision making (Lindsay 2002).

The evaluation of HIV/AIDS prevention and care programmes is comparatively young (Praag & Tarantola 2006). However, evaluation of HIV/AIDS interventions have received considerable attention because it is essential to know how best to improve and measure effectiveness of intervention and also because of the high prevalence of HIV/AIDS (Family Health International 2001). A review of 50 published articles on HIV/AIDS evaluation in developing countries revealed that extensive studies have been conducted on prevention and behavioural components of the intervention (MacNeil & Hogle 1998) with limited studies on care and support for PLHIV (Praag & Tarantola 2006). A study conducted in 18 countries in developing countries also recommended the need to conduct structural and environmental evaluation as part of evaluation designs for HIV/AIDS interventions (Merson et al. 2000).

Another evaluation approach that is gaining popularity in developing countries is economic evaluation. This is as a result of the scarce resources in developing countries which create the need for an evaluative approach that ensures efficient and effective use of resources. As a result of the cost of certain economic evaluations in low income countries, alternative less expensive approaches are used to perform economic evaluations. These include the uses of published data and results of previous studies to inform an economic model (Walker and Fox-Rushby 2000). However, the validity and the reliability of these data are questionable. This is because of concerns over lack of transparency (e.g. sources of data not identified), bias (e.g. some costs were excluded from estimate) and the absence of a critical examination of findings (e.g. many papers failed to perform a sensitivity analysis) (Walker & Fox-Rushby 2000).

2.1.3 The need for an enhanced capacity for evaluation in Africa.

As a result of the precarious economic situation in developing countries coupled with underdeveloped health structures and systems, Meda et al. (1997) argue that only interventions that are applicable, acceptable, safe, affordable, of low cost and integrated into the health system will reduce transmission of HIV/AIDS.

This is partly due to the fact that the research resources available to address health problems in developing countries are relatively low compared with the enormous health problems and underdeveloped health structures in developing countries (Anonymous 2000). This explains why less than 10% of the global spending on health research is allocated to diseases or conditions that accounts for 90% of the global disease burden mainly in developing countries (Global Forum for Health Research 2002). As a result, diseases such as HIV/AIDS, tuberculosis and malaria were neglected to be tackled by recent public-private partnership which continue to plague the developing world (Yamey and Torreele 2002). This situation has been aggravated with the unprecedented impact of HIV/AIDS in developing countries and, as a result, many programmes on HIV/AIDS were rushed to be implemented without thorough formative evaluations (Rehle and Hassig 2006). In addition, programmes were developed outside the context of the people who were the intended beneficiaries (Rehle & Hassig 2006). This is more evident in some countries like South Africa and Botswana that are still experiencing high incidence rates after years of fighting HIV/AIDS (UNAIDS 2006b).

Also, as a result of pressure to demonstrate the worth of social programmes in developing countries in order to maintain global political will and maintain the flow of resources directed to health interventions, most of the programmes tend to demonstrate effectiveness and measure impact (Family Health International 2001) rather than try to be more comprehensive in their approach to evaluation so that the entire intervention can be improved (Kellogg Foundation 2004).

Demonstrating effectiveness and measuring impact are important and valuable: however, it is equally important to focus on gathering and analysing data which will help improve on-going initiatives (Cronbach and Associates 1980). Therefore, there is the need to develop an approach to evaluation that cannot only help

demonstrate the effectiveness of the project but will also help us know how to improve and strengthen the project in order to optimise health benefits that are equitable in the context of scarce resources (Kellogg Foundation 2004).

2.1.4 Methods of evaluation

The identification of an appropriate conceptual framework for an evaluative approach is crucial in determining the philosophy behind the entire evaluation process (Shadish et al. 1991). Patton estimated there to be over one hundred approaches to evaluation and emphasised that evaluation can be confusing with this many types of evaluation (Patton 1980). Looking at the perspectives surrounding different approaches to evaluation, Øvretveit (1998) grouped evaluations into fewer than four main groupings. He argued that most of the evaluations carried out are best understood as falling into this smaller number of groupings defined by the perspectives employed (Øvretveit 1998). This was to simplify and make more understandable the range of types of evaluation in the health sector and to draw attention to the assumptions which underlie different approaches to evaluation and which are not often made explicit in evaluation reports. These evaluation perspectives are experimental, economic, developmental, and the managerial.

The perspective employed will be determined principally by the purpose of the evaluation, the nature of what is being evaluated and its intended effects. However, the evaluator's training and disciplinary background also plays a part (Øvretveit 1998).

These perspectives are summarised below.

2.1.4.1 Experimental Evaluation

Experimental evaluation uses experimental design to test a hypothesis with the aim of discovering whether the intervention has effects and the causes of these effects (Johannessen 1991). It is commonly used for evaluating an intervention like pharmacological treatments though it is considered as an ideal approach for evaluating other interventions like services, policies and organisational change (Øvretveit 1998). Ideally, experimental evaluation will use prospective trials to

test a hypothesis rather than retrospective designs where an evaluator tries to look at what happened in the past as a historical experiment. The different types of evaluation carried out within the experimental perspective are the randomised controlled trial, quasi-experimental and observational evaluation (Øvretveit 1998).

2.1.4.1.1 *Randomised controlled trial (RCT)*

Randomised Controlled Trials (RCTs) can be used to assess 'absolute effectiveness' as well as 'comparative effectiveness'. In the first approach (absolute effectiveness) one intervention is compared with a placebo rather than with a second intervention (Johannessen 1991). The aim is to get proof about whether or not there is an effect, and to exclude all possible explanation of the cause of the effect apart from the cause being the intervention. The RCT has great strengths as an approach, but is very expensive and has many practical challenges (Cochrane 1972). This approach first requires a review of previous knowledge about the item to be evaluated with the aim of defining the hypothesis to be tested. Next there should be a careful selection of subjects for the trial which includes deciding how many people will take part, which people to exclude and the practical way to select them. One 'experimental group' gets the intervention and one group termed the 'control group' does not. Random allocation of subjects to the experimental and the control group and the collection of evidence about the people before and after the intervention and the placebo using objective, valid and reliable data gathering methods constitutes the central part of the method. 'Blinding' is a technique to ensure that investigators are not aware of which subjects receive the intervention or the control and helps to minimise bias (Cochrane and Blythe 1989). In RCTs, the subjects are either randomly assigned individually to the experimental group (referred to as individually randomised trial) or groups of individuals randomly assigned to the experimental group (referred to as a cluster randomised controlled trial) (Elbourne and Campbell 2001). The cluster randomised trials help to study interventions that cannot be directed towards selected individuals such as randomising health professionals and their practices based on health promotion and educational interventions research (Edwards et al. 1999).

In many circumstances ethical considerations dictate that effectiveness is assessed comparatively against current treatment. In these circumstances the approach is similar to that described above but a placebo is replaced by current best practice.

2.1.4.1.2 *Quasi-experimental evaluation*

In this case the evaluator is guided by experimental principle to design and conduct evaluation for social interventions and programmes where the RCT designs are not possible (Campbell and Stanley 1966). The most common types are summarised below.

Non-randomised controlled trial

This is identical to an RCT in terms of having experimental and control groups. A variation of this design is where two interventions are compared and subjects are not randomly assigned to groups. Here ‘matching’ is used to try to ensure that the experimental or control groups or sites are the same in all important respects (Fox et al. 2005).

Longitudinal experimental evaluations using ‘self-controls’

In this approach, only one group of subjects gets the intervention, whilst the groups or individuals act as their own controls over time. This uses the approach where the evaluation is planned and a ‘before’ measure is taken; and an ‘after’ measure is taken after the intervention has been introduced so that the differences between before and after can be assessed. The evaluator then considers the extent to which the difference between before and after can be attributed to the intervention (Shapiro and Firth 1987).

Single ‘target case’ experimental evaluation

The aim of this study is to find proof for or against an intervention causing a change in a measure. This is done by exposing the intervention to a single ‘target case’ (one patient or one organisation) and before and after measurements is made.

Designs like these have been used in evaluations of alternative medicines (Barlow and Hursen 1984).

Historical case-control evaluations (Retrospective)

This is a retrospective study where people or an organisation is selected as a study group because they exhibit outcome characteristics which are of interest to be evaluated. These people or organisations with specific characteristics or outcomes of interest are studied retrospectively and compared with those who do not show the characteristics of interest but are the same in other respects.

This evaluation depends on good historical documentation and statistics as well as expert statistical analysis (Sacks et al. 1982).

2.1.4.2 Economic evaluation

Economic evaluation is “*comparative analysis of alternative courses of action in terms of both the costs and consequences*” where the alternative include no action (Drummond et al. 1987, p.2). An economic perspective is used to evaluate treatments, different services and policies, health reforms and health projects, as well as interventions to health organisation. It focuses on resources used for an intervention expressed as costs and the consequences of the intervention expressed in a number of ways.

There are several approaches used in economic evaluation to examine the effectiveness of a programme and the choice of analytic methods depends on both the goal of the analysis and the data that are available. In performing various types of economic evaluations of an intervention, cost analysis such as cost-effectiveness, cost-utility, cost-benefit analyses, cost-description and cost-minimisation are used depending upon the purpose of the evaluation and the data available (Hale et al. 2008).

2.1.4.2.1 Cost-description and cost-minimisation

Cost-description involves measurement of the costs of one thing, or of more than one, in a way which allows an explicit or implicit comparison of costs. Many cost evaluations only describe the costs of one intervention, and are thus termed

‘partial’ evaluations because they do not explicitly compare the intervention with one or more alternatives.

Cost-minimisation assumes that the differences in outcome produced by the alternatives are not significant, and calculates the cost of each alternative with the purpose of discovering the lowest cost intervention.

Cost-description and cost-minimisation evaluations only calculate the resources used in interventions (inputs), and usually quantify these resources in money terms. This makes it easier to compare the total resources used by different interventions (Marks et al. 1980).

2.1.4.2.2 Cost-utility analysis

This evaluates how much well-being different interventions produce in relation to their cost. Cost-utility analysis quantifies the effects of the evaluation in terms of how people value the effect, rather than in simple terms of lives or life years saved. The technical term for the value or usefulness of something to a person is ‘utility’.

Most cost-utility studies use one or more quality of life measures (Bowling 1992), eg. ‘Quality adjusted life year’ (QALY) and the ‘healthy day equivalent’ (adjusted for quality of life).

A cost-utility evaluation will calculate the cost of the interventions (or nothing), calculate the utility of the effects (how much value people give to the effect they get) and then show how much it costs to get the effects for each intervention. Estimations of the value of the effects are not made by the evaluators but are based on variations made by ordinary people using special techniques like, time trade-off and the standard gamble (Richardson 1992).

2.1.4.2.3 Cost-benefit analysis

Cost-benefit analysis quantifies the effects of an intervention or the benefits in monetary terms so that the value of the costs and benefits can be compared directly. This is done by putting both the numerator (cost) and the denominator (benefits) in monetary terms (Olsen and Donaldson 1993). Cost-benefit analysis

employs two main techniques. These are willingness to pay and discrete choice method (Hale 2000).

2.1.4.2.4 Cost-effectiveness analysis (CEA).

In cost-effectiveness analysis, the cost of health interventions are compared with the expected health gains (DCP2 2008). An intervention is using human, financial, and other inputs to perform an activity with the intention of improving health whilst the health gain involves reducing risk of health problems, severity or duration of illness or disability, or preventing death (DCP2 2008). CEA can be used in health care planning to assist policymakers and programme managers to determine the best alternative ways of achieving a given objective in order to select the method that uses available resources most effectively and efficiently.

Even though cost-effectiveness analysis could be used to evaluate completed programmes, its primary aim is to assist decision-makers decide what to do in the future. The effects are often quantified in terms of number of lives saved, or life years or cases detected in a screening programme (Hale 2000).

2.1.4.3 Developmental evaluation

Developmental evaluation is used by a variety of social scientific methods to evaluate interventions by describing the views of people and organizations which brings into focus their feelings and perceptions (Patton 2009).

Developmental evaluations are usually carried out to evaluate health services, or interventions to health services, as well as certain health policies rather than to evaluate treatments. However, an increasing number of evaluators are using this perspective to evaluate alternative therapies, rather than the experimental perspective (Johannessen et al. 1994). There are three main approaches: descriptive social research evaluations, action evaluations and provider self-evaluations. There are also some specific types of evaluation which show features of the developmental perspective, such as formative, illuminative, social analytic, process, pluralistic, logic model theory of change evaluation approaches and Donabedian structure, process and outcome model.

2.1.4.3.1 Descriptive social research evaluations

In this case, the evaluator employs case study methods to describe the intervention and the people affected by it, in order to give the user of the evaluation a variety of information to judge the value of the intervention. Many descriptive social research evaluations aim to describe the inputs and processes of the evaluated, its boundaries, the context and often also the outputs. Evaluations of this type are useful to service providers as they give them an independent view to review and improve their services. They can also be useful to managers and policy makers who want an independent description of the operation of a service and one which also answers any specific questions they may have. They can also be used as a study preliminary to an experiment or other type of evaluation (Wholey 1983).

These evaluations are useful for quick feedback, use few resources and can be used when a service or policy is undergoing a change even though they often do not give measures of outcomes or effects. The quality and the usefulness of the evaluations depend on the skills of the evaluator and the theory and the model selected to describe the evaluations.

Generally, both social research and action evaluations are useful when the objectives of the interventions are unclear, the boundaries of the intervention are unclear, there is continual and complex change in the intervention, there is uncertainty about the effects of the intervention, there is uncertainty about what caused or influences any effects and users want some improvement quickly. It is less useful when the intervention is stable (Øvretveit 2002).

2.1.4.3.2 Action-evaluations

This involves the evaluation of an intervention whilst changing the intervention using action research methods and by giving frequent feedback to service providers. The features of the evaluation are close collaboration between the evaluator and providers or users to design the project and its focus, to decide criteria and measures, to collect measures, to judge value and to decide and plan action and also do analysis in terms of helping providers to reflect on what they do, to give them an external view and to help them to conceptualise their service and work (Hart and Bond 1996).

2.1.4.3.3 *Provider self-evaluations*

In this case, health personnel themselves use systematic methods to judge the value of what they do, so as to make better informed decisions. The theories and methods come from the field of quality improvement where service providers use a specific framework to define the item to be evaluated, to guide their collection of data, to analyze the data and to decide and implement changes (Deming 1986).

2.1.4.3.4 *Other evaluations with developmental perspective*

There are also some specific types of evaluations which show features of developmental perspective such as pluralistic evaluation, illuminative evaluation, responsive evaluation, real-time evaluation, social analytic evaluation research, facilitated peer review, formative evaluation, process evaluation and logic model theory of change (Øvretveit 1998).

Pluralistic evaluation

This involves exploring how different interest groups or stakeholders within an intervention define and assess success. The features of pluralistic evaluations include; identification of the main stakeholders in the intervention, understanding and describing the interpretations which different parties make of events and of the agencies in which they are involved, especially of what constitutes 'success', documentation of the strategies which each party uses to advance its interests and the use of a variety of data sources and methodological triangulation (Smith and Cantley 1985).

Illuminative evaluation

This is used mostly in the field of education to interpret practices, participants' experiences, institutional procedures and management problems in ways that are recognisable and useful to those for whom the study is conducted. Qualitative methods are often used, such as ethnographic method and its primary concern is description and interpretation rather than measurement and prediction. The aims of this evaluation are to study the innovatory programme: how it operates, how it is influenced by the various school situations in which it is applied and the advantages and disadvantages (Parlett and Hamilton 1976).

Responsive evaluation

This involves the uses of qualitative methods and close collaborations between evaluator and users by studying people who are experiencing the intervention in natural situations without external controls or manipulations, understanding the meanings people give to events within a specific context and feeding back information and noting reactions. This is done whereby an evaluator conceives of a plan of observations and negotiations. He or she arranges for various persons to observe the programme and, with their help, prepares brief narratives, portrayals, product displays, graphs etc. He or she finds out what is of value to his audiences, and gathers expressions of worth from various individuals whose points of view differ (Stern 1990) .

Real-time evaluation

This approach grew out of the action research methods. The evaluation itself is 'formative', and 'shapes' the intervention while the evaluation is being done. Many of these studies do look at outcome, but give more attention to the process of the evaluation, with the aim of linking any outcomes to specific actions. The philosophy of the evaluator is to involve service providers in the evaluation and to create conditions for them to learn and to develop a common understanding about the service (Stern 1993).

Social analytic evaluation research

The focus of this approach is organisation and aimed at working with service providers and managers to describe current organisation, document different views about aims and about the effectiveness of organisation, and provide analysis of further organisational options for pursuing different aims. In this case explicit views about aims and values are gathered and the current organisation is assessed against those values and aims (Øvretveit and J 1994).

Facilitated peer review

This is where the evaluator helps practitioners or service providers to develop a method to review their own practice or service, and then helps them to use the

method to do a review. The aim of the evaluator is not to describe or report back their findings but to enable others to do their own evaluation and to develop their own criteria to do the evaluation (Heron 1981).

Formative evaluation

Formative evaluation is normally conducted on a small-scale during a planning or re-planning stage of a programme to identify and resolve issues surrounding intervention and evaluation before the programme is widely implemented (Rehle & Hassig 2006). This approach gathers the data necessary to define realistic goals and objectives for the programme interventions and helps programme planners make possible decisions about effective, feasible intervention strategies and how to implement them. Formative evaluation can identify interventional approaches, designs and concepts that are ineffective and unacceptable so that feedback can be provided to project managers to help them adjust programme objectives to changing situations.

One methodological criticism associated with formative evaluation is its lack of external validity or generalisability because the results of the evaluation are derived from pilot studies and cannot be generalised to a larger population (Kosecoff and Arlene 1982).

Process evaluation

The aim of this type of evaluation is to give an understanding of how the activity, project or intervention operates in terms of whether they are being carried out correctly, on time, and within budget. In process evaluation, certain basic concerns such as the extent at which planned intervention activities are realised and types of services provided, to whom, when, how often, for how long, and in what context are addressed (Family Health International 2001). The key elements of process evaluation are inputs which tend to focus on the basic resources required in terms of manpower, money, material, and time and outputs which target the immediate service improvement expressed as distributed commodities, trained staff, and service units delivered.

In process evaluation, the evaluator is required to get close to data and become well acquainted with the details of the programme, and observe not only anticipated effects but also unanticipated consequences. Process evaluation does not demonstrate effectiveness of the intervention but contributes to explaining the outcome of the intervention. Process evaluation employs both qualitative and quantitative study designs that are complementary to one another to provide the most comprehensive information (Rossi and Howard 1993).

Logic model theory of change

The logic model is a systematic and visual way of presenting and sharing understanding of the relationship between a plan of work and the intended results of that work. This is the picture showing how the programme works- the theory and assumptions underlying the programme (Kellogg Foundation 2004).

In the theories of change approach the theory is well articulated, owned and approved by a wide range of stakeholders. The approval is supporting the fact that the stakeholders are well endowed with the implementing activities and the expected outcomes and that if these outcomes occur more or less as expected, the outcome will be attributed to the interventions (Connell and Kubisch 1998). The reason for this is that it is these stakeholders who best understand the intervention and it is they who will, at a later stage, require to be convinced that the outcomes that are measured are attributable to the detail of the intervention theory they approved. The ability to identify outcomes and anticipate ways to measure them provides all programme participants with a clear map of the road ahead.

Logic models theory of change can bring about effective programming and greater learning opportunities, better documentation of outcomes, and shared knowledge about what works and why. This model also contributes to identifying factors that will have an impact on the programme thereby giving you the room to anticipate the data and resources that needed to achieve success.

Avedis Donabedian evaluation model

Avedis Donabedian designed three categories of a model for research intended to measure quality health care (Burns 1995). These categories are structure, process and outcome model (Donabedian 1966). The structure measures the professional and organisational resources available for the intended programme, the process measures what is to be done to and for the beneficiaries in providing treatment and services to them (Gustafson and Hundt 1995) and outcome measures the desired states which result from the provision of the intended services or interventions (Kane and Kane 1988). These desired states include reduction in morbidity, mortality and improvement in the quality of life. However, Lohr and Donaldson (1990) indicated the Five “Ds” as a complete consensus in research to measure outcome. These Five “Ds” are death (mortality rates), disease (morbidity), disability (loss of optimal functioning), discomfort (uncontrolled pain) and dissatisfaction.

According to Donabedian (1966), the structure, process and outcome model designed to measure quality health care, is not distinct but are constituted within each other in a common underlying framework. He further indicated that good structure promotes good process resulting in good outcome (Donabedian 1988).

2.1.4.4 Managerial evaluations

This method involves the rational implementation of objectives and the need to assess the extent to which the objectives of a programme or project are implemented in order to decide on the next steps and how to improve upon them when the need arises. This evaluation therefore compares actual activities against procedures and standards which are thought to ensure safety, efficiency, effectiveness and equity. The evaluation is carried out to monitor or improve the performance of services, or to check that agreed policies, projects or changes were implemented as intended. The evaluation is used by managers and public bodies for the purposes of accountability, enforcing safety standards, reducing risks, checking whether plans and policies are implemented, reviewing and replanning, assessing patient access to services, performance management and comparative competition (Øvretveit 1998). Examples of managerial evaluations

are inspection of hospitals or nursing homes, special studies of service performance and evaluations of whether programmes or projects were implemented as intended (Forss and Carlsson 1997).

There are three different types of managerial evaluations; routine administrative monitoring, monitoring evaluations and needs-effective evaluations and other types of evaluations like compliance and efficiency and needs-effectiveness evaluation show features of managerial evaluations.

2.1.4.4.1 Routine administrative monitoring

This is a regular and established part of a managerial process which involves a comparative assessment of the value of an intervention in relation to defined criteria. Examples are regular hygiene inspections of hospital kitchens and regular financial audits (Raleigh et al. 2008).

2.1.4.4.2 Monitoring evaluations

These are special studies conducted by external agencies by taking the statements of standards or procedures which the intervention or policy should be meeting, and comparing these to what people do. However, the evaluation does not look at effectiveness and whether the intervention meets the needs of the people for whom it is intended. They assume that if service providers meet standards or objectives, the needs of the people are being served (O'Kane et al. 2008).

2.1.4.4.3 Needs-effective evaluations

This is where the needs of the people to be served by an intervention are compared to the actual outcomes of the intervention. This is to assess the extent to which a service is meeting patient or client needs. Many experimental and economic evaluations do this, which in turn can help to set up or revise objectives or standards (Chen et al. 2010).

2.1.4.4.4 Compliance evaluations

This involves comparing the outcomes of intervention with either standards and procedures or objectives or plan of the intervention.

The comparison with the standards and procedures involve routine administrative monitoring activities and special monitoring evaluation studies where compliances are checked with the standards and procedures. Examples are the financial audits and many types of accreditation falls within this category of compliance evaluations.

With regards to the goal/plan performance evaluation, the criterion of valuation is the extent to which a service meets its objectives or realises its plans. The comparison is between what was planned and what has been achieved (Perret et al. 1991).

2.1.4.4.5 Efficiency and needs-effectiveness performance evaluations

This looks at how well resources are used rather than whether the service complied with established standards. They assess efficiency and sometimes look at effectiveness in terms of whether needs were met. Rapid appraisal is a practical method of data gathering for needs -effectiveness performance evaluations (Nordberg et al. 1993).

2.1.5 Strengths and weakness of various evaluation approaches

The aims, strengths and weaknesses of some evaluation approaches under the four main evaluation perspectives are summarised. These include experimental perspectives, economic perspectives, developmental perspectives and managerial perspectives.

The experimental perspectives are mostly used to test hypotheses where randomisation and other controls are either possible or not possible. It has a high attribution factor as one of its strongest strengths. However, it is expensive, takes time and needs an evaluator with experience and skills.

The economic perspectives compare cost with the consequences for better alternate causes of action based on the intended purpose. In economic perspective, inputs are always quantified in monetary terms for easy comparison. This is a strength. However, there are assumptions about what to include in the cost of overheads and the capital.

The developmental perspectives describe programme inputs, processes and outcome to provide lesson learning for programme development, improvement and future replications. It has a high contribution factor but low attribution factor.

The managerial perspectives are mostly used for programme accountability and to improve performance of services by managers and policy makers. It checks whether standards or objectives are met and pays attention to outcomes and effectiveness. However, it pays little or no attention to the efficiency of the services or the intervention.

The detailed description of the aims, strengths and weaknesses of the evaluation approaches under each of the perspective is indicated in tables 2.1-2.11.

No	Types	Aims/ purposes	Strengths	Weakness
1.	<p>1.0 Experimental</p> <p>1.1 Randomised controlled trial (RCT)</p>	<p>To test hypotheses to discover effects and causes of effects of an intervention</p> <p>To test hypothesis to ascertain the effects and causes of that effect of an intervention</p>	<p>1.It offers conclusive evidence of the effect of a treatment or service</p> <p>2. It excludes all possible explanation of the cause of the effect apart from the cause being the intervention</p> <p>3.It establishes whether an intervention has an effect or not and the size of the effect(s)</p> <p>4. It gives reliable and valid information about the effect of the intervention.</p> <p>5.RCTs assess absolute effectiveness rather than comparative effectiveness</p> <p>6. It has a high attribution factor</p> <p>7. It involves random sampling</p>	<p>1.Planning and doing valid RCT is extremely expensive</p> <p>2. Focus on few measurable outcomes and ignores others such as patients' experience.</p> <p>3.Some outcomes and impacts may take time to become evident</p> <p>4. Needs evaluators with experience, skills and statistical expertise to produce credible results</p>

Table 2-1 Summary of evaluation approaches

No	Types	Aims/ purposes	Strengths	Weakness
2.	<p>2.0 Quasi-experimental evaluation</p> <p>2.1 Non-randomised controlled trial (RCT)</p> <p>2.2 Longitudinal experimental evaluation</p> <p>2.3 Historical case-control evaluation</p>	<p>To test hypotheses where randomisation and other controls are not possible</p> <p>Compare the effects of two interventions</p> <p>Considers the extent to which the difference between before and after measurements can be attributed to the intervention</p> <p>Conduct a study into outcome characteristics which are of interest.</p>	<p>1. It is an ideal approach when comparing the effects of two interventions.</p> <p>2. The measured effects can only be attributed to the intervention.</p> <p>It is simple and only a single group of subjects gets the intervention</p> <p>1. The outcome is already known to the evaluator.</p> <p>2. They can show associations or lack of evidence of associations and suggest possible causality</p>	<p>There is no random allocation.</p> <p>There is a high level of uncertainty with attributions</p> <p>It depends on good historical documentation and statistics as well as expert statistical analysis.</p>

Table 2-2 Summary of evaluation approaches cont

No	Types	Aims/ purposes	Strengths	Weakness
3.	<p>3.0 Economic evaluation</p> <p>3.1 Cost- description</p> <p>3.2 Cost- minimisation</p>	<p>To do comparative analysis for alternative causes of action in terms of cost and consequences</p> <p>Measure the cost of one or more things for an explicit or implicit comparison of costs.</p> <p>It calculates the cost of each alternative with the purpose of discovering the lowest cost intervention.</p>	<p>Inputs are quantified in monetary terms for easy comparison of the resources used by different interventions.</p> <p>The total resources (inputs) used by different interventions are quantified in monetary terms for easy identification of the intervention with the lowest cost.</p>	<p>There are assumptions about what to include in the cost of overheads and in the costs of capital and rate of depreciation and how broad the scope of the costing should be.</p> <p>1. There are assumptions about what to include in the cost of overheads and in the costs of capital and rate of depreciation and how broad the scope of the costing should be.</p> <p>2. It assumes that the differences in outcome produced by the alternatives are not significant.</p>

Table 2-3 Summary of evaluation approaches cont

No	Types	Aims/ purposes	Strengths	Weakness
3.	3.3. Cost-effectiveness analysis (CEA)	To compare the cost and effectiveness of an intervention using one measure of effectiveness such as lives saved.	<p>1. Effects are often quantified in terms of number of lives saved, or life years or disability days which are gained or lost, or cases detected in a screening programme</p> <p>2. Policymakers and programme managers use CEA as a decision making tool to select future course of action.</p>	<p>1. CEA concentrates on one measure of outcome</p> <p>2. No attempt is made to value the consequences. It is assumed that the output is of value.</p>
	3.4 Cost-utility evaluation	The aim is to assess the utility or value of health states produced by different interventions for the cost.	<p>1. Cost-utility quantifies the effects of the evaluated in terms of how people value the effect, rather than in simple terms of lives or life years saved.</p> <p>2. The value of the effects is not made by the evaluators but by ordinary people using special techniques like time trade-off, standard gamble, etc.</p> <p>3. Most cost-utility studies use one or more quality of life measures eg 'quality adjusted life year' (QALY) and the 'healthy day equivalent (adjusted for quality of life).</p> <p>4. Knowing the value people attribute to different health states helps clinicians and policy makers judge the value of an intervention for prudent resource allocation decisions.</p>	<p>1. They are based on the values of small populations</p> <p>2. Small number of interventions which have been studied using this approach</p> <p>3. A bias to giving greater value to duration of life than to life itself and to valuing the young</p> <p>4. QALYs do not distinguish between life-enhancing and life-saving treatments and try to equate them.</p>

Table 2-4 Summary of evaluation approaches cont

No	Types	Aims/ purposes	Strengths	Weakness
3.	3.5. Cost-benefit analysis	To value the consequences of a programme in terms of money and compare with the actual cost of the programme	<ol style="list-style-type: none"> 1. Quantify the inputs and effects of the intervention in monetary terms. 2. It is concerned with how worthwhile an end result of an intervention is for the cost. 3. It can predict the costs and benefits of a system, or retrospectively to evaluate the actual costs and benefits. 4. It can be used for an investment appraisal of proposed building or service schemes. 	There are assumptions about what to include in the cost of overheads and in the costs of capital and rate of depreciation and how broad the scope of the costing should be.
4.	4.0 Developmental perspective	Evaluate interventions by describing the views of people and organisation which brings into focus their feelings and perceptions using a variety of social scientific methods.		

Table 2-5 Summary of evaluation approaches cont

No	Types	Aims/ purposes	Strengths	Weakness
4.	4.1 Descriptive social research evaluation	Describe the inputs and processes of the intervention, its boundaries, the context and often the outputs.	<p>1. It gives an independent description of the operation of a service especially intervention which is not well defined or understood and also gives independent views to service providers to review and improve their services.</p> <p>2. It can be used as a study preliminary to an experiment or other type of evaluation.</p> <p>3. They are useful for quick feedback, use few resources and can be used when a service or policy is undergoing a change.</p> <p>4. They draw on a tradition of social research with well developed methods and designs, such as a case-study, which can be described and replicated and which are becoming more understood and valued by users of evaluations.</p> <p>5. If the 'case' is well selected and described, then the findings can be generalized.</p>	<p>1. The quality and the usefulness of the evaluations depend on the skills of the evaluator and the theory and the model selected to describe the evaluations.</p> <p>2. They often do not give measures of outcomes and effects.</p> <p>3. The results are difficult to assimilate and use to inform action since many users do not have time to read through many long reports of qualitative findings, no matter how rich the report is.</p> <p>4. The explanations of effects where they are giving, are of influences, not causes, and do not carry the certainty or specificity which some evaluation users want or are used to.</p>

Table 2-6 Summary of evaluation approaches cont

No	Types	Aims/ purposes	Strengths	Weakness
4.	4.2 Action-evaluations	The aim is to work with providers or users to analyse and judge the value of what they are doing, deciding and carrying out improvements.	<p>1. There is close collaboration between the evaluator and providers or users to design the project and its focus and to analyse in order to help them to conceptualize their service and work.</p> <p>2. They tend to use qualitative and multiple methods intended for service providers' reflection and self-development rather than accountability and inspection.</p> <p>3. The results are practical and more immediately useful to service providers.</p> <p>4. They are quicker, cost less, produce immediate benefits and are under close controls by users than descriptive social research evaluation.</p>	<p>1. Useful when the objectives of intervention are unclear, continual and complex change in the intervention, uncertainty about the effects of the intervention but not when the intervention is stable.</p> <p>2. They are often not replicable or generalisability and are rarely published.</p> <p>3. Their success greatly depends with research and consultancy skills of the evaluators</p> <p>4. They cannot give objective and conclusive evidence of effectiveness because the intervention is changed.</p> <p>5. The data may be misleading if the limitations of the design and data collection methods are not described.</p>

Table 2-7 Summary of evaluation approaches cont

No	Types	Aims/ purposes	Strengths	Weakness
4.	4.3 Formative evaluation	This is conducted during the planning or replanning stage of a programme before the programme is widely implemented.	<ol style="list-style-type: none"> 1. It can be used as a exploratory tool to give feedback to project managers to help them adjust the programme. 2. Provides information necessary to define realistic goals and objectives for programme interventions. 3. Identifies unacceptable and ineffective interventions, approaches, designs and concepts. 	The methodological criticism is its lack of external validity or generalisability because the result is derived from a small-scale rapid assessment procedures and or pilot studies.
	4.4 Process evaluation	Gives an understanding of how the activity, project or intervention operates as to whether they are being carried out correctly, on time and within budget.	<ol style="list-style-type: none"> 1. Both inputs and outputs are the key elements of process evaluation 2. It explains best the outcome of the intervention 3. It improves or modifies interventions by providing the information necessary to adjust delivery strategies or programme objectives 4. It uses both the qualitative and quantitative study designs that are complementary to one another to provide the most comprehensive information. 	It does not demonstrate the effectiveness of the intervention.

Table 2-8 Summary of evaluation approaches cont

No	Types	Aims/ purposes	Strengths	Weakness
4.	4.5 Logic model theory of change	Present the picture of how a programme works in terms of the relationship between your planned work and the intended results coupling with the theory and assumptions underlying the programme.	<ol style="list-style-type: none"> 1. The theory is well articulated, owned and approved by a wide range of stakeholders. 2. There is a visual representation of the change you want to see in your community and how you expect it to come about. 3. An agreement among stakeholders about what defines success and what it takes to get there. 4. The ability to identify outcomes and anticipate ways to measure them provides all programme participants with a clear map of the social road ahead. 5. It seeks agreement from all stakeholders that if activities are well implemented in the presence of certain contextual factors, it should lead to certain outcomes and if these activities, contextual supports, and outcomes all occur more or less as expected, the outcomes will be attributed to the interventions. 	<ol style="list-style-type: none"> 1. A theory of change would not be complete without an articulation of the assumptions which explain both the connections between early, immediate and long term outcomes and the expectations of how the proposed intervention would effect the change. 2. Most scientists have problem with the level of attribution associated with theory of change approach.

Table 2-9 Summary of evaluation approaches cont

No	Types	Aims/ purposes	Strengths	Weakness
4.	4.6 Avedis Donabedian evaluation model	Measure quality of health care	<p>1. The model describes the structure, process and outcome of the intervention</p> <p>2. Gives complete understanding of the programme for future replications and lessons learning</p> <p>3. It uses both qualitative and quantitative designs that are complementary to each to provide comprehensive information</p>	Most scientists have problem with the level of attribution associated with the model
5	<p>5.0 Managerial perspective</p> <p>5.1 Routine administrative monitoring</p>	<p>It enables managers and policy makers to monitor or improve the performance of services, or to check that agreed policies, projects or changes were implemented as intended.</p> <p>This is conducted regularly by the internal staff with the aim of comparing service activity with specified standards and objectives.</p>	<p>1. It measures whether standards or objectives are met.</p> <p>2. It ensures that established standards, regulations and directives are followed (compliance) and more with how well resources are used which includes efficiency.</p>	It does not look at the effectiveness and whether the intervention meets the needs of the people for whom it is intended.

Table 2-10 Summary of evaluation approaches cont

No	Types	Aims/ purposes	Strengths	Weakness
5.	5.2 Monitoring evaluation	Conducted mostly by external agencies to compare service activity with specified standards and objectives.	1. It measures whether standards or objectives are met 2. It ensures that established standards, regulations and directives are followed (compliance) and more with how well resources are used which includes efficiency.	It does not look at the effectiveness and whether the intervention meets the needs of the people for whom it is intended.
	5.3 Needs-effective evaluation	Compare the needs of the people to be served with actual outcomes to judge if the service standards and objectives are the right ones to meet priority needs.	1. Help to set or revise standards and objectives. 2. Compare the needs of the people to be served by the intervention with the actual outcomes. 3. It pays a lot of attention to outcomes and effectiveness	It pays little or no attention to the efficiency of the services.

Table 2-11 Summary of evaluation approaches cont

2.1.6 Applicability and justification of choice of evaluation approach

The use of any of the evaluation approaches under the experimental perspective to evaluate the 'HOPE' programme turned out not to be feasible in the circumstances. This is because the study was conducted at a later stage of programme implementation once all major decisions on programme approach and design had been made. Randomisation controls and clearly defined hypotheses which are major ingredients of experimental evaluations were not considered at the planning and the implementation phase of the programme. For these reasons, the possibility of employing an experimental design was set to one side.

Economic evaluation could not be performed for this programme because data on programme costs were not collected. The limitation of the PhD and the resources available to the researcher at the time of data collection meant that it was not possible to collect economic data.

Evaluation approaches with managerial perspectives were also discarded. The main reason for this was the need to provide lesson learning for evaluation of community-based interventions in the health sector in Ghana and Africa more generally. Evaluations with a managerial perspective are mostly used by service providers like hospitals to monitor performance of their services as to whether policies are being implemented as planned. The needs of the 'HOPE' programme evaluation were more expansive.

The uses of some evaluation approaches with a developmental perspective can be considered appropriate to evaluate the HOPE programme due to the perspective of the approach, data available, the intention and the resources available for the PhD studies. This perspective describes the views of people and organisation and therefore bringing into focus their feelings and perception of the programme for lesson learning. Additionally, it is intended for programme development, improvement and replication. This conforms to the overall intention of the studies to provide lesson learning on evaluation of community-based intervention for PLHIV in Ghana, the rest of Africa and for future

programme replications. However, descriptive social research evaluation, action-evaluation, formative evaluation and process evaluation with developmental perspective cannot be used to evaluate the programme due to the stage the programme had reached at the time of the study. These evaluative approaches are utilised during the preliminary stage of an intervention to provide feedback for programme improvements. However, the study described in this thesis was conducted at a later stage of implementation. In addition, the uses of logic model theory of change as an approach to evaluate the programme was not possible at the time of this study. This concept is mostly adopted at the planning and designing phase of a programme where all stakeholders discuss together the intended activities and outcomes.

Having eliminated alternatives, the use of the Avedis Donabedian evaluation model was judged to be appropriate to evaluate the programme due to the stage the programme had reached at the time of the study, the overall intention of the study and the data available to the researcher coupled with constraints of time and other resources available. This model employs both qualitative and quantitative approaches that are complementary to each other to provide comprehensive information on the structure, process and immediate outcomes of a programme. The intention is to provide a complete understanding of the programme to enhance lesson learning for programme improvement and future replications which is the overall interest of the study. In addition, it justifies programme accountability by measuring immediate outcomes.

2.2 Community-based Interventions

2.2.1 Definitions of community-based interventions

Community-based interventions have been defined in a number of ways. This reflects different understandings of two concepts: community and interventions. Community can refer to a population with a shared characteristic. For example, a geographical community live in a given area. A community of interest can be dispersed geographically but with a shared need, activity or some other defining characteristic. Community can also be used as a term to describe interventions that are provided outside traditional institutions. So community can also mean

non-institutional. Intervention is also a wide term with different definitions. So, sometimes it refers to specific aspects of prevention or treatment. On other occasions it refers to much wider and less easily defined activities like empowerment (Crawford Shearer et al. 2010).

So, example of a definition of a community-based intervention is the introduction of primary (preventing diseases before it occurs) and secondary (early detection of diseases in a symptomatic period) programmes in the community by modifying at least one risk factor in order to reduce the burden of diseases on the population (Dongbo et al. 2008). Also, Ackon (2003) defined community-based intervention as building the capacity of the community to assume responsibility for their own health and welfare to contribute to the development of the community. This thinking has also been applied to research. Caldwell & McGranaghram (2007, p.1) defined community-based intervention as a *“partnership approach that equitably involves, for example, community members, organisational representatives, and researchers in all aspects of the research process; enables all partners to contribute their expertise, with shared responsibility and ownership; enhances understanding of a given phenomenon; and integrates the knowledge gained with interventions to improve the health and well-being of community members”*.

2.2.2 History of community-based interventions

Most countries in the developing world achieved independence between the 1960s and 1970s (Hall and Taylor 2003). The new independent governments had to meet high expectations. They needed to provide a high-standard of health care, education and other services for their people. In response, teaching hospitals, medical and nursing schools and other western style facilities were established with support from donors. These developments were mostly built in urban areas, typically capital cities or large regional towns. The consequence was that people in rural areas were provided with very little access to health and other social services (Hall & Taylor 2003). Health care in rural areas was, therefore, provided by local traditional healers, missionary hospitals and a few mobile services from urban hospitals. Rural populations suffer high levels of morbidity and mortality and their unmet needs prompted countries like

Tanzania, Sudan and Venezuela to initiate basic but comprehensive primary health care interventions to arrest the situation. This was the genesis of what came to be known as the “Primary health care” movement (Bennett 1979).

In the 1970s, the Primary Health Care (PHC) concept was synthesised by WHO and UNICEF to generate basic healthcare services that were equitable, accessible and affordable to address the health care needs of developing countries. This new approach placed more emphasis on prevention along with the provision of appropriate curative services. As such, they consciously contrasted their priorities and methods with the model adopted during the colonial period which they were seeking to replace. These experiments and new thinkers became a movement and, as a result, “Health for All” by the year 2000 was adopted in 1977 by the World Health Assembly (WHO 2008c).

Meanwhile, community-based intervention for the prevention and control of cardiovascular diseases (CVD) had started in Europe and USA in the 1970s (WHO 2001). These were community-based in the sense of targeting geographically based populations using dispersed resources but they differed in aspects of ideology from the “Health for All” movement in as much as they were more dominated by expert power and relied primarily on defined interventions and less on processes of empowerment, cooperation and participation.

The now famous starting point for the initiative to achieve “Health for All” by 2000, was an international conference held in the former Kazat Soviet Republic in 1978 where the Alma-Ata Declaration was unanimously adopted (WHO 2003a). The declaration identified and recognised PHC as a strategy for achieving “Health for All” by 2000 (WHO 2008c). However, the concept was attacked by politicians and experts from the developed world who could not understand why communities should be responsible for planning and implementing their own healthcare services as a core principle of the PHC concept (Warren 1988). This led to the introduction of a new concept called “Selective Primary health care” (SPHC). This concept argued that the comprehensive PHC strategy was too idealistic and expensive. As a consequence it was unachievable as a strategy for the total population. Therefore, they advocated for the provision of PHC services that could contribute to the reduction in mortality for children less than five years (Warren 1988). As a result, foreign consultants with technical

expertise in this field were employed by the funding agencies to implement this concept in developing countries. This took away the decision-making power from the communities since the consultants were subject to the policies of their employers who were the funding agencies and not the community. This compromise negated the core principle of the PHC concept (Unger and Killingsworth 1986).

Notwithstanding the objection raised against the PHC concept, countries in Africa like Botswana, Burkina Faso, Kenya, Tanzania, Namibia, Democratic Republic of Congo and Ghana adopted the concept in their national development plans to achieve “Health for All” by 2000 as soon as the Alma-Ata Declaration was adopted in 1978 (WHO 2008c).

In the event “Health for All” by 2000 raised more expectations than it delivered results. A review of programmes in the countries listed above by WHO (2008b) which examined the implementation of the PHC policy found considerable efforts had been made in formulating and marketing the PHC policy but identified weak structures, inadequate attention to PHC principles, inadequate resource allocation and inadequate political will as a hindrance to the full implementation of the policy.

In 1986, learning from “Health for All” throughout the world was brought together in the “Ottawa Charter” which was the output of a conference in Ontario, Canada.

The “Ottawa Charter” advocates the acceptance of Health Promotion as a contributory tool for achieving “Health for All” by 2000 and beyond (WHO 1986). The Charter built on the progress made through the Declaration on primary health care at Alma-Ata and the WHO targets for “Health for All”. It also used debates at the World Health Assembly on inter-sectoral action for health (WHO 1986). As a result, the Charter focussed on five action areas, namely; building healthy public policy, creating supportive environments, strengthening community actions, developing personal skills and the reorientation of health services. It then called on WHO and other international organisations to advocate the acceptance and implementation of health promotion strategies and

also to support countries to set up health promotion strategies and programmes (WHO 1986).

In Europe the Ottawa Charter was most strongly associated with the “Healthy Cities” movement which was a vehicle for implementing the health for all principles as an alternative to highly technical, hospital based philosophies.

In Africa, experimentation continued into how best to bring comprehensive and equitable health improvement in resource poor settings. So, for example, in 1987, African Health Ministers adopted another concept called the Bamako Initiative. This resulted from dissatisfaction with the progress of PHC (WHO et al. 1999). This initiative was designed to accelerate PHC implementation and to ensure access to essential health services by the majority of the population in Africa (WHO, UNICEF, & GO Mali 1999). As a result, emphasis was placed on the promotion and implementation of a limited package of services, access to a list of drugs at affordable cost, cost-sharing between governments and users and effective participation of the community in the local management of the health system (WHO, UNICEF, & GO Mali 1999). Note that by this stage the ideology of employing market mechanisms was beginning to have an impact on local practice usually at the insistence of funders like the World Bank. These initiatives improved access to health services in some regions in Africa like the Central Africa Republic where access to health services within a radius of 5km improved from 45% in 1995 to 65.2% in 2000 (WHO 2008c). Also, there was a general improvement in the promotion and implementation of a minimum package of activities, revitalisation of health centres, constant availability of essential drugs at affordable cost and effective participation of the population (Kara and Mcpake 1993). However, coverage was not encouraging : in 18 of the 25 French speaking countries supported by UNICEF covered only 34% of 1048 districts (WHO 2008c).

Another concept called health sector reforms was introduced in 1990 by the World Bank (Hall & Taylor 2003). This came to light when resource-poor countries reduced their expenditure on health due to high debts between 1980 and 1990 (Hall & Taylor 2003). As a result, international donors like the World Bank introduced health sector reforms in 1990 as part of their economic structural adjustment programme in those countries (WHO 1981). The World

Bank made it conditional for countries to accept the health sector reform concept in order to qualify for debt relief and financial aid (Hall & Taylor 2003). The health sector reforms emphasised the involvement of the private sector in the provision of health services whilst eliminating or minimising government services (Hall & Taylor 2003). In pursuance of that, the reforms focused on the rationalisation of the Ministry of Health, decentralisation of planning, management and implementation of health services in districts, introduction of alternate healthcare financing and recognising the role of the private sector, NGO'S and other actors in the provision of healthcare (WHO 2008c). The health sector reforms were criticised as being driven by economic and political ideology and the failure to explain how the policy could be implemented in resource-poor countries where there is an absolutely high level of poverty (Hall & Taylor 2003). A review of the implementation of this concept in 2003 by WHO indicated that the health status of most countries that benefited from this concept remained unchanged in most countries and aggravated in a few countries (WHO 2008c).

In summary, therefore, community-based interventions have a complex history. Nonetheless, the literature does suggest that there are a number of principles that should inform successful community-based interventions and these are discussed next.

2.2.3 Principles of community-based interventions

The WHO definition for health which is a complete state of physical, mental and social wellbeing and not merely the absence of disease or infirmity has been part of a body of thinking and argument that has been used to assert that health is a fundamental human right (WHO 2003a). As part of this thinking, various principles are being employed in communities to improve upon access to basic health services. Attention is given to principles like equity, community participation, empowerment, inter-sectoral collaboration, integration and motivation as essential tools in delivery and improving health services in the community. The above principles of community-based interventions are discussed below.

Community participation entails the involvement of the community to identify and solve their own problems (WHO 2008c). Community participation has been

witnessed in most countries in Africa through the formation of structures like community health committees, village health committees, area health committees and the representations of communities in health facility or hospital management boards (WHO 2008c). However, attempts by organisations to utilise this concept to promote community involvement have failed (Wilcox 1994). This has been attributed to unclear definitions of the level of participation in the approach to promote community participation (Wilcox 1994). As a result, Wilcox (1994) enumerated five elements called the “ladder of participation” as a guide to promote effective community participation. These are; information sharing, consultation, deciding together and supporting independent community interest. He further outlined levels of participation; initiation and process; control, power and purpose; role of practitioners; stakeholders; community; partnership; commitment; ownership of ideas and confidence and capacity as 10 key ideas as a guide to promote community involvement. Wilcox (1994) concluded that for effective participation, different interest groups in the project or programme must be satisfied with their levels of involvement. The involvement of the community in the managerial process of an intervention is identified as crucial in determining the success of an intervention since it promotes ownership and commitment of the community (Perera 1983). As a result, the beneficiaries of a project should be involved in the entire project processes which include the formulation and design, implementation, management and decision making (Oakley 1988). This will motivate the community to identify their own needs and become ambassadors to solve their own problems. For example, this approach was adopted by the Department of Adult Education, University of Ibadan in Nigeria where a village called Apasan was involved in a study to address rural poverty (Anyanwu 1988). The study indicated that the community identified village isolation and food insecurity as the root cause of their poverty and eventually came up with their own measures to eradicate food problems and improve upon their living conditions (Anyanwu 1988). Also, in Zimbabwe, traditional birth attendants (TBAs) were involved in healthcare delivery as part of the national public health strategy to assess their contribution to maternal mortality and morbidity. The study indicated that TBAs involvements contributed to the reduction of both maternal and infant mortality by 50% and 66% respectively (Jacobson 1991).

The major problems with community participation as a tool for development are the capacity of the community representatives, the need for recognition and support from the relevant national structure (Jarrett and Ofosu-Ammah 1992) and inadequate preparation of the promoting organisation to respond to promises made to the community (Wilcox 1994).

An integrated approach is another principle to promote community-based interventions in developing countries. An early example of the integrated approach in Africa started in Tanzania in 1983 when the International Planned Parenthood (IPPF) Africa Bureau promoted the acceptance rate of family planning (International Planned Parenthood Federation IPPF. Evaluation and Management Audit Department 1989). This principle was adopted by Japanese Organisation for International Cooperation in Family Planning (JOICFP) in promoting the acceptance of family planning and has proved to be successful in some countries in the developing world (JOICFP 1992). The aim of the integrated FP/MCH/Parasite Control project by JOICFP was to promote and fortify international cooperation, international exchange of knowledge and expand approaches and acceptance in the practice of family planning in the developing world (Wang 1985). The project initially identified and addressed the needs of the communities to win their confidence and respect before introducing the family planning concept. Addressing the key needs of a community have been identified as strategies to promote community confidence and acceptability of interventions (Mansa 1991). The project activities implemented to address the needs of the communities included the mass examination and deworming of adults and children, nutritional assessment of school children, latrine census and constructions, health education and income generating projects. At the end of the project period, there was an improvement in family planning acceptance rate in project communities from 25% to 100% whilst non-project communities remained around 25-30% (Maro 1988). Also, this approach was used in developing countries like China, Ghana, Bangladesh and Philippines to improve the level of family planning acceptance rate (JOICFP 1986). According to Solon (1985), the integrated approach has been demonstrated to be effective in improving family planning acceptance rate and parasitic control in developing countries based on the lessons from the JOICFP approach.

The principle of an inter-sectoral collaboration is based on the fact that health problems should not be tackled as a sole responsibility of the health sector but should be seen as a multi-sectoral approach involving all sectors that have direct or indirect impact on the problem (WHO 2008c). The health sector should therefore play a leading role in bringing the various sectors that have direct or indirect impact on health together to improve upon human development (WHO 2001).

International collaboration of community directed interventions has been shown to enhance community directed interventions in developing countries. However, the development of common guidelines that are applicable to the local settings are important for the success of the interventions (WHO 2001). Morse (2003) further indicated collaboration between professional staff of a project and the community as an effective tool in addressing complex health and social problems. He emphasised that as part of the collaborations, the professional staff should identify themselves as visitors and see the community as belongers. This is expected to promote cultural acceptability and respect for the community which is central to effective collaboration and hence the success of the interventions.

According to WHO (1994), the unsuccessful implementation of inter-sectoral collaboration in developing countries is due to lack of funds as well as lack of clarity of roles and responsibility of the parties involved.

Empowerment, which is another principle of community-based interventions, is the process of helping an individual identify and recognise his capacity for an individual or social change (Zorrilla and Santiago 1988). Traditionally, health promotion used to target individuals and their behaviours which yielded a limited impact. As a result, WHO now recommends a new approach to health promotion based on the Ottawa Charter which places more emphasis on empowerment. This new approach to health promotion entails building healthy public policy and strengthening community action (Raeburn and Beaglehole 1989). Empowerment involves mental and spiritual awareness to enable the individual to focus on his physical, psychological and social circumstances (Zorrilla & Santiago 1988). Empowerment is also used to describe a movement towards greater equality of the parties who relate to each other in community

care (Stevenson and Parsloe 1993). Empowerment does not only entail workers listening to the request of the user, but requires an active worker ready to share ideas and thoughts and to ensure that the other has the advantage of hearing different points of view (Stevenson & Parsloe 1993).

Equity as a principle which underpins community-based interventions is understood as a fair allocation and access to health resources and services (WHO 2008c). This has not been fully implemented in most countries in the developing world due to a high level of inequitable services and resources inherited at independence (WHO 2008c). Though countries have equity outlined in their national health policy, the understanding of this concept is entirely different as reflected in the implementation processes of some countries. Some countries attribute re-allocation of resources and services which are already scarce in the urban areas to the rural areas as implementing equity (WHO 2008c). In other counties in Africa, there is a high concentration of resources and services in urban areas confirming the skewness in terms of access to health services and health outcomes like maternal and infant mortality in urban and rural areas (WHO 2008c).

The use of awards or contests as a motivational tool has also been identified to be successful in promoting community-based interventions in developing countries. This principle was used in Ghana where mothers who completed their immunisation schedules on time were giving basic items like basins, bathing soaps and T-shirts. This succeeded in encouraging 513 mothers to complete their immunisation schedules prior to the event. The programme was successful in improving the monthly immunisation schedule of children in the northern part of Ghana (Amanor 1991).

2.2.4 Advantages of community-based interventions

Community-based interventions have a variety of advantages over hospital services. They have been identified as providing expedient, considerate, careful and high quality services compared to hospitals (Guo 1999). They can also provide information on the prevalence of diseases in the community needed by public health practitioners for timely and appropriate allocation of resources to control, prevent and eradicate diseases (Gumber and Berman 1997).

The successes of most of the community directed interventions are based on lessons, successes and failures learnt as a result of interventions that have been developed and tested in the developed world (Adekoga 1994). For instance, Medicare, an insurance system in the USA, has been tested in Nigeria to lower inequalities and improve accessibility to healthcare. In this case, civil servants and businessmen were taxed to contribute to the universal healthcare using the USA model (Adekoga 1994).

Community directed interventions have also been recognised as an appropriate approach to deliver healthcare interventions in rural areas in developing countries. This is as a result of the existence of traditional structures and processes in the rural areas which are non-existent in urban settings (WHO 2008a).

The introduction of the concept of decentralisation has also enhanced community based interventions in the health sector in some countries in Africa. This is more evident in countries like Ghana and Zambia where the health services have been detached from the civil service, a greater part of the management and financial responsibility have been decentralised to the districts and a complete review of the ministry of health structure from the vertical systems to more functional horizontal systems (Dovlo 1998). In a presentation delivered by the partnership for the public collaborative partners at their second Annual Conference indicated that lasting improvements in a community sometimes require a policy or a system change (Acosta 2003).

2.2.5 Disadvantages of community-based interventions

Infectious diseases account for 60% of all deaths in Africa. However, effective and simple interventions do exist but the delivery of these interventions to the affected population still remains a big challenge. This is as a result of the weak public health structures in some developing countries (WHO 2008a). Also, most of these interventions are simple and do not require professional skills or staff but fail to be delivered in an efficient and systematic way to the targeted population (WHO 2008a).

Though community directed interventions have been recognised as an appropriate approach to delivering healthcare interventions in developing countries, the delivery of these interventions in urban areas where infectious diseases are also endemic is challenging due to non-existent traditional structures and processes (WHO 2008a). As a result of the difficulties in implementing community directed interventions in Urban settings, the business line on “Integrated Community-Based Interventions” (BL II) within the business plan of the UNICEF/UNDP/World Bank/WHO has invited letters of intent for research to develop and test community level health intervention strategies under its new ten year vision (WHO 2008a).

Van Wyke & Peltzer (2004) identified some of the problems with the implementation of evidence based community interventions as inadequate funding, inadequate knowledge to implement evidence based interventions and poor fit between sciences based interventions and community needs. These problems were identified in the implementation of PHC as a hindrance to the attainment of the goals of the PHC. For instance, the inadequate funding and insufficient training in the implementation of the PHC contributed to inadequate equipment and poor quality of care at the community level respectively. This made services at the community level unattractive and therefore not highly patronised. This compromised negatively the concept of the referral system in the PHC (WHO 2000).

Also, Macdonald (1993) indicated that inadequate understanding of the PHC policy contributed to the discrepancies between policy formulation and implementation of the PHC concept in some countries in Africa. This was confirmed by WHO (2008c) that ministers in Africa had a dual vision towards the implementation of the PHC concept. Whilst some considered it as an integration to the traditional structures, others saw it as a vertical programme that run concurrently with different management systems due to inadequate understanding of the whole concept.

Sometimes, the needs of the community are manipulated or distorted by powerful interest groups either in the community, the political context or the international donors (Short 1989). This is evident in the implementation of the health sector reforms where governments in the resource-poor countries viewed

the concept as the imposition of decisions since the concept was not debated and unanimously agreed upon (Hall & Taylor 2003). The political context that recognises, articulates and mobilises community promotes community participation and effective collaboration (Short 1989).

2.2.6 Application of community-based interventions to HIV/AIDS

In the 1980s, AIDS was identified as a major healthcare challenge (Alperin and Richie 1989). However, HIV/AIDS patients have experienced improvements in quality and duration of life for some decades due to technological advancement in medicine and treatment of the patients and more recently the emergence of community-based service organisations for HIV/AIDS patients. The emergence of community-based service organisations for HIV/AIDS patients have created social networks for people living with HIV/AIDS and therefore contributed to the generation of hope and support for patients (Harris 2006). Community-based interventions have also been recognised as an appropriate approach for HIV/AIDS patients in Africa (Kalibala and Kaleeba 1989).

According to Layzell and McCarthy (1992), community-based care for HIV/AIDS patients is aimed at creating an environment for an individual with HIV/AIDS to remain in his home rather than residing permanently in hospitals or residential homes. A study was conducted in Ontario, Canada to examine the demographic and health-related characteristics of both AIDS patients who access and do not access support from community-based organisations. The study revealed that patients who use community services are less healthy, experienced difficulties in maintaining normal life, are often depressed, are comparatively poorer, rely more on government and report physical disability frequently as compared to those who do not use community services (Williams et al. 2005). Although in a rich country, these insights are still important.

The study therefore recommends a strong collaboration between community-based organisations providing services for AIDS patients with other health promotion and social services to strengthen capacity of community-based organisations to be able to identify and address depression and other physical health problems of the patients.

The traditional model where AIDS patients were kept in hospital was expensive and failed to address the key needs of the patients (Kawata and Andriote 1988). As a result, community-based service organisations emerged to support and care for HIV/AIDS patients in the communities (Layzell and McCarthy 1992). These community services for AIDS patients have been identified as cost-effective, flexible, accessible and culturally sensitive (Katoff 1991). However, what is crucial is to empower the HIV/AIDS patients and involve them in community-based interventions targeting them. A study conducted in the United States to examine the organisational contribution to HIV/AIDS patients and difficulties and obstacles of involving HIV/AIDS patients in community-based interventions recommended the empowerment of HIV/AIDS patients to be involved in policy development and delivery of services to themselves (Roy and Cain 2001). Also, a similar study was conducted in the United States where HIV-positive peers were engaged in providing community-based support for the peers. The study indicated that the involvement of the HIV-positive peers in the provision of care and support generated social acceptance, reciprocal support, personal growth and empowerment (Marino et al. 2007).

Most of the community directed interventions for HIV/AIDS in developing countries are in collaboration with international donors. This was evident in the review of 22 community-based HIV prevention programmes in developing countries in terms of their sustainability and transferability. The review commended the involvement and training of community members for project supervision. However, the review indicated that the sustainability of those interventions beyond the funding or contract period was questionable (Van Wyke and Peltzer 2004).

2.2.7 Community-based services for People Living with HIV

International or global partners like the U.S President's Emergency Plan for AIDS (PEPFAR) and Global Fund support community-based interventions on HIV/AIDS in Africa. The PEPFAR promotes palliative care for HIV/AIDS patients (PEPFAR 2008) whilst the Global Fund supports the fight against AIDS, tuberculosis and malaria (Global Fund 2008).

The palliative care under the PEPFAR initiative is a comprehensive approach composed of clinical, psychological, spiritual, social and preventive care services. This was intended to promote quality of life for adults and children living with HIV/AIDS (PEPFAR 2008). The clinical services include preventive care with antibiotics prophylaxis for opportunistic infections, insecticide-treated nets, interventions to improve the quality of drinking water and hygienic practices, treatment and care services for opportunistic infections, pain alleviation and symptom management, nutritional counselling, assessment and rehabilitation from malnutrition, routine clinical monitoring, including the need for antiretroviral therapy (ART) and support for ART adherence. The social care supports community mobilisation, leadership development for HIV/AIDS patients, legal services, linkages to food support and income-generating activities. The psychological services include mental health counselling, family care and support groups, cultural and age-specific approaches for psychological care, identification and treatment of HIV-related psychiatric illness and bereavement preparedness. Also, the spiritual care entails assessment, counselling, facilitating forgiveness and life completion tasks whilst the positive prevention efforts include counselling and HIV testing for the entire family, prevention counselling and services and biomedical interventions that reduce transmission risk (PEPFAR 2008).

The area of interventions of the Global Fund include the provision of ART, HIV counselling and testing and support for orphans (Global Fund 2008).

Other community-based interventions designed for HIV/AIDS prevention and education programmes includes; public information and education, education for school-aged populations, risk reduction education and individual counselling and testing services for people at risk of HIV infection (Roper 1991).

In spite of all these interventions, stigmatisation against People Living with HIV/AIDS continues to be a big challenge despite tremendous media campaigns and the distribution of information on the diseases and its transmission (Cobb and De Chabert 2002). A study conducted in Burkina Faso among 75 HIV seropositive women indicated their reluctant to disclose their status to their partners as a result of fear of stigmatisation by their friends and relatives (Issiaka et al. 2001).

2.3 Nutrition support for PLHIV

2.3.1 HIV and Nutrition

The effects of HIV on nutrition are mostly manifested at the early stage of the infection at the time the status of the infected person may be unknown to him or her (Bogden et al. 2000). When infected with the HIV virus, the body's immune system works harder to fight infection (Babamento and Kotler 1997). This affects the nutritional status by increasing the energy and nutrient requirements. The consequences may be loss of weight and wasting arising from an increase in resting energy expenditure, reductions in food intake, nutrient malabsorption and metabolic alterations common in AIDS patients (Macallan 1999b).

In Africa, nutritional supports have been suggested as an ideal approach to meet the energy and protein intakes of PLHIV who are mostly confronted with extreme deprivation, economic hardship, stigmatisation, malnutrition and food scarcity (Piwoz & Preamble 2000). These supports include food and nutritional assessment, counselling and support, targeted nutrition supplements and linkages with food security and livelihood programmes (Piwoz et al. 2004). The counselling and support components involve the promotion of locally available foods to meet the nutritional requirement of the PLHIV in the context of their age, sex and physiologic state (Macallan 1999a). Also, the support is provided as a holistic approach, with other components of care such as treatment of opportunistic infections, stress management, physical exercise, emotional, psychological and spiritual counselling and support (Abdale and Kraak 1995). This support, when implemented properly, may increase the recovery rate of HIV-related infection, prevent weight loss, diarrhoea, digestive discomfort as a result of fat malabsorption and offer PLHIV the strength, skills and knowledge to participate in their own care (Awour et al. 1998). In Africa, the support is provided by health staff and devoted volunteers who are directly or indirectly affected by the pandemic (Bijlsma 2000).

The energy requirements for HIV symptomatic adults and subsequently during AIDS, is 20%-30% more than non-infected individuals of the same age, sex and

physical activity level (WHO 2003b). However, for asymptomatic adults, the energy requirements are likely to be increased by 10% to maintain body weight and physical activity (WHO 2003b). Also, the energy requirements for HIV infected children experiencing weight loss need to be increased by 50% to 100% (WHO 2003b). Studies indicate that weight loss and wasting are early stage consequences of HIV infection among adults due to poor nutrition. This poor nutrition increases the risk of opportunistic infections and shortens survival time (Whitney et al. 1990). In addition, clinical outcomes are poorer and there is a high risk of death among adults with micronutrient deficiencies (Baum and Short-Posner 1998).

Micronutrients such as vitamin A, B-complex, C and E, selenium and zinc are needed by the immune system to fight infection (Baum and Shor-Posner 1995). The deficiencies of these micronutrients may contribute to disease progression of HIV infected individuals and are common among people living with HIV due to poor nutrition (Kupka and Fawzi 2000). Good nutrition is vital at the early stage of infection to maintain health and quality of life. A study conducted by Fawzi et al. (2000) in a smaller clinical trial indicated that daily micronutrient supplementation improved body weight and body mass, reduced HIV RNA levels, improved CD4 cells counts and reduced the incidence of opportunistic infections. In a similar study conducted on a larger clinical trial among adult with AIDS demonstrated an increased survival among those with low CD4 cells counts, prevented adverse birth outcomes and reduced mother-to-child transmission (Fawzi et al. 2000).

In Africa, malnutrition in PLHIV is as a result of starvation, cachexia, or both (Piwoz & Premble 2000). Starvation results from either low nutritional intake or malabsorption, or both, and can be reversed by providing adequate nutrition. Starvation causes loss of fat mass rather than muscle mass. However, the loss of fat mass can progress to muscle mass if not corrected. Cachexia is the loss of muscle mass out of proportion to overall weight loss and cannot be reversed with adequate nutrition. The medical reason behind the loss of muscle mass must be identified and corrected.

According to WHO (2003b), the quality of life of people living with HIV can be improved through an effective nutritional care and support programme. It

further indicated that effective nutritional care and support programmes can maintain good body weight and strength, replace lost vitamins and minerals, improve functions of the immune system, extend the progression period from HIV to AIDS, improve response to treatment, reduce time and money spent on health care, keep HIV-infected people active, productive, able to grow food and to take care of themselves, their children and family.

2.3.2 PLHIV and Body Mass Index

Weight loss of about 6-7kg is one of the early clinical signs for adult AIDS patients. The effect is serious for those who are already underweight (Walsek et al. 1997). Good nutrition involving a healthy and balanced diet and treatment of infection can reduce weight loss and future infections. Body size compositions which are mostly expressed in terms of body weight and height are mostly used as indicators for protein-energy status. In addition, other indicators such as body cell mass, lean body or fat free mass and skin fold thickness are used (Walsek, Zafonte, & Bowers 1997). The lean body mass and body cell mass are more difficult to measure as compared to changes in weight alone. It is important to note that in a population where malnutrition is endemic, the composition of the body mass changes due to vitamins and minerals deficiency. These micronutrients are needed for the proper functioning of the immune system and the consequences of its deficiencies are weight loss and wasting (Kelly et al. 1999).

Weight loss and wasting in PLHIV is as a result of reduced in food intake, nutrient malabsorption and metabolic alteration (Macallan 1999b). Weight loss in PLHIV follows two patterns. These are slow progressive weight loss resulting from anorexia and gastrointestinal disturbances, rapid and episodic weight loss from secondary infection. The loss in weight of about 5% is associated with decreased survival in PLHIV (Macallan 1999a). Weight is gained by eating a variety of foods either in larger proportions or more frequently (Whitney, Hamilton, & Rolfes 1990).

Wasting syndrome is a severe nutritional manifestation typical in many adult AIDS patient in Africa. AIDS wasting syndrome is defined by the Centre for Disease Control (CDC) as an unintentional loss of baseline body weight of 10%

with either diarrhoea or fever for more than 30 days (CDC 1987). Wasting in AIDS patients occurs as a result of changes in body compositions such as lean body mass and body cell mass (Babamento & Kotler 1997).

The weight loss and wasting may be addressed or reversed by nutritional or dietary management. However, undue delay to correct these consequences might introduce metabolic abnormalities making it impossible to reverse these nutritional deficiencies (Corcoran and Grinspoon 1999).

2.3.3 HIV/AIDS and Antiretroviral Drugs (ARVs)

Highly active antiretroviral therapy (HAART) improves nutritional status in spite of the side effects and metabolic complications (Rousseau et al. 2000). The side effects of ARV include nausea, and vomiting. This may affect adherence to therapy, particularly in the first months of treatment (Chen et al. 2003). Also, wasting still develops in some patients on ARVs (Wanke et al. 2000).

Additionally, certain metabolic complications such as derangements in glucose and lipid metabolism and lactic acidemia have been associated with the use of certain ARV drugs (Shevitz and Knox 2001).

Use of HAART to treat HIV disease has been successful in improving immune status for those people who have access to the drugs and can tolerate them (Castleman et al. 2004). These medications have given people with HIV infection the hope of living out a normal life span. Maintaining a good physical appearance and overall health are significant concerns for most patients. Anti-retroviral therapy is when drugs are used for the treatment of HIV/AIDS. These drugs work by suppressing the action of one or the other of two viral enzymes essential for replication of the HIV virus. The currently available HIV antiviral drugs can improve the quality of life of someone infected with HIV and help someone to stay well much longer than they would without the drugs. These drugs are used for treatment and not cure.

The WHO Technical Advisory Group on Nutrition and HIV/AIDS addressed a number of metabolic complications associated with the use of certain types of ART, including derangement in glucose and lipid metabolism, bone metabolism and lactic acidemia documented in industrialised countries. The consultation

emphasised the need for evidence to improve management of these metabolic abnormalities in patients receiving ART. Particular consideration was given to gaps in knowledge relating to ART use in populations where malnutrition is endemic.

ART is more effective when anti-retroviral drugs from different classes are used in combination. This is because the virus can develop resistance if only one drug is used. These drugs can be offered as a single drug regimen (monotherapy), dual therapy or triple therapy or highly active antiretroviral therapy (HAART).

The single drug therapy is not recommended for the treatment of HIV infection as no single antiretroviral drug used so far has provided sufficient, long-lasting suppression of HIV replication. Monotherapy does, however, play an important role in the prevention of mother-to-child transmission. Dual therapy is moderately effective. It is not the standard care but is better than no therapy at all and should be considered in patients unable to afford highly active antiretroviral therapy. Triple combinations or HAART is the combination of three synergistic antiretroviral agents. It remains the standard of care and substantial reductions in medication prices continue to make triple-drug regimens more affordable.

Ghana is now offering anti-retroviral drugs at much lower prices to people living with HIV/AIDS. Some of the triple combination drugs include zidovudine, AZT, didanosine, ddI, stavudine, d4T, lamivudine, 3TC, indinavir, nevirapine and efavirenz.

The benefits of anti-retroviral therapy include lower mortality, improved quality of life, reduced hospitalization costs, and increased labour-force productivity, potential reductions in new infections due to lower viral load and increased stability and longevity of families with fewer orphans (IAE and UNFPA 2003).

In Africa, there is an evidence-based research on the importance of nutrition in improving prevention of the disease, treatment and care for PLHIV. Nutritional interventions involving food-based approaches and micronutrient supplementation should be integrated into all HIV treatment programmes. This may enhance ART acceptability, adherence and effectiveness. However,

appropriate strategies for nutritional counselling and management still need to be investigated in resource limited countries (Castleman, Seumo-Fosso, & Cogill 2004).

2.4 Summary of literature review

This chapter has focussed on describing a broad range of literatures on evaluation, concepts and principles of community-based interventions in Africa and effects of nutrition on HIV/AIDS.

The review of literature on evaluations, has shown a range of definitions of evaluations, proposed by a number of theorists and evaluation practitioners. Also, different approaches to evaluation for community-based interventions have been discussed. These approaches have been grouped under four perspectives. These are evaluations with experimental, economic, developmental and managerial perspectives. The selection and the application of the appropriate approaches for community-based interventions, depends on the purpose of the evaluation, the nature of the intervention, criteria of valuation and the perspective taken by the evaluator based on the experience of the evaluator and the resources available. However, the successful implementations of evaluations in Africa using these approaches are constrained by various barriers. These include inadequate facilities, financial and manpower resources, unclear definitions of objectives, inappropriate designs, lack of baseline data, project objectives being too vague or over ambitious and insufficient time for thorough evaluation study.

However, evidence-based research to provide lessons to overcome most of these barriers based on local resources is limited. Also, the demand for care and support services for increasing number of people living with HIV due to underdeveloped health structures and services in Africa have generated a debate on how best to improve and measure effectiveness of the existing care and support interventions for PLHIV. As a result, Avedis Donabedian structure, process and outcome model was judged as the best evaluation approach for the 'HOPE' programme based on the stage the programme had reached at the time

of the research, the intention of the research, the data available coupled with the limitation of time and other resources available.

In terms of community-based interventions, a number of principles have been suggested to inform successful implementation of community-based programmes in Africa. These include; community participation, integrated approach, equity, inter-sectoral collaboration, empowerment and motivation. These principles have been successfully applied to promote community-based programmes such as family planning, immunization, maternal and infant health, poverty alleviation programmes and so on. However, applications of this principle to inform care and support programmes for people living with HIV in Africa to provide lesson learning are limited.

The next chapter outlines the methods employed for the study as well as a description of the initial plan of the study and why it proved impractical. It further outlines the aims, objectives and research questions of the thesis.

Chapter three: Methods

3.1 Introduction

The introduction to the thesis outlined key features of the background of the study. This chapter assumes knowledge of this background and begins with a brief description of the initial research plan and explains why it had to be modified. It then moves on to discuss briefly mixed methods approaches, outline the aims and objectives of the study and sets out the detailed research questions. Finally, it describes in detail the methods chosen to achieve the specific objectives and answer the research questions posed in the thesis.

3.2 Description of the initial and modified plans

The first task was to read widely reports about HIV and AIDS in Ghana to gain an appreciation of the approach that was being taken to combat the problem. The results of this investigation have been incorporated into the introduction of this thesis. More specifically, the National Strategic Framework(NSF) II (GAC 2006), which is of particular relevance to the programmes under evaluation, is described as part of the results chapter because it is of such immediate relevance.

The initial intention of the researcher when this PhD began was to undertake a formal evaluation of the impact of OICI food assisted programme for PLHIV in Ghana. The intention was to compare the difference in Body Mass Index (BMI) of the PLHIV before and after, the mortality and morbidity patterns before and after, the quantity of food rations to the PLHIV and what is consumed by them and their immediate families. In addition, it was intended that an evaluation should be conducted of the skills training offered by the programme and provide an estimate of the number who made use of this training. The researcher had been led to believe that baseline data had been collected which would make this broad approach achievable.

To advance this plan, the researcher explored data that were available for examination without any further data collection. The main sources of

information were discovered to be a baseline survey report and a series of monthly records. Each contained some information about the programme recipients enrolled in the OICI food assisted programme.

The baseline survey report was found to contain the demographic characteristics of the surveyed respondents, their baseline levels of knowledge and some information about home management of HIV/AIDS and percentages of respondents who were receiving food support and skills training. The monthly records were available for all 997 PLHIV who attended a total of 21 support groups. These were support groups that had benefited from 'HOPE' for a minimum of twelve months.

The monthly records contained the name, age, sex, address and the monthly recorded weights of the PLHIV. While investigating these two main sources of programme data, records on food management and programme reports to the sponsors were also discovered. Although these sources of data provided many valuable insights, it soon became clear that the original intention of the researcher (to conduct a straightforward evaluation of the intervention(s)) had been predicated on the existence of baseline data which was more complete and comprehensive than turned out to be the case.

Although an examination of the literature on HIV in Africa revealed a preponderance of evaluations into prevention strategies, levels of behavioural changes and clinical trials of therapy, very little work had been carried out to examine the support components provided by programmes like 'HOPE' in Ghana. It became clear to the researcher that it is important that programmes like 'HOPE' are evaluated to provide learning for the rest of Africa and other parts of the developing world. Yet, a successful evaluation of 'HOPE' would have required access to evaluation skills prior to the implementation of the programme so that appropriate pre-intervention data were collected. In particular, baseline data on morbidity and mortality had not been collected. In addition, some of the data available was of uncertain quality and completeness.

These newly appreciated realities resulted in an early change in direction of the thesis. The researcher determined that he would set three broad outcomes:

- (i) To improve his own understanding of the range of evaluation methods that could be useful for the evaluation of community-based interventions in Africa
- (ii) From the available options, devise an evaluation of the 'HOPE' programme in Ghana which was the best possible within the then current context
- (iii) Learn lessons from the evaluation and integrate this learning with conclusions drawn from the literature review. The aim was to gain an appreciation of broader issues that may impact on evaluation strategies for future community-based interventions in Africa.

These outcomes are not the formal aims of this thesis which are set out in more detail in the next section. However, they do indicate the way in which, at quite an early stage, the researcher had to make pragmatic decisions about the direction of his research.

In the event it became necessary to use multiple data collection methods, qualitative and quantitative, since both are valued and recognised as legitimate for programme evaluation to address diverse evaluation needs (Patton, 1997).

3.3 Mixed methods approach

Researchers and academics acknowledge the complexities surrounding healthcare and the need for a range of methods to understand and evaluate these complexities (Pope and Mays 1995). This has attracted international interest in the best way to address these complexities using mixed methods research. However, there have been various theoretical perspectives taken to mixed methods approaches. While some perceive mixed methods as a combination of both quantitative and qualitative methods in a single or multiphase study (Tashakkori and Teddie 1998), others include historical research to the methods stated above (Burke et al. 2007). However, Tashakkori & Creswell (2007, p.4) defined mixed methods as “*research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or programme of inquiry*”.

Mixed methods studies can be designed in different ways depending upon the purpose of combining the methods, the priority of methods within the study, and the sequence in which the methods are used (Creswell et al. 2003). The sequence of applying both qualitative and quantitative methods has raised several arguments among researchers and academics. While some argue the need to start with qualitative methods to inform the quantitative methods, others hold the contrary view. Tashakkori and Teddlie (1998) indicated that usual practice should be starting with qualitative research to help develop hypotheses to be tested in quantitative research. Contrary to this, Bryman (2008) suggested starting with quantitative methods to help select the subjects for qualitative research. This divide between the sequences of application of both methods has been a subject of debate for a long time (Barbour 1999). As a contribution to this debate, Kinn & Curzio (2005) explained that both quantitative and qualitative methods address different sorts of research questions, collect diverse types of data and produce a variety of answers. As a result, researchers should not exhaust much time on this debate, but should rather acknowledge the benefits of applying both the qualitative and quantitative methods in a single or multiphase study using a mixed method approach irrespective of the sequence which supersedes the strengths of each method and offsets their individual weaknesses (Brookes 2007).

This thesis focussed on using three methods in a mixed methods approach. These are; a desk-based approach, quantitative methods, and qualitative methods. However, the applications of these methods were based on data available due to logistical constraints. The first phase was a documentary analysis using a desk-based approach of literature on evaluation approaches and HIV/AIDS, and secondary data from documents provided by the programme. The documentary analysis was used to inform the design of both the quantitative and qualitative method. The second phase was a structured questionnaire administered to 200 sampled PLHIV on the programme and the third phase was qualitative semi-structured interviews and focus group discussions with programme stakeholders and beneficiaries respectively. The application of both the quantitative and qualitative methods was done concurrently due to logistical constraints.

The detailed techniques used to develop the tools, implementation of the methods and the analysis are discussed in this chapter.

3.4 Aims and Objectives

The main aim of the study is to assess the potential for evaluation of the 'HOPE' programme in Ghana in order to make wider recommendations for evaluation of community-based interventions (CBI) in Africa.

The specific objectives are;

1. To review various approaches to evaluation
2. To set out a range of possible evaluation strategies for 'HOPE' and assess strengths and weaknesses
3. Develop a practical evaluation design for the 'HOPE' programme
4. Evaluate the 'HOPE' programme based on the approach described under 3
5. Make recommendations to the 'HOPE' programme
6. Make recommendations for evaluation in the health sector in Ghana and Africa more generally.

3.5 Research Questions

The research questions are;

1. What approach to evaluation will be practical and achievable within the local constraints and circumstances to evaluate the 'HOPE' programme?
2. Once these lessons are applied to an evaluation of the programme, how can the 'HOPE' programme benefit from these insights?
3. What are the implications for community-based intervention in Ghana and Africa more generally?

3.6 Literature search strategy

The literature that was accessed and reviewed to inform the thesis was gathered from a range of disciplines. The three main headings were reviews of (i) various approaches to evaluation, (ii) community-based interventions and (iii) HIV/AIDS and nutrition. A number of search strategies were employed to identify various literatures. These included the use of electronic databases, primarily Ovid-Medline from 1950- June, 2010 and Web of Science for the same dates. In addition, extensive use was made of Google to find relevant websites (using a variety of obvious search terms). Ovid-Medline and Web of Science were used on advice from the University of Glasgow's librarian. These were supplemented with the Google search, in order to also access other articles relevant to the study. Most of the articles retrieved from the Google search were repetitions of those that had been accessed via the other databases. In addition, all the articles from the Google search with restricted access had been read from both databases. Also, Glasgow University library catalogue, books on evaluation, hand searching from reference lists and other information on evaluation were utilised. The references were managed using a bibliographic software package (Reference Manager 12).

The search terms used for searching electronic databases for evaluation approaches were 'history of evaluation in Africa', 'evaluation approaches', 'challenges of programme evaluation in Africa' and 'monitoring and programme evaluations in developing world'. The main inclusion criterion was all community-based evaluation studies in the health sector. However, community-based programme evaluation in the health sector designed for clinical trials of therapy and those meant for the non-health sector such as educational programmes were excluded. This generated over 500 journal articles and from these, 72 were selected and reviewed. The selection was based on relevance to community-based evaluations for health in Africa. These articles generated from websites together with training material, standard textbooks of evaluation and a variety of other resources were interrogated, synthesised and discussed in terms of the meaning of evaluation, approaches to evaluation based on perspectives from evaluation practitioners, the history of evaluation of health interventions in Africa and the need for an enhanced capacity for evaluation in Africa.

On community-based interventions, the search terms used for electronic databases were; 'community-based interventions', 'community care and empowerment', 'community care and empowerment for people living with HIV/AIDS' and 'evaluation of health programmes in developing countries'. The main inclusion criterion was all community-based interventions in the health sector. This excluded community-based interventions in the health sector designed for clinical trials of therapy and community-based interventions in the non-health sector. The electronic databases generated over 300 papers. However, 64 papers were selected and reviewed once their relevance to this thesis had been assessed. The selection was based on community-based interventions in the health sector in Africa and community-based interventions for PLHIV in Africa. These were finally grouped and discussed in terms of the definitions of community-based interventions, history of community-based interventions, principles of community-based intervention, advantages of community-based interventions, disadvantages of community-based interventions, application of community-based interventions to HIV/AIDS and community-based interventions for people living with HIV/AIDS.

The search terms used on HIV/AIDS via electronic databases were 'HIV/AIDS situations globally, in Africa and in Ghana', 'HIV and Nutrition', 'body mass index for people with HIV' and 'Antiretroviral drugs for People with HIV'. This generated an unmanageable number of references. These were reduced using the headings below to over 250 papers from which 70 papers were selected. The selection criteria was based on the effects and the responses to HIV/AIDS pandemic in Africa and Ghana, community-based nutritional and ART support for PLHIV. However, those articles with information on effects and responses to HIV/AIDS beyond Africa were excluded. In addition, those on nutrition and malnutrition without any link to HIV/AIDS were excluded. These were discussed under broad headings; Problems of HIV/AIDS in Africa, impact of HIV/AIDS on Africa, Problems of HIV/AIDS in Ghana, impact of HIV/AIDS in Ghana, nature of Africa's response to HIV/AIDS, nature of Ghana response to HIV/AIDS, HIV and Nutrition, PLHIV and Body Mass Index, and HIV/AIDS and Antiretroviral drugs.

3.7 Set out a range of possible evaluation strategies for the 'HOPE' programme and assess strength and weakness.

A desk-based approach was employed to summarise the literature reviewed on the various approaches to evaluation. This desk-based component formed a large part of the initial work of this thesis. The researcher attended training courses on evaluation and read widely as well as examining the output from the literature searches outlined above. From this, the strengths and weaknesses of each of a wide spectrum of approaches to evaluation were summarised. Notes were made for each approach in terms of evaluation perspectives and the methods used to further each perspective. Particular attention was paid to the aims or purposes of each perspective and a distilled list of strengths and weaknesses was created of each approach to evaluation.

Next, using a simple tabular format, an assessment was made of the utility of each approach within the practical limitations of data that was already collected or might realistically be gathered for the 'HOPE' programme.

3.8 Developing practical evaluation designs for the programme.

Based on the strengths and weaknesses of the various approaches to evaluation and the assessment made of the utility of each approach within the practical limitation of the data available, the Avedis Donabedian evaluation model was adopted to evaluate the programme. This choice was made because this approach to evaluation made 'lesson learning' possible and was achievable within the data constraints imposed by the context and the time limitations inherent in this particular PhD.

The model takes a simple approach. It uses data and insights to describe the structure, process and outcome of the intervention being evaluated. The approach asks three questions. First, what are the structural components of the intervention? Second, what processes are involved? Third, what are the

outcomes? It has a long track record and has been used successfully in the past to measure aspects of effectiveness and improve upon on-going initiatives.

Applied to the 'HOPE' programme, the structural evaluation described the structure of the programme in terms of the national context of the programme, local and organisational context of the interventions, background of the 'HOPE' programme, funding, staffing, target groups, monitoring and evaluation systems. The process evaluation examined the core activities undertaken to achieve project goals and intended outcomes and the outcome evaluation assessed how well the project progressed in improving the well-being of the target population.

At the end of the study, recommendations were made for the programme and community-based interventions in Africa more generally. The recommendations were based on the lessons learnt from the programme for future programme replications and also to advance community-based evaluation in the health sector in Ghana and Africa more generally. In addition, it was based on the emerging challenges confronting community-based interventions in the health sector in Ghana and in Africa more generally.

3.9 Evaluate the 'HOPE' programme

The 'HOPE' programme was evaluated based on the evaluation design described above. A range of secondary data including information from background policy documents, baseline evaluations, monitoring reports and other data sources was added to by new data collected by the researcher. Qualitative and quantitative approaches were employed by the researcher to achieve the set objectives.

An e-mail was sent to the national HIV/AIDS programme director to request all available documents and reports relevant to the 'HOPE' programme. These included a copy of the baseline study report, programme documentation on the 'HOPE' project, management reports and programme reports to sponsors, programme activities and detailed registration information and progress reports on beneficiaries, itemised activity costs of the programme and any other information that was relevant for the study. The following records were received in response to that e-mail; the baseline report, programme reports to sponsors and monthly records containing age, sex, address and the monthly weights. The

baseline report, programme report to sponsors and the literature on HIV/AIDS in Ghana (which generated the National Strategic Framework I & II) were analysed using documentary analysis. The search strategy is detailed in the section of the literature search on HIV/AIDS.

These records or documents, stakeholders' interview transcripts together with the literature on HIV/AIDS in Ghana were used to present the results on the national context and the detailed description of the HOPE programme using a desk-based approach.

The fieldwork was conducted in Ghana to collect any further information needed to enhance the data available to evaluate the HOPE Programme.

Prior to the field trip, ethical approval was sought and granted from the University of Glasgow and School of Medical Sciences in the United Kingdom and Ghana respectively (see Appendix 1). Data were collected and analysed using both quantitative and qualitative methods.

3.9.1 Description of documentary analysis, quantitative and qualitative methods

Documentary analysis, quantitative and qualitative methods were employed for the study. These are described below.

3.9.1.1 Documentary analysis

Theory of documentary analysis

Documentary analysis involves the analyses of data generated from socially produced materials, personal papers, diaries, literature and so on (Bowen 2009). These records or documents can be analysed systematically either qualitatively or quantitatively using the concept of semiotics analysis (where signs and symbols in documents are analysed), content analysis (where data is categorised using codes to produce counts of the frequency generated from words, phrases, themes and so on), diaries analysis (data generated from diaries for analysis),

descriptive qualitative analysis (describes data at face value or literally) and so on (Bowling 2006).

Data analysis

The study had access to two forms of data provided by the programme. The first data included monthly record sheets containing age, sex, address and initial weights of the participants. The initial weights of the sampled participants (weight recorded at the first enrolment into the programme) as recorded in the monthly record sheets were extracted as the previous weight. This was analysed as described in the quantitative analysis section to compare the relationship between the previous and the current weight.

The second data included one baseline report and one technical report to sponsors. Also, one document on the Ghana National Strategic Framework I & II was generated from the literature search. These documents were analysed using qualitative descriptive analysis based on a documentary analysis worksheet, designed and developed by the Education Staff of the National Archives and Records Administration (NARA). The National Archives and Records Administration keeps records of all documents and materials created in the course of business conducted by the United States Federal government (NARA 1970). The documentary analysis worksheet, for the purposes of this study, was modified to contain a framework generated from three components of the policy cycle (see Appendix 7). In this case, the document information column of the worksheet was modified to contain questions which were generated around each component of the policy cycle. The components include; policy formulation, policy implementation and policy accountability (Rist 1994). The analysis of the questions was facilitated by a desk-based approach. This generated three broad headings which mapped on to the questions asked. These are; description of the national context of the intervention, description of the local and organisational context of the intervention, and detailed description of the 'HOPE' programme. This technique was selected to provide a contextual understanding of the policy and practice environment which the programme was implemented.

The data generated from the policy formulation worksheet were analysed to discuss the broad headings; the national context of the HOPE intervention and,

local and organisational context of the intervention. This data was generated from the programme baseline report, reports to sponsors, and the National Strategic Framework I & II based on predetermined questions by the researcher. The questions were;

- A. What is the framework in Ghana to address the HIV/AIDS pandemic?
- B. Why was the framework developed?
- C. Are there any relationships between the 'HOPE' programme and the National Framework?

The analysis of the data generated around A and B were summarised to describe national context of the 'HOPE' intervention whilst those generated around C discussed local and organisational context of the intervention.

The analysis of the data generated from the policy implementation was used to describe the broad heading; detailed description of the programme. This broad heading was generated from the sub-headings; background of the 'HOPE' programme, funding, staffing, target groups and programme activity which mapped on to the questions asked under the policy implementation. The questions were;

- A. How was the programme idea developed?
- B. What were the resources available for programme implementation?
- C. What were the changes that inhibited or enhanced the programme implementation?

These questions were completed from the baseline report and programme reports to sponsor. The analysis of the data generated from A were summarised to describe the background information of the 'HOPE' programme whilst those generated from B and C described the sources of funding, staffing, target groups and programme activity.

The policy accountability further discussed the broad heading; detailed description of the 'HOPE' programme based on the sub-heading; monitoring and evaluation plan of the programme. This sub-heading was generated from the analysis of the data generated from the pre-determined question under this component. The question was;

A. What were the structures in place to assess the programme anticipated or unanticipated outcomes?

The question was completed from the programme report to sponsors and interview transcript of the programme Monitoring and Evaluation Officer. The analysis of the data generated from the question were summarised to discuss the monitoring and evaluation plan of the programme.

3.9.1.2 Quantitative methods

The quantitative method was a structured questionnaire administered to 200 PLHIV. The sample size was not deduced statistically but was a pragmatic decision based on the resources available to the researcher. However, it was felt that a sample size of 200 would be sufficient to allow some multivariable modelling.

Study population

The study population for the surveys were PLHIV belonging to support groups which had been enrolled into the 'HOPE' programme for a minimum of twelve months.

Sampling methods

The sampling strategy employed for the surveys of PLHIV was simple random sampling. This was used to select the PLHIV from the 21 support groups. The sampling strategy created a list of substitutes to be approached in a similar way to take the place of individuals who declined to be part of the study. As a result, a total number of 250 PLHIV were sampled at regular intervals from the sampling frame which was 997. PLHIV were numbered from 1-997 based on the support

group lists supplied by the 'HOPE' Director. The 250 PLHIV were selected from a table of random numbers (Varkevisser et al. 1991). Since the sampling frame consists of 997 units, three digits were used to ensure that all 997 had an equal chance of being included. Without looking at the table, a pen was used to pinpoint one number on the row and two numbers on the column and moved down the page to select the required numbers within the range of 1-997. On moving down the page, numbers within the range of 1-997 were taken. If this was not possible, then movement continued in the same direction until a number within that range was found. This continued until a total number of 250 were selected. The names of the selected 250 PLHIV were ticked in the support groups list. The first 200 PLHIV bearing those numbers were approached at their support group meetings and engaged in structured interviews with their consent.

Data collection technique

The selected PLHIV were contacted at their support group meetings to engage in structured interviews. Prior to this, the researcher recruited two researchers and trained them to assist the data collection. One was trained to help the researcher to administer the structured questionnaire and the other was trained to measure body weight, height and as a recorder for focus group discussions. The training of the researcher who helped to administer the structured questionnaire, focussed on proper translation of the structured questionnaire, information sheet and consent form. These were all prepared in English and then translated into a local language (Twi) which was the medium of communication to the participants. The researcher who measured the body weight and height was trained on the instruments used for both measurements (scale for body weight measurement and body height metre for height measurement). The researchers practiced among themselves to minimise any potential mistakes. Also, the two trained researchers were monitored and supervised whilst administering the questionnaire and taking the measurements. In addition, the researcher went through the questionnaire administered by the colleagues to ensure that all information was correctly entered. At the support group meetings, the sampled PLHIV were called and interviewed based on their names on the list sampled. The interviewers explained to the sampled PLHIV the essence of the study using an information sheet written by the researcher. The information sheet and the consent form were prepared in English. They were

then verbally translated into a local language that was understandable to the individuals who had difficulties in comprehending English. Individual consent was taken to participate or not. Those who agreed to participate in the study were asked to sign or thumbprint a consent form. The data gathered from the PLHIV included information about their background, current circumstances and the interventions they had experienced. In addition, height and their current weight were measured (note that previous weight was recorded on enrolment in the 'HOPE' Programme). The questionnaires were administered to the first 200 sampled PLHIV. All the 200 participants sampled were present at the meeting for the questionnaires administration and completed a questionnaire. This is probably because of the food provided by the programme which was an incentive to encourage participation and completion of the questionnaire as indicated in the interviews with the stakeholders.

Methods for quantitative analysis

The data was entered using SPSS version 15.0. The statistical significance level for all testing was set at 0.05. However a more liberal 0.1 was used for the multivariable analyses as these were exploratory in nature and the findings were used to prompt and feed into qualitative results.

Describing the background of the respondents

Descriptive statistics of demographic variables such as age, sex, religion, previous occupation, current occupation, marital status, education, ethnic group, household size, number of children and ART status were reported.

Comparing the relationship between previous and current employment

A chi-squared test was used to compare the relationship between previous and current employment status.

Comparing the relationship between the previous and current weight

A scatter plot was used to show the relationship between previous and current weight. The null hypothesis of no difference in previous and current weight was tested using a paired samples t-test.

Comparing the relationship between the previous and current BMI

The previous and the current BMI were calculated. These were analysed using WHO expert committee's recommendation on physical growth classifications indicated below;

Normal (BMI= 18.50 - 24.99kg/m²)

Mildly underweight (BMI= 17.00 - 18.49 kg/m²)

Moderately underweight (BMI= 16.00 - 16.99 kg/m²)

Severely underweight (BMI< 16.00 kg/m²)

For overweight, the classification is as follows:

Grade 1 (BMI= 25.00 - 29.99 kg/m²)

Grade 2 (BMI= 30.00 - 39.99 kg/m²)

Grade 3 (BMI> 40.00 kg/m²)

The above was further re-classified into normal, underweight and overweight to estimate the previous and current BMI proportions. The relationship between both proportions was tested using a chi-square test. A line graph was also used to describe the relationship between the previous and the current BMI.

Comparing the relationship between maintained/gained weight versus losing weight and survey variables

Descriptive statistical approaches were used to compare the relationship between the probability of maintaining/gaining weight and survey variables. The Survey variables included support group, ethnic group, age group, sex, region, religion, marital status, ART status, highest level of education, number of children, household size, length of time on the programme, previous occupation, current occupation, entrepreneurial skills, number trained and number using as a vocation.

Assessing the effect of maintaining and gaining weight versus losing weight on survey variables

A logistic regression was performed using maintaining and gaining weight, versus losing weight, as the dependent variable and support group code, age group, sex, previous occupation, current occupation, highest level of education, household size, number of children, length of time on the programme, ART status, entrepreneurial skills, number of skills received and number using as a vocation as independent variables. Any independent variables that had a significant association with the outcome went forward into a multiple logistic regression model. However, age and sex were adjusted for regardless of the significance of the unadjusted associations as they are standard demographic variables to adjust for. This forward selection procedure was adopted because it was not possible with the sample size obtained to put all independent variables in a model and use backward selection.

Comparing the relationship between skilled trained versus none and survey variables

Descriptive statistical approaches were used to compare the relationship between skills trained versus none and survey variables. These variables included : support groups, ethnic group, age group, sex, region, religion, marital status, ART status, highest level of education, number of children, household size, length of time on the programme, previous occupation, current occupation, number trained, and number using as a vocation.

Assessing the effect of skills trained versus none on survey variables

A logistic regression was performed using skills trained, versus none, as the dependent variable and support group, age group, sex, region, previous occupation, current occupation, highest level of education, household size, number of children, length of time on the programme, ART status and weight category as independent variables. The modelling strategy is the same as outlined in section where the effect of maintaining and gaining weight versus losing weight was assessed.

Describing demographic by support groups

For each support group, the frequencies and percentages of age group, sex, previous occupation, current occupation, highest level of education, household size, number of children, length of time on the programme, ART status, entrepreneurial skills, number of skills received, and number using as a vocation are discussed.

Describing what the beneficiaries do with the food and their feelings or opinions on the food rations

Frequency and percentage distribution were used to describe what beneficiaries do with the food. The meals prepared from the food and the frequencies and percentage of each meal were described. The opinion or feelings of beneficiaries were described using frequencies and percentages. Beneficiaries' feelings or opinions and the frequencies and percentages of each feeling or opinion were also explored.

Describing the skills training offered to the beneficiaries and their desired employment

Frequencies and percentage distributions were used to describe the skills offered to the beneficiaries and their desired employment.

3.9.1.3 Qualitative methods

The qualitative methods employed were focus group discussions and interviews with stakeholders.

Study population

The focus group discussions were carried out with a sample of PLHIV from across the 21 support groups.

The interviewed stakeholders were support group coordinators, the OICI regional coordinators, the OICI Monitoring and Evaluation Officer and the National HIV/AIDS Director of OICI Ghana 'HOPE' programme.

Sampling methods

The focus groups were sampled from the 21 support groups. First, a simple random sampling technique was employed to select eight support groups. In this case, twenty-one pieces of paper bearing the names of the 21 support groups were folded and placed in a bowl. This was shaken and the first eight support groups selected were contacted for the focus group discussions. The second part of the randomisation process focussed on selection of participants for the focus group. This resulted in each of the selected support group having eight PLHIV using a paper ballot. In this case 100 pieces of sheets were folded with eight of them bearing 'YES' whilst the rest were bearing 'NO'. These were put in a bowl and at each support group level, individuals who picked 'YES' took part in the focus group discussions.

The stakeholders directly involved in programme implementation were contacted and interviewed. These were eight support group coordinators, the four OICI regional coordinators, the Monitoring and Evaluation Officer and the National HIV/AIDS Director. The eight support group coordinators in-charge of the support groups selected for focus discussions were selected to reconcile any emerging issues from the focus group discussions.

Data collection technique

The eight focus group discussions were held at the support group premises. The discussions were held at their meeting room as a convenient place agreed upon by the participants. Participants, the facilitator and the recorder sat in a circle and open-ended questions were used to start discussions. The focus group attendees were informed of the content and the rules of the discussions using an information sheet and written consent was solicited from the interviewees before they participated in the study. The questions were asked about the supports they received from OICI and its contribution to their health, wellbeing, home and lifestyle, challenges and recommendations. Additional questions were asked to gain a deeper understanding of individual circumstances. The focus group discussions were audio recorded and additional notes were taken where necessary. Each discussion lasted between thirty to forty-five minutes.

The stakeholders were interviewed at their offices. The content of the study was explained to them using an information sheet. They were then asked to sign consent forms indicating their agreement to participate in the study. Interviews with support group coordinators gathered information on support from OICI and other agencies, changes the programme has had on the lives of the PLHIV, types of training or capacity building programmes received from OICI, challenges of delivering the programme and recommendations for the future.

Interviews with the regional coordinators and the M&E officer collected information on their role in the programme, how well the programme has progressed in accordance with the goals and the objective of the programme and their thoughts on perceived challenges and future recommendations.

The interview with the National HIV/AIDS director focused on the structure of the programme, the core activities, how well the programme has progressed in accordance with the goals and the objectives of the programme, challenges and recommendations for the future. All the interviews were audio recorded and additional notes were taken where necessary. Also, copies of available reports, records and documents such as mission statements, annual reports, sponsors reports, registration records and participant's utilisation records were collected for review. This enhanced knowledge about the history, philosophy, goals and

intended outcomes of the programme and other important changes that had emerged in the course of the programme's development.

Transcription

The audio recordings of focus group discussions and semi-structured interviews were allocated a unique identifier by the researcher and transcribed verbatim. The recordings for the focus groups and the stakeholders' interviews were conducted in a local language Twi and English respectively. The researcher translated the focus group discussions into English.

Data coding and analysis

The data were analysed using thematic analysis (Braun and Clarke 2006), facilitated by software (ATLAS Ti). Initial codes were applied to the transcripts, refined and subsequently sorted into potential themes. These were then grouped into three broad categorical headings which mapped on to the questions asked. These are: benefits of the programme, constraints and suggested policy or broad changes. In addition to the above, three broader overriding additional themes were generated. These were level of confidence for programme sustainability and survival, level of programme involvement and beneficiaries' economic enhancement.

Chapter four: Results

This chapter describes the national context of the intervention and the 'HOPE' programme. It then moves on to discuss both the quantitative and the qualitative results.

4.1 Description of national context and the 'HOPE' programme

4.1.1 Description of national context

The first HIV/AIDS case in Ghana was diagnosed in 1986 and fourteen years later, 330,000 adults and 14,000 children were estimated to be living with HIV. The epidemic caused diversion of national resources which could have been used for national development: for example, 59 billion cedi were used to treat HIV/AIDS opportunistic infections in 1999 (excluding antiretroviral treatments) and this figure is projected to rise to 167 billion cedi in 2014, if the current trend continues.

In response to the devastating effect of the disease on the social and economic productivity, two national strategic responses were generated. These are the National Strategic Framework (NSF) I and NSF II. The NSF I was earmarked from 2001-2005 and generated the enactment of several policies and guidelines for smooth implementation of HIV/AIDS programmes in the country. These policies and guidelines included: 2004 National HIV/AIDS and STI Policy, the National HIV/AIDS Workplace Policy, the 2002 Guidelines for Anti-retroviral Therapy, the policy on HIV/AIDS for Faith-Based Organisations (FBOs), the 2003 National Guidelines for the Development and Implementation of HIV Voluntary Counselling and Testing, National Policy Guidelines on Orphans and Vulnerable Children, 1999 Draft National Guidelines for Blood Safety and the National Monitoring and Evaluation Plan of 2001-2005.

In addition, guidelines were further developed to generate plans and specific HIV/AIDS activities appropriate for sector Ministries, Departments, Agencies (MDAs) and District Assemblies (DAs), Non-governmental Organisations (NGOs)

and Civil Society. The successful implementation of the NSF I generated support from the development partners and contributed to an increase in HIV/AIDS awareness and community participation.

Based on the challenges and the lessons learnt from the NSF I, a NSF II was developed for the period 2006-2010 to cater for the emerging HIV/AIDS treatment technologies, care and support, behavioural change communication, the changing nature of the epidemic and the socio-economic environment. The NSF II was developed around seven key interventional areas. These were;

Policy, Advocacy and Enabling Environment

This section solicits support from the political leaders to create a positive environment for the smooth implementation of HIV/AIDS programmes in the country and advocates the involvement of the President as the Chairman of the Ghana AIDS Commission in Ghana's Multisectoral response. These are intended to create an enabling environment to generate resources at local and international levels to address upcoming challenges (in particular the expansion of prevention, treatment, care and support programmes). In addition, it involves the enactment and the enforcement of laws and policies to protect the rights of PLHIV, their families and friends. These include the elimination of discrimination against PLHIV, improving the rights and status of women and the passing into law of bills that had been drafted but not passed.

Prevention and Behavioural Change Communication (BCC)

This section targets specific vulnerable groups such as sex workers and their clients, migratory populations, street youth, women and middle class employed persons. It also directs attention to places where HIV/AIDS is likely to be transmitted. It involves the design and the implementation of Behavioural Change Communication (BCC) programmes to change the on-going strategy from creating awareness among these groups to changing their risky sexual behaviours.

Treatment, Care and Support

This framework indicates the increasing availability, accessibility and affordability of ARVs in developing countries, as a result of stronger bilateral and multi-lateral partnerships and commitment from the international agencies in the fight against HIV/AIDS. The framework therefore makes use of this enabling environment to scale up the provision of ARVs to those who require them. It further indicates the expansion of the institutions, community and family efforts to provide care and support programmes which are feasible and affordable and meet the needs of PLHIV.

Mitigating the Social, Cultural, Legal and Economic Impact

This framework recognises a range of social, cultural, economic and political structures as contributing factors influencing the spread of HIV/AIDS. It therefore identifies and promotes the positive social and cultural responses that can reduce transmission and minimise deleterious effects of the epidemics. Also, it identifies and eliminates the negative social aspects (especially gender issues) militating against reduction of the spread and the impact of the epidemic. It further discusses the mainstreaming of HIV/AIDS programmes into a poverty reduction strategy and the importance of addressing gender-based issues, especially violence, coercion and the marginalisation of women.

Coordination, Management and Institutional Arrangements

This framework describes the importance of strengthening coordination, management and institutional management as components of HIV/AIDS programmes. It therefore defines clearly the functional roles and responsibilities of the Ghana AIDS Commission, all implementers, stakeholders and the need to strengthen the capacity of participants, from the national to the district level, to implement and monitor all steps to combat the spread of the epidemic. It further identifies advocacy as one of the strategies to ensure that HIV/AIDS stays on the political agenda and that politician's stay focused on coordination, policy direction and guidance, partnership development and social mobilisation.

Research, Surveillance, Monitoring and Evaluation

This framework discusses the quality and the type of data to be generated through research, surveillance, monitoring and evaluation to determine the effectiveness of the NSF II throughout the programme implementation period. It involves periodic assessment of the programme to monitor the status and trend of the programme for any necessary adjustments needed for programme inputs, outputs and outcomes to be made. The strategies adopted to strengthen these areas include the development of clear priorities for research. It calls for a national research agenda which includes updating, adopting and using data from evaluations and programme monitoring. This framework is of particular relevance to the outputs from this thesis.

Mobilisation of Resources

This section indicates enhancement and coordination of resource mobilisation and funding to ensure that all committed resources for HIV/AIDS programmes are integrated into the national response. It will further ensure that resources available to implement priority national programmes on HIV/AIDS are sustainable. The strategies adopted to achieve such tasks will include re-engineering the Ghana AIDS Response Fund (GARFUND) into a coordinated multi-donor funding body, developing a transparent and a consultative mechanism for the disbursement of funds, strengthening the mechanism for the monitoring of disbursed funds and increasing the capacity of staff at all levels.

4.1.2 Description of local and organisational context of the interventions

Prior to the implementation of the 'HOPE' programme the provision of care and support programmes for PLHIV and OVC were grossly inadequate and resources and capacity to train health workers, caregivers and institutions were limited and sometimes non-existent. As a result, most PLHIV were seeking treatment from traditional healers and elderly family members back in their villages where inadequate food, coupled with stigmatisation and discrimination, were major problems.

The introduction of the 'HOPE' programme by the OICI was seen as timely and appropriate to complement the government and other international agencies in their efforts to improve care and support programmes for PLHIV and OVC. The programme provided monthly food support, OVC skills training and skills training for PLHIV. In addition, monthly health education inputs were provided. These interventions are seen as contributing factors to four of the key interventional areas of Ghana National Strategic Framework II. These are the Prevention and Behaviour Change Communication, Treatment, Care and Support, Mitigating the Social, Cultural, Legal and Economic Impact and Research, Surveillance, Monitoring and Evaluation.

4.1.3 Detailed description of the 'HOPE' programme

This section discusses the background of the 'HOPE' programme, sources of funding, staffing, target groups and monitoring and evaluation system designed for the programme. The detailed descriptions are indicated below;

4.1.3.1 Background of the 'HOPE' programme

In 2003, OICI decided to implement programmes on HIV/AIDS since most of their programmes had until that time focused on agriculture, micro-finance and other matters. In preparation, they commissioned the OICI National Director of HIV/AIDS Programmes to conduct an assessment of the HIV/AIDS situation in the USAID four regional sites in Ghana since they were expecting the funding from USAID. These regional sites were Ashanti, Greater-Accra, Western and Eastern which were also the four highest HIV/AIDS prevalence sites in Ghana. The assessment revealed that most of the implementing programmes by government and other international agencies were focused on HIV/AIDS prevention. It further indicated that the very few interventions focused on care and support were not comprehensive. It was against this background that the HOPE programme was introduced to improve care, support and economic opportunities for PLHIV and OVC in the country. The programme was a 5-year USAID funded programme which started in 2004 and was completed at the end of 2009.

The main goal of the programme was to improve care, support and economic opportunities for PLHIV and OVC in those four high HIV/AIDS prevalence regions of Ghana. The objectives were:

- (i) To build the capacity and to increase the knowledge and skills of 2000 PLHIV and OVC care and support providers
- (ii) Train 1500 OVCs in vocational skills, entrepreneurial and business development at OIC Ghana's skills training centres in Accra, Takoradi, Kumasi and a vocational school in the Eastern region through the orphan scholarship programme
- (iii) Increase the nutritional intake of 5,600 PLHIV and 3,785 OVC through the distribution of monthly household food rations.

4.1.3.2 Funding

The main funding (about 99.5%) came from the USAID. However, a small amount of funding (0.5%) was received from the Ghana AIDS Commission (GAC) to support the purchase of OVC tools after skills training. Also, in-kind support, such as second hand clothing, detergents and soaps, were raised from a fundraising initiative called "Wipe a Silent Tear" from the private sectors such as Unilever, banks, churches and faith-based organisations. These resources were distributed to the PLHIV and the OVC under the programme.

4.1.3.3 Staffing

The programme was implemented by a number of full-time staff and volunteers. The full-time staff composed the Director of HIV/AIDS Programme, National Logistic Manager, Regional Programme Officers, Regional Logistic officers and the M&E Officer supporting the programme at the national and regional level. The volunteers were the local partners who were the providers of PLHIV and OVC support groups, the Community Health Nurses through the Ghana Health Services (GHS), Traditional Healers, National Association of Positive People (NAPLUS), District Assemblies and the Queen mothers (Traditional women leaders).

4.1.3.4 Target groups

The programme had two main target groups; the primary target groups and the secondary target groups. The primary target groups were the PLHIV and the OVC. The secondary target groups were the community health nurses, the traditional healers, the queen mothers, orphanage caregivers, and OIC counsellors. The primary target groups were the direct beneficiaries of the programme and the secondary target groups were trained to support the primary target groups through counselling. The beneficiaries were selected with support from the NAPLUS and the HIV/AIDS focal persons in the district assemblies based on pre-determined criteria.

4.1.3.5 Programme activity

The programme activities included monthly food support, skills training and capacity building (involving monthly education and training workshops). These were designed to cover the needs of the beneficiaries based on the initial assessment and the challenges that evolved in the course of the programme implementation. The details are discussed below;

Monthly food support

The programme initially provided 20kg of Wheat soy-blend (WSB), 20kg of Soy Fortified Sorghum Grit (SFSG) and 4 litres of fortified vegetable oil. These quantities were based on the initial assessment and lessons learnt from similar programmes in other neighbouring countries. The quantity was also designed to cater for an average household membership of five. However, in the course of the programme implementation, the quantity was reduced to 10kg WSB, 5kg SFSG and 2L of fortified vegetable oil. This change was requested by USAID. The reason was that the Catholic Relief Service (CRS), who was running a similar programme with support from the USAID, was providing half of the initial quantity provided by the OICI. This was creating problems for CRS support groups, and was losing its members to OICI support groups. CRS therefore made an official complaint to the USAID to increase their quantity so that they could

also provide the same quantity as OICI to their beneficiaries. In resolving this, USAID requested OICI to reduce their quantity to that provided by the CRS. The beneficiaries were later given 15kg of wheat to replace the 10kg WSB and 5kg SFSG since both were not coming.

The anthropometric measurement of beneficiaries in terms of their weight was assessed monthly to ascertain any impact of the food contribution on their weight.

Capacity building

The programme provided capacity building in terms of monthly education and training workshops for primary and secondary target groups.

The primary target groups were provided with monthly education and training on HIV prevention, psychosocial and nutritional counselling, home-based care, peer education and other themes as needs dictated. All of the above were based on the programme training module. The programme conducted a survey to examine the impact of the education on the beneficiaries' semi-annually. Those who attended 75% of the training modules, or more, were considered trained.

Also, the secondary target groups were trained on psychosocial counselling. This was to equip them to support the PLHIV and the OVC through counselling and to encourage them to live positively and adhere to their treatments.

Skills training

The skills training covered by the programme comprised income generating activities (IGAs) for the PLHIV and a scholarship programme for the OVC.

The skills training for the PLHIV included community farming, piggery farming, soap making, bead making, powder making, yoghurt making, jam making and others. This training was based on proposals from the groups. The skills training was intended to improve the economic condition of the beneficiaries and to ensure programme sustainability.

OVC scholarships were designed to provide OVC with vocational skills training. The duration of the scholarship was two years either at OICI vocational schools located in Accra, Kumasi and Takoradi or attached to master craftsmen or women to learn a job.

4.1.3.6 Monitoring and evaluation

The programme had internal and external monitoring and evaluation systems.

The internal monitoring and evaluation was conducted by a full time monitoring and evaluation officer employed by the programme. The internal monitoring and evaluation structures were designed to assess the progress of interventions on education, food support and other components of the programme. The educational component was assessed at the end of every six months. In this case, beneficiaries' baseline knowledge on HIV infection and mode of transmission, basic ways of managing opportunistic infections at home and their psychological wellbeing were assessed. Beneficiaries' level of knowledge acquisition was assessed on a six monthly basis after going through regular monthly education, counselling and training workshops. In addition, the weight of beneficiaries was measured monthly to monitor the impact of the food on their weight.

The internal evaluation was designed to measure U.S. President's Emergency Plan for AIDS Relief (PEPFAR) indicators and also to complement the USAID Mini Country Operational Plan (COP).

The external evaluation was conducted by external consultants. The programme had received two evaluations by external consultants. These were the mid-term evaluation and the end of programme evaluation.

4.2 Quantitative results

4.2.1 Introduction and background of respondents

Two hundred PLHIV were interviewed. The background of respondents is described in tables 4.1-4.2. The respondents had a mean age of 39.9 years (SD =

9.4) with 39.0% falling within the age group 30-39 years. Females represented 82.0% of the respondents. Out of the 200 respondents, 179 (89.5%) were Christians, 19 (9.5%) were Moslems and the rest (1.0%) belonged to other religions. Seventy nine percent (79.0%) have had formal education while 21% have had no formal education. Twenty two percent had attended primary, 45.5% Junior Secondary School (JSS), 6.5% Senior Secondary School (SSS) and 5.0% University. Eight percent of the respondents were previously unemployed. Fifty two percent and seventeen percent of the respondents were previously traders and farmers respectively. Currently, 37.5% were unemployed, 35.5% were traders and 12.0% were farmers. Out of the 200 respondents, 43.0% had less than 4 persons in a household and 57.0% had 4 or more. 51.5% had 3 or more children and 48.5% had 2 or less children.

Variable	Frequency (N=200)	Percentage (%)
AGE GROUP (years)		
<30	26	13.0
30 - 39	78	39.0
40 - 49	63	31.5
50 - 59	26	13.0
>60	7	3.5
Mean= 39.9; SD= 9.4		
SEX		
Male	36	18.0
Female	164	82.0
RELIGION		
Christian	179	89.5
Moslem	19	9.5
Others	2	1.0
PREVIOUS OCCUPATION		
Farmer	34	17.0
Trader	105	52.5
Unemployed	17	8.5
Others	44	22.0
CURRENT OCCUPATION		
Farmer	24	12.0
Trader	71	35.5
Unemployed	75	37.5
Others	30	15.0
MARITAL STATUS		
Single	22	11.0
Married	68	34.0
Divorced	58	29.0
Widowed/Widower	52	26.0

Table 4-1 Background of respondents

Variable	Frequency (N=200)	Percentage (%)
EDUCATION		
None	42	21.0
Primary	44	22.0
JSS	91	45.5
SSS	13	6.5
University	10	5.0
ETHNIC GROUP		
Akan	141	70.5
Ewe	12	6.0
Ga	8	4.0
Fante	7	3.5
Northerner	23	11.5
Others	9	4.5
HOUSEHOLD SIZE		
<2	17	8.5
2-3	69	34.5
4-5	66	33.0
6-7	34	17.0
>7	14	7.0
NUMBER OF CHILDREN		
0	15	7.5
1-2	82	41.0
3-4	56	28.0
5-6	37	18.5
>6	10	5.0

Table 4-2 Background of respondents' cont

4.2.2 Comparing the relationship between previous and current employment

Out of the 34 PLHIV who were farmers before enrolment, 10 (29.4%) lost their job and the rest (70.6%) either maintained or gained different job (see Table 4.3). Among 105 who were previously traders, 43 of them (41.0%) became unemployed and the rest (59.0%) maintained or gained a different job.

Seventeen (17) of the respondents were previously unemployed. Eleven (11) of them, representing 64.7%, were still unemployed, whilst the rest (35.3%) gained a different job.

		CURRENT OCCUPATION				Total
		Farmer	Trader	Unem- ployed	Others	
PREVIOUS OCCUPATION	Farmer	19 55.9%	4 11.8%	10 29.4%	1 2.9%	34 100%
	Trader	3 2.9%	54 51.4%	43 41.0%	5 4.8%	105 100%
	Unemployed	-	6 35.3%	11 64.7%	-	17 100%
	Others	2 4.5%	7 15.9%	11 25.0%	24 54.5%	44 100%
Total		24 12.0%	71 35.5%	75 37.5%	30 15.0%	200 100%

Table 4-3 Relationship between previous and current occupation

The association shown in Table 4.3 has a p-value < 0.001 indicating a highly significant association between previous occupation and current occupation. However, a lot of PLHIV have lost the jobs they held previously to be currently unemployed. Also, among 17 of them who were previously unemployed, 6 of them gained job whilst the rest (11) were still unemployed.

4.2.3 Comparing the relationship between previous and current weight

Most of the respondents gained weight as indicated in figure 4.1 below. The mean previous weight was 58.0kg with SD of 11.7. The weight at the time of the study, referred to as current weight, had a mean of 60.0kg with SD of 11.9. The mean difference in weight was 2kg (see Table 4.4) with 95% CI (1.1, 2.9), p value <0.001.

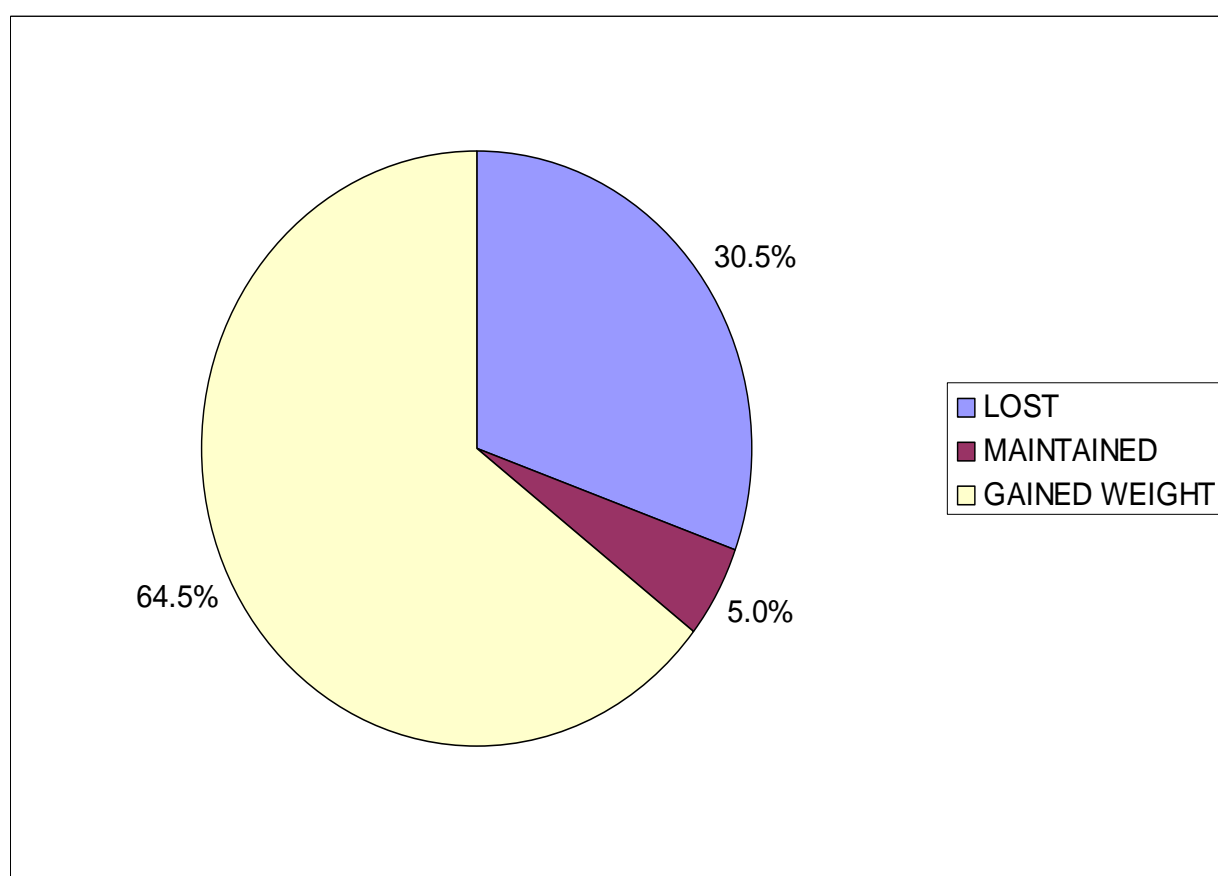


Figure 4-1 Weight trends among PLHIV

Variable	Mean	SD	95%C.I	P-value
Previous weight	58.0	11.7		
Current weight	60.0	11.9		
Difference in mean weight	2.0	6.7	(1.1, 2.9)	[<0.001]

Table 4-4 Mean and Standard Deviation of Previous and Current Weight

This shows the difference in previous and current weight is highly statistically significant. It is also of practical significance, PLHIV have, on average, current weight which is 2kg higher as compared to their previous weight.

A plot of previous weight on the x-axis against current weight on the y-axis is shown in Figure 4.2.

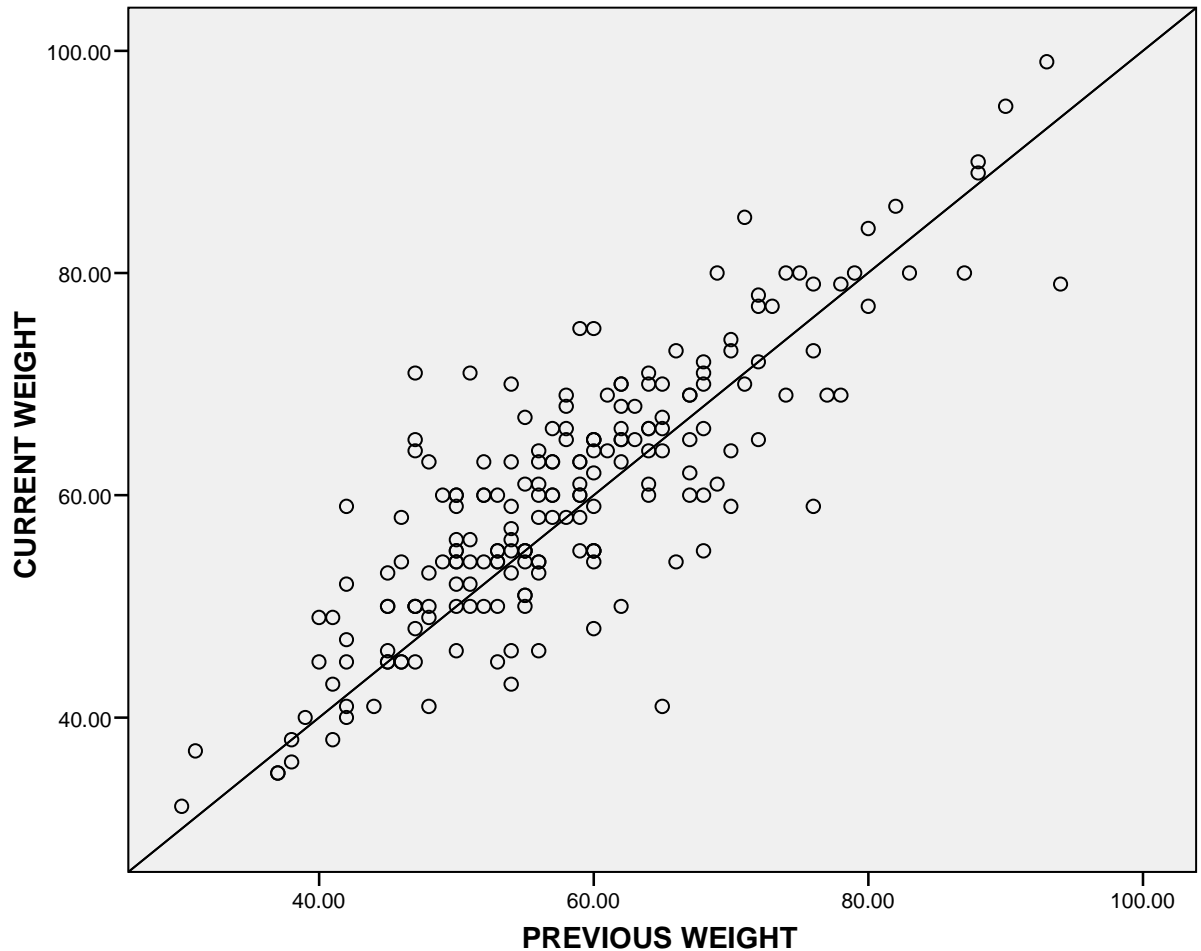


Figure 4-2 A Scatter Plot of Current Weight and Previous Weight

The figure shows that the magnitude of the change in weight does not seem to be influenced by the individual's previous weight. In other words, the average 2kg weight gain is observed regardless of what the individual's previous weight was. More of the circles are located above the line indicating that PLHIV have currently gained weight as compared to the previous weight.

The average difference in weight gained by participants in each support group is shown in table 4.5

Support groups	Mean weight (SD) (kg)		Mean weight difference (SD) (kg)
	Previous mean	Current mean	
1.Together AS One	61.5(15.8)	62.5(16.7)	0.6(5.1)
2.Bomso Clinic	55.4(11.2)	59.3(11.3)	3.9(6.9)
3.Friends of the Vulnerable	54.1(10.8)	56.0(12.2)	1.9(9.7)
4.Liberty	60.4(8.8)	63.1(8.1)	2.7(7.3)
5.JOP	65.6(9.2)	66.3(9.7)	0.7(3.1)
6.GHAFTRAM	64.6(9.3)	68.0(10.0)	3.4(4.5)
7.Perseverance	53.7(5.0)	54.4(6.0)	0.7(4.5)
8.New Generation Concern	46.6(7.8)	48.0(7.7)	1.4(3.4)
9.Ultimate AID Foundation	62.2(11.6)	69.8(10.8)	7.6(5.2)
10.Solace Club	67.7(11.2)	61.7(11.2)	-6.0(8.8)
11.El-Shaddai	56.6(7.8)	61.2(7.5)	4.6(4.1)
12. Friends of the Aged and Invalid	50.8(9.4)	51.3(7.1)	0.5(5.6)

Table 4-5 Weight gained by support groups

This shows that on average, participants in all the support groups gained weight with the exception of Solace Club. As already shown, the average weight gain was 2kg. These results show the great variance in average weight gain observed between the support groups.

4.2.4 Comparing the relationship between previous and current BMI

The mean previous BMI was 23.8 with SD of 4.7 and the mean BMI at the time of the evaluation (current BMI) was 24.6 with SD of 4.6 as indicated in table 4.6. The association between previous and current BMI was highly significant with a p-value < 0.001 (see Table 4.6) which obviously is the same result as for weight (see Table 4.4). This means that, on average, PLHIV have current BMI which is 0.8 units higher as compared to their previous BMI.

Variable	Mean	SD	95%C.I	P-value
Previous BMI	23.8	4.7		
Current BMI	24.6	4.6		
Difference in mean BMI	0.8	2.9	(0.4, 1.2)	[<0.001]

Table 4-6 Mean and Standard Deviation of Previous and Current BMI

Out of 107 PLHIV who had Normal BMI before enrolment into the programme, 79 (76.5%) maintained their BMI, 25 (21.4%) gained weight to become overweight and the rest (2.1%) became underweight (see table 4.7). Among those (21) who were previously underweight, 12 representing 57.1% were still underweight whilst 8 (38.1%) currently had Normal weight. Sixty four PLHIV, representing 88.9% who were overweight before the intervention remained in that BMI category and 8 of them (11.1%) had lost weight to be now classified in the Normal category.

		BMI AFTER PROPORTIONS			Total
		Underweight	Normal	Overweight	
BMI BEFORE PROPORTIONS	Underweight	12 (57.3%)	8 (38.1%)	1 (4.8%)	21
	Normal	3 (2.1%)	79 (76.5%)	25 (21.4%)	107
	Overweight	0	8 (11.1%)	64 (88.9%)	72
Total		15	95	90	200

Table 4-7 Relationships between Current and Previous BMI Proportions

A line graph of previous and current BMI is shown in figure 4.3.

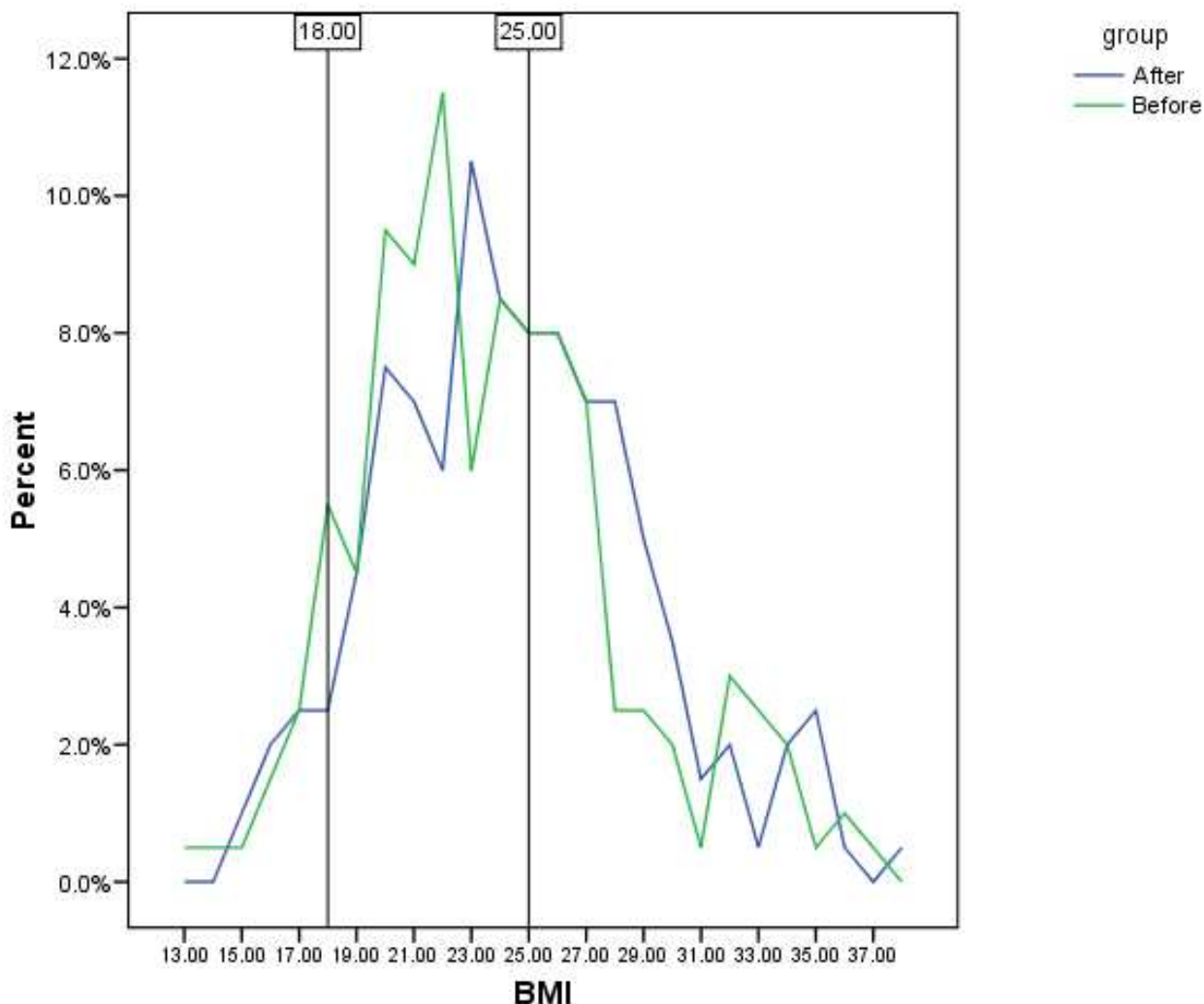


Figure 4-3 A Line Graph of Current and Previous BMI

The graph shows that the whole distribution of BMI has shifted upwards slightly indicating a difference in the current and the previous BMI. This means that generally PLHIV have current BMI which is higher as compared to their previous BMI.

4.2.5 Comparing the relationship between maintained/gained weight versus losing weight and survey variables

Survey variables such as support group, ethnic group, age group, sex, region, religion, marital status, ART status, highest level of education, number of

children, household size, length of time on the programme, previous occupation, current occupation, entrepreneurial skills, number trained and number using as vocation were compared with PLHIV who maintained/gained weight versus losing weight. The results revealed a difference in percentage of maintained/gained weight versus losing weight across the variables.

There were considerable differences seen for the support groups (see tables 4.8-4.11). For example, all the PLHIV (100%) belonging to the Ultimate AID Foundation maintained or gained weight as compared to those belonging to the Solace Club (25.0%) and more than half of the PLHIV (58.3%) belonging to the Friends of the Vulnerable lost weight as compared to the El-Shaddai (9.5%).

Most of the PLHIV (73.1%) in the age group less than 30 years maintained/gained weight as compared to those with age group between 30 and 39 (69.2%). Eighty percent (80.6%) of the males maintained/gained weight as compared to sixty seven percent (67.1%) of the females. Seventy five percent (75%) of the support groups located in the Eastern Region maintained/gained weight as compared to sixty six percent (66.7%) of those in the Greater-Accra region. Seventy seven percent (77.9%) of the PLHIV who were married maintained/gained weight as compared to 63.6% for those who were single. Sixty six percent of the PLHIV who were on ART maintained or gained weight as compared to seventy eight percent (78.3%) of those not on ART. Eighty four percent (84.6%) of the PLHIV who had completed Senior Secondary School maintained/gained weight whilst fifty seven percent (57.1%) of those who had no formal education maintained/gained weight.

In addition, seventy four percent (74.0%) of the PLHIV who had stayed on the programme for less than 12 months maintained/gained weight as compared to sixty percent (60.3%) of those who had been on the programme for more than 24 months. Eighty three percent (83.3%) of those who were currently farmers maintained or gained weight as compared to seventy percent (70.7%) of those currently unemployed. Seventy two percent (72%) of those who had not received any entrepreneurial skills maintained or gained weight whilst fifty six percent (56.7%) of those trained on soap making maintained or gained weight.

These descriptive analyses suggest to varying degrees that there are relationships between the variables support group, age group, sex, marital status, highest level of education, ART status, employment status, the length of time on the programme and the probability of maintaining/gaining weight. For instance, those PLHIV belonging to a support group like Ultimate AID Foundation, in the age group less than 30 years, who have stayed on the programme for less than 12 months, on ART and those with employment status as farmers were most likely to have maintained or gained weight.

In the next section, a more formal analysis is conducted to estimate the magnitude of the independent effects after adjustment and to assess the statistical significance of these results.

Variable	Category	Lost weight	Maintained/ Gained weight	Total
Support Group	Together AS One	6(46.2%)	7(53.8%)	13(100.0%)
	Bomso Clinic	3(18.8%)	13(81.3%)	16(100.0%)
	Friends of the Vulnerable	7(58.3%)	5(41.7%)	12(100.0%)
	Liberty	4(28.6%)	10(71.4%)	14(100.0%)
	JOP	4(30.8%)	9(69.2%)	13(100.0%)
	GHAFTRAM	3(23.1%)	10(76.9%)	13(100.0%)
	Perseverance	3(21.4%)	11(78.6%)	14(100.0%)
	New Generation Concern	7(29.2%)	17(70.8%)	24(100.0%)
	Ultimate AID Foundation	0(0%)	25(100.0%)	25(100.0%)
	Solace Club	15(75.0%)	5(25.0%)	20(100.0%)
	EL-Shaddai	2(9.5%)	19(90.5%)	21(100.0%)
	Friends of the Aged and Invalid	7(46.7%)	8(53.3%)	15(100.0%)
	Ethnic Group	Akan	45(31.9%)	96(68.1%)
Ewe		3(25.0%)	9(75.0%)	12(100.0%)
Ga		3(37.5%)	5(62.5%)	8(100.0%)
Fante		3 (42.9%)	4(57.1%)	7(100.0%)
Northerner		5(21.7%)	18(78.3%)	23(100.0%)
Others		3(33.3)	6(66.7%)	9(100.0%)

Table 4-8 Relationship between maintained/gained weights versus losing weight and survey variables

Variable	Category	Lost weight	Maintained/ Gained weights	Total
Age Group	<30	7(26.9%)	19(73.1%)	26(100.0%)
	30-39	24(30.8%)	54(69.2%)	78(100.0%)
	40-49	17(27.0%)	46(73.0%)	63(100.0%)
	50-59	11(42.5%)	15(57.7%)	26(100.0%)
	>60	2(28.6%)	5(71.4%)	7(100.0%)
Sex	Male	7(19.4%)	29(80.6%)	36(100.0%)
	Female	54(32.9%)	110(67.1%)	164(100.0%)
Region	Ashanti	30(31.6%)	65(68.4%)	95(100.0%)
	Greater-Accra	15(33.3%)	30(66.7%)	45(100.0%)
	Eastern	9(25.0%)	27(75.0%)	36(100.0%)
	Western	7(29.2%)	17(70.8%)	24(100.0%)
Religion	Christian	58(32.4%)	121(67.6%)	179(100.0%)
	Moslem	3(15.8%)	16(82.4%)	19(100.0%)
	Others	0(0%)	2(100.0%)	2(100.0%)
Marital status	Single	8(36.4%)	14(63.6%)	22(100.0%)
	Married	15(22.1%)	53(77.9%)	68(100.0%)
	Divorced	19(32.8%)	39(67.2%)	58(100.0%)
	Widowed/widower	19(36.5%)	33(63.5%)	52(100.0%)
	ART status	Yes	51 (33.1%)	103(66.9%)
	No	10 (21.7%)	36 (78.3%)	46(100.0%)

Table 4-9 Relationship between maintained/gained weights versus losing weight and survey variables cont

Variable	Category	Lost weight	Maintained/ Gained weights	Total
Highest level of education	None	18(42.9%)	24(57.1%)	42(100.0%)
	Primary	14(31.8%)	30(68.2%)	44(100.0%)
	JSS	24(26.4%)	67(73.6%)	91(100.0%)
	SSS	2(15.4%)	11(84.6%)	13(100.0%)
	University	3(30.0%)	7(70.0%)	10(100.0%)
Number of children	0	5(33.3%)	10(66.7%)	15(100.0%)
	1-2	26(31.7%)	56(68.3%)	82(100.0%)
	3-4	16(28.6%)	40(71.4%)	56(100.0%)
	5-6	11(29.7%)	26(70.3%)	37(100.0%)
	>6	3(30.0%)	7(70.0%)	10(100.0%)
Household size	<2	5(29.4%)	12(70.6%)	17(100.0%)
	2-3	21(30.4%)	48(69.6%)	69(100.0%)
	4-5	19(28.8%)	47(71.2%)	66(100.0%)
	6-7	12(35.3%)	22(64.7%)	34(100.0%)
	>7	4(28.6%)	10(71.4%)	14(100.0%)
Length of time on the programme	<12 Months	20(26.0%)	57(74.0%)	77(100.0%)
	12-24 Months	18(27.7%)	47(72.3%)	65(100.0%)
	>24 Months	23(39.7%)	35(60.3%)	58(100.0%)

Table 4-10 Relationship between maintained/gained weights versus losing weight and survey variables cont

Variable	Category	Lost weight	Maintained/ Gained weights	Total
Previous occupation				
	Farmer	9(26.5%)	25(73.5%)	34(100.0%)
	Trader	38(36.2%)	67(63.8%)	105(100.0%)
	Unemployed	3(17.6%)	14(82.4%)	17(100.0%)
	Others	11(25.0%)	33(75.0%)	44(100.0%)
Current occupation				
	Farmer	4(16.7%)	20(83.3%)	24(100.0%)
	Trader	23(32.4%)	48(67.6%)	71(100.0%)
	Unemployed	22(29.3%)	53(70.7%)	75(100.0%)
	Others	12(40.0%)	18(60.0%)	30(100.0%)
Entrepreneurial skills				
	Soap making	13(43.3%)	17(56.7%)	30(100.0%)
	None	45(28.0%)	116(72.0%)	161(100.0%)
	Others	3(33.3%)	6(66.7%)	9(100.0%)
Number trained				
	None	46(28.4%)	116(71.6%)	162(100.0%)
	1	11(37.9%)	18(62.1%)	29(100.0%)
	2	4(44.4%)	5(55.6%)	9(100.0%)
Using as a vocation				
	Yes	2(66.7%)	1(33.3%)	3(100.0%)
	No	59(29.9%)	138(70.1%)	197(100.0%)
Total		61(30.5%)	139(69.5%)	200(100.0%)

Table 4-11 Relationship between maintained/gained weights versus losing weight and survey variables cont

4.2.6 Assessing the effect of maintaining/gaining weight versus losing weight on survey variables

A logistic regression was performed using maintained/gained weight versus lost weight as the outcome variable. The independent variables used were support group, age group, sex, previous occupation, current occupation, highest level of education, length of time on the programme, ART status, household size, number of children, entrepreneurial skills, number of skills received, number using as a vocation, ethnic group and marital status as indicated in tables 4.12 to 4.16. First, each independent variable is fitted one-at-a-time (univariable analyses).

Variable	Variable category	OR	95%CI	P-Value
Support Group	Friends of the Aged and Invalid	1		[0.001]
	Together AS One	1.02	(0.23-4.52)	0.9
	Bomso Clinic	3.79	(0.76-19.05)	0.1
	Friends of the Vulnerable	0.63	(0.14-2.89)	0.5
	Liberty	2.19	(0.47-10.21)	0.3
	JOP	1.97	(0.42-9.32)	0.4
	GHAFTRAM	2.92	(0.57-15.05)	0.2
	Perseverance	3.21	(0.63-16.38)	0.2
	New Generation Concern	2.13	(0.56-8.14)	0.3
	Ultimate AID Foundation	1413540506.33	(0.00)	0.9
	Solace Club	0.29	(0.07-1.22)	0.09
	EL-Shaddai	8.31	(1.41-49.06)	0.02

Table 4-12 Logistic regressions of maintaining/ gaining weight vs. losing weight

NOTE: The overall p-value is in square brackets

In the Ultimate AID Foundation support group, all 25 PLHIV maintained or gained weight. This makes it difficult to calculate the odds ratio as indicated in the table above because it involves a division by zero. Therefore, for the purposes of

these analyses one of the 25 PLHIV was randomly selected using random number generation and treated as lost weight in order to calculate the odd ratios as indicated in the table below.

Variable	Variable category	OR	95%CI	P-Value
Support Group	Friends of the Aged and Invalid	1		[0.001]
	Together AS One	1.02	(0.23-4.53)	0.9
	Bomso Clinic	3.79	(0.76-19.05)	0.1
	Friends of the Vulnerable	0.63	(0.14-2.89)	0.5
	Liberty	2.19	(0.47-10.21)	0.3
	JOP	1.97	(0.42-9.32)	0.4
	GHAFTRAM	2.92	(0.57-15.05)	0.2
	Perseverance	3.21	(0.63-16.38)	0.2
	New Generation Concern	2.13	(0.56-8.14)	0.3
	Ultimate AID Foundation	21.00	(2.23-197.83)	0.01
	Solace Club	0.29	(0.07-1.22)	0.09
	EL-Shaddai	8.31	(1.41-49.06)	0.02

Table 4-13 Logistic regressions of maintaining/ gaining weight vs. losing weight

Overall, there are statistically significant differences in the odds of maintaining/gaining weight (overall p-value=0.001) as shown in the above table. For example, the odds of maintaining/gaining weight for those PLHIV attending the Ultimate AID Foundation and El-shaddai are 21 and 8 times respectively higher than the odds of maintaining/gaining weight for those PLHIV attending Friends of the Aged and Invalid. This means that belonging to support groups like the Ultimate AID Foundation and El-shaddai are associated with a higher probability of maintaining/gaining weight as compared with the Friends of the Aged and Invalid.

Variable	Variable category	OR	95%CI	P-Value
Age Group	>60	1		[0.6]
	<30	1.25	(0.20-7.74)	0.8
	30-39	0.84	(0.15-4.63)	0.8
	40-49	1.08	(0.19-6.12)	0.9
	50-59	0.55	(0.09-3.35)	0.5
Sex	Male	2.03	(0.84-4.93)	0.1
Region	Western	1		[0.9]
	Ashanti	0.89	(0.34-2.38)	0.8
	Greater-Accra	0.82	(0.28-2.42)	0.7
	Eastern	1.24	(0.39-3.94)	0.7
Previous Occupation	Others	1		[0.2]
	Farmer	0.93	(0.33-2.58)	0.8
	Trader	0.56	(0.26-1.24)	0.2
	Unemployed	1.56	(0.38-6.45)	0.5
Current Occupation	Others	1		[0.3]
	Farmer	3.33	(0.91-12.21)	0.06
	Trader	1.39	(0.58-3.37)	0.5
	Unemployed	1.61	(0.66-3.89)	0.3

Table 4-14 Logistic regressions of maintaining/ gaining weight vs. losing weight cont

The table above indicates that there are no statistically significant differences in the odds of maintaining/gaining weight across the age groups, regions, previous and current occupation. However, there are suggestions of statistically significant differences in the odds of maintaining/gaining weight between males and females and across current employment categories. Males have twice the odds of maintaining/gaining weight compared to females (p-value = 0.1) and in the current occupation, farmers have over 3 times the odds of maintaining/gaining weight as compared to those with other occupations (p value = 0.06). This means that PLHIV who are males and those with current employment status as farmers are associated with a higher probability of maintaining/gaining weight as compared with those who are females and those with other current employment status, respectively.

Variable	Variable category	OR	95%CI	P-Value
Highest Level of Education	University	1		[0.3]
	None	0.57	(0.13-2.52)	0.5
	Primary	0.92	(0.21-4.09)	0.9
	JSS	1.13	(0.27-4.72)	0.9
	SSS	2.36	(0.31-17.85)	0.4
Household size	>7	1		0.9]
	<2	0.96	(0.20-4.57)	0.9
	2-3	0.86	(0.24-3.03)	0.8
	4-5	0.99	(0.28-3.55)	0.9
	6-7	0.73	(0.19-2.85)	0.7
Number of Children	>6	1		[1.0]
	0	0.86	(0.15-4.82)	0.9
	1-2	0.87	(0.21-3.64)	0.9
	3-4	1.07	(0.25-4.67)	0.9
	5-6	1.01	(0.22-4.66)	0.9
Length of Time on the Programme	>24 Months	1		[0.2]
	<12 Months	1.87	(0.90-3.90)	0.09
	12-24 Months	1.59	(0.75-3.37)	0.2
ART Status	Yes	0.55	(0.25-1.18)	0.1

Table 4-15 Logistic regressions of maintaining/ gaining weight vs. losing weight cont

Overall, there are no statistically significant differences in the odds of maintaining/gaining weight across the highest level of education, household size, number of children and length of time on the programme as shown in the above table. However, there are suggestions of significant differences in the odds of maintaining/gaining weight for length of time on programme and ART status. The odds of maintaining/gaining weight for those PLHIV who had joined the programme less than 12 months ago is almost twice the odds of maintaining/gaining weight for those who had joined the programme over 24 months ago (p value = 0.09).

Also, the odds of maintaining/gaining weight for those PLHIV who are on ART is half the odds of maintaining/gaining weight for those not on ART respectively (p value = 0.1).

Variable	Variable category	OR	95%CI	P-Value
Entrepreneurial skills	Others	1		[0.3]
	Soap making	0.65	(0.14-3.12)	0.6
	None	1.25	(0.30-5.21)	0.8
Number of skills received	2	1		[0.4]
	None	1.96	(0.50-7.61)	0.3
	1	1.31	(0.29-5.95)	0.7
Number Using as a Vocation	Yes	0.22	(0.02-2.46)	0.2
Ethnic Group	Others	1		[0.8]
	Akan	1.07	(0.26-4.46)	0.9
	Ewe	1.50	(0.22-10.08)	0.7
	Ga	0.83	(0.11-6.11)	0.9
	Fante	0.67	(0.09-5.13)	0.7
	Northerner	1.80	(0.33-9.89)	0.5
Marital Status	Widowed/widower	1		[0.4]
	Single	1.01	(0.36-2.84)	1.0
	Married	1.87	(0.85-4.15)	0.1
	Divorced	1.18	(0.54-2.60)	0.7

Table 4-16 Logistic regressions of maintaining/ gaining weight vs. losing weight cont

The table above shows no statistically significant differences in the odds of maintaining/gaining weight across entrepreneurial skills, number of skills received, number using as a vocation, ethnic group and marital status. However, there is suggestion of significant differences in the odds of maintaining/gaining weight for PLHIV across marital status categories. The odds of maintaining/gaining weight for PLHIV who were married is almost twice the odds of maintaining/gaining weight for those PLHIV who were widowed/widower.

The overall p-values of each of the variables above checked for statistical significance were more than 0.05 with the exception of the support group having the overall p-value <0.05. Also, the overall p-value of sex and ART status was less than 0.1. In addition, those who have joined the programme for less than 12 months, those married and those with their current employment status as farmer had individual p-values less than 0.1.

A multiple logistic regression was performed using support group, age group, sex, length of time on the programme, ART Status, marital status and current occupation as indicated in tables 4.17 and 4.18.

Variable	Variable category	OR	95%CI	P-Value
Support Group	Friends of the Aged and Invalid	1		[0.002]
	Together AS One	1.01	(0.19-5.28)	1.0
	Bomso Clinic	4.20	(0.73-24.05)	0.1
	Friends of the Vulnerable	0.64	(0.12-3.46)	0.6
	Liberty	2.93	(0.53-16.13)	0.2
	JOP	3.34	(0.53-20.99)	0.2
	GHAFTRAM	1.81	(0.26-12.44)	0.5
	Perseverance	3.52	(0.60-20.47)	0.1
	New Generation Concern	1.03	(0.20-5.23)	1.0
	Ultimate AID Foundation	28.76	(2.71-304.71)	0.005
	Solace Club	0.31	(0.07-1.48)	0.1
EL-Shaddai	8.66	(1.30-57.8)	0.03	
Age Group	>60	1		[0.2]
	<30	0.85	(0.11-6.65)	0.9
	30-39	0.81	(0.12-5.70)	0.8
	40-49	1.07	(0.15-7.54)	0.9
	50-59	0.26	(0.03-2.05)	0.2

Table 4-17 Multiple regression of maintaining/ gaining weight vs. losing weight

Variable	Variable category	OR	95%CI	P-Value
Sex	Male	2.62	(0.83-8.25)	0.1
Current Occupation	Others	1		[0.3]
	Farmer	4.07	(0.82-20.16)	0.1
	Trader	2.08	(0.65-6.68)	0.2
	Unemployed	2.16	(0.69-6.73)	0.2
Length of Time on the Programme	>24 Months	1		[0.9]
	<12 Months	0.94	(0.32-2.73)	0.9
	12-24 Months	0.75	(0.25-2.23)	0.6
ART Status	Yes	0.41	(0.14-1.17)	0.1

Table 4-18 Multiple regression of maintaining/ gaining weight vs. losing weight cont

After adjustment, there is still a significant association between support group and the odds of maintaining/gaining weight (p-value = 0.002). Indeed, the size or effect for Ultimate AID Foundation has increased. The odds of maintaining/gaining weight for those PLHIV attending the Ultimate AID Foundation is almost 29 times higher than the odds of maintaining/gaining weight for those PLHIV attending Friends of the Aged and Invalid (the unadjusted OR was 21.0). Also, there are still no statistically significant differences between age group, length of time on the programme and current occupation and the odds of maintaining /gaining weight after adjustment. However, there are suggestions of significant associations between sex, ART status and those with current employment status as farmers. The odds of maintaining/gaining weight for males are almost 3 times higher as compared to females (the unadjusted OR was 2.03). It is also important to note that after adjustment, farmers have about 4 times higher the odds of maintaining/gaining weight as compared to those with other occupation (the unadjusted OR was 3.33).

This is an indication that, after adjustment there is still association between maintaining/gaining weight and support groups. Also, there is a suggestion of association between maintaining/gaining weight and specific variables like males, farmers and ART status.

4.2.7 Describing the skills offered to the beneficiaries and their desired employment

One hundred and sixty one (80.5%) individuals had not received any skills training and only 39 (19.5%) had been trained. Skills training included soap making, powder preparation, jam, yoghurt, beads making, tie & dye. Seventeen percent of the respondents attributed the non-use of skills to lack of initial capital, 80.5% to not being trained and 1.0% to not well being trained. On their desired employment, almost three-quarters of respondents (70%) indicated petty trading.

4.2.8 Comparing the relationship between skilled trained versus none and survey variables

Skills trained versus none was compared with survey variables : support groups; ethnic group, age group; sex; region; religion; marital status; ART status; highest level of education; number of children; household size; length of time on the programme; previous occupation; current occupation; number trained; and number using as a vocation. The results revealed a difference in percentage across the variables as indicated in tables 4.19-4.22.

There is a difference in percentage of skilled trained versus none across the support groups. For instance, ninety two percent (92.3%) of the PLHIV belonging to the Together AS One support group had been skills trained whilst none of those belonging to the liberty, Perseverance, Ultimate AID Foundation, Solace Club and EL-Shaddai had received any skills training.

Also, twenty eight percent (28.6%) of the PLHIV aged greater than 60 years had received skills training as compared to eleven percent (11.5%) of those aged less than 30 years, twenty two percent (22.2%) of the males had been skills trained

as compared to eighteen percent (18.9%) of the females and twenty six percent (26.9%) of the widowed/widower had received skills training as compared to twenty two percent (22.1%) of those who were married.

In addition, more of the PLHIV (46.2%) who had completed SSS had received skills training as compared to sixteen percent (16.7%) of those who had no formal education, forty four percent (44.8%) of those who had stayed on the programme for more than 24 months had been trained on a skill as compared to two percent (2.6%) of those who had joined the programme for less than 12 months and twenty percent (20%) of those currently unemployed had received skills training as compared to seventeen percent (17.6%) of those who were previously unemployed.

These descriptive analyses suggest to varying degrees, there are relationships between skills trained and variables like length of time on the programme, current occupation, level of education, marital status and support group. For instance, PLHIV who have stayed on the programme for more than 24 months, were currently unemployed, had formal education, widowed and belonging to a specific support group like Together AS One were more likely to be trained on a skill.

In the next section, a more formal analysis is conducted to estimate the magnitude of the independent effects after adjustment and to assess the statistical significance of these results.

Variable	Category	Skilled trained	None	Total
Support Group	Together AS One	12(92.3%)	1(7.7%)	13(100.0%)
	Bomso Clinic	1(6.3%)	15(93.8%)	16(100.0%)
	Friends of the Vulnerable	9(75.0%)	3(25.0%)	12(100.0%)
	Liberty	0(0%)	14(100.0%)	14(100.0%)
	JOP	6(46.2%)	7(53.8%)	13(100.0%)
	GHAFTRAM	8(61.5%)	5(38.5%)	13(100.0%)
	Perseverance	0(0%)	14(100.0%)	14(100.0%)
	New Generation Concern	2(8.3%)	22(91.7%)	24(100.0%)
	Ultimate AID Foundation	0(0%)	25(100.0%)	25(100.0%)
	Solace Club	0(0%)	20(100.0%)	20(100.0%)
	EL-Shaddai	0(0%)	21(100.0%)	21(100.0%)
	Friends of the Aged and Invalid	1(6.7%)	14(93.3%)	15(100.0%)
	Ethnic Group	Akan	34(24.1%)	107(75.9%)
Ewe		0(0%)	12(100.0%)	12(100.0%)
Ga		0(0%)	8(100.0%)	8(100.0%)
Fante		0(0%)	7(100.0%)	7(100.0%)
Northerner		5(21.7%)	18(78.3%)	23(100.0%)
Others		0(0%)	9(100.0%)	9(100.0%)

Table 4-19 Relationship between skilled trained versus none and survey variables

Variable	Category	Skilled trained	None	Total
Age Group	<30	3(11.5%)	23(88.5%)	26(100.0%)
	30-39	9(11.5%)	69(88.5%)	78(100.0%)
	40-49	18(28.6%)	45(71.4%)	63(100.0%)
	50-59	7(26.9%)	19(73.1%)	26(100.0%)
	>60	2(28.6%)	5(71.4%)	7(100.0%)
Sex	Male	8(22.2%)	28(77.8%)	36(100.0%)
	Female	31(18.9%)	133(81.1%)	164(100.0%)
Region	Ashanti	36(37.9%)	59(62.1%)	95(100.0%)
	Greater-Accra	0(0%)	45(100.0%)	45(100.0%)
	Eastern	1(2.8%)	35(97.2%)	36(100.0%)
	Western	2(8.3%)	22(91.7%)	24(100.0%)
Religion	Christian	34(19.0%)	145(81.0%)	179(100.0%)
	Moslem	5 (26.3%)	14(73.7%)	19(100.0%)
	Others	0 (0%)	2(100.0%)	2(100.0%)
Marital status	Single	3(13.6%)	19(86.4%)	22(100.0%)
	Married	15(22.1%)	53(77.9%)	68(100.0%)
	Divorced	7(12.1%)	51(87.9%)	58(100.0%)
	Widowed/widower	14(26.9%)	38(73.1%)	52(100.0%)

Table 4-20 Relationship between skilled trained versus none and survey variables cont

Variable	Category	Skilled trained	None	Total
ART status	Yes	29(18.8%)	125(81.2%)	154(100.0%)
	No	10 (21.7%)	36(78.3%)	46(100.0%)
Highest level of education	None	7(16.7%)	35(83.3%)	42(100.0%)
	Primary	8(18.2%)	6(81.8%)	44(100.0%)
	JSS	17(18.7%)	74(81.3%)	91(100.0%)
	SSS	6(46.2%)	7(53.8%)	13(100.0%)
	University	1(10.0%)	9(90.0%)	10(100.0%)
Number of children	0	2(13.3%)	13(86.7%)	15(100.0%)
	1-2	12(14.6%)	70(85.4%)	82(100.0%)
	3-4	15(26.8%)	41(73.2%)	56(100.0%)
	5-6	7(18.9%)	30(81.1%)	37(100.0%)
	>6	3(30.0%)	7(70.0%)	10(100.0%)
Household size	<2	0(0%)	17(100.0%)	17(100.0%)
	2-3	11(15.9%)	58(84.1%)	69(100.0%)
	4-5	17(25.8%)	49(74.2%)	66(100.0%)
	6-7	7(20.6%)	27(79.4%)	34(100.0%)
	>7	4(28.6%)	10(71.4%)	14(100.0%)

Table 4-21 Relationship between skilled trained versus none and survey variables cont

Variable	Category	Skilled trained	None	Total
Length of time on the programme	<12 Months	2(2.6%)	75(97.4%)	77(100.0%)
	12-24 Months	11(16.9%)	54(83.1%)	65(100.0%)
	>24 Months	26(44.8%)	32(55.2%)	58 (100.0%)
Previous occupation				
	Farmer	8(23.5%)	26(76.5%)	34(100.0%)
	Trader	18(17.1%)	87(82.9%)	105(100.0%)
	Unemployed	3(17.6%)	14(82.4%)	17(100.0%)
	Others	10(22.7%)	34(77.3%)	44(100.0%)
Current occupation				
	Farmer	5(20.8%)	19(79.2%)	24(100.0%)
	Trader	11(15.5%)	60(84.5%)	71(100.0%)
	Unemployed	15(20.0%)	60(80.0%)	75(100.0%)
	Others	8(26.7%)	22(73.3%)	30(100.0%)
Number trained				
	None	1(0.6%)	161(99.4%)	162(100.0%)
	1	29(100.0%)	0(0%)	29(100.0%)
	2	9(100.0%)	0(0%)	9(100.0%)
Using as a vocation				
	Yes	3(100.0%)	0(0%)	3(100.0%)
	No	36(18.3%)	161(81.7%)	197(100.0%)
Total		39(19.5%)	161(80.5%)	200(100.0%)

Table 4-22 Relationship between skilled trained versus none and survey variables cont

4.2.9 Assessing the effect of skills trained versus none on survey variables

Skills trained versus none were used as an outcome variable to perform logistic regression. The independent variables used were support group, age group, sex, marital status, region, previous occupation, current occupation, highest level of education, household size, number of children, length of time on the programme, ART Status and weight category as shown in tables 4.23-4.25.

Variable	Variable category	OR	95%CI	P-Value
Support Group	Friends of the Aged and Invalid	1		[0.001]
	Together AS One	168.0	(9.46-2983.99)	0.001
	Bomso Clinic	0.93	(0.05-16.39)	1.0
	Friends of the Vulnerable	42.0	(3.76-469.09)	0.002
	Liberty	2.33	(0.19-29.04)	0.5
	JOP	12.0	(1.20-120.08)	0.03
	GHAFTRAM	22.4	(2.21-227.05)	0.009
	Perseverance	1.08	(0.06-19.05)	1.0
	New Generation Concern	1.27	(0.11-15.39)	0.9
	Ultimate AID Foundation	0.58	(0.03-10.08)	0.7
	Solace Club	0.74	(0.04-12.82)	0.8
EL-Shaddai	0.70	(0.04-12.16)	0.8	
Marital Status	Widowed/widower	1		[0.2]
	Single	2.33	(0.60-9.12)	0.2
	Married	1.30	(0.56-3.01)	0.5
	Divorced	2.68	(0.99-7.30)	0.05

Table 4-23 Logistic regressions of skills trained vs. none

NOTE: The overall p-value is in square brackets

Overall, there are statistically significant differences in the odds of being skills trained across the support groups (overall p-value=0.001) as shown in the table above. For instance, the odds of being skills trained for those PLHIV attending the Together as One and Friends of the Vulnerable are 168 and 42 times respectively higher than the odds of being skills trained for those PLHIV attending Friends of the Aged and Invalid. Also, there is a significant associations in the odds of being skills trained and PLHIV who were divorced (p-value=0.05). PLHIV who were divorced had twice the odds of being skills trained as compared to those who were widowed/widower. This is indications that belonging to a support group and being divorced are associated with skills trained.

Variable	Variable category	OR	95%CI	P-Value
Age Group	>60	1		[0.06]
	<30	0.35	(0.05-2.41)	0.3
	30-39	0.32	(0.05-1.92)	0.2
	40-49	1.00	(0.18-5.63)	1.0
	50-59	1.11	(0.18-6.99)	0.9
Sex	Male	1.43	(0.61-3.35)	0.4
Region	Western	1		[0.001]
	Ashanti	6.71	(1.49-30.25)	0.01
	Greater-Accra	0.25	(0.02-2.91)	0.3
	Eastern	0.31	(0.03-3.68)	0.4
Previous Occupation	Others	1		[0.9]
	Farmer	1.05	(0.36-3.02)	0.9
	Trader	0.75	(0.32-1.78)	0.5
	Unemployed	1.73	(0.17-3.05)	0.7
Current Occupation	Others	1		[0.6]
	Farmer	0.72	(0.20-2.59)	0.6
	Trader	0.50	(0.18-1.42)	0.2
	Unemployed	0.75	(0.28-1.99)	0.6

Table 4-24 Logistic regressions of skills trained vs. none cont

The above table shows no statistically significant difference in the odds of being skills trained across age group, sex, previous occupation and current occupation. However, the odds of skills trained across the region showed a significant association (overall p-value=0.001). For example, the odds of being skills trained for those support group located in Ashanti Region is almost 7 times higher than the odds of being skills trained for those located in Western Region.

This means that belonging to a support group and the region where the support group is located is associated with skills trained. However, there is no association between age group, sex, previous occupation, current occupation and skills trained.

Variable	Variable category	OR	95%CI	P-Value
Highest Level of Education	University	1		[0.2]
	None	1.80	(0.20-16.57)	0.6
	Primary	2.00	(0.22-18.11)	0.5
	JSS	2.22	(0.26-18.66)	0.5
	SSS	7.71	(0.75-79.77)	0.1
Household size	>7	1		[0.7]
	<2	0.33	(0.05-2.18)	0.3
	2-3	0.64	(0.17-2.33)	0.5
	4-5	0.94	(0.26-3.37)	0.9
	6-7	0.65	(0.16-2.70)	0.6
Number of Children	>6	1		[0.5]
	0	0.36	(0.05-2.68)	0.3
	1-2	0.44	(0.10-1.93)	0.3
	3-4	0.85	(0.20-3.74)	0.8
	5-6	0.54	(0.11-2.65)	0.5
Length of Time on the Programme	>24 Months	1		[0.001]
	<12 Months	0.03	(0.007-0.15)	0.001
	12-24 Months	0.28	(0.12-0.63)	0.002
ART Status	Yes	0.87	(0.39-1.95)	0.7
Weight category	Lost Weight	1.89	(0.92-3.86)	0.08

Table 4-25 Logistic regressions of skills trained vs. none cont

There are statistically significant differences in the odds of being skills trained across the length of time on the programme (overall p-value=0.001) as indicated in the above table. For instance, the odds of being skills trained for those PLHIV who have joined the programme for less than 12 months and 12-24 months are only 3% and 28% of the odds, respectively, of being skills trained for those PLHIV who has joined the programme for more than 24 Months. The odds of being skills trained across the highest level of education, household size, number of children, ART Status and weight category showed no statistically significant difference. However, there is a suggestion of association in the odds of being skills trained and those with SSS as the highest level of education (p-value=0.1). The odd of being skills trained for those with SSS as educational level is 7 times higher than the odds of being skills trained for those with educational level as university.

This is an indication that there is an association between the length of time on the programme and the skills trained. There is no association between the highest level of education, household size, number of children ART Status, weight category and skills trained. However, there is a suggestive association between those who have completed SSS and skills trained.

The overall p-value of these variables; support group, age group, region and length of time on the programme was less than 0.05. This is an indication that the type of support group a PLHIV belongs; the region where the support group is located; the age group of the PLHIV and the length of time a PLHIV has been on the programme are associated with being trained on vocational skills.

A multiple logistic regression was further computed using support group, age group, sex, region, length of time on the programme, highest level of education and weight category as indicated in the tables 4.26-4.27.

Variable	Variable category	OR	95%CI	P-Value
Support Group	Friends of the Aged and Invalid	1		[0.001]
	Together AS One	251.12	(9.15-6894.71)	0.01
	Bomso Clinic	0.88	(0.04-18.16)	0.9
	Friends of the Vulnerable	31.63	(2.13-469.04)	0.01
	Liberty	2.56	(0.16-41.87)	0.5
	JOP	15.24	(1.02-227.37)	0.05
	GHAFTRAM	23.33	(1.50-362.90)	0.02
	Perseverance	2.81	(0.12-67.94)	0.5
	New Generation Concern	2.62	(0.16-43.75)	0.5
	Ultimate AID Foundation	1.25	(0.05-29.14)	0.9
	Solace Club	0.72	(0.04-14.77)	0.8
EL-Shaddai	1.58	(0.06-39.49)	0.7	
Age Group	>60	1		[0.5]
	<30	0.75	(0.08-7.39)	0.8
	30-39	0.80	(0.10-6.51)	0.8
	40-49	1.81	(0.24-13.56)	0.6
	50-59	1.44	(0.16-13.05)	0.7
Sex	Male	1.30	(0.43-3.93)	0.6
Region	Western	1		[0.001]
	Ashanti	4.61	(0.90-23.56)	0.07
	Greater-Accra	0.37	(0.04-3.24)	0.4
	Eastern	0.60	(0.07-5.39)	0.6

Table 4-26 Multiple regression of skills trained vs. none

Variable	Variable category	OR	95%CI	P-Value
Length of Time on the Programme	>24 Months	1		[0.006]
	<12 Months	0.15	(0.05-0.49)	0.002
	12-24 Months	0.43	(0.16-1.16)	0.1
Highest Level of Education	University	1		[0.2]
	None	1.38	(0.16-12.23)	0.7
	Primary	1.09	(0.14-8.38)	0.9
	JSS	1.58	(0.23-10.95)	0.6
	SSS	7.53	(0.74-77.05)	0.09
Weight category	Lost Weight	2.38	(0.94-6.00)	0.07

Table 4-27 Multiple regressions of skills trained vs. none cont

After adjustment, there is still a significant difference between support group (p-value=0.001), region (p-value=0.001), length of time on the programme (p-value=0.006) and the odds of being skills trained. The effect on specific support group has increased. For instance, the odds of being skills trained for those PLHIV attending the Together as One is 251 times higher than the odds of being skills trained for those PLHIV attending Friends of the Aged and Invalid (the unadjusted OR was 168). There are still no statistically significant differences between the age group, sex, highest level of education and the odds of being skills trained after adjustment. However, there are suggestions of association between weight category (p-value=0.07), those with SSS educational level (p-value=0.09) and the odds of being skills trained. For instance, the odds of being skills trained for those who lost weight is twice higher than those who maintained/gained weight.

This means that the association between support group, length of time on the programme and skills trained were maintained after adjustment and effect on specific support group even increased.

4.2.10 Describing demographic variables by support groups

The demographic characteristics of the support groups in which respondents were interviewed are tabulated (see Appendix 4). Respondents were interviewed from 12 support groups. Most of the respondents were between the age group of 30 and 39 years. EL-Shaddai had majority of their beneficiaries (28.6%) below the age group of 30 years with Solace having the least (5.0%). Among the support groups, Friends of the Vulnerable had most of their members (75%) above 50 years and Solace had the least (5.0%). GHAFTRAM had majority (53.8%) of their respondents as males. All the respondents (100%) from the Friends of the Vulnerable and JOP were females. Among all the support groups, New Generation Concern had majority (16.7%) of their respondents previously unemployed whilst Friends of the Vulnerable and Friends of the Aged and Invalid had the least (0%). All the respondents (100%) belonging to the Friends of the Vulnerable and Friends of the Aged and Invalid support groups were previously employed. However, Friends of the Aged and Invalid had most of their respondents (80%) currently unemployed with Liberty having the least (14.3%). Most of the respondents had been formally educated. All the respondents (100%) in JOP had been formally educated. The majority (41.7%) of the respondents belonging to New Generation Concern had no formal education whilst Bomso Clinic had the least (6.3%). The majority of the respondents had stayed more than 12 months on the programme. Perseverance had most of their respondents (85.7%) on the programme less than 12 months. All the respondents (100%) in the Liberty, Perseverance, Ultimate AID Foundation, Solace Club and EL-Shaddai support groups had no entrepreneurial skills training. Together AS One had most of their beneficiaries (92.3%) trained on entrepreneurial skills. Among the support groups trained on entrepreneurial skills, only two of them, Together AS One (15.4%) and GHAFTRAM (7.7%) had their members using as a vocation.

4.2.11 Describing what the beneficiaries do with the food and their feelings or opinions on the food rations

Two main rations were provided by the programme at the time of the evaluation. These were soy-fortified wheat and vegetable fortified oil. Almost all the respondents (89.0%) indicated they liked the food rations. On the usage

of the food rations, 115 of them (77.5%) eat all, 11 (5.5%) eat and sell some and 34 (17.0%) eat and give some out as a gift. The vegetable fortified oil was used for the preparation of stew. Typical meals prepared from the soy-fortified wheat were porridge, jollof and cooked raw wheat. On the type of meals prepared from soy-fortified wheat, the majority (94.5%) mentioned porridge as indicated in table 4.28 below.

Food	Frequency	Percentage
Porridge	189	94.5
Jollof Wheat	85	42.5
Cooked raw wheat	21	10.5

Table 4-28 Number of times a meal included in a menu

Note: These values are not mutually exclusive

Almost all the respondents perceived changes in their lifestyles as a result of the food. Respondents mentioned the changes as gained weight, being healthy and reduced financial burden. On the changes respondents perceived on their lifestyles as a result of the food, more than half (62%) perceived to be healthy as shown in table 4.29 below.

Changes	Frequency	Percentage
Gained weight	82	41.0
Healthy	124	62.0
Reduced Financial Burden	48	24.0

Table 4-29 Effect of food rations as perceived by beneficiaries

Note: These values are not mutually exclusive

4.3 People's views and experiences of the programmes

The aim of the qualitative element of the research was to explore the programme from the perspectives of the people involved; both beneficiaries and stakeholders. In the following, the views of beneficiaries are first presented, followed by the views of the stakeholders. The beneficiaries' and the

stakeholders' views are first discussed under three broad categorical headings (which map onto the questions asked); the benefits of the programme, the constraints of the programme and suggested policy or broader changes. Following this, three broader themes are discussed; the level of confidence about programme sustainability and survival, level of programme involvement and beneficiaries' economic enhancement. The intention is not to generate exhaustive accounts of these categories, but to present some of the essential issues that emerged from the focus groups and interviews.

4.3.1 Beneficiaries' views and experiences

Benefits of the programme as perceived by the beneficiaries

Beneficiaries were generally positive about the support received from the 'HOPE' programme:

Before they came to help us the disease was killing us massively, we were dying of the disease, but since they came in, the rate has reduced (4th speaker, FG 2).

Participants' views about each aspect of the main programme activities (food rations, skills training and the educational workshops) are discussed below in turn.

Food support

As noted in section 4.2.11, beneficiaries' indicated receiving WSB (commonly called tombrown); SFSG (commonly called sorghum); yellow corn and oil at the beginning of the programme; wheat and oil were the food rations currently received:

First they were giving us tombrown, then later yellow and sorghum and now wheat and oil (2nd speaker, FG 2).

The food support generated a lot of discussion, with beneficiaries describing it as timely, and as providing tremendous benefits to strength and overall health:

Life was very difficult before OICI came in, because, before you don't even have food to eat. They have helped us to get food to eat. The food gives us strength (1st speaker, FG 8).

[...] the food helps us a lot. It gives us strength and when we check our body weight, we observe that we have gained some weight (2nd speaker, FG 4).

With some suggesting that it served to counteract the impact of the ART drugs on hunger:

Please the drug is very strong. Small time you feel hungry so when you don't have money and the food is not available, you suffer a lot. Sometimes you can even add sugar to it and eat (5th speaker, FG 6).

According to participants, the food support was a very important aspect of the programme, with most of their peers attending meetings because of the food:

We have realized that most of the clients need food. If there is food, the association will be sustained or we will get more people to join but if they refused to give us food, some of them won't come but go and join other associations (1st speaker, FG 4).

My opinion is that, when there was food, we were many but when the food got finish, our number reduced (people laugh) so will like them to help us by bringing food so that the others will attend meetings (5th speaker, FG 4).

Skills training

Beneficiaries had very little to say about the benefits of the skills training, with much of the discussion focussed on suggested policy or broader changes (as the first quote shows), or frustration around the amount of skills training provided (illustrated in the second quote and discussed further below):

Most of us are unemployed, so if they would help us to get some work, it will help (8th speaker, FG 8).

They told us to discuss among ourselves our preferred skills and also the names of our children with the skills they intend to learn. We have submitted the names but have not seen anything (4th speaker, FG 2).

Education and training workshops

Beneficiaries were positive about the training workshops and health education provided by the programme. In terms of the training workshops, they reported being trained as HIV/AIDS counsellors and as peer educators (Model of Hope):

They gave us a lot of teachings about the HIV disease, how it comes about and side effects, how to relate well with others in the form of counselling (5th speaker, FG 4).

In terms of health education, beneficiaries indicated receiving education around drug adherence; nutritional advice; personal hygiene and life style; and HIV/AIDS and its side effects. They reported that this provided the understanding and information necessary for the beneficiaries to care for themselves properly:

Please when they come, they educate us on nutrition. For instance, they tell us to eat beans or fish but not meat because it is not good for us. So they tell us to eat eggs, palm oil and kontonmire (cocoyam leaves) and things like that. Also cabbage, pawpaw and carrot are also good for our health so they educate us on them (5th speaker, FG 5).

They have helped us to take our drugs without mixing with any traditional herbal concoctions (7th speaker, FG 8).

Participants reported that this in turn provided them with hope and motivation:

They gave us hope and motivated us not to isolate ourselves or look down on ourselves because of our situation. So they always encourage us to be

happy so that we would not be sad about our situation (6th speaker, FG 8).

As a result of your help and education we've put away all anxieties and have taken the path of protecting ourselves and living a better life (2nd speaker, FG 3).

Some of the PLHIV further perceived the health education delivered by their peers (Model of Hope) as a particular strength of the programme. According to them, the 'Model of Hope' volunteers were able to talk to, and encourage those newly infected, more than the health workers:

Please it is not OICI but rather M-SHARP that trained us but they couldn't support the group well so OICI came in but when OICI took over, they took us through refresher course and after the refresher course, they brought others from other organisations to join us, distributing us among the hospitals. They sent us and we are really working hard. In fact the way we even talk to some of the clients give encourages them greatly than even what the workers tell them (3rd speaker, FGD 4).

Some participants even reported being given the courage to be open about their status:

We were not comfortable with life. We didn't even know how to come for drugs, but since the arrival of OICI, we have been activated so that we can come out boldly (4th speaker, FG 8).

Constraints of the programme as perceived by PLHIV

Beneficiaries highlighted some constraints associated with each of the main activities of the programme (food rations, skills training, and educational workshops) as well as issues beyond the programme activities. These are discussed in turn below.

Food support

Participants highlighted issues with the quantity of food received and with the variety and distribution of foodstuffs:

As for the wheat, we have eating it too much so please tombrown and even rice (4th speaker, FG 7).

Okay even though they bring food to us, but sometimes I think the storing keeps too long to the extent that the stored food goes bad (1st speaker, FGD 2).

The interruption of the supply of food was further perceived to have a direct effect on their health:

For two months we have not received food our health has deteriorated very fast, our health is not good at all (5th speaker, FG 1).

Also, they indicated that the food was helpful but sometimes they sold it to gain money for their medication:

The situation is, eating the food is very helpful but due to financial difficulties some of us sell the food. The reasons we do that is that, sometimes we need to buy the drugs meanwhile you are financially handicap, so you are forced to do so even though that is not desired (3rd speaker, FG 3).

Skills training

Only two groups out of eight indicated receiving skills training. The beneficiaries recognised the importance of this training and the lack of training was a major source of frustration:

What I also observe is that they cannot give us the food forever. So what we prefer is for them to train us in any income generating activity so that we will be independent and work on our own to take care of ourselves (2nd speaker, FG 4).

Most of us are unemployed, so if they would help us to get some work so that at the end of the month, we will get something small to take care of our children (8th speaker, FG 8).

Those that had received the training felt that they still required support in order to establish themselves:

What I will say is that they have helped us as a group if they can also help us to put the vocational skills we have learnt into individual trade, we will appreciate and thank them (5th speaker, FG 2).

The soap making, when we were trained, we did not have any money to start the project, so the soap making activity slowed down (5th speaker, FG 2).

In addition, the training school provided only technical courses, and did not make provision for other courses (for example, business courses):

I was told business is not part of the package. So they said that for technical courses like carpentry, sawing, and others they could help (9th speaker, FG 3).

Education and training workshops

With regard to the educational workshops, beneficiaries expressed concerns about the criteria for selecting participants. These required that participants could write, respond and contribute to discussions:

There are people who are not good speakers in public, some cannot write, they cannot respond to questions. Those who are able to respond and contribute to the discussions are selected to attend the workshops (4th speaker, FG 3).

This inevitably excluded a number of PLHIV from attending workshops with the result that there were fewer people with whom participants could share their experiences:

Another is that the workshops, they select few people. Some of the leaders do not understand our situation so if they allow most of our members to attend it enhance our ability to live a positive life (2nd speaker, FG 3).

Beyond programme activities

PLHIV identified lack of money for transport as a constraint of the programme:

One thing that can make the programme more effective is transportation. Most of us are coming from far places and money for transportation is a problem. They can consider giving us something small for our transportation so that we will be happy and motivate us to come for meetings (1st speaker, FG 1).

I will add to what my father said, some of us come from far away and money for transport is difficult to come by. Some even have to borrow before coming, where they could not get money to borrow, they stay at home and avoid meeting, so if they can help us financial we would agree (2nd Speaker, FG 1).

Suggested policy/broader changes

Beneficiaries offered suggestions for future policy amendment to improve upon the programme activities and beyond. These are discussed in terms of the programme activities (skills training and educational workshops) and beyond the programme activities. There were no suggestions about the food rations, reflecting the high level satisfaction with the provision of food.

Skills training

Beneficiaries identified that, although useful, the skills training was not sufficient to provide continued employment. The majority indicated their need for capital or funds to enable them to trade on the basis of these skills or to re-establish themselves in existing business areas:

Most people prefer them to give us some money to start their own businesses (2nd speaker, FG 4).

We would like to establish individual businesses. Like we are giving money as loans to put into any business of choice which we think we can effectively do so that that even if they don't give food, you won't be sad (1st speaker, FG 4).

A few suggested income-generating activities for the support groups, which would help to generate some money to support their members and also to sustain the activities of the group:

They should give us something to do some business or trade so that we get some money into our coffers because if it happens that the food supplied is stopped, it brings a lot of problems (2nd speaker, FG 4).

If we could get some money to buy plastic chairs and canopies and give out on hiring, it will assist to generate some funds into our coffers (3rd speaker, FG 6).

Education and training workshops

Participants were particularly positive about the 'Model of Hope' volunteers, and suggested that their remit be expanded:

Now that they have a group like Model of Hope working in the hospitals, they should expand it across the whole country, in the villages because that is where bulk of the problem is (4th speaker, FG 4).

According to them, the experience of being peer educators suggested that using PLHIV in HIV/AIDS interventional programmes may more effectively promote the desired changes:

It is someone affected who can speak to fellow person for the person to better understand the situation (4th speaker, FG 4).

Also, they indicated that workshops should be spread among the entire memberships in a group, instead of tying to specific individuals:

It is only one person who attends all the workshops all times. It should be spread such as everyone would have that opportunity. One goes this month and the other the next month (3rd speaker, FG 3).

Beyond programme activities

In terms of sustainability, as noted above, participants proposed financial establishment through gaining some work before the programme ends:

Please that is why we said if they can help us financially to do some work to support ourselves and our children it will help, because when they stop giving us the food that is the only way to cater for ourselves (2nd speaker, FG 2).

Participants across a number of focus groups reiterated this. For example, in the following quote a participant highlights the positive aspects of the food provision, but observes that establishing income generating activities is the only way to be self-sustaining:

It is better to teach others how to fish and not how to eat it so that in your absence they can go fishing. Now we are healthy due to the food you provided us and we are capable of working. So we need artisan training or income for some of us who can trade, so that in the absence of the intervention, you would have established us to be self sustaining. if you give us food whilst we still don't have money, and you stop providing the food, then certainly we are all going to die miserably (1st speaker, FG 3).

Some PLHIV suggested financial support to trade to avoid selling the food in the name of poverty because of the nutritional value of the food to them:

So if we get some financial aid it would be helpful because we know the food is very good for us. In the absence of food we were very unhealthy,

but with the nutritious food we are now strong. Because of financial difficulty we sell it to buy the drugs (3rd speaker, FG 3).

Another suggestion articulated by some of them was financial help for their medications. ART drugs were provided to them free when they had no money. However, money was also needed to buy medication for opportunistic infection treatments:

About the drugs. Even though they give some of the drugs for free, we wouldn't have money to buy the other drugs. If you are economically engaged you can buy all these drugs. Unfortunately most of us are not employed so we even find it difficult to make review visits (4th speaker, FG 3).

As a remedy to the above predicament, they suggested the national health insurance scheme to cover the full cost of their medications:

The hospitals should accept health insurance so that we can use the insurance card to claim our drugs (1st speaker, FG 8).

Interestingly, participants also expressed strong religious beliefs, and reliance on authorities, as their intended sustainability plans:

When the time comes, God himself will provide (3rd speaker, FG 6).

We will go to the head and beg him so that he will continue to give us the food (2nd speaker, FG 1).

4.3.2 Stakeholders views and experience

Stakeholders' views and experience were generated from face-to-face interviews. As with the beneficiaries' views, these are discussed under three themes; benefits of the programme, constraints of the programme and suggested policy or broader changes. As above, these themes are discussed in relation to the main programme activities (food support, skills training and education/training workshops) and issues beyond the programme activities.

Benefits of the programme as perceived by the stakeholders

Food support

All the stakeholders were positive about the food support, reporting that this was one of the main benefits of the programme, in terms of providing participants with much needed nutrition and as such improving strength and overall health:

Looking at the kind of food, it has helped to build their immune system. Some of the hospital we work has confirmed that the admission rate at the beginning of the programme before we came in was higher and now it has been reduced (Stakeholder 9).

When you are put on ARV it is another thing all together. You get hungry, you need to eat and you need to take your drugs. How do you take your drug when you don't have food? It is a challenge, so most people were not adhering. They tell us that, I am not taking my drugs because when I take my drug I get hungry and I don't have money to buy food. So adherence to ARV increased rather than decreased (Stakeholder 7).

Stakeholders also observed that the food support encouraged people to attend the support groups meeting, reiterating what participants themselves reported:

The main strength is the food aspect because if we don't have food, they hardly come for monthly meeting (Stakeholder 2).

You realise that food, although is phasing out but it has always been able to always bring these people together so that if you have any other thing that you want to tell them, you can tell them but without the food normally you see that they do not even attend their monthly meetings, so if you go there for education, no matter the kind of education you coming with, all they are interested is the food (Stakeholder 9).

Skills training

On the skills training, stakeholders provided details of the skills training rendered to some support groups:

We went in for community farms, piggery farming, hiring of plastic chairs, beads making, soap making, yoghurt making, batik tie and dye (Stakeholder 4).

These skills were selected based on the proposals submitted by the support groups:

We come and sit down and decide what they want to do, it's the whole support group that will decide what they want to do (Stakeholder 9).

Stakeholders also noted that vocational skills training was offered to OVC, either in OICI training schools (located in all the four regional programme sites) or attached to master craftsmen and craftswomen:

When money comes, we take some of the burdens of their children like enrolling in various vocational skills training (Stakeholder 2).

According to them, some of the trained OVC were gainfully employed. For instance, the stakeholder above continued:

Some of them are working and they are making money even to support their parents who submitted their names for this scholarship (Stakeholder 2).

Education and training workshops

Stakeholders mentioned training workshops and the monthly education as the main capacity building programmes for the beneficiaries:

We give education to the PLHIV and OVC on HIV/AIDS prevention and other issues on HIV and AIDS. Apart from that, we also train some of the PLHIV so that they can provide education to their peers (Stakeholder 4).

They reported on the types of training programmes offered to the beneficiaries:

They trained some on family planning, personal hygiene, peer educators, how to keep the food and how the food is rationed (Stakeholder 12).

They train us in guidance and counselling (Stakeholder 8).

They further reported on the various educational topics offered:

They have educated us on STIs, condom use, PMTCT (Stakeholder 13).

Every month we have topic like nutrition, adherence counselling, abstinence, prevention of re-infection (Stakeholder 12).

Also, they indicated that the secondary target groups (community health nurses, traditional healers, caregivers and Queen Mothers) were trained to support PLHIV in their catchment areas:

We train community health workers so that they provide care and support and psychosocial counselling to the PL support group members in the various catchment areas (Stakeholder 4).

OICs intervention is not about helping the PLs alone but also training the nurses on psychosocial counselling and home based care. Training care givers and educating care givers during monthly meetings. We also train the traditional healers so that they begin doing the right thing (Stakeholder 11).

In addition, the primary target groups (PLHIV and OVC) were trained as peer educators to sustain the educational aspects at the end of the programme:

The peer educators trained in the support groups, if we are not there they would continue with their education (Stakeholder 7).

They further indicated that the training workshops and education had promoted drug adherence and reduced stigmatisation and discrimination, equipping beneficiaries to face the challenges ahead and live positively:

With the counselling and drug adherence education, they've come to understand that HIV/AIDS once it comes it is going to stay with them for good and they just need to live positively and it has helped a lot of them to adjust their lives to that line and most of them are happy, they are working because they are adhering to their drugs, they have a lot of counselling sessions, they have forgotten about the whole issue of stigma and discrimination (Stakeholder 9).

Beyond programme activities

As noted above, some stakeholders highlighted the reduction in stigmatisation and discrimination, and the consequent increase in motivation and hope the programme had generated for the beneficiaries:

OICI came in the year 2007, from then we could see everything is beginning to accelerate, membership increased, they feel confident in themselves than before, they are not peeved anymore, they count themselves among other people in the society and feel equal to anybody nearer them (Stakeholder 8).

Additionally, collaborations with other stakeholders were identified as a strength of the programme:

Something that makes our programme unique is that we try to work with existing structures, the assemblies, and then the traditional structures. So we work with Queen Mothers in the eastern region and we work with traditional healers in all the region (Stakeholder 4).

Constraints of the programme as perceived by stakeholders

Stakeholders reported a number of constraints associated with the programme and beyond. These are presented below in terms of the programme activities (food support, skills training and educational workshop) and issues beyond the programme activities.

Food support

On the food component, the initial quantity was designed to meet the daily requirement of the beneficiaries, but stakeholders indicated that this was altered over the course of the programme (as discussed earlier):

OICI did assessment to find out how much food the people ate in a day, and realized there was a gap. Apart from that, there are other programmes outside Ghana running similar programmes, we got information from those programmes and we realized that using similar quantities will help them [...] Initially, we were giving 20kg of the food and a gallon of oil. We had another organisation, CRS running similar programme on feeding. They were giving half of what we were giving to our clients. We realized that in areas where we had CRS and OICI working along side, the CRS support group members would run and join OICI. So CRS put in a complaint to USAID to give them the permission to increase their quantity. But USAID said, the best they can do is to get OICI to reduce theirs. So we had to reduce our quantity of food (Stakeholder 4).

Also, the delay in food shipment (as shown in the first quote below) coupled with a delay in increasing food quantities to match increasing numbers of beneficiaries (as indicated in the second quote), were perceived as constraints:

If there is delay in shipment of food to Ghana and you go to support group meetings, the number of attendance is reduced by two-third in every support group because they know there is no food (Stakeholder 9).

The food rationing , when our number increases and we keep informing them, our number has increased and they still don't want to do anything on time and we keep getting large numbers so we squeeze what we have for them, so that it reaches everybody (stakeholder 8).

Lastly, some stakeholders reported on the sales of the food by the beneficiaries as constraints:

Sometimes, some people do not like the food they supply. They collect and sell to buy whatever they like (Stakeholder 13).

Skills training

Stakeholders mentioned the slow flow of IGAs due to funding problems as a constraint:

When it comes to IGAs, we expected our partners to have been established into IGAs long ago but we always being denied funds from our donors (Stakeholder 11).

According to them, inadequate funding was the main set back to establish beneficiaries on skills training or IGAs:

We had problems when it comes to IGAs and even in our reports, we wrote to the head office. We always told them the need why they should engage the groups in income generating activities. But you know every thing goes with money and sometimes the feedback we had was that there is no money and that when there is money it will be done (Stakeholder 11).

Also, stakeholders noted that some of those who had benefited from the skills training were not interested in the skills provided:

I feel that if they get money, everybody should be supported to do whatever he/she is doing in a very small way so that the interest of me selling my salt will still be there, the interest of selling my paper in the market will still be there but not the idea of the support group having soap and I am not interested and I have to come and cope with that situation (Stakeholder 9).

On the skills training offered to the OVC, they reported on the number who benefited and the scope of the programme:

The OVC, they admit some of them into their training schools. But we have a problem with that because the number of children that they take is very meagre and they limit us to certain areas (Stakeholder 8).

They added that the start up tools for the OVC was not part of the initial proposal submitted to their donors:

Start up tools for the children who have to go in for the vocational skills were not part of the funding (Stakeholder 4).

In addition to the above, they highlighted the duration of the scholarship and the level of the scholarship:

The scholarship programme should be increased to three years as three years is the minimum duration for training in any skill area which is economically viable (Stakeholder 11).

When it comes to the OVC skill training, we should add the senior high school and if possible the university (stakeholder 11).

Beyond programme activities

Stakeholders were positive about the intention behind the community farming project:

We wanted another supplement of food that could be giving to them when they have harvested it (Stakeholder 9).

However, the project could not be sustained because of money to pay for hired labour, money for transport and stigmatisation:

We were hoping to do it as community based but because of stigma, we were not able to get the people to get involved with weeding, so looking at hiring labour, it became expensive putting up a farm (Stakeholder 9).

We expected them to continue but along the line they were complaining of money to travel to the farm (Stakeholder 11).

Also, issues on under budgeting and inadequate staffing were highlighted as constraints:

One weakness of our programme is that we under budgeted for most of our programmes, so we're finding it difficult to meet the cost of our needs (Stakeholder 7).

Our top management should increase the staff in the region so that we will be able to work and have more time for our people (Stakeholder 11).

Some suggested that the programme budgeting should have involved both the technical and financial consultant:

I think, the budget is still a challenge and coming up with a programme, there is a need for the finance persons to get technical HIV/AIDS persons who can give them details on what the activities are so they can base the budget on, so that in running the programme you don't get hot up along the way that you do not have funds to continue because these are vulnerable groups you are dealing with (Stakeholder 7).

Finally, some stakeholders were negative about the programme sustainability by the district assemblies because of their previous experience with them:

We took steps to meet district coordinating directors, district chief executives, municipal coordinating directors and their chief executives to see how best they can also help with their common fund in buying tools for these children. I think just a few, around Kumasi, were able to do that. Most of the assemblies we contacted so far have not donated anything even though they promised and were appreciative of what OICI was doing (Stakeholder 11).

Suggested policy or broader changes

Stakeholders offered suggestions to effect policy or broader changes intended to improve each aspect of the programme and issues beyond the programme activities. These are discussed in turn below.

Food support

Stakeholders suggested a variety of food rations (as shown in the first quote) and consultation with beneficiaries prior to setting up the programme with regard to rations (as illustrated in the second quote):

OICI food supplement is one-way. I was thinking that they would bring some different food supplements (Stakeholder 3).

Sometimes some people do not like the food they supply. It can happen that they collect and go and sell to buy whatever they like. So if they had seen us we are going to bring you food, do you like it. Most of them like the tombrown this is what I have seen. So if they had consulted us instead of ordering for wheat, bring tombrown (Stakeholder 13).

Skills training

Stakeholders indicated that the majority of the beneficiaries were unemployed and therefore needed skills training:

Most of them are jobless and complaining that they need a skill, there will be a need for some skill training (Stakeholder 1).

While they reflected that skills training were necessary due to unemployment, they suggested that there were other methods of supporting beneficiaries. As in focus group discussions, it was suggested that capital loans would allow people to select their own trade/work and would be more sustainable:

I feel that if they get money, everybody should be supported to do whatever he/she is doing in a very small way, by giving a little bit of capital to continue with my trading or whatever I am doing, that will rather entice me to go on working and become more sustainable (stakeholder 9).

Education and training workshops

Stakeholders mentioned a number of ways of improving the education and training workshops. These included developing the psychosocial elements of the workshops:

I think the education should be more intense, especially the psychosocial counselling so that, the daily challenges that they face, the stigmatization and discrimination that they face, they will be able to cope better. That will help them to live with the disease more positively (Stakeholder 1).

In addition, others suggested using the PLHIV as their own model for education in the support groups (as illustrated in the first quote) and community outreach programmes (as indicated in the second quote):

Using the PLs themselves as their own models, should be a core activity. Because we have also come to realise that the people listen to their peers more because their peers are in their plight (Stakeholder 5).

Funds to give to these associations to go into community outreach programmes for people who are prepared to disclose their status to the community (Stakeholder 11).

On the training workshops, some suggested leadership training programmes for support group coordinators (as indicated in the first quote) and training of some hospital staff (as shown in the second quote):

Some of them lack leadership skills, how to manage members in a group (Stakeholder 7).

There should be training for more of the hospital staff to understand HIV/AIDS. Most of the doctors and nurses do not understand what HIV/AIDS are and stigmatise the HIV/AIDS clients (Stakeholder 11)

In addition, others suggested adult literacy programme for illiterate leaders. For instance, stakeholder 7 above continued:

I think for those groups with leaders who cannot actually read and write, I will suggest that they begin this adult literacy programme to enhance their reading and writing skills (Stakeholder 7).

Finally, they suggested that workshop content should be designed to make them easier to access for those with little formal education. For example through greater use of other media:

If they could organise more programme for those who are not educated to attend and share their views (Stakeholder 13).

When it comes to rural intervention, the people are able to understand much better with pictures displayed to them or with a movie (Stakeholder 11).

Beyond programme activities

Stakeholders suggested financial support to establish the beneficiaries on income generating activities (IGAs):

That is why I am saying that, they should additionally, support us financially, so that in the future if they wine off we can get our own capital to feed ourselves. Because just feeding us, one day if you are not there, you see that the group will collapse (Stakeholder 14).

Also, most of the stakeholders suggested collaborations with other NGOs to solve future funding problem (as shown in the first quote) and budgeting for beneficiaries' transportation in future programmes (as illustrated in the second quote):

OICI should not focus on one donor but if we have different donors, it would help. We can also go into collaboration with other NGOs (Stakeholder 11).

OICI doesn't give clients transportation because anytime you go to the field, after giving the food to them they come and the clients come and ask for T&T from us because someone might even come with nothing on him or her and that person has received food, and come to think of how the person will take the food home, is a problem. So I think they should look at this in the future (Stakeholder 2).

Finally, they suggested quarterly review meetings among all stakeholders (as indicated in the first quote) and a database for the programme (as illustrated in the second quote):

I think, one new thing I will do is to may be have some quarterly review meetings with stakeholders to sort of brief them on the HOPE activities, and also ask for their inputs in the next quarter that is what I would like to see (Stakeholder 7).

Anywhere this programme will be replicated, they should have a database available to all support groups in a way of curbing, because of poverty, people were moving from one support group to another support group (Stakeholder 9).

4.3.3 Broader themes

In addition to the above, three broader themes generated from the focus groups and the interviews are discussed below. These include; level of confidence about programme sustainability and survival, the level of programme involvement and beneficiaries' economic enhancement.

Level of confidence for programme sustainability and survival

Participants and stakeholders plans for programme sustainability and survival were based on reliance on a third party (e.g. district assemblies, community farming, religious beliefs and programme establishment). For example, a number of stakeholders portrayed a high level of confidence around the programme survival because of their perceived support from the district assemblies. The assemblies are the local government institution in the district to

coordinate, implement and monitor government programmes. They indicated that the district assemblies were involved from the onset of the programme to ensure continuity:

Anytime a programme starts in a district, we make the district assembly aware that OICI international which is an NGO is running this programme in your district and we always want programmes that are sustainable because it is a programme and it has a life span. It will definitely end. So we keep talking to the district assemblies, the HIV/AIDS focal person in the district (Stakeholder 2).

The district assemblies, they have about 1% fund for HIV and its activities. So we are linking them up to these governmental institutions (Stakeholder 7).

However, some were doubtful because of their previous experience when they approached them for support for OVC tools:

We took steps to meet district coordinating directors, district chief executives, municipal coordinating directors and their chief executives to see how best they can also help with their common fund in buying tools for these children. I think just a few, around Kumasi, were able to do that. Most of the assemblies we contacted so far have not donated anything even though they promised and were appreciative of what OICI was doing (Stakeholder 11).

Another intended sustainability plan mentioned was community farming. According to them, they have suggested to a number of the district assemblies that community farming be developed in order to sustain the food component:

For the food supplement, we have talked to a couple of the districts to go into farming and see if they could get some proceeds for them at the end of every month (Stakeholder 9).

Others suggested financial support to establish them as economically viable before the programme ends:

It is better to teach others how to fish and not how to eat it so that in your absence they can go fishing. Now we are healthy due to the food you provided us and we are capable of working. So we need artisan training or income for some of us who can trade, so that in the absence of the intervention, you would have established us to be self sustaining. If you give us food whilst we still don't have money, and you stop providing the food, then certainly we are all going to die miserably (1st speaker, FG 3).

Finally, some indicated faith as their intended sustainability plan:

When that time comes, God himself will provide (1st speaker, FG 1).

All that we are planning is God will make a way, there is no hope from anywhere for my clients (Stakeholder 14).

Level of programme involvement

Evidence from the qualitative research suggests that there was not much feeling of programme involvement in aspects of the programme activities from either stakeholders or beneficiaries:

Sometimes some people do not like the food they supply. It can happen that they collect and go and sell to buy whatever they like. So if they had seen us we are going to bring you food, do you like it. Most of them like the tombrown this is what I have seen. So if they had consulted us instead of ordering for wheat, bring tombrown (Stakeholder 14).

I think, one new thing I will do is to may be have some quarterly review meetings with stakeholders to sort of brief them on the HOPE activities, and also ask for their inputs in the next quarter that is what I would like to see (Stakeholder 7).

However, there was suggestion of beneficiaries and stakeholders involvement in the educational aspects of the programme:

The peer educators trained in the support groups, if we are not there they would continue with their education (Stakeholder 7).

Beneficiaries' economic enhancement

Most of the beneficiaries and the stakeholders perceived that beneficiaries were not in a position to be economically independent when the programme came to an end:

When it comes to establishing our clients whereby we will pull out and they will cater for themselves that is where we have suffered funding (Stakeholder 11).

Idea of getting a lot of money to be able to settle most of them before the end of the programme has not worked (Stakeholder 9).

According to them, they perceived most of the beneficiaries to have difficulties in getting food to eat and thus most of them will still be depending on their leaders:

Most of them depend on the food to take their drugs and I don't know where some of them their daily bread will come from (Stakeholder 14).

What I will say is that the leader of our association Mr. Amoah, before OICI came in, he was supporting us with our feeding, transportation and others. I know he hasn't given up, the way he used to help us; he will continue to do so (1st speaker, FG 2).

They further outlined the reasons why most beneficiaries could not be established on income-generating activities:

I think for every programme, before you can run a detail programme you need money. I think one weakness of our programme is that we under budgeted for most of our programmes so we're finding it difficult to meet most of our needs (Stakeholder 11).

Chapter five: Discussion

This chapter begins with a summary of the findings from the documentary analysis and the quantitative and qualitative results. It then offers a discussion of the strengths and weaknesses of the study as a whole and assesses the strengths and weaknesses of the methods used. There then follows a discussion of the objectives set for the study followed by conclusions and recommendations.

5.1 Summary of documentary analysis, quantitative results and qualitative findings

5.1.1 Summary of documentary analysis

The documentary analysis provided a detailed description of the national context of the 'HOPE' intervention and the 'HOPE' programme. This was to provide a contextual understanding of the policy and practice environment in which the programme was implemented.

Ghana has two national strategic responses. These were generated from 2001 - 2010 and were designed to reduce the escalating epidemic of HIV and AIDS and to support those affected. The first was the National Strategic Framework I (NSF I) which covered the period from 2001 till 2005. It generated policies and guidelines and created programmes that were implemented throughout the country. The successful implementation of this framework generated support from various development partners and contributed to an increase in HIV/AIDS awareness and community participation. The second was the National Strategic Framework II (NSFII) which covered the period from 2006 until 2010. This was developed in response to lessons learnt from the NSF I. By this stage the emphasis was on HIV/AIDS treatment technologies, care and support, behavioural change communication, and the socio-economic environment. Seven key interventional areas were developed; Policy, Advocacy and Enabling Environment, Prevention and Behaviour Change Communication, Treatment, Care and Support, Mitigating the Social, Cultural, Legal and Economic Impact,

Coordination, Management and Institutional Arrangements, Research, Surveillance, Monitoring and Evaluation and Mobilisation of Resources.

The 'HOPE' programme focused on improving care, support and economic opportunities for PLHIV and OVC in four regions of Ghana with high HIV/AIDS prevalence. This was intended to complement the efforts of the government and other international agencies in improving care and support and was in direct response to the perceived inadequacy of this type of services prior to the implementation of the programme. In pursuance of this goal, the programme provided monthly food support, skills training for PLHIV and monthly education inputs. These programme activities contributed to four of the key interventional areas of NSF II. These were; Prevention and Behaviour Change Communication, Treatment, Care and Support, Mitigating the Social, Cultural, Legal and Economic Impact, and Research, Surveillance, Monitoring and Evaluation. The main source of funding for the programme activities was from the USAID.

The programme had primary target groups (PLHIV and OVC) as direct beneficiaries and secondary target groups (community health nurses, traditional healers, the queen mothers, orphanage caregivers and OICI counsellors) who were trained to support the primary target groups.

The programme activities were monitored internally using PEPFAR indicators and USAID Mini COP. In addition, external consultants conducted mid-term and end of programme evaluations.

5.1.2 Summary of quantitative findings

The quantitative results are summarised below in relation to the food component of the programme, its contribution to the weight and body mass index of the beneficiaries, factors that contributed to beneficiaries' maintaining or gaining weight, employment status of the beneficiaries, skills trainings and factors influencing skills training.

Beneficiaries were being provided with soy-fortified wheat and vegetable fortified oil at the time of the evaluation. Self reports indicated that they had gained weight, were healthy and that their financial burden had been reduced

because of the food support. The relationship between the previous and the current BMI indicated that beneficiaries had, on average, experienced an increase in BMI. A model to establish factors that contributed to maintaining or gaining weight revealed that the type of support group to which a PLHIV belonged seemed to be an important determinant of a favourable outcome. For instance, belonging to support groups like Ultimate AID Foundation and EL-shaddai was associated with an increased chance of maintaining or gaining weight as compared to other support groups like Friends of the Aged and Invalid. After adjustment, support group was still significantly associated with the odds of maintaining or gaining weight. Of course, the baseline weight measurement was in the hands of each support group so this introduces a potential source of bias. This possible bias will be considered later in this chapter. However, there is no way of estimating whether bias in baseline measurements have influenced these results.

Over a third of programme participants were unemployed at the time of the study. Importantly, only a few had been skills trained and even those who had, were not using their new skills as a vocation because of lack of business start up capital. Additionally, most respondees indicated petty trading as their preferred skill. Unadjusted analyses showed that factors associated with skills training were the type of support group to which a PLHIV belongs, the region where the support group is located, the age group of the PLHIV and the length of time a PLHIV has been on the programme. After adjustment, support group, region and length of time on the programme were still significantly associated with the odds of being skills trained. For instance, belonging to support group Together AS One, being located in the Ashanti region and staying on the programme for more than 24 months were associated with an increased chance of receiving vocational skills training.

5.1.3 Summary of qualitative findings

The overall findings from the focus group discussions and the interviews demonstrate a belief among respondents that the programme has contributed to the improvement of the health, nutrition and social and psychological status of the beneficiaries. However, the findings also show that there were a number of

challenges which affected the smooth implementation of the programme. When discussing the food support, beneficiaries mentioned receiving an initial quantity based on assessment and lessons learnt from similar programmes elsewhere. However, the quantity was reduced over the course of programme implementation (to give an equal quantity to all groups receiving support from the USAID) in order to control the movement of participants from one support group to another. Despite this, beneficiaries were extremely positive about the food supplement element of the programme. A number indicated that ART medication increased hunger and that the food supplements helped deal with that problem. They indicated that the food was nutritious, made them healthy and strong and contributed to their weight gain. Additionally, they reported that support groups had been sustained and membership had increased. Most of the PLHIV reported that they attended meetings because of the food. However, some indicated that they felt the food offered should be more varied. Also, they mentioned selling some of the food to earn money to pay for their medications.

When discussing the skills training, most of the beneficiaries indicated that they were unemployed. Some participants had lost their jobs, whilst others had resigned because of their HIV status. This was as a result of high stigmatisation and discrimination against PLHIV at workplaces. Some participants indicated that the skill training was timely and appropriate and helped to address their financial problems because of improved job prospects. Some of the skills training provided by the programme included soap making, bead making, yoghurt making, powder making, community farming and piggery farming. However, participants also indicated that only a few had benefited from the skills training due to inadequate funds. These were a result of under budgeting in the initial programme proposal and slow cash flow from the donor. A few who benefited could not use their newly acquired skills because of lack of initial capital. In addition, most of them preferred petty trading to the skills offered. The programme also provided scholarships for OVC, either in the OICI training school or as an apprentice with a local master craftsmen or craftswomen. Self reports indicated that some of the OVC were, as a consequence, gainfully employed and were supporting their parents who were HIV/AIDS patients. However, they further indicated that others who had graduated had been unable to obtain necessary tools due to inadequate funding.

The capacity building aspects of the programme included monthly education for the beneficiaries and the training workshops for the beneficiaries and secondary target groups. The secondary target groups included community health nurses, traditional healers and care givers. According to the beneficiaries, the monthly education and the training workshops had generated hope for them, improved their knowledge about HIV/AIDS and motivated them to live positively. Additionally, it had promoted drug adherence, disclosure of status and further reduced stigmatisation and discrimination. They emphasised that the training of the PLHIV as peer educators (Model of HOPE) was an effective tool for HIV education and counselling programmes, as PLHIV listen to their peers to a greater extent than they do health workers. They therefore recommended that this approach should be expanded to other hospitals in other regions. However, they also indicated that the number of PLHIV who benefited from the training workshops was inadequate. In addition, they proposed more members be given the opportunity to benefit from the training, rather than only allowing specific individuals to attend.

Overall, the majority of the beneficiaries had low levels of confidence about the sustainability of the programme. This was mainly due to the lack of income generating activities which were intended to make them financially independent. This was a key need of the beneficiaries, who were mostly unemployed.

The level of programme involvement among beneficiaries and some stakeholders was perceived to be low. They therefore perceived dissolution of the support groups when the programme ends. This was because they were not adequately involved in major decisions (such as the types of food required) and review meetings with donors to discuss emerging challenges. As a result, they perceived difficulties in sustaining the food component of the programme. However, the educational component could be sustained because of the peer educators.

Lastly, beneficiaries expressed major concerns about the adequacy of the financial independence of the programme. This was a result of challenges the programme was confronted with during the implementation period. These included under budgeting, inadequate funding and slow cash flow from their donor. These challenges, together with others like inadequate knowledge to

implement evidence based intervention, have been identified as hampering the smooth implementation of other community-based interventions in developing countries (Van Wyke & Peltzer 2004)

5.2 Strengths and limitations of the study

The discussion will focus on the strengths and weaknesses of the overall programme of research, followed by the strengths and weaknesses of the methods employed for the study (mixed methods, documentary analysis, quantitative and qualitative).

5.2.1 Overall programme of research

Strengths

A major achievement of this research is that it was completed in the specified period even after major setbacks at the outset. This might seem a strange strength to identify but, as is clear from the literature review, the challenges associated with conducting high quality evaluations in Africa are so profound that few are completed. So, to have completed an evaluation, albeit one with limitations, is a considerable achievement.

The survey was conducted by a researcher with deep experience of Ghana and a great deal of tacit knowledge. The researcher had worked for several years in the health sector and had knowledge of Ghana's strategic approach to HIV and AIDS and had access to networks that made it possible for him to make contact with programme managers and implementers. This proved to be a strength, as someone without knowledge and experience of the context could not have made contacts and collected data in the time available.

The researcher was supervised by a team comprising an academic public health practitioner, a senior non-clinical academic researcher and a senior clinical academic researcher. Given the difficult and pragmatic decisions that had to be made to keep the research on track, this combination of supervisors proved to be an important contributor to the final success of the project. In particular, the supervisors had experience that covered the following areas; (i) principles of

evaluation (ii) qualitative research methods and (iii) quantitative research methods. As such, each supervisor was able to provide more intensive support as the work moved through different phases. One further advantage was that this mixture of skills and experience among the supervisors limited the degree to which any one professional perspective became dominant. This proved to be helpful as the mixed methods that are reported in this thesis emerged as a solution to the practical evaluation challenges encountered during preparation, field work, analysis and writing up.

The result of the above is a study that is more comprehensive than was originally planned and more helpful to programme implementers than seemed likely at several stages during planning and early field work.

In establishing strengths, it is reasonable to argue that this study provides important and relatively rare information on community-based care and support for people living with HIV in sub-Saharan Africa. As such, it provides important lessons for Ghana, the wider region and other parts of the developing world. This can be claimed as a strength because of the limited published information on care and support for people living with HIV in Ghana and Africa generally. Therefore, the findings will help the design of future programmes as well as improving existing programmes.

Finally, the timing of the study has turned out to be a strength. It was conducted at the time when Ghana's National Strategic Framework II, which ran from 2006-2010, was coming to an end. As such, it provides insights that can be used by policy makers as they design the next phase of work for people living with HIV and AIDS. In addition, the research community in Ghana will be able to plan ahead to ensure that some of the challenges encountered with this work do not impede future evaluations.

Weaknesses

The main source of weaknesses in this study is that the evaluation commenced at a later stage than would have been ideal. The intentions of all concerned were good. The idea had been to fund a PhD scholarship to evaluate what was seen by policy makers as an important intervention. Documentation from the

programme itself suggested that baseline data had been collected but this turned out to be less comprehensive than first anticipated. These problems with timing (in addition to a number of other practical and ethical considerations) also meant that the design chosen for this study could not utilise non-intervention groups to provide a comparison with programme recipients. Consequently, quantitative outcome data are before and after measurements on subjects who participated in the 'HOPE' programme. A further problem is that some, but not all, beneficiaries of the 'HOPE' programme were also being provided with inputs by other NGOs. There are, therefore, two consequences that arise because of these circumstances. First, although beneficial outcomes seem to have emerged in some support groups, the size of these benefits is uncertain. For example, two weight samples were compared. The first was recorded by each distribution centre when a beneficiary entered the programme. The second was recorded as part of this research. The potential for bias through faulty scales and misreporting or other factors is very real. Nonetheless, this research had no option but to take historical data at face value and remain aware of these weaknesses when interpreting results. Second, from an evaluation perspective, the inputs were 'contaminated' by other programmes and so beneficial findings can not be fully attributed to the 'HOPE' intervention.

If circumstances had been different, it would have been better if it had been possible to carry out a prospective evaluative study, using cluster randomised controlled trial methods among a large number of support groups, to assess the programme effectiveness on the health, nutrition and economic status of the beneficiaries (in order to attribute causality to the intervention). However, such an approach would only have been possible if decisions leading to a trial had been made years before that actual decision was made and, even if such decisions had been made, the problem of identifying a suitable control group and the ethics of creating a control group might well have been insurmountable.

The next most desirable approach would have been to collect standardised measurements before, during and after the programme implementation. This has only been achieved in part. As explained earlier, the researcher has been forced into a variety of pragmatic decisions which would not have been necessary if formal engagement with evaluation had started earlier.

A further weakness of this study is that the small amount of literature on evaluation of care and support programmes in Ghana and Africa makes it difficult to discuss the findings of this study in a manner that allows findings to be placed in the context of results from similar previous studies. Where such studies were identified they have been included (see discussion of structure, process and outcome below). Nonetheless, the writing of this discussion section is weakened by the absence of a large background literature into which these new findings can be placed. This is especially the case in the discussion of the structure of the programme. So, for example, in the study conducted by Merson et al. (2000) there followed a recommendation that evaluation of structure should be a much stronger and more frequently performed part of evaluation designs for HIV/AIDS interventions in developing countries. While this is helpful, very little data of this sort are available for comparisons. As a result, most of the discussion of structure, process and outcome in this thesis is based on the researchers' reflection.

5.2.2 Methodological strengths and weaknesses

Strengths

Mixed methods approach

The documentary analysis provided the author with the data available for the study. This helped the author to design a good structured questionnaire and qualitative study by collecting new data to enhance what was available. For instance, the current weight and the height of the programme beneficiaries which were included in the structured questionnaire were not in the documents provided by the programme. Also, the detailed views of the beneficiaries and stakeholders on the programme activities which were collected in the qualitative study were not explored in the documents provided by the programme.

The mixed methods approach taken to the quantitative and qualitative arms of the study were as robust as circumstances allowed. A great deal of data were collected to provide comprehensive information to address the research questions.

Some of the information generated from the qualitative study was used to test the consistency of some of the quantitative results. For instance, in the qualitative study, beneficiaries had mentioned that they had gained weight over the course of the programme. This was consistent with the analysis of the structured questionnaire where beneficiaries on average gained an increase in weight of 2kg.

Finally, the mixed methods approach made it possible to clarify and explain the results from one method with the use of another method. For instance, the analysis of the structured questionnaire revealed that only one in five of the beneficiaries had been trained in a skill. However, it was only in the qualitative study that a plausible explanation for this was obtained, namely inadequate funding (as the programme went on).

Documentary analysis

The analysis of relevant documents provided important information, facilitating a clearer understanding of the history of the programme, the programme implementation strategy and the strategic framework of the country on HIV/AIDS.

As a method, it is low cost and does not interfere in peoples' lives (unlike the structured questionnaire, interviews and focus groups). Also, the data were easily accessible.

Finally, all the materials were clearly typed and self explanatory.

Quantitative approach

Simple random sampling was employed to select the respondents. This enhanced the representativeness of the sample. The sample size was large enough to allow for univariable and multivariable modelling of the main response variables (change in weight, skills training). Also, it provided enough statistical power to find an average 2kg increase in weight statistically significant.

The questionnaire used in the quantitative arm of the study had several important strengths. First, it was simple and relatively short but was sufficiently comprehensive to cover the information needed. This meant that it could be administered without taking much of the respondents' time. Participants were assured that their responses would be anonymous: there is evidence that this increases participation and the validity of responses (Waltz et al. 1991). These factors may have contributed in part to the 100% response rate and full completion from all the respondents.

A key strength of this study is that primary data were collected. This new data set, for all its weaknesses, will add to the relatively small literature on support programmes for people living with HIV in Ghana and Africa generally.

Qualitative approach

A semi-structured interview technique was employed for the focus group discussions and the interviews. The technique allowed the researcher to explore the views, perceptions and opinions of the beneficiaries and stakeholders on the programme. It further allowed the researcher to probe and further clarify feedback from participants. These advantages would not have been achieved with a more structured method. The probing ensured the reliability of the data collected since it allowed the researcher to identify and clarify emerging issues arising from the interview (Barriball and White 1994).

Simple random sampling was employed to decide who among the members of the support groups were asked to be part of the focus group discussions. The focus group sample size was based on the concept of saturation. This is the point in data collection when no new issues or information are being raised by respondents. So, the approach used was predicated on the idea that the number of focus group participants and the nature of the focus group encounters would identify all the important issues that needed to be discovered from the support groups as a whole.

The approach described above was used to gather information from support group participants but, when it came to collecting qualitative data from programme managers, a more comprehensive approach was used because the

number of potential interviewees was smaller and it was considered important that each of their potentially divergent perspectives should be heard. Consequently, *all* the OICI regional coordinators and the director of OICI HIV/AIDS programme were interviewed. In addition, interviews were conducted with support group coordinators where focus groups had taken place.

All the interviews and focus groups were audio recorded, allowing the interviewer to fully concentrate on the interview, to observe non-verbal responses and establish rapport with the respondents. Importantly, the fact that the focus group discussions were conducted in the local language Twi and that the researcher had considerable tacit knowledge of the study areas allowed the respondents to express their views eloquently and confidently. The result is a number of important insights which might not otherwise have been heard by decision makers and the research community. These results will contribute to an evidence base which is limited for people living with HIV in Ghana and Africa generally.

Weaknesses

Mixed methods

The collection and analyses of both the quantitative and qualitative data concurrently, did not allow results from one approach to inform the methods used by the other. It might have been beneficial to have collected and analysed the quantitative data first for this to feed into the qualitative interview guides to answer some emerging issues. For example, the quantitative results revealed a highly significant support group effect. That is, there was an association between maintaining/gaining weight and being in certain support groups. What was different about these ‘successful’ support groups? This could have been an important avenue of investigation for the qualitative enquiry but the timing of data collection and analysis made this impossible.

Documentary analysis

The documents were not collected by the researcher and so were not informed with the study’s research questions.

The monthly weight records and the technical report to sponsors provided by the HOPE programme are compiled at the national level. It is possible that these documents might have been edited or subjected to errors and biases owing to the perspective of the compiler. However, the researcher did check the quality of these documents from the primary source.

The analysis of the factual data was restricted to questions generated around the three components of the policy cycle. This is because the documents were prepared without having this study in mind and therefore not all the information in the documents was relevant to the study.

Finally, the information in the documents was not sufficiently enough to address all the research questions. Therefore, there was the need to supplement the documents with both quantitative and qualitative methods.

Quantitative methods

A general weakness of a structured questionnaire is the inability of the interviewer to probe deeper on emerging issues and the tool restrains respondents from expressing their detailed views on issues of concern (Mathers et al. 2007). This issue was addressed by providing a suitable space for the respondents to indicate additional comments where they wished to do so. In addition, the qualitative component of the study provided the platform for questions that needed thorough exploration to be investigated.

The validity of the data was based on trust and confidence in the information provided by the respondents. This is potentially a weakness but it is argued by Polit and Hunger (1993) that researchers have no alternative but to trust the information provided by respondents.

The sample size for the structured questionnaire was not determined statistically based on expected effect sizes in the response variables of interest but was a pragmatic decision based on the resources available to the researcher. As with so much of this work, this was a pragmatic choice dictated by the time and human resources available for the study.

Finally, the study population was restricted to PLHIV belonging to support groups that had benefited from the programme for a minimum of 12 months. This is because, at the time of the study, some of the support groups had only recently been recruited and it was felt that their duration on the programme was too short for potential benefits to have fully emerged. However, given that the quantitative results show that beneficiaries who have stayed on the programme for more than 24 months were highly associated with being trained on a skill as compared to those who have stayed on the programme for less than 6 months, this group may be systematically different to those on the programme for greater than 12 months. Also, those who had been on the programme for a shorter period of time had more weight gain. This finding is difficult to explain but further illustrates the importance of understanding the unfolding dynamics of the intervention.

Qualitative methods

Prior to this work for his PhD, the author (who acted as interviewer) had limited experience of qualitative one-to-one interviewing or of conducting focus group discussions. However, this skill deficit was addressed prior to field work by attending external courses. The author further developed his skills during the course of the study and increasingly felt that he was able to establish a good rapport with participants. It seems likely that this developing set of skills contributed to overcoming the barriers that confronted the author as an inexperienced qualitative researcher.

The author also developed skills in the analysis of qualitative data over the course of his PhD, successfully summarising and systemising participants' talk about the benefits and challenges of the programme. In addition, a number of broader themes were highlighted (e.g. the beneficiaries' confidence about the sustainability of the programme), which although not developed fully (due to the time constraints inherent in the PhD), inform the discussion (below) in a useful and informative way.

The interviews and the focus group discussions were translated (from Twi to English) by the researcher. At times, it was difficult to get exact English words for some Twi phrases and terms and so the literal meaning of these were

provided to overcome this barrier. For instance, sometimes, three words in a phrase in a local language Twi attracted three to four words in English to depict the literal meaning. The language used to conduct the focus group discussion is a local language of the researcher, and it is expected that all key messages were captured in the transcription. However, the language and the words of the participants in the focus group discussion had to be translated and discussed in English which is an acceptable and recognised international language in Ghana and for the thesis. The lack of external validation of the translation and the fact that qualitative analysis was conducted on translated text are both weaknesses but the researcher's familiarity with both languages and close involvement with all stages of the research process is a strength.

Also, all the support group coordinators whose support groups engaged in the focus groups discussions were interviewed. This was to reconcile emerging issues from the focus group discussions in the context of programme goals and practice. However, choosing participants in this way might have introduced a bias since other coordinators, whose support groups were not selected for the focus group discussions, were not interviewed. In addition, the interviews were restricted to stakeholders directly involved in programme implementation. This excluded others like the donors and the secondary target groups (community health nurses, caretakers and the district assemblies). These omissions constitute a weakness but it is one that again arose from pragmatic decision making about how best to deploy limited research resources of time and personnel.

In the course of the interview with stakeholders, the issue of remuneration for work as a volunteer was raised as a major concern. However, the study did not explore views on the best remuneration system for volunteers. It was felt that questions regarding proper remuneration for volunteers used for community based interventions are still unanswered. A study focussing on this is highly recommended in order to establish a clear picture and create uniformity about the best method or framework to remunerate volunteers in Africa.

Finally, the discussions with the beneficiaries on the skills training generated fewer responses probably because so few had benefited from it. However, the

food support and the education generated more and richer response. This is confirmed in the qualitative findings where much has been written on the benefits of the food support and education with little on the skills training component.

5.3 Discussion of the main objectives of the study

The objectives of the study are outlined below;

1. To review various approaches to evaluation
2. To set out a range of possible evaluation strategies for 'HOPE' and assess strengths and weaknesses
3. Develop a practical evaluation design for the 'HOPE' programme
4. Evaluate the 'HOPE' programme based on the approach described under 3
5. Make recommendations to the 'HOPE' programme
6. Make recommendations for evaluation in the health sector in Ghana and Africa more generally.

5.3.1 Objectives 1 - 3

Objectives 1 - 3 were individually discussed in detail as part of the literature review and there is no need to repeat that discussion at this point. Although it is a fundamental part of every PhD thesis to provide a 'research training' for the candidate, the exploration of possible research methods and the training of the author in a variety of methods became such an important priority that this part of the work was stated formally as objectives 1 - 3 of the study. This gave focus to the early part of the work and proved to be a sensible strategy. The intention was to address the first research question; the approach to evaluation that will be practical and achievable within the local constraints and circumstances to evaluate the 'HOPE' programme.

HIV and AIDS remain a growing problem globally and especially in sub-Saharan Africa. The problem is so severe because in many countries there are still growing numbers of cases and each new case has a devastating effect on the victim, his or her family and the wider community. In the face of these problems many countries lack the resources needed to support an appropriate response (Victoria et al. 2009).

In this context it is not surprising that priority has been given to programmes that are designed to reduce the escalation of the number of cases of HIV and AIDS in the sub-region (Rehle & Hassig 2006). Scientific and evaluation activities have also reflected this priority: extensive studies have been conducted on prevention and behavioural strategies (MacNeil & Hogle 1998) and clinical trials of therapy (Roger, Alvaro, Glen, Lawrence, Joseph, John, & Lewis 1998) using randomised controlled trials and quasi-experimental designs. Importantly, limited evaluation studies have been conducted on programmes which provide care and support, in part because such interventions are less common (Praag & Tarantola 2006). Such care and support programmes as have been implemented have often been rushed during the development phase and implemented without undertaking formative evaluation studies (Rehle & Hassig 2006).

Ghana has demonstrated success in reducing prevalence rates (AVERT 2009). This may in part reflect a more appropriate implementation of the evidence base in the country. There is some support for this contention in Ghana where the first National Strategic Framework (National Strategic Framework I) was introduced from 2001-2005 after numerous unsuccessful attempts to reduce the prevalence rate (GAC 2004b). This framework was explicitly based on evidence of best practice and policies. It set clear targets for the reduction of prevalence rates at the end of the implementation period and outlined steps towards that aim (GAC 2005). In short, the framework was developed out of the lessons learned from evaluation studies that had helped to create an evidence base that was sufficient to ensure a common response to the epidemic from all stakeholders. In the event, the successful implementation of this framework was associated with a reduction in the prevalence rate from 3.7% in 2004 to 2.7% at the end of 2005 (Quartey 2010). From this evidence it is clear that, in the area of prevention and treatment, Ghana has a strategy which is showing some signs

of success. Nonetheless, a massive burden of disease remains with all the attending health care and social challenges.

It has been noted above that there is an imbalance in research and evaluation investments towards interventions designed to reduce the escalating rate of epidemics and those meant for social support (Kellogg Foundation 2004). This emphasis is justified by the pressing need to control the epidemic and this is further reinforced by the requirement for evaluation studies insisted upon by funding organisations (Family Health International 2001). Demonstrating and measuring impact are important and valuable, however, it is equally important to gather and analyse data that will not only demonstrate effectiveness but will help improve on-going initiatives (Cronbach & Associates 1980). In short, it is important to understand structure and process as well as assessing outcomes. An absence of a full range of data and insights might explain why some countries in sub-Saharan Africa are still experiencing high prevalence rates in spite of extensive studies conducted on prevention, behavioural change and treatment. Therefore, there is the need to develop an evaluative approach that will not only measure effectiveness but will help to provide lesson learning.

The 'HOPE' programme is a major community-based care and support intervention in Ghana instituted by the OICI with support from the USAID. Therefore, exploring an appropriate evaluation approach for the HOPE programme is crucial to providing learning for Ghana, Africa and the developing world.

However, deciding upon the appropriate approach to the evaluation of the programme was a major challenge. The single biggest problem was that the possibility of an experimental design that would have more robustly attributed beneficial outcomes to inputs (by randomisation, identification of control or comparison groups and the testing of a clearly defined hypothesis), were not considered during the formative stages of programme planning. These issues unravelled in the discussions and the interviews where participants in some of the support groups indicated receiving support from other organisations such as the World Vision, NACP, Esther, ADRA and the Ghana AIDS Commission. The support from these organisations included financial support for skills training, medication, monthly meetings and educational programmes. Consequently, as

was discussed above, attribution of benefits to the 'HOPE' programme becomes problematical. However, this point is made again to highlight a second and more far reaching challenge. The possibility of using a randomised controlled trial for the programme was impossible due to the ethical challenges explained above coupled with issues of timing and the lack of available resources. Also, data on economic evaluation was not collected due to logistical constraints and the needs of the 'HOPE' programme were so expansive that evaluations with managerial perspectives were discarded. In addition, most of the evaluation approaches with developmental perspectives could not be used due to the stage the programme had reached at the time of the study coupled with the intention to provide lesson learning for programme improvement and future replication.

Weaknesses in indigenous African evaluation skills might explain why programmes with funding from abroad tend to use expatriate evaluators instead of local workers. There is simply a lack of evaluation specialists in Africa (World Food Programme 2008). This weakness became a key issue in this PhD. The author discussed the training dimension of his PhD with his supervisors and the type of evaluation skills that would be most useful for a career in Ghana was assessed. The outcome of these discussions was that a large and wider element of formal training in evaluation was built into the research training than is normal for a PhD. This will help the author to contribute to programme evaluation on completion of his studies.

Despite constraints and limitations, the author was able to apply his evaluation training to create a framework for evaluation that allowed the programme to be evaluated based on the data and resources available to the researcher at the time. Avedis Donabedian structure, process and outcome model was adopted to evaluate the programme. The model employs both qualitative and quantitative methods as a combined approach to provide comprehensive information on the structure, process and outcome of the programme. This combined approach is now increasingly becoming a popular method to broaden researchers' understanding and direct use of data for decision making (Lindsay 2002).

5.3.2 Evaluation of the 'HOPE' programme (Objective 4)

In the results section, data were presented according to the methods used to collect information - primarily qualitative and quantitative sections. However, the evaluation plan was formulated using the Donabedian framework. For this reason, the 'HOPE' programme will now be discussed under three subheadings - structure, process and outcome.

5.3.2.1 Structure

Data were collected on the numbers of centres and their locations, the relationship of the 'HOPE' programme to the National Strategic Framework, numbers and nature of beneficiaries, numbers and nature of staff, sources of funding and monitoring and evaluation plan.

The programme has over twenty centres spread across four regions in Ghana. These regions are the highest HIV/AIDS prevalence regions in Ghana (OICI Ghana 2003). There are several benefits that may emerge from this decision. First, creating and supporting centres in those regions is a sensible strategy and might contribute to reducing prevalence rates in those regions. Second, it might improve the health, nutrition and economic status of the patients in those regions and, third, it could provide lessons for the programme to be replicated to other regions with comparatively low prevalence rates.

The programme activities fell within the National Strategic Framework II which succeeded the first national framework (mentioned above) and ran from 2006 until 2010. These two national frameworks have been instrumental in bringing relief to a country, namely Ghana, where care and support services for PLHIV and OVC were grossly inadequate prior to the implementation of the programme (USAID 2003). It is the working assumption of this thesis that lessons learned from evaluation of work initiated under the two national frameworks will contribute to the formulation of policy which will inform the next strategic framework. What seems of little doubt is that the development and implementation of the 'HOPE' programme was much more acceptable to the Government of Ghana (through the Ghana AIDS Commission) because it helped to meet the aims of the second strategic framework. This helps to explain why the

programme was supported financially (as indicated in the interviews with the OICI Director of HIV/AIDS programme).

This is a subtle finding but, if it is accurate, it suggests that programmes in Africa need the support of policy makers and the best way to ensure that support is to make sure that work on the ground (the programme implementation) helps to meet the overall objectives of national policy. In the case of the 'HOPE' programme, it is being argued that coherence between national policy and local programme goals was one of the factors that contributed to success. It will be argued below that this dimension of coherence needs to be complemented by inter-sectoral cooperation and community participation.

Unfortunately, this level of structural coherence is not always to be found in Africa. One clear example is the implementation of, so called, 'health sector reforms' where most governments in developing countries perceived the concept as an imposition because it was developed outside the context in which it was to be implemented and seemed to be designed more to meet the economic and ideological aims of some western governments than the needs of the people (Hall & Taylor 2003). In the event 'health sector reforms' in most African countries resulted in no improvement and sometimes even a worsening of health status (WHO 2003a).

The 'HOPE' programme's primary target groups were PLHIV and the OVC. The main role of the support group structure was to identify and support these two categories of potential beneficiaries in a defined location. This support group model goes by other names in different countries. The most common terminology is the simple phrase 'community-based services' and this is used in many other countries in the developing and developed world. It is a feature of the patients who take advantage of community-based services in Ghana that they are comparatively poorer, often less healthy and experience difficulties in maintaining normal life as compared to those who do not receive support from community-based services. This general truth was revealed in a study conducted in Ontario Canada to examine the demographic and health related characteristics of both AIDS patients who access and do not access support from community-based organisations (Williams, Narciso, Browne, Roberts, Weir, &

Gafni 2005). While this evidence comes from a 'developed' country the principle probably holds wherever AIDS is a problem.

The programme has full time staff and volunteers. This collaboration between full time trained staff and members of the local population (local partners) who are volunteers was considered by many respondents to be one of the most positive dimensions of the support group structure. Volunteers live with the beneficiaries and some were already supporting them prior to the implementation of the programme. Therefore, their involvement improved and broadened the programmes' understanding of needs and changed the nature of the care and support that was provided. The key role of the volunteers and their popularity with beneficiaries is an important finding. It is to be hoped that this finding might ensure that volunteers are enabled to support beneficiaries after the implementation of the programme. If this were to happen it would enhance the prospects for programme sustainability.

The findings relating to the role of volunteers is also important because inadequate staffing was one of the main constraints enumerated in the interviews with stakeholders. This constraint could have been addressed by recruiting a larger numbers of volunteers, supervised by a smaller number of salaried staff. Savings could have been made using this approach and part of those monies could have been used to motivate and reward the volunteers who were 'crying out' for small incentives: they were not looking for payment but some small incentive or reward would have done a great deal for their morale. Such an approach would ultimately promote programme ownership since volunteers are part of the communities and some are HIV patients. This was confirmed in the focus group discussions where participants indicated that beneficiaries listened to their peers who were trained as educators more readily than to health workers. In addition, such an approach might contribute to programme sustainability once funding comes to an end. Similar approaches have been used in Palliative Care Programmes in Uganda, Kenya and Malawi where a large number of volunteers were recruited and trained to support a small number of technical staff (Grant et al. 2009).

This constraint of inadequate funding has been identified to hamper the implementation of evidence based community interventions in Africa. For

instance, inadequate funding and insufficient training in the implementation of the primary healthcare concept contributed to inadequate equipment and poor quality of care at the community level (Van Wyke & Peltzer 2004). Similar problems with funding were experienced by 'HOPE' although the details of how resource constraints played out in practice provide some more nuanced lessons.

The main source of funding for the programme was from USAID. The slow flow of funds from USAID coupled with unbudgeted activities in the initial proposal impacted negatively on the skills training components and equipment for the OVC. USAID was the main funding agency and the programme did not have any other major sources of funding with the exception of the little financial support received from the Ghana AIDS commission. This constraint (inadequate funding) has also been experienced by other programmes in Africa and, from anecdotal evidence, seems to be a feature of programmes which are donor driven. For instance, the provision of community-based palliative care programmes in Uganda, Kenya and Malawi with support from the Diana, Princess of Wales, Memorial Fund revealed limited funding as one of the programme constraints (Grant, Brown, Muray, & Leng 2009). All health programmes have to make decisions about what to do when needs are greater than resources. This is not the point that is being made here. The 'HOPE' programme prioritised vocational training but the original submission underestimated the costs and even such funds as were committed flowed slowly or not at all. This is a structural weakness that could have been corrected.

Problems associated with proposal development are increasingly becoming a concern. In most instances, either the proposal excludes the key needs of the beneficiaries or some of the agreed priorities are under budgeted. This was evident in the 'HOPE' programme where money for start up tools for the OVC was not budgeted for during the planning phase. In addition, the budgets for most of the programme activities were underestimated. This point was made by respondents in both the interviews and focus group discussions. Also, among those who had been previously trained on a skill prior to the programme, 72% attributed non-use of skills to lack of initial capital (OICI Ghana 2003). This should have been addressed in the initial proposal. However, the same concern has been raised, where almost 1 in 5 of the beneficiaries attributed non-use of skills to lack of initial capital. The suggestion from the interviews is that these

failures arose because the consultants who worked on the proposal did not collaborate adequately with the technical team. This problem has been identified with many other proposals submitted for funding from developing countries: there is a tendency to exclude key needs of the intended beneficiaries either because they have not been adequately involved in developing proposals or important inter-professional collaborations have not been established. For instance, a study conducted by the Global Funds as a result of funds earmarked for AIDS, Malaria and Tuberculosis in developing countries revealed these very weaknesses and further commented that most of the agencies that benefited had weak initial evaluation proposal in terms of their ability to meet the key needs of intended beneficiaries (Radelet & Siddiqi 2007).

The internal evaluation report focussed on services delivered and immediate outputs. It offered general recommendations on programme challenges in order to improve service delivery. These aspects of the internal evaluation reports were seen as valuable but they can also be criticised for being deficient in critical analysis. Some of the weaknesses in programme design, programme effectiveness and programme sustainability that have been identified in this thesis could have led to programme improvements if they had been identified earlier. This observation adds to the evidence that evaluation skills are weak in Ghana and need strengthening (Wellmann et al. 2007). This is why the programme implementers indicated in the interview the need for a seasoned evaluator.

5.3.2.2 Process

Process evaluation is intended to determine whether interventions were implemented as planned, the quality of the intervention and to understand the impeding and the enabling factors for implementation.

Overall, beneficiaries were provided with food support, education and, to a lesser degree, skills training. This was established in both the quantitative and qualitative findings. However, the outcome of the intervention could not be attributed entirely to the 'HOPE' programme. This is because beneficiaries in some support groups were receiving support from other NGOs and public sector organisations (as discussed earlier). Consequently, from the point of view of this

evaluation, it is impossible to know what outcomes are attributable to 'HOPE' and what may have resulted from inputs from other NGOs.

Another key finding that relates to process, is that 'HOPE' created no formal collaborations with these other organisations that were engaged in similar work (with the exception of the Ghana AIDS Commission which provided a little financial support for OVC tools). This is an important point because it is more than possible that a more formal collaboration with these other organisations could have saved the 'HOPE' programme from some financial burdens through economies of scale and simple cost sharing. This is the practical and rather simple meaning of cooperation as a principle of health interventions and development work.

Food support

Beneficiaries were positive about the food support provided by the programme. However, the food provided by the programme was not locally produced. Also, the initial quantity of food, designed to cater for an average household of five, was discontinued in the course of the programme implementation and changed to a lower level to make the 'HOPE' food quantities the same as other supplementation programmes funded by the USAID. It is possible that the reduction in food quantity coupled with the sale of the food by some beneficiaries meant that the recorded gains in weight were less than they might otherwise have been. The beneficiaries were selling the food probably because most were unemployed and needed money for other contingencies. This is not surprising given that the members of the support groups were recruited into the 'HOPE' programme because of difficulties in maintaining normal life - a circumstance that can lead to depression and loss of hope (Williams, Narciso, Browne, Roberts, Weir, & Gafni 2005). Until the economic conditions of the beneficiaries improve and more of their basic needs are met, this problem will persist. The psychological needs of the beneficiaries have to be supported to help them adopt positive behavioural actions. Quite simply, the provision of food rations alone with the presumption that it would be consumed by the beneficiaries may be wrong. This is because there are always competing needs due to the fact that beneficiaries still hold some responsibilities at home or

elsewhere. Individuals will make decisions that reflect personal circumstances even if the result is at the expense of the objective of the intervention.

Education

The 'HOPE' programme provided monthly education and training workshops for all beneficiaries. The training of the primary beneficiaries as peer educators which was called 'Model of HOPE' was perceived to be positive. This contributed to the programme and was perceived to be important in sustaining the educational component of the programme. The involvement of their peers to provide education was perceived to result in three benefits: social acceptance, personal growth and empowerment. This is probably because the patients accept their peers and perceive them as people who understand their situation. This generates trust, boosts confidence and creates the needed environment for effective deliberations. This concept was adopted in Zimbabwe where traditional birth attendants (TBAs) were identified in their communities, trained and involved in health care delivery. The impact of their work was assessed in terms of their beneficial contribution to maternal mortality and morbidity (Jacobson 1991). This is just one of many examples where peer education by community volunteers who are provided with training and support has resulted in improved outcomes at relatively low cost.

Given this very positive response to peer involvement in service provision and other comments made by beneficiaries it is reasonable to argue that this dimension of HOPE may well have contributed to the reduction in stigmatisation and discrimination that was indicated by the participants. It was further suggested that this approach could be expanded nationwide.

Skills training

The programme provided skills training for some of the beneficiaries. However, only one in five of the PLHIV and a smaller number of OVC benefited from this component of the intervention due to inadequate funding and weak initial proposals. This set of issues has been discussed above but, in terms of 'process' evaluation, needs to be linked with the concept of co-operation. There was a perceived reluctance on the part of many programme planners and implementer

to tackle health problems through a multi-sectoral approach: that is, by involving all sectors that have direct or indirect impact on the problem (WHO 2001). It might be speculated that their motivation is to claim more exclusive credit for their intervention and promote their own ideas as being the most effective. In the background there is always the need for implementers to maintain the financial commitment of their funders and the maintenance of their identity as the providers of service can be crucial in this respect (Kellogg Foundation 2004). This is evident in the 'HOPE' programme where other avenues for funding such as collaborations with other NGOs and public sector organisations providing similar support were not adequately explored.

Also, among those trained, less than one in ten were practicing with the skills when data were collected. This is probably because the majority were interested in petty trading and not the skills provided. Also, even for those who wanted to turn their skills training into employment, the lack of a small but important start up capital proved to be a major barrier.

5.3.2.3 Outcome

Food support

The main purpose of food support is improving health through good nutrition. Evidence of this effect is looked for in terms of the ability of people with HIV and AIDS to maintain or gain weight. A variety of studies have reported that weight is gained in these circumstances by eating a variety of food more frequently (Whitney, Hamilton, & Rolfes 1990), so it seems reasonable to make this case here. However, the mean difference in weight of 2kg for this study was relatively higher than that recorded in a similar study in Uganda where the mean difference in weight was 0.36kg (Rawat et al. 2010). It has already been discussed above that in this study weight gains may have been overestimated because of uncertainty over baseline assessments.

Beneficiaries and stakeholders were highly satisfied with the monthly food provided by the programme. This is probably because most (seven in every ten) were not receiving any food support prior to the implementation of the programme (OICI Ghana 2003). In addition, adherence to ART was a major

concern. For example, the baseline report recorded that only 53% of the subjects surveyed were on ART prior to the implementation of the programme (OICI Ghana 2003). However, with the food support, over 77% of the PLHIV were on ART at the time of the study. It is possible that the improvement in the ART adherence was as a result of the food support: a conclusion that is supported by quotes from the focus group discussions and stakeholder interviews. This has also been reported elsewhere in the literature. Nutritional interventions involving food-based approaches and micronutrient supplementation which are integrated with HIV treatment programmes enhance ART acceptability, adherence and effectiveness (Castleman, Seumo-Fosso, & Cogill 2004).

In this study weight gain was not uniform. A range of factors were associated with maintaining and gaining weight. However, one variable, namely the support group, proved to be highly significant after statistical adjustment. Assuming that this is a real finding it begs the question as to what differentiated successful from less successful support groups. As the author visited these centres and has access to formal and informal data, the author has a theory about the important differences between support groups. The most likely explanation is that some support groups were more successful in providing practical inputs but also in creating an atmosphere of hope and generating community-based social networks (see, for example, Harris (2006)). For example, the Ultimate AID Foundation has the best outcome in terms of weight. Importantly, it had been providing its members with food supplementation before the commencement of the programme which suggests that the outcomes recorded in this study reflect a longer period of sustained inputs. It was also a well organised operation with committed staff and a positive ethos. By way of contrast, the Solace Club recorded the poorest weight outcomes. The most likely explanation, based on interview data, is the frequent delays in food provision and questions about food quality. The fundamental problem seems to have been a slow programme response to increasing membership of this support group. As a result, food was being overstretched to feed the entire membership, which obviously compromised the distribution formula. The impact was practical (less food for beneficiaries) but also psychological.

Education

Beneficiaries and stakeholders were highly satisfied with the educational component of the programme. This is especially so with the training of their peers as educators. As a result, they perceived that the educational component of the programme to be sustainable beyond the programme period. This issue has been discussed above.

Skills training

Beneficiaries and stakeholders were dissatisfied with the number supported with skills training, probably because many beneficiaries indicated losing their jobs and were currently unemployed. Even though there is an increase in the percentage of those trained in a skill, over a third of the beneficiaries (37.5%) were still currently unemployed as compared to the previous unemployment status (8.5%). The high level of current unemployment might explain why beneficiaries perceived difficulties in sustaining the food component beyond the programme period.

5.3.3 Implications of findings for Ghana and Africa

Objective 5 is concerned with recommendations that flow from the evaluation for the HOPE programme while objective 6 is concerned with future work in Ghana and, more widely, in Africa.

So, what can be synthesized from these findings? Subjective benefits have been identified and suggestive if not conclusive evidence of objective benefits has been presented. The major issue is sustainability and transferability. People living with HIV and AIDS and those in their families affected by their illness have complex needs. Resources are in short supply. Therefore, the key issue is what can be learned from this study that might promote low cost sustainability.

First, the quantity and nature of food provided by the programme brought benefits to the beneficiaries but the sustainability of the food component beyond the programme period remains a major concern. It seems logical to suggest that the programme should have invested in local production through

community farming which would have resulted in beneficiaries being able to enjoy the produce during and, crucially, after implementation of the programme. In addition, it would have given employment to beneficiaries interested in farming.

Another approach identified from the 'HOPE' programme to promote programme sustainability is the direct involvement of beneficiaries (Model of HOPE). This involvement of HIV-positive peers in the provision of care and support has been shown in this study and in others to generate social acceptance, reciprocal support, personal growth and empowerment. It is for this reason that this model is strongly supported in a much wider literature (for example, Marino, Simoni & Silverstein (2007)). It also has a strong track record in Africa. For example, St. Mary's Hospital in Nigeria used Traditional Birth Attendants who had their existing credibility with the community enhanced by further training with the result that maternal mortality and morbidity both fell by more than 50% (Brennan 1988).

The 'HOPE' programme involved beneficiaries in the identification of their own needs. Addressing the key needs of beneficiaries has been identified to promote community confidence and acceptability of intervention (Mansa 1991). For example, the JOICEP approach in Tanzania improved family planning acceptance in project communities by identifying the key needs of the beneficiaries which were more to do with parasitic illness and more general activities. These needs were addressed alongside the intervention intended to promote family planning acceptance with mutual benefit to both. The 'HOPE' programme identified food as a key issue for the potential beneficiaries but also took a much wider approach in the provision of education and support. It seems from the qualitative data that these components were mutually supportive.

So, the main deduction to be drawn here is that the use of peers, local produce, participative needs assessment and community participation are the ingredients that helped to bring about the successful outcomes that were achieved by the 'HOPE' programme. This is not a new finding. For example, this combination of techniques was used in Vietnam to promote appropriate infant feeding practices and, three years after the programme terminated, mothers were still practising with the new behaviours acquired from the programme (Marsh et al. 2004).

The 'HOPE' programme also experienced failure: most importantly, in terms of skills training and employment. Problems with the initial budget and a slow flow of funds contributed to this failure. Again, this is not uncommon as inadequate funding is a major constraint to many of the community-based interventions that initially proved to be effective in Africa (Florentino 2003). In this context, inter-sectoral collaboration, by developing common guidelines that are applicable for local settings, has proved to be successful and ensures effective and efficient use of resources (WHO 2001). This approach was adopted by UNICEF in 2002 in 100 districts within 11 countries in West Africa during the implementation of the programme called Accelerated Child Survival and Development (ACSD). The programme involved all key partners such as the World Bank, numerous NGOs, government and community leaders, WHO and others. The programme achieved a 20% reduction in child deaths across 16 districts where it was fully implemented and a 10% improvement across districts where it was implemented partially (Veneman 2005). It may be that these successful examples of collaboration and cooperation between agencies involved in bringing aid need to be applied more widely.

5.4 Conclusions, recommendations and reflection

5.4.1 Conclusions

These conclusions and recommendations are presented as succinct numbered points for the sake of clarity and flow from the discussion. The evidence that leads to the point being made has been set out in full earlier. Where further argument is needed it is made briefly so as not to break the flow of the sequence.

A. About evaluation approaches and design for the 'HOPE' programme

1. The possibility of an experimental design using a randomised controlled trial was not considered during the formation stage of the programme. As a result, beneficiaries were accessing care and support from other programmes - thus, outcomes could not be attributed entirely to the 'HOPE' interventions

2. The ethical challenges associated with the study coupled with the context, timing and available resources made it impossible to use randomised controlled trial and other approaches to evaluate the programme

3. In theory, different evaluation approaches were available for the 'HOPE' programme. However, the author considered Avedis Donabedian structure, process and outcome models as the most suitable approach in the circumstances to evaluate the 'HOPE' programme.

B. About the evaluation of the 'HOPE' programme

1. This information revealed that the programme structure was in the main as had been planned

2. Lack of funding for the skills training component and for equipment and capital to support movement into employment emerged as a key weakness

3. The amount of food provided was reduced during the period of implementation and some beneficiaries sold their food. The impact may have reduced weight gain and other food related benefits

4. Volunteers who acted as peer educators and sources of empathy and encouragement were greatly appreciated by beneficiaries - more so than some of the trained employed staff

5. There was a perceived lack of cooperation between 'HOPE' and other NGOs with similar aims and client groups

6. Only a minority of programme participants received skills training and only a very few found employment. Skills training may have been misdirected because participants seem to express a preference for becoming traders

7. On average, participants gained weight and improved their BMI scores (assuming baseline data were accurate)

8. A wide range of factors were associated with gaining weight (support group, sex, farmers, ART status, length of time on the programme and marital status)

but the centre that provided care had a strong and independent effect. This suggests that the way in which care was provided varied from centre to centre and some were more successful than others

9. The food supplements were greatly appreciated by recipients probably because it contributed to improve ART acceptance.

C. Implications of findings for Ghana and Africa

Based on discussion of the implications of the findings for Ghana and Africa, the under listed conclusions are made to provide lessons for community-based interventions in Ghana and Africa more generally.

1. The non local nature of food supplements and inadequate inter-sectoral cooperation left programme managers and recipients doubtful about the longer term sustainability of the intervention once funding is discontinued
2. The role of volunteers/peer educators was perceived as both valuable and sustainable
3. Greater participation by members of the community and participative needs assessment were seen as important criteria for the programme success
4. Data from this study add to the case for funding the continuation of at least some components of the 'HOPE' programme.

5.4.2 Recommendations

Recommendations for the 'HOPE' programme

The purpose of making recommendations is to ensure that lessons learned from this research are implemented in the future. The main actions that are required are that further research is performed, successful components of the programme continued and weaknesses addressed. Therefore, it is recommended that:

1. The possibility of a cluster RCT of a programme like HOPE supported by qualitative tools should be considered
2. Unsuccessful components of the programme like skills training should only continue if they can be adequately funded and can be redesigned to better meet the needs and aspirations of potential beneficiaries
3. Successful components like the provision of food and the value of peer support in terms of encouragement and psychological support should be copied as a model elsewhere
4. Greater coordination of and cooperation between NGOs involved in this field is desirable and should be promoted.

General recommendations for Ghana and Africa

1. The results of this evaluation should be used to plan for a continuation of the intervention based on more local food sources, greater community participation, inter-sectoral cooperation and the need for comprehensive baseline data
2. Funders should allocate resources to develop evaluation skills in countries like Ghana
3. The challenge of programme sustainability needs to be addressed.

5.4.3 Reflections

It was the perspective of the funders that a formal training in evaluation methods should be incorporated as a major component of this PhD. While it is true that any PhD provides a research training this request from the funders came from a desire that the author of this thesis should be equipped to contribute to community-based programme evaluations on completion of his studies. This is a pressing need because of the lack of evaluation specialist in Ghana.

As a result, the researcher had the opportunity to attend evaluation courses, conferences and further reviewed numerous literatures on community-based evaluation approaches in developed and developing countries. The acquisition of these skills and knowledge coupled with those acquired from the supervisors on evaluations and application of mixed methods (desk-based, quantitative and qualitative) provided the researcher with skills and knowledge to successfully manage this PhD thesis. In addition, the researcher has acquired invaluable skills which will enable him to manage community-based evaluation programmes in Ghana and Africa more generally on completion of his studies. Importantly, the application of the mixed methods approach in this thesis has furnished the researcher with the skills and experience to address diverse methodological challenges.

Appendices

Appendix 1	Ethics consent
Appendix 2	Consent form and information sheets
Appendix 3	Questionnaire, interview and focus group discussion guide
Appendix 4	Demographic by support groups
Appendix 5	Ghana national strategic framework I & II
Appendix 6	OICI 2008 annual report
Appendix 7	Modified documentary analysis worksheet

Appendix 1

Ethics consent



University
of Glasgow | Faculty of
Medicine

Mr Kofi Akohene Mensah
Community Based Sciences
1 Lilybank Gardens
University of Glasgow
Glasgow
G12 8RZ

12 November 2008

Dear Mr Mensah

Medical Faculty Ethics Committee


Project Title: *An exploration of evaluation approaches for a community based intervention for People Living with HIV/AIDS in Ghana.*

Project No.: *FM05207*

The Faculty Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study following the submission of the finalised methods. They are happy therefore to approve the project, subject to the following conditions:

- The research should be carried out only on the sites, and/or with the groups defined in the application.
- Any proposed changes in the protocol should be submitted for reassessment, except when it is necessary to change the protocol to eliminate hazard to the subjects or where the change involves only the administrative aspects of the project. The Ethics Committee should be informed of any such changes.
- If the study does not start within three years of the date of this letter, the project should be resubmitted.
- You should submit a short end of study report to the Ethics Committee within 3 months of completion.

Yours sincerely


PP **Dr Una MacLeod**
Faculty Ethics Officer

Dr U MacLeod
Clinical Senior Lecturer

General Practice & Primary Care, Division of Community
Based Sciences, University of Glasgow, 1 Horselethill Road,
Glasgow, G12 9LX

Tel: 0141 330 8328
E-mail: u.macleod@clinmed.gla.ac.uk



KWAME NKURUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF MEDICAL SCIENCES
COMMITTEE ON HUMAN RESEARCH PUBLICATION AND ETHICS

Our Ref: CHRPE/KNUST/KATH/10_09_08

6th September, 2008

Mr. Kofi Akohene Mensah
 PhD Student, University of Glasgow
 Public Health and Health Policy
 1 Lilybank Gardens
 Glasgow, G12 8RZ
 Scotland

Dear Sir,

**AN EXPLORATION OF EVALUATION APPROACHES FOR A COMMUNITY
 BASED INTERVENTION FOR PEOPLE LIVING WITH HIV/AIDS IN
 GHANA**

Your application for Ethical Committee review for the study entitled "*An Exploration of Evaluation Approaches for a Community Based Intervention for People Living with HIV/AIDS in Ghana*" has been considered and approved by the Committee on Human Research, Publication and Ethics (CHRPE) of the School of Medical Sciences, Kwame Nkrumah University of Science and Technology, Kumasi and the Komfo Anokye Teaching Hospital, Kumasi.

The Committee recommends that samples and/or materials taken for this study should be used for the study only. Any subsequent use of the samples and/or materials for other studies will need clearance from the CHRPE.

The Committee also recommends that if applicable it should be informed of any adverse events. Its permission should be sought for any amendments to the protocol. The Committee should be informed of all publications arising from the study and copies of the same should be sent to the committee.

Also note that you are required to seek the requisite permission from any facility or department involved in order to carry out this study.

Professor Sir J. W. Acheampong, MD, FWACP
Chairman

Appendix 2

Consent form and information sheets

CONSENT FORM

Title of Project: An exploration of evaluation approaches for a community based intervention for People Living with HIV in Ghana

Name of Researcher: Kofi Akohene Mensah

Please cross box

1. I confirm that I have read and understand the information sheet dated..... (version.....) for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

3. I agree to take part in the above study.

Name of subject	Date	Signature/thumbprint
-----------------	------	----------------------

Name of Person taking consent (if different from researcher)	Date	Signature
---	------	-----------

Researcher: Kofi Akohene Mensah	Date	Signature
---------------------------------	------	-----------

1 for subject; 2 for researcher

An exploration of evaluation approaches for a community based intervention for People Living with HIV in Ghana

Information sheet for OICI Director of HIV/AIDS programme

You are being invited to take part in a research study, aimed at evaluating a community based intervention for People Living with HIV/AIDS in Ghana.

Before you decided to take part, it is important for you to understand why the research is being done and what it will involve. Please take some time to read the following information carefully and discuss it with others if you wish. Ask a member of the research team if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

Who is conducting the study?

The study is being conducted by Kofi Akohene Mensah, a Ghanaian PhD student being supervised by Prof. Phil Hanlon and Dr. Paula Lorgelly of the University of Glasgow, Scotland.

What is the purpose of the study?

The study is about the evaluation of community based interventions, which seek to evaluate the OICI Ghana programme in order to make recommendations to improve upon the programme and more generally on evaluations of community based interventions in the health sector in Africa. We will use interviews, questionnaires, discussion groups and examine project documents. The field work for this study begins in January 2009 and will continue until December 2010.

Why have I been asked to take part?

You have been chosen to represent the views of OICI Ghana HOPE programme.

What would be involved?

The interview will take place at your office, or a place of your convenience if this would make you feel more comfortable. The interviewer will take you through a semi-structured interview. The interviewer will complete an interview sheet and take additional notes where necessary. The interview will be relaxed and informal and it should last not more than 45-60 minutes. The questions will ask about the structure of the programme, detailed activities, how well the programme is progressing in accordance with the goals and objectives of the programme, and your thoughts on perceived challenges and future recommendations.

What happens next?

If you are interested in taking part in this study then a consent form will be given to you to sign to affirm your willingness to take part in the study.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving reason.

What are the benefits of taking part?

There may be no direct benefits of being interviewed. However, you will be providing useful and important information, which will contribute to the improvement of the programme and evaluation of community based interventions in the health sector of such programmes in Ghana and Africa generally.

What are the disadvantages of taking part?

You will be asked to provide information about the programme and its contribution to the health, wellbeing, home and lifestyle of the beneficiaries. You can choose not to answer a particular question if you wish to do so.

Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the study will be kept strictly confidential. You will be identified by a given code number and no names will be recorded. This cannot be linked to you in anyway and your name or any identifier will not be used in any publication or report of this study. However, your participation in this study is entirely voluntary.

What will happen to the results of the research study?

The study is for a PhD and the results will be presented at scientific meetings, and published in academic journals. It is likely that the results will be published within two years of the end of the study, i.e. between 2010 and 2012. If you wish, you can obtain a copy of the published results by contacting Kofi Akohene Mensah.

You will of course not be identified in any report or publication.

Who is organising and funding this research?

The research is being undertaken by Kofi Akohene Mensah, a Ghanaian student at the University of Glasgow under the supervision from two academic lecturers. The Government of Ghana is funding this research.

Who has reviewed the study?

Ethical approval has been obtained from the University of Glasgow Faculty of Medicine Ethics Committee and the Kwame Nkrumah University of Science and Technology, School of Medical Sciences Ethics Committee.

An exploration of evaluation approaches for a community based intervention for People Living with HIV in Ghana

Information sheet for OICI regional coordinators

You are being invited to take part in a research study, aimed at evaluating a community based intervention for People Living with HIV/AIDS in Ghana.

Before you decided to take part, it is important for you to understand why the research is being done and what it will involve. Please take some time to read the following information carefully and discuss it with others if you wish. Ask a member of the research team if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

Who is conducting the study?

The study is being conducted by Kofi Akohene Mensah, a Ghanaian PhD student being supervised by Prof. Phil Hanlon and Dr. Paula Lorgelly of the University of Glasgow, Scotland.

What is the purpose of the study?

The study is about the evaluation of community based interventions, which seek to evaluate the OICI Ghana programme in order to make recommendations to improve upon the programme and more generally on evaluations of community based interventions in the health sector in Africa. We will use interviews, questionnaires, discussion groups and examine project documents. The field work for this study begins in January 2009 and will continue until December 2010.

Why have I been asked to take part?

You have been chosen to contribute your views on OICI Ghana HOPE programme in this study. In total we will interview 4 regional coordinators.

What would be involved?

The interview will take place at your office, or a place of your convenience if this would make you feel more comfortable. The interviewer will describe the study to you, and take you through a semi-structured interview. The interviewer will complete an interview sheet and take additional notes where necessary. The interview will be relaxed and informal and it should last not more than 30-45 minutes. The questions will ask about your role in the programme, how well the programme is progressing in accordance with the goals and objectives of the programme, and your thoughts on perceived challenges and future recommendations.

What happens next?

If you are interested in taking part in this study then a consent form will be given to you to sign to affirm your willingness to take part in the study.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving reason.

What are the benefits of taking part?

There may be no direct benefits of being interviewed. However, you will be providing useful and important information, which will contribute to the improvement of the programme and evaluation of community based interventions in the health sector of such programmes in Ghana and Africa generally.

What are the disadvantages of taking part?

You will be asked to provide information about the programme and its contribution to the health, wellbeing, home and lifestyle of the beneficiaries. You can choose not to answer a particular question if you wish to do so.

Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the study will be kept strictly confidential. You will be identified by a given code number and no names will be recorded. This cannot be linked to you in anyway and your name or any identifier will not be used in any publication or report of this study. However, your participation in this study is entirely voluntary and will not affect your relationship with OICI Ghana if you choose to opt out of the study.

What will happen to the results of the research study?

The study is for a PhD and the results will be presented at scientific meetings, and published in academic journals. It is likely that the results will be published within two years of the end of the study, i.e. between 2010 and 2012. If you wish, you can obtain a copy of the published results by contacting Kofi Akohene Mensah.

You will of course not be identified in any report or publication.

Who is organising and funding this research?

The research is being undertaken by Kofi Akohene Mensah, a Ghanaian student at the University of Glasgow under the supervision from two academic lecturers. The Government of Ghana is funding this research.

Who has reviewed the study?

Ethical approval has been obtained from the University of Glasgow Faculty Of Medicine Ethics Committee and the Kwame Nkrumah University of Science and Technology, School of Medical Sciences Ethics Committee.

An exploration of evaluation approaches for a community based intervention for People Living with HIV in Ghana

Information sheet for support group coordinators

You are being invited to take part in a research study, aimed at evaluating a community based intervention for People Living with HIV/AIDS in Ghana.

Before you decided to take part, it is important for you to understand why the research is being done and what it will involve. Please take some time to read the following information carefully and discuss it with others if you wish. Ask a member of the research team if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

Who is conducting the study?

The study is being conducted by Kofi Akohene Mensah, a Ghanaian PhD student being supervised by Prof. Phil Hanlon and Dr. Paula Lorgelly of the University of Glasgow, Scotland.

What is the purpose of the study?

The study is about the evaluation of community based interventions, which seek to evaluate the OICI Ghana programme in order to make recommendations to improve upon the programme and more generally on evaluations of community based interventions in the health sector in Africa. We will use interviews, questionnaires, discussion groups and examine project documents. The field work for this study begins in January 2009 and will continue until December 2010.

Why have I been asked to take part?

You have been chosen at random to represent the views of all support group coordinators. In total we will interview 4 support group coordinators.

What would be involved?

The interview will take place at your monthly meeting premises, or a place of your convenience if this would make you feel more comfortable. The interviewer will describe the study to you, and take you through a semi-structured interview. The interviewer will complete an interview sheet and take additional notes where necessary. The interview will be relaxed and informal and it should last not more than 45-60 minutes. The questions will ask about the support from OICI and other agencies, changes the programme has affected on the lives of PLWHAS, and your thoughts on perceived challenges and future recommendations.

What happens next?

If you are interested in taking part in this study then a consent form will be given to you to sign to affirm your willingness to take part in the study.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving reason.

What are the benefits of taking part?

There may be no direct benefits of being interviewed. However, you will be providing useful and important information, which will contribute to the improvement of the programme and evaluation of community based interventions in the health sector of such programmes in Ghana and Africa generally.

What are the disadvantages of taking part?

You will be asked questions about the contribution of the programme to the health, wellbeing, home and lifestyle of the beneficiaries. You can choose not to answer a particular question if you wish to do so.

Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the study will be kept strictly confidential. You will be identified by a given code number and no names will be recorded. This cannot be linked to you in anyway and your name or any identifier will not be used in any publication or report of this study. However, your participation in this study is entirely voluntary and will not affect your relationship with OICI Ghana if you choose to opt out of the study.

What will happen to the results of the research study?

The study is for a PhD and the results will be presented at scientific meetings, and published in academic journals. It is likely that the results will be published within two years of the end of the study, i.e. between 2010 and 2012. If you wish, you can obtain a copy of the published results by contacting Kofi Akohene Mensah.

You will of course not be identified in any report or publication.

Who is organising and funding this research?

The research is being undertaken by Kofi Akohene Mensah, a Ghanaian student at the University of Glasgow under the supervision from two academic lecturers. The Government of Ghana is funding this research.

Who has reviewed the study?

Ethical approval has been obtained from the University of Glasgow Faculty Of Medicine Ethics Committee and the Kwame Nkrumah University of Science and Technology, School of Medical Sciences Ethics Committee.

An exploration of evaluation approaches for a community based intervention for People Living with HIV in Ghana

Information sheet for focus group discussion

You are being invited to take part in a research study, aimed at evaluating a community-based intervention for People Living with HIV/AIDS in Ghana.

Before you decided to take part, it is important for you to understand why the research is being done and what it will involve. Please take some time to read the following information carefully and discuss with others if you wish. Ask a member of the research team if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

Who is conducting the study?

The study is being conducted by Kofi Akohene Mensah, a Ghanaian PhD student being supervised by Prof. Phil Hanlon and Dr. Paula Lorgelly of the University of Glasgow, Scotland.

What is the purpose of the study?

The study is about the evaluation of community based interventions, which seek to evaluate the OICI Ghana programme in order to make recommendations to improve upon the programme and more generally on evaluations of community based interventions in the health sector in Africa. We will use interviews, questionnaires, discussion groups and examine project documents. The field work for this study begins in January 2009 and will continue until December 2010.

Why have I been asked to take part?

You have been chosen at random to represent the views of all beneficiaries of the programme. In total we will conduct 8 focus group discussions. Two groups (one for males one for females), one of which you are being asked to participate in, will be randomly selected from each of the four regions benefiting from the OICI programme.

What would be involved?

The discussions will take place at your monthly meeting premises. The facilitator will describe the study to you, and will then facilitate discussion between you and around 8 others (this will constitute the focus group), on your impressions of the programme, the supports you receive from the programme and its contribution to your health, wellbeing, home and lifestyle, The facilitator will record the proceedings and take additional notes where necessary. The discussions will be relaxed and informal and it should last not more than 60 minutes.

What happens next?

If you are interested in taking part in this study then a consent form will be given to you to sign or thumbprint to affirm your willingness to take part in the study.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign or thumbprint a consent form. If you decide to take part you are still free to withdraw at any time and without giving reason.

What are the benefits of taking part?

There may be no direct benefits of being interviewed. However, you will be providing useful and important information, which will contribute to the improvement of the programme and evaluation of community based interventions in the health sector of such programmes in Ghana and Africa generally.

What are the disadvantages of taking part?

The focus group will involve talking about the support you received from OICI Ghana and its contributions to your health, wellbeing, home and lifestyle in a group situation. Some people may not feel comfortable in such situations. However, you can choose not to answer a particular question if you wish to do so.

Will my taking part in this study be kept confidential?

All information, which is collected, about you during the course of the study will be kept strictly confidential. However, it is important to bear in mind that, unlike with individual interviews, focus group participants cannot be given an absolute guarantee that confidences shared in the group will be respected.

In the study you will only be identified by a given code numbers and no name will be recorded. This cannot be linked to you in anyway and your name or any identifier will not be used in any publication or report of this study. However, your participation in this study is entirely voluntary and will not affect the benefit you receive from OICI Ghana if you choose to opt from the study.

What will happen to the results of the research study?

The study is for a PhD and the results will be presented at scientific meetings, and published in academic journals. It is likely that the results will be published within two years of the end of the study, i.e. between 2010 and 2012. If you wish, you can obtain a copy of the published results by contacting Kofi Akohene Mensah.

You will of course not be identified in any report or publication.

Who is organising and funding this research?

The research is being undertaken by Kofi Akohene Mensah, a Ghanaian student at the University of Glasgow with the supervision from two academic lecturers from the department. The Government of Ghana is funding this research.

Who has reviewed the study?

Ethical approval will be obtained from the University of Glasgow Faculty of Medicine Ethics Committee and Kwame Nkrumah University of Science and Technology, School of Medical Sciences Ethics Committee.

An exploration of evaluation approaches for a community based intervention for People Living with HIV in Ghana

Information sheet for structured questionnaire

You are being invited to take part in a research study, aimed at evaluating a community based intervention for People Living with HIV/AIDS in Ghana.

Before you decided to take part, it is important for you to understand why the research is being done and what it will involve. Please take some time to read the following information carefully and discuss it with others if you wish. Ask a member of the research team if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

Who is conducting the study?

The study is being conducted by Kofi Akohene Mensah, a Ghanaian PhD student being supervised by Prof. Phil Hanlon and Dr. Paula Lorgelly of the University of Glasgow, Scotland.

What is the purpose of the study?

The study is about the evaluation of community based interventions, which seek to evaluate the OICI Ghana programme in order to make recommendations to improve upon the programme and more generally on evaluations of community based interventions in the health sector in Africa. We will use interviews, questionnaires, discussion groups and examine project documents. The field work for this study begins in January 2009 and will continue until December 2010.

Why have I been asked to take part?

You have been chosen at random to represent the views of all beneficiaries of the programme. In total we will interview over 200 direct beneficiaries.

What would be involved?

The interview will take place at your monthly meeting premises, or a place of your convenience if this would make you feel more comfortable. The interviewer will describe the study to you, and take you through the questionnaire. The interviewer will complete the questionnaire and take additional notes where necessary. They will also measure your height. The interview will be relaxed and informal and it should last not more than 30 minutes. The questions will be asked about the supports you receive from OICI and its contribution to your health, wellbeing, home and lifestyle.

What happens next?

If you are interested in taking part in this study then a consent form will be given to you to sign or thumbprint to affirm your willingness to take part in the study.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign or thumbprint a consent form. If you decide to take part you are still free to withdraw at any time and without giving reason.

What are the benefits of taking part?

There may be no direct benefits of being interviewed. However, you will be providing useful and important information, which will contribute to the improvement of the programme and evaluation of community based interventions in the health sector of such programmes in Ghana and Africa generally.

What are the disadvantages of taking part?

You will be asked to complete an interview based questionnaire about your health, wellbeing, home and lifestyle. You can choose not to answer a particular question if you wish to do so.

Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the study will be kept strictly confidential. You will be identified by a given code number and no names will be recorded. This cannot be linked to you in anyway and your name or any identifier will not be used in any publication or report of this study. However, your participation in this study is entirely voluntary and will not affect the benefit you receive from OICI Ghana if you choose to opt from the study.

What will happen to the results of the research study?

The study is for a PhD and the results will be presented at scientific meetings, and published in academic journals. It is likely that the results will be published within two years of the end of the study, i.e. between 2010 and 2012. If you wish, you can obtain a copy of the published results by contacting Kofi Akohene Mensah.

You will of course not be identified in any report or publication.

Who is organising and funding this research?

The research is being undertaken by Kofi Akohene Mensah, a Ghanaian student at the University of Glasgow under the supervision of two academic lecturers. The Government of Ghana is funding this research.

Who has reviewed the study?

Ethical approval has been obtained from the University of Glasgow Faculty of Medicine Ethics Committee and the Kwame Nkrumah University of Science and Technology, School of Medical Sciences Ethics Committee.

Appendix 3

Questionnaire, interview and focus group discussion guide

**An exploration of evaluation approaches
for a community based intervention for People Living with HIV in Ghana.**

An Interview based questionnaire for the evaluation of OICI Ghana HOPE Project for PLWHAS in Ghana.

Date:.....Interviewer:..... Support Group Code:.....

Location:.....

Section A: Household demographic characteristics:

A1. Individual Code #..... A2. Region

A3. District A4. Town/village.....

A5. House # A6. Sex M F

A7. Religion Christian Moslem Others _____

A8. Ethnic group Akan Ewe GA Fante Northerner
 Others _____

A9. Previous Occupation Artisan Farmer Trader Hairdresser
 Student Unemployed Others _____

A10. Current occupation Artisan Farmer Trade

Hairdresser Student Unemployed Others _____

A11. Highest level of Education None Koranica Primary JSS

SSS College University Poly.

- A12. Marital status Single
 Married
 Divorced / Separated
 Widowed / widower
 Others

A13. Household size less than 2 2-3 4-5 6-7 above 7

A.14. Number of children 0 1-2 3-4 5-6 above 6

Section B: Height Measurements:

B1. Height 1 (m)..... Previous Weight

B2. Current Weight

Section C: Food Distributions and utilization

C1. What are the various dry food rations you receive monthly?

No.	Name of Dry ration	Quantity Received
1.		
2.		
3.		

C2. How long have you received the food support from OICI Ghana Project?

less than 6 months 6-12 months 12-24 months above 24 M

C3. What do you do with the foods given?

Eat All Eat and sell some Sell All Give it out as a gift

Eat and give some out as a gift Sell and give out some as a gift

Date:.....Interviewer:..... Support Group Code:.....

Location:.....

C4. What meals do you prepare from the foods received?

No.	Name of Food ration	Types of Meals	No. of individuals consumed
1.			
2.			
3.			
4.			

C5. Can eating of any of the food given cause you or your family to become ill?

Yes No

If yes, please name the type of ration or food and the sickness;

Food Ration

Sickness

1. _____

2. _____

3. _____

C6. Do you like all the food Rations given?

Yes No If No, state the one of less interest and the reasons

Date:.....Interviewer:..... Support Group Code:.....

Location:.....

C7. Has the consumption of the food brought any improvement in your wellbeing or changes to you?

The same Decreased Increased

C8. What are those changes?

C9. Are you on antiretroviral therapy? Yes No

C10. If No, why? No money not heard of ART not interested

Not due for ART Not provided locally

Section D: Entrepreneurial skills

D1. Name the various entrepreneurial skills you have received from OICI

Soap making Powder preparation Yoghurt preparation

Jam preparations None Others _____

D2. How many of the entrepreneurial skills have you received training?

None 1 2 3 4 above 4

D3. Were you involved in the selection of the entrepreneurial skills Yes NO

D4. Are you using any of them as a vocation?

Yes No if yes go to D 6

D5. If, No, why _____

Date:.....Interviewer:..... Support Group Code:.....
Location:.....

D6. Are you happy to use those entrepreneurial skills as a vocation?

Yes

No if yes, go to D8

D7. If No, why_____

D8. What skills would you have preferred most if you were given the chance to do so?



Semi-Structured Interview Guide for OICI Ghana National HIV/AIDS Programme Director

1.0 Background of the programme (ask for available documentation also)

- ❑ What is the background of the HOPE project in terms of who and how the idea was developed, how it fits into the organisational framework of OICI Ghana and the duration of the programme?
- ❑ Who are your funders and what are their other areas of support?
- ❑ What is the duration of the fund or the support and whether the funding has helped or restricted the development of the project?
- ❑ Do you have plans to get more funding for the project, if yes where from and what do you intend using the funding for?
- ❑ Who are your stakeholders and how do you involve these stakeholders in the programme?

2.0 Programme Activities

- ❑ What criteria did you use to identify the various support groups you fund?
- ❑ What is the time frame allocated for each support group to benefit from the HOPE programme and how did you arrive at that?
- ❑ What are the critical components or activities of the project?

- ❑ Why and how were those activities selected?
- ❑ Has there been any changes in activities since the programme started, what are they and why did you effect those changes?

- ❑ What do you hope to achieve by the end of the project?

- ❑ How many PLHIV did you start with and how many of them are on the programme now.

- ❑ What are the various rations given to PLHIV and in what quantities

- ❑ How did you arrive at these quantities for the various rations for the PLHIV?

- ❑ What are the various entrepreneurial skills given to the PLHIV and why were those skills chosen?

- ❑ How do you compare the status of the PLHIV before and after the implementation?

Before:

After

- ❑ In what way do you think that the difference is as a result of OICI Ghana support?

- ❑ How do you feel members of the support groups have responded to this intervention?

- ❑ What are the strengths of this project from your perspectives

- ❑ What are the weakness of this project and how could they be addressed in future activities?

3.0 Evaluation

- ❑ What is your understanding of evaluation and have you been involved in any evaluative studies previously?
- ❑ Do you think the programme needs to be evaluated and why?
- ❑ In your opinion, what approach or type of evaluation would you recommend for the programme and why?
- ❑ Has there been any evaluation since the programme started, who did the evaluation, what approach was used and what contributions did it make to the programme?
- ❑ What are the lessons to be learned from this community experience with the project that can be used in future projects and how would you do things differently?
- ❑ In your opinion, do you think the programme should be continued or discontinued and why?
- ❑ What measures are you putting in place to ensure the programme's sustainability after its completion?
- ❑ What recommendations do you have for the support groups to improve upon the programme and for future programme replications?
- ❑ What recommendations do you have for the OICI Ghana to improve upon the programme and for future programme replications?



Date: _____ **Interviewer:** _____ **Location:** _____ **Code:** _____

Draft Interview Guide for OICI Ghana Regional Programme Coordinators

1.0 Personal Profile

- Can you share with me your educational background and your working experience to date?
- How long have you been a coordinator?
- What are your roles and responsibilities in the OICI E:\Interview Guide for OICI Ghana Regional coordinators.docGhana HOPE programme?

2.0 Programme Activities

- How many PLHIV did you start with and how many of them are on the programme now.
- What are the various rations given to PLHIV and at what Quantities
- How did you arrive with the quantities of the various rations for the PLHIV?
- What are the various entrepreneurial skills given to the PLHIV and why were those skills chosen?
- How do you compare the status of the PLHIV before and after the implementation?

Before:

After:

- In what way do you think that the difference is as a result of OICI Ghana support?
- How do you feel members of the support groups have responded to this intervention?
- What are the strengths of this project from your perspectives
- What are the weakness of this project and how could they be addressed in future activities?

3.0 Evaluation

- Do you understand the term evaluation?
- What are the various types or approaches to evaluation you have heard of and which of them are you familiar with?
- Have the activities of the support groups been evaluated before, who did the evaluation, what approach was used for the evaluation, what was your involvement in the evaluation and the contribution of the evaluation to the support group programmes?
- Do you think there is a need to evaluate the programme and why?
- In your opinion, what type of evaluation do you recommend for this programme and why?
- What are your recommendations that can improve upon the HOPE Programme?
- What are the lessons to be learned from this community experience with the project that can be used in future projects and how would you do things differently?

- In your opinion, do you think the programme should be continued or discontinued and why?
- What recommendations do you have for the support groups to improve upon the programme and for future programme replications?
- What recommendations do you have for the OICI Ghana management to improve upon the programme and for future programme replications?



Semi-Structured Interview Guide for OICI Ghana monitoring and evaluation officer

2.0 Personal Profile

- Can you share with me your educational background and your working experience to date?
- How long have you been a monitoring and evaluation officer?
- What are your roles and responsibilities in the OICI Ghana HOPE programme?

2.0 Evaluation

- What is your understanding of evaluation and have you been involved in any evaluative studies previously?
- What are the various types or approaches to evaluation you have heard of and which of them are you familiar with?
- Have the activities of the HOPE programme been evaluated before, who did the evaluation, what approach was used for the evaluation, what was your involvement in the evaluation and the contribution of the evaluation to the HOPE programme?
- Do you think there is a need to evaluate the programme and why?

- In your opinion, what type of evaluation do you recommend for this programme and why?

- What are your recommendations that can improve upon the HOPE Programme?



Semi-Structured Interview Guide for Support Group Coordinators

3.0 Personal Profile

- Can you share with me your educational background and your working experience to date?
- How long have you been a coordinator?
- What are your roles and responsibilities in the OICI Ghana programme?

4.0 OICI Ghana support

- What training programmes have you received from OICI Ghana?
- What sort of assistance has OICI Ghana offered you to support your group?
- What other agencies support your group and what are their areas of support?
- How do you compare the state of the PLHIV before and after they started the OICI Ghana programme (either your own personal comparison or programme driven)?

Before:

After:

- ❑ Why do you think the changes are a result of OICI Ghana programme?
- ❑ What are the key needs of the PLHIV you think the OICI Ghana programme is not addressing?

- ❑ What training programmes has the group received from OICI Ghana?

- ❑ In your own opinion, how do you think the training programmes have been useful?

- ❑ What are the other training needs of the beneficiaries?

- ❑ Do you think it is valuable to continue with the programme and why?

- ❑ How are you involved in the identification and selection of activities for the PLHIV?

- ❑ In your opinion, why do you think, some of the PLHIV are not practicing the various IGAS skills

- ❑ How do you intend to continue with the programme after OICI Ghana support is finished?

3.0 Evaluation

- ❑ Do you understand the term evaluation?

- ❑ What are the various types or approaches to evaluation you have heard of and which of them are you familiar with?
- ❑ Have the activities of your support group been evaluated before, who did the evaluation, what approach was used for the evaluation, what was your involvement in the evaluation and the contribution of the evaluation to your support group programmes?

- ❑ Do you think there is a need to evaluate the programme and why?

- In your opinion, what type of evaluation do you recommend for this programme and why?

- What are your recommendations that can improve upon the HOPE Programme?



Checklist for Focus Group Discussion

1. Let's talk about what you get from OICI Ghana?

- Food Supplementations
- Entrepreneurial skills
- Capacity buildings and training programmers
- Other supports
- Other supports from other agencies and Name of those agencies

2. How was it?

- How would you compare your status before and after receiving those supports from OICI Ghana?

Before:

After:

- Do you think is good to continue with the programme and why?

3. How could it be better?

- Were you involved in the selection of those supports?
- What are your key needs that you think OICI Ghana programme are not addressing?
- What training have you received from OICI Ghana and how has it helped you??
- Do you have any suggestions in terms of the supports you received from OICI Ghana?

- Do you have any other suggestions for OICI Ghana and your support group officials that will improve upon the support you are receiving?

OICI officials:

Support group officials:

4. Future plans

- How do you intend to survive or cope when the support from OICI Ghana is stopped?

Appendix 4

Demographic by support group

Together AS One (13)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	3	23.1
	30-39	4	30.8
	40-49	3	23.1
	50-59	1	7.7
	>60	2	15.4
Sex	Male	3	23.1
	Female	10	76.9
Previous Occupation			
	Farmer	1	7.7
	Trader	7	53.8
	Unemployed	2	15.4
	Others	3	23.1
Current Occupation			
	Trader	6	46.2
	Unemployed	5	38.5
	Others	2	15.4
Level of Education			
	None	4	30.8
	Primary	2	15.4
	JSS	4	30.8
	SSS	3	23.1
Household Size			
	2-3	4	30.8
	4-5	7	53.8
	6-7	1	7.7
	>7	1	7.7
Number of Children			
	0	1	7.7
	1-2	3	23.1
	3-4	6	46.2
	5-6	1	7.7
	>6	2	15.4
Length of time on the Programme			
	<12 Months	1	7.7
	12-24 Months	3	23.1
	>24 Months	9	69.2

Together AS One (13) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	12	92.3
	No	1	7.7
Entrepreneurial Skills			
	Soap Making	12	92.3
	None	1	7.7
Number Trained			
	None	1	7.7
	1	3	23.3
	2	9	69.2
Number using as vocation			
	Yes	2	15.4
	No	11	84.6

2. Bomso Clinic (N=16)

Variable	Variable category	Frequency	Percentage
Age Group	<30	3	8.8
	30-39	6	37.5
	40-49	4	25.0
	50-59	2	12.5
	>60	1	6.3
Sex	Male	3	18.8
	Female	13	81.3
Previous Occupation	Farmer	2	12.5
	Trader	12	75.0
	Unemployed	2	12.5
Current Occupation	Farmer	2	12.5
	Trader	6	37.5
	Unemployed	8	50.0
Level of Education	None	1	6.3
	Primary	7	43.8
	JSS	8	50.0
	SSS	-	-
Household Size	<2	2	12.5
	2-3	4	25.0
	4-5	6	37.5
	6-7	3	18.8
	>7	1	6.3
Number of Children	0	1	6.3
	1-2	4	25.0
	3-4	6	37.5
	5-6	5	31.3
Length of time on the Programme	<12 Months	1	6.3
	12-24 Months	7	43.8
	>24 Months	8	50.0

Bomso Clinic (N=16) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	15	92.3
	No	1	7.7
Entrepreneurial Skills	Soap Making	1	6.3
	None	15	93.8
Number Trained	None	15	93.8
	1	1	6.3
Number using as vocation	No	16	100

3. Friends of the Vulnerable (N=12)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	1	8.3
	30-39	2	16.7
	40-49	6	50.0
	50-59	3	25.0
Sex	Female	12	100.0
Previous Occupation	Farmer	3	25.0
	Trader	5	41.7
	Others	4	33.3
Current Occupation	Farmer	1	8.3
	Trader	4	33.3
	Unemployed	5	41.7
	Others	2	16.7
Level of Education	None	3	25.0
	Primary	2	16.7
	JSS	3	25.0
	SSS	3	25.0
	University	1	8.3
Household Size	2-3	3	25.0
	4-5	4	33.3
	6-7	3	25.0
	>7	2	16.7
Number of Children	0	1	8.3
	1-2	3	25.0
	3-4	3	25.0
	5-6	5	41.7
Length of time on the Programme	<12 Months	2	16.7
	12-24 Months	1	8.3
	>24 Months	9	75.0

Friends of the Vulnerable (N=12) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	8	66.7
	No	4	33.3
Entrepreneurial Skills	Soap Making	9	75.0
	None	3	25.0
Number Trained	None	4	33.3
	1	8	66.7
Number using as vocation	NO	12	100.0

4. Liberty (N=14)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	2	14.3
	30-39	4	28.6
	40-49	4	28.6
	50-59	3	21.4
	>60	1	7.1
Sex	Male	1	7.1
	Female	13	92.9
Previous Occupation	Farmer	3	21.4
	Trader	6	42.9
	Unemployed	2	14.3
	Others	3	21.4
Current Occupation	Farmer	3	21.4
	Trader	7	50.0
	Unemployed	2	14.3
	Others	2	4.3
Level of Education	None	5	35.7
	Primary	1	7.1
	JSS	6	42.9
	SSS	2	14.3
Household Size	2-3	2	14.3
	4-5	8	57.1
	6-7	3	21.4
	>7	1	7.1
Number of Children	0	2	14.3
	1-2	8	57.1
	3-4	1	7.1
	5-6	2	14.3
	>6	1	7.1
Length of time on the Programme	<12 Months	5	35.7
	12-24 Months	6	42.9
	>24 Months	3	21.4

Liberty (N=14) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	13	92.9
	No	1	7.1
Entrepreneurial Skills	None	14	100.0
Number Trained	None	14	100.0
Number using as vocation	No	14	100.0

5. JOP (N=13)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	1	7.7
	30-39	4	30.8
	40-49	5	38.5
	50-59	2	15.4
	>60	1	7.1
Sex	Female	13	100.0
Previous Occupation			
	Farmer	1	7.7
	Trader	7	53.8
	Unemployed	2	15.4
	Others	3	23.1
Current Occupation			
	Trader	5	38.5
	Unemployed	5	38.5
	Others	3	23.1
Level of Education			
	Primary	1	7.7
	JSS	11	84.6
	University	1	7.7
Household Size			
	<2	2	15.4
	2-3	7	53.8
	4-5	4	30.8
Number of Children			
	0	3	23.1
	1-2	9	69.2
	3-4	1	7.7
Length of time on the Programme			
	<12 Months	1	7.7
	12-24 Months	12	92.3

JOP (N=13) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	11	84.6
	No	2	15.4
Entrepreneurial Skills	None	7	53.8
	Other	6	46.2
Number Trained	None	7	53.8
	1	6	46.2
Number using as vocation	No	13	100.0

6. GHAFTRAM (13)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	1	7.7
	30-39	3	23.1
	40-49	6	46.2
	50-59	3	23.1
Sex	Male	7	53.8
	Female	6	46.2
Previous Occupation			
	Farmer	5	38.5
	Trader	2	15.4
	Unemployed	1	7.7
	Others	5	38.5
Current Occupation			
	Farmer	3	23.1
	Trader	2	15.4
	Unemployed	4	30.8
	Others	4	30.8
Level of Education			
	None	2	15.4
	Primary	4	30.8
	JSS	4	30.8
	University	3	23.1
Household Size			
	2-3	3	23.1
	4-5	4	30.7
	6-7	5	38.5
	>7	1	7.7
Number of Children			
	1-2	5	38.5
	3-4	4	30.8
	5-6	3	23.1
	>6	1	7.7
Length of time on the Programme			
	<12 Months	1	7.7
	>24 Months	12	92.3

GHAFTRAM (13) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	6	46.2
	No	7	53.8
Entrepreneurial Skills	Soap Making	8	61.5
	None	5	38.5
Number Trained	None	5	38.5
	1	8	61.5
Number using as vocation	Yes	1	7.7
	No	12	92.3

7. Perseverance (N=14)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	3	21.4
	30-39	7	50.0
	40-49	3	21.4
	50-59	1	7.1
Sex	Male	3	21.4
	Female	11	78.6
Previous Occupation			
	Farmer	3	21.4
	Trader	4	28.6
	Unemployed	2	14.3
	Others	5	35.7
Current Occupation			
	Farmer	2	14.3
	Trader	3	21.4
	Unemployed	6	42.9
	Others	3	21.4
Level of Education			
	None	2	14.3
	Primary	2	14.3
	JSS	9	64.3
	SSS	1	7.1
Household Size			
	<2	1	7.1
	2-3	5	35.7
	4-5	5	35.7
	6-7	2	14.3
	>7	1	7.1
Number of Children			
	0	1	7.1
	1-2	6	42.9
	3-4	5	35.7
	5-6	2	14.3
Length of time on the Programme			
	<12 Months	12	85.7
	12-24 Months	2	14.3

Perseverance (N=14) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	14	100.0
Entrepreneurial Skills	None	14	100.0
Number Trained	None	14	100.0
Number using as vocation	No	14	100.0

8. New Generation Concern (N=24)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	3	12.5
	30-39	7	29.2
	40-49	9	37.5
	50-59	3	12.5
	>60	2	8.3
Sex	Male	6	25.0
	Female	18	75.0
Previous Occupation			
	Farmer	12	50.0
	Trader	5	20.8
	Unemployed	4	16.7
	Others	3	12.5
Current Occupation			
	Farmer	12	50.0
	Trader	3	12.5
	Unemployed	7	29.2
	Others	2	8.3
Level of Education			
	None	10	41.7
	Primary	7	29.2
	JSS	7	29.2
Household Size			
	<2	2	8.3
	2-3	5	20.8
	4-5	7	29.2
	6-7	8	33.3
	>7	2	8.3
Number of Children			
	1-2	6	25.0
	3-4	8	33.3
	5-6	8	33.3
	>6	2	8.3
Length of time on the Programme			
	<12 Months	11	45.8
	12-24 Months	9	37.5
	>24 Months	4	16.7

New Generation Concern (N=24) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	7	29.2
	No	17	70.8
Entrepreneurial Skills	None	22	91.7
	Others	2	8.3
Number Trained	None	22	91.7
	1	2	8.3
Number using as vocation	No	24	100.0

9. Ultimate AID Foundation (N=25)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	5	20.0
	30-39	13	52.0
	40-49	5	20.0
	50-59	2	8.0
Sex	Male	2	8.0
	Female	23	92.0
Previous Occupation			
	Farmer	1	4.0
	Trader	16	64.0
	Unemployed	1	4.0
	Others	7	28.0
Current Occupation			
	Trader	17	68.0
	Unemployed	4	16.0
	Others	4	16.0
Level of Education			
	None	3	12.0
	Primary	6	24.0
	JSS	14	56.0
	SSS	1	4.0
	University	1	4.0
Household Size			
	<2	5	20.0
	2-3	7	28.0
	4-5	9	36.0
	6-7	4	16.0
Number of Children			
	0	4	16.0
	1-2	11	44.0
	3-4	6	24.0
	5-6	4	16.0
Length of time on the Programme			
	<12 Months	14	56.0
	12-24 Months	11	44.0

Ultimate AID Foundation (N=25) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	22	88.0
	No	3	12.0
Entrepreneurial Skills	None	25	100.0
Number Trained	None	25	100.0
Number using as vocation	No	25	100.0

10. Solace Club (N=20)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	1	5.0
	30-39	12	60.0
	40-49	6	30.0
	50-59	1	5.0
Sex	Male	4	20.0
	Female	16	80.0
Previous Occupation			
	Trader	13	65.0
	Unemployed	2	10.0
	Others	5	25.0
Current Occupation			
	Trader	10	50.0
	Unemployed	6	30.0
	Others	4	20.0
Level of Education			
	None	5	25.0
	Primary	4	20.0
	JSS	7	35.0
	SSS	1	5.0
	University	3	15.0
Household Size			
	<2	2	10.0
	2-3	6	30.0
	4-5	7	35.0
	6-7	4	20.0
	>7	1	5.0
Number of Children			
	0	2	10.0
	1-2	9	45.0
	3-4	6	30.0
	5-6	3	15.0
Length of time on the Programme			
	<12 Months	6	30.0
	12-24 Months	7	35.0
	>24 Months	7	35.0

Solace Club (N=20) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	19	95.0
	No	1	5.0
Entrepreneurial Skills	None	20	100.0
Number Trained	None	20	100.0
Number using as vocation	No	20	100.0

11. El-Shaddai (N=21)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	6	28.6
	30-39	4	19.0
	40-49	8	38.1
	50-59	3	14.3
Sex	Male	6	28.6
	Female	15	71.4
Previous Occupation	Farmer	2	9.5
	Trader	11	52.4
	Unemployed	1	4.8
	Others	7	33.3
Current Occupation	Trader	10	50.0
	Unemployed	6	30.0
	Others	4	20.0
Level of Education	None	4	19.0
	Primary	5	23.8
	JSS	9	42.9
	SSS	2	9.5
	University	1	4.8
Household Size	<2	1	4.8
	2-3	10	47.6
	4-5	6	28.6
	6-7	2	9.5
	>7	2	9.5
Number of Children	1-2	13	61.9
	3-4	4	19.0
	5-6	3	14.3
	>6	1	4.8
Length of time on the Programme	<12 Months	16	76.2
	12-24 Months	4	19.0
	>24 Months	1	4.8

El-Shaddai (N=21) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	15	71.4
	No	6	28.6
Entrepreneurial Skills	None	21	100.0
Number Trained	None	21	100.0
Number using as vocation	No	21	100.0

12. Friends of the Aged and Invalid (N=15)

Variable	Variable category	Frequency	Percentage
Age Group	< 30	4	26.7
	30-39	5	33.3
	40-49	4	26.7
	50-59	2	13.3
Sex	Male	1	6.7
	Female	14	93.3
Previous Occupation	Farmer	2	13.3
	Trader	13	86.7
Current Occupation	Trader	3	20.0
	Unemployed	12	80.0
Level of Education	None	3	20.0
	Primary	3	20.0
	JSS	9	60.0
Household Size	2-3	7	46.7
	4-5	4	26.7
	6-7	2	13.3
	>7	2	13.3
Number of Children	1-2	5	33.3
	3-4	6	40.0
	5-6	1	6.7
	>6	3	20.0
Length of time on the Programme	<12 Months	7	46.7
	12-24 Months	3	20.0
	>24 Months	5	33.3

Friends of the Aged and Invalid (N=15) cont

Variable	Variable category	Frequency	Percentage
ART Status	Yes	12	80.0
	No	3	20.0
Entrepreneurial Skills	None	14	93.3
	Others	1	6.7
Number Trained	None	14	93.3
	1	1	6.7
Number using as vocation	No	15	100.0

Appendix 5

Ghana national strategic framework I & II

The National Response

Ghana AIDS Commission (GAC) is the one multi-sectoral body that coordinates the national HIV/AIDS response; there is one national strategic framework that describes the priorities for the national response; Ghana has one national monitoring and evaluation framework to measure the effectiveness of the response.

The National Strategic Framework (NSF) I 2001-2005

The first National Strategic Framework (NSF) I, which was developed for the period 2001-2005, successfully guided the implementation of the national response, leading to some major achievements. The implementation of National Strategic Framework I triggered the enactment of several policies and guidelines to create an environment conducive to the delivery of effective HIV/AIDS services. It stimulated the preparation of

policy documents, such as the 2004 National HIV/AIDS and STI Policy, the National HIV/AIDS Workplace Policy, the 2002 Guidelines for Anti-retroviral Therapy (ART), the Policy on HIV/AIDS for Faith-Based Organisations (FBOs), the 2003 National Guidelines for the Development and Implementation of HIV Voluntary Counselling and Testing, National Policy Guidelines on Orphans and Vulnerable Children, 1999 Draft National Guidelines for Blood Safety and the National Monitoring and Evaluation Plan of 2001-2005.

National Strategic Framework I provided broad guidelines for sector Ministries, Departments, Agencies (MDAs) and District Assemblies (DAs), Non-governmental Organisations (NGOs), and civil society to develop specific HIV/AIDS plans and activities appropriate to their circumstances. The high level of consultation during the preparation and the implementation of activities promoted in National Strategic Framework I encouraged the development of a national consensus on combating the epidemic. This consultation process also generated social and political support from national, traditional and religious leaders. Over the five-year period, there was increased awareness, community participation and support from development partners (GAC, 2004).

The National Strategic Framework (NSF) II 2006-2010

The environment, in which the national response operates, has changed substantially since the National Strategic Framework I (2001-2005) was produced. Awareness of the disease is now universally high. Antiretroviral (ARV) drugs have become increasingly accessible and affordable. ART has been simplified and funding for it has become increasingly available in developing countries as a result of stronger bilateral and multi-lateral partnerships. International commitments to the fight against HIV/AIDS such as UNGASS, Millennium Development Goals and the 'Three Ones Principles' have improved both the global and national environments(GAC,2005).

In view of these positive developments, and due to the end of the national Strategic Framework (2001-2005), a review of the National Strategic Framework for the period 2006-2010 was carried out. This will ensure the responsiveness of the National Strategic Framework II to the changing nature of the epidemic and the socio-economic environment, the emerging HIV/AIDS treatment technologies, and the lessons learnt from successful district and regional responses, initiatives in behaviour change communication and treatment, care and support.

The National Strategic Framework II (2006-2010) is developed based on seven key intervention areas around which comprehensive responses are to be developed, including annual programmes of work and budgets for all intervention programmes to be coordinated by the Ghana AIDS Commission (GAC), the national coordinating authority.

The seven key intervention areas are indicated below, along with brief discussion of the importance, challenges and strategies adopted in NSF II:

1. Policy, Advocacy and Enabling Environment

This area outlines the supportive political leadership, and positive enabling environment in Ghana with the President serving as the Chairman of the GAC, and wide involvement in Ghana's multisectoral response. Still, however, the need for developing, implementing, and enforcing laws and policies to protect the rights of PLHA, their families and friends continues. And while the new daunting challenges of expanding prevention, treatment, care and support programmes must be faced squarely, older difficult challenges remain. These include the elimination of discrimination against PLHA, improving the rights and status of women, and passing the many bills and laws that have been drafted but not passed.

2. Prevention and Behavioural Change Communication

This section describes the importance of shifting interventions from creating awareness among the general public, to actually changing risky sexual behaviour through the design and implementation of BCC programmes. These programmes are targeted toward specific identified vulnerable groups such as sex workers and their clients, migratory populations, street youth, women (who suffer disproportionately from the disease), and middle class employed persons, among others, and to geographic "hotspots", and places where HIV/AIDS is likely to be transmitted.

3. Treatment, Care and Support

This part of the Framework indicates that ARVs have become increasingly accessible and affordable and are to be supplied to all who require them. ART has been simplified and the funding for it has become increasingly available in developing countries as a result of stronger bilateral and multi-lateral partnerships and strengthened international commitments to the fight against HIV/AIDS. These developments set the stage for a rapid scaling-up of treatment programmes. At the same time, care and support programmes for PLHA require very substantial expansion of institutional, community, and family efforts. Creating an appropriate manpower mix which is feasible, affordable, and meets the needs of all who require care and support represents a formidable challenge. The solution will no doubt be a combination of professional personnel and volunteers, all of whom will require substantial training and continuing support.

4. Mitigating the Social, Cultural, Legal and Economic Impacts

This chapter discusses the importance of mainstreaming of HIV/AIDS programmes into the Poverty Reduction Strategy, and of seriously addressing gender-based vulnerability, including violence, coercion and marginalisation of women. The spread of HIV is strongly influenced by the surrounding social, cultural and economic environment. The sexual, social and spatial milieus in which people operate, and the political structures which provide the framework for governance, have implications for the pattern of spread and the nature of responses to the epidemic. The challenges involve identifying and enhancing the

positive social aspects that may help to reduce transmission and mitigate the effects of the epidemic, as well as identifying and eliminating the negative social aspects, such as gender issues that have implications for the spread, prevention and mitigation of the impact of the epidemic. The economic impact of the epidemic is large and growing, and it will affect the economy of Ghana in many ways. These challenges will be addressed at the policy level, through micro credit to provide a source of capital for small and medium level entrepreneurs, for substantial involvement of the private sector in all AIDS programming, and workplace programmes.

5. Coordination, Management and Institutional Arrangements

This section of the Framework describes the importance of Coordination, Management and Institutional Arrangements as key components of HIV/AIDS programme implementation. They will be strengthened by placing greater emphasis on the functions of the GAC, establishing clearly defined roles and responsibilities for all implementers and stakeholders, and strengthening the capacity of all participants - from National through Regional to District - to implement and monitor all of the steps necessary to combat the HIV/AIDS epidemic. Among the key issues are advocacy to ensure that HIV/AIDS is at the centre stage of the political aspects of coordination, policy direction and guidance, development of partnerships and social mobilisation.

6. Research, Surveillance, Monitoring and Evaluation

This section of the Framework focuses on the type and quality of information necessary for all stakeholders to properly develop, guide, adjust, and manage all of the programmes of a national response to the HIV/AIDS epidemic. The material provides a guide as to how Ghana will generate and use critical strategic information through research, surveillance, monitoring and evaluation activities in order to determine whether the chosen strategies in NSF II are being effective throughout the entire process of programme implementation. Periodic assessments that provide status, trends and changes in inputs, outputs and outcomes will help managers monitor the programmes, and make necessary adjustments. Strategies to strengthen these areas discussed include: developing clear priorities for research and a national research agenda; the updating, adoption and use of a national monitoring and evaluation plan; and timely dissemination of data and information.

7. Mobilisation of Resources

This section of the Framework indicates how critical it is to meet the increasing demands of expanded and diversified programmes which have huge resource requirements. Under NSF II, resource mobilisation and funding will be enhanced and effectively coordinated by ensuring that resources committed to HIV/AIDS activities from all sources are integrated into the national response. In addition, the Framework will ensure sustainable availability of resources to implement national HIV/AIDS priorities. Strategies for accomplishing this include: re-engineering the GARFUND into a coordinated multi-donor funding; developing a transparent and consultative mechanism for the disbursement of funds; strengthening the mechanism for the monitoring of disbursed funds; and increasing capacity of staff at all levels.

The HIV/AIDS pandemic goes beyond a health problem. Basic cultural beliefs and elements of traditional social organisation require change, and the socio-economic and human impacts of the epidemic are vast. The strategic framework covers considerable territory, and deals with the diverse ramifications of the

epidemic. It is expected that the integrated approach adopted in NSF II will result in considerable achievement of its goals and objectives. Successful implementation of NSF II will depend on the collective will, commitment and responsibility of all partners in the fight against HIV/AIDS.

UNGASS Indicators

Selected Indicators For Reporting On 2005:

1. Life skills based HIV/AIDS education in schools

The Ministry of Education and Sports (MOES) is responsible for supervision and coordination of all pre-professional educational activities and programmes. The Ministry has established series of intervention programmes including the Population and Family Life Education Programme, which has developed curricula modules for youth counselling, peer education and HIV/AIDS life-skills education into the curricular of teacher training colleges. Currently, the management information system unit of the Ministry conducts an annual survey of schools and data on life skills based HIV/AIDS education is collected. However, data collected during the 2003/2004 academic year was still being processed as at the time of this report.

The MOES 2002/2003 national report on schools supplementary survey shows that 3.4% (4,410 teachers) of 129,729 teachers were trained during this time in life skills based HIV/AIDS education. 5,370 teachers were teaching the subject in 5,479 primary and secondary schools out of 21,266 schools covered in the survey.

2. Work place HIV/AIDS Control

Workplace programmes is one of the cardinal interventions to combat the spread of HIV/AIDS in Ghana.

The National Strategic Framework I (2001-2005) states that, in the effort to combat HIV/AIDS at the workplaces, the Ministry of Employment and Social Welfare would be assisted to accelerate the development of HIV/AIDS workplace programmes. Advocacy efforts would be intensified to get employers to develop workplace HIV/AIDS programmes and vote resources for their implementation. The framework further stipulates that promotion of IE&C on STD and HIV/AIDS would be directed through programmes designed at these workplaces.

As at December 2005, 60% of 30 public and private sector employers surveyed by the Ghana AIDS commission had HIV/AIDS policies and programs that have anti discrimination at work policies, workplace HIV/AIDS prevention, control and care programmes and comprehensive work place policies on HIV/AIDS. 20% (1 out of every 5) of public sector and 68% (17 out of every 25) of private sector organizations had policies and programmes that address HIV/AIDS.

However according the report on a base line survey by the ILO HIV/AIDS Workplace Education Project in Ghana, 30.7% of 238 employees interviewed were aware of HIV/AIDS services available at their workplaces. 188(65.5%) did not know of HIV/AIDS services and 11(3.8%) were not sure of the existence of such services. And out of 291 respondents to the question as to whether their employers have an HIV/AIDS policy that protects employees who are HIV+, 25(9.6%) said 'Yes', 155(53.3%) said 'No', and 111(38.1%) did not know. This implies that there is a general lack of awareness of the existence of HIV/AIDS policies and services. This finding may be a result of the lack of policies and programmes in the workplaces or inadequate information on the existence of such.

3. Sexually Transmitted Infections (STIs): comprehensive case management

Syndromic management of STIs is the first line management strategy in both public and private health institutions in Ghana. In addition to that, other strategies are adopted. These include: equipping service providers in deprived areas with basic knowledge on the effects of STIs to enable them to refer clients for further assessment and treatment; provision of specialized services in the regional and district hospitals; developing STI programmes for commercial sex workers. Statistics from the 2004 Sentinel Survey report indicate that syphilis prevalence ranged from 0% in 1 rural site to a high 33.9% in another rural site. Prevalence in the rural sites (5%) was higher than in the urban sites (3.5%). The prevalence was highest among the 30 to 34 age group (5%). The national syphilis prevalence for 2004 was 4.3%.

4. MTCT: antiretroviral prophylaxis

Prevention of mother-to-child transmission services in Ghana includes the treatment with antiretroviral drugs, breastfeeding counselling and infant feeding. The NACP estimates that mother-to-child transmission accounts for about fifteen percent of all HIV transmissions in Ghana.

Data from the NACP indicate that 62 out of an estimated 13,735 HIV positive pregnant women (in the last 12 months) have received ART in the last month to prevent MTCT. This is only 0.45% of the estimated number of mothers in need of ART.

Country wide about 107 centres are providing the services, which could be extended to approximately 200,000 clients. However, the services are not effectively offered through all the centres, which has not made the scaling up as rapid as expected. PMTCT is to be dramatically scaled up in 2006 and integrated into existing health care services in all the regional and district hospitals based on the lessons learnt from the pilot programme implemented in the Manya Krobo District.

5. HIV treatment: antiretroviral combination therapy

Highly Active Anti-retroviral Therapy (HAART) was piloted at two centres in Ghana in 2003. The success of the project has led to the expansion of the programme and by the end of 2004; about 2,028 persons were being treated with HAART.

According to data from NACP, as at September 2005, the cumulative number of 3,584 people had commenced treatment. Currently 5.7 percent males and 2.4 % females of those who are in need of ART are receiving it. This indicator shows firstly that ART up-take is slow and secondly that it is easier for males to access the therapy than females because they are less stigmatized compared to females. In spite of the slow up-take, the programme has given hope to many people and has transformed perspectives on treatment of HIV in the country.

There is the need for rapid scaling-up of access to the therapy which is currently available in only about five (5) public-sector facilities country wide.

6. Support for children affected by HIV/AIDS

The special place of children and the commitment of the government of Ghana to child rights have been expressly stated in both the 1992 constitution and by the passage of the 1998 children's Act (Act 560).

Children affected by HIV/AIDS are found in all parts of the country. Traditionally, many Ghanaian communities absorbed these affected children within the extended family system. This trend, however, is gradually changing over the years with urbanisation, industrialisation, and the break down of the

extended family system. Nonetheless, there is a ray of hope as shown in the Manya Krobo Queen Mothers' Initiative which is a model of community foster care for orphans and vulnerable children.

A study conducted by the GAC and the United Nations Development Programme (UNDP) in 2002-2003 in two (2) districts in each of the 10 regions of Ghana indicate that many of the care givers are over-burdened and often lack the socioeconomic capacity to provide adequate care and support for these children. Community-based organizations (CBOs), FBOs and other civil society organizations are contributing in various ways by providing information, vocational skills, basic education, medical care, counselling, micro-credit services and nutritious food.

According to a national survey on services for orphans and vulnerable children (OVC) conducted in June 2005 by the Ministry of Local Government and Rural Development (MLGRD), there is an estimated number of 208,628 OVC in 96 out of the then 110 Districts in Ghana (28 new Districts have been carved out of the 110 making the total number of Districts 138). The survey was conducted by taking an inventory of service providers in the field of OVC services at the district level.

It indicated that 133,779 are receiving various forms of support, while the remaining 74,849 have not been reached with any services.

7. Blood safety

Transmission of HIV through transfusion of blood and blood products is believed to account for about 5% of all transmissions in Ghana. The National Blood Transfusion Service (NBTS) is implementing a number of responses to minimize the accidental transmission of diseases through blood transfusion. A national blood policy and guideline is being finalised by the MOH.

The NBTS does not currently cumulate data on blood units collected in a manner that would allow the calculation of the indicator. However, information from the office of the NBTS indicates that all the blood units it collects, that is 100%, are screened for HIV infection.

8. Young people's knowledge about HIV prevention

Data from the DHS 2003 report indicate that 87% of the youth between the ages 15-24 are knowledgeable about HIV/AIDS. The awareness level is higher: 92% among males and 87% among females. 89% of the youth between the ages of 20-24 years are aware of HIV/AIDS compared to 85% of the 15-19 years group. These data indicate that people become more knowledgeable about HIV/AIDS as they grow older.

79% of the young people knew that HIV can be avoided by using condoms. 81% acknowledged that a healthy-looking person can have HIV, whilst 64% believed that they cannot get HIV from mosquito bites. Men were more knowledgeable about HIV/AIDS than women: 40% for men and 39% for women. Further, men and women in the urban areas (48%) are far more knowledgeable about the disease than those in the rural areas (29%).

One of the strategies for reducing the risk of contracting an STI is for young people to delay the age of sexual debut. In Ghana, 7% of women and 4% of men reported having sex by age 15. At the age of 18 the figures were 46% among women and 27% among men.

From the 2003 DHS data, the median age at first sex among males in the urban and rural areas is 20. The ages drop to 17 (urban) and 19 (rural) among females. Since the introduction of HIV/AIDS interventions among youth, the age of sexual debut has delayed, which is encouraging development.

Higher risk sexual behaviour is more common among youth. The alarming observation made was that 32.2% of women aged 15-24 and 49.6% of men in the same age cohort reported having had a non-regular sexual partner in the last 12 months. In the same age group only 33% of the women and 52% of the men reported using condom at the last higher risk sex.

9. Orphans' school attendance

The 2003 DHS shows that the ratio of school attendance by orphaned children aged 10 - 14 years is 0.80%. However, according to supplementary data from the MOES, out of 945,736 enrolments of 10-14 year olds, 11, 756 (1.24%) were orphans. This implies that with the rapid scaling-up of support service for orphans, school attendance and enrolment can be increased.

Despite the relatively high enrolment of orphans to school, comparison with 1993 and 1998 reveals that the rate of enrolment was lower in 2003. This could be because of increasing rate of AIDS orphans and stigma, which encourages increasing the intense support and programmes to OVC.

10. Reduction in HIV prevalence

Currently about 400,000 Ghanaians are estimated to be living with the disease. Current data from the NACP indicate that there is very little reduction in the prevalence rates. To date, 109 people out of 3,769 people (3%) in the urban areas and 43 out of 1,868 (2%) in the rural sites, had tested positive to HIV. There is little difference in the prevalence rates among the various age groups; 15-19 (2%), 20-24 (3%).

11. HIV treatment: survival after 12 months on ART

As antiretroviral programmes are scaled up it is important to understand why and how many people drop out of treatment programmes. This data can be used to demonstrate the effectiveness of the programmes and highlight obstacles to expanding and improving them.

While calculating the indicator, the following data was collected:

- Number of adults and children initiating the ART and the start date.
- Number of adults and children continuously on ART at 12 months after initiating treatment.
- Number of people who have stopped antiretroviral therapy, including those who have transferred out, those lost to follow-up and those who died.

A proportion of people who have stopped treatment or were lost to follow-up may still be alive. However, since they are not continuously on treatment, they should not be included in the numerator.

According to current indicators from NACP, in the last 12 months the current indicator scores for those on ART is 65%, (67%) for men and (63%) for women.

Out of 2,164 people who initiated treatment 12 months ago, 1,400 are still taking the treatment, 217 have stopped and 70 have died.

Appendix 6

OICI 2008 annual report

OICI GHANA HOPE FY 08 ANNUAL REPORT October 1, 2007 - September, 30 2008

Part 1: Introduction

The HOPE program is in its last year of implementation. The goal of the program is to improve care, support and economic opportunities to PLHIV and OVC, over a period of five years in high HIV prevalence regions of Ghana.

The objectives of the HOPE Program are:

1. To build the capacity and to increase the knowledge and skills of 2,000 PLHIV and OVC care and support providers.
2. To train 1,500 OVC in vocational skill, entrepreneurship and business development at OIC Ghana vocational schools in the Accra, Kumasi, Takoradi and a vocational school in the Eastern region through the orphan scholarship.
3. To increase the nutritional intake of 5,600 PLHIV and 3,785 OVC through the distribution of monthly household food rations.

The total number of beneficiaries of this program is 46,925 on the assumption that 9,385 PLHIV and OVC households with an average of 5 per household will be catered for. The primary target groups are PLHIV and OVC while the secondary groups are community health workers, traditional healers, Queen Mothers, orphanage care givers, home care and support providers and OIC counsellors

The HOPE program complements the USAID Mini Country Operational Plan (COP) and also measures some PEPFAR indicators.

The HOPE program activities are implemented by a full-time team composed of a Director of HIV/AIDS Programs and a Logistics Manager supported by Program and Logistics Officers in the regions. An M & E Officer supports the program both at the national and regional levels. This core staff work in conjunction with local partners which include PLHIV support groups, orphanages, the Ghana Health Service, District Assemblies, Queen Mothers, traditional healers and OIC vocational schools located in three of the four target regions.

Nutrient dense food rations are distributed monthly to OVC and PLHIV. 5kgs of SFSG, 10kgs of WSB and 2 litres of vegetable oil are distributed monthly to the two target groups. Anthropometric measurement of weight of recipients is taken monthly to ascertain the contribution or otherwise of the food rations given. Beneficiaries are also given both group and individual nutritional and psychosocial counselling. Two semi-annual surveys are conducted to examine the impact of the education on the beneficiaries.

Secondary target groups and PLHIV are trained as lay psychosocial counsellors and also in home-based care. PLHIV are trained at monthly group meetings where they are given a dose of knowledge each month. At the end of the year, anyone who has benefited from 75% of the modules used for training is considered trained.

OVC are also provided with scholarships to enable them pursue vocational training skills. These young ones go through two years of training either at vocational schools or are attached to master craftsmen and women to learn on the job.

Part 2. Coordination

- The program has had considerable impact on the lives of the target beneficiaries especially the scholarship, HIV/AIDS education and food distribution components for PLHIV and OVC. This is captured in the quarterly surveys and field visits to partner organization during the year.

- AIDS Relief Project sent OICI an article for the newsletter which showed the result of the monthly food ration in her program. According to them the children are much healthier and they are assured of food everyday.
- The collaboration between OICI and other health team implementing partners, especially AED/SHARP and CRS was strengthened. AED/ GSCP/SHARP have developed the home-based care. The guide has been field-tested.
- OICI continues to add value to its program by integrating family planning (FP) into its education and programming. This was been done through collaboration with the Quality Health Program (QHP) the previous year but OICI is continuing. PLHIV peer educators trained by QHP provide education on FP to their peers at monthly meetings and report to QHP through OICI. OICI program staff supervises and monitor the education provided by the peer educators.
- OICI is implementing a comprehensive HIV/AIDS initiative for PLHIV in five regions with funding from AED/SHARP. The eighteen-month program seeks to improve ART adherence, prevention through positive living, care and support to 4000 PLHIV.
- OICI sought funding from Ghana AIDS Commission through the MSHAP to buy tools for the OVC on scholarship.
- OICI has collaborated very closely with a number of District Assemblies. The Manya Krobo district Assembly continues to provide office accommodation to the HOPE office in the Eastern region. The Shama Ahanta East Metropolitan Assembly has also shown a lot of goodwill to the program by employing a number of OVC graduates. All the assemblies also provide free venue for program activities when they are contacted.
- OICI continues with its fund raising activities to increase the intake of OVC on scholarship. Thirty-two extra children are being catered for in the vocational schools by corporate bodies.

Part 3. Lessons Learned and Possible Best Practices

A. Collaboration:

- Collaboration with other NGOs has added value to the HOPE program and made it possible for it to implement activities which were not included in the original program design such as family planning and the tools for OVC.
- Through the corporate bodies more children are benefiting from the scholarship.

C. Linkages with DA and Local Institutions.

- A good rapport has been created between the program teams, the District Chief Executives, and the District Coordinating Directors in the regions. There is more trust between us and them.
- The Manya Krobo District Assembly has provided office space for the HOPE program in the Eastern region.

D. Linkages with private sector for in-kind and cash grants and contributions.

- Some international institutions have contributed towards the program. An assortment of items was received from the Joseph Assignment group which was distributed to the OVC program.

- Through the corporate bodies more children are benefiting from the scholarship.

E. Socio-cultural/economic

- The provision of food rations and scholarships for vocational training has reduced OVC economic dependence on their foster parents and the Queen Mothers and has improved their quality of life.
- More traditional healers continue to benefit from the program. Those who hitherto did not have much knowledge on care and support for PLHIV have had their knowledge enhanced through HOPE education and training.

Part 4. Major Challenges/Issues/Concerns for the next plan of work:

The major challenges and issues impacting program implementation and OICI's recommendations to address them are as follows:

- **Delay in the release of funds:** This is a big challenge as activities have to be rushed when the money finally arrives towards the end of the fiscal year.
- **Establishment of Income Generating Activities (IGA):** The program does not have adequate resources to support the establishment of more income generating activities. Assisting PLHIV to set up IGA is critical for the sustainability of the program, especially for those PLHIV on ART who say they get hungrier on the ART medication and therefore require more food.
- **Vehicle/Logistic Support:** Currently, Greater Accra and Eastern Regions are sharing one vehicle which makes movement to the project sites very challenging. One additional vehicle for the Eastern Region is needed for food distribution counselling and training assignments.

- **Appendix 7**

- Modified documentary analysis worksheet

Modified documentary analysis worksheet: Policy formulation

1.	<p>Type of document (check one)</p> <p><input type="checkbox"/> Newspaper <input type="checkbox"/> Map <input type="checkbox"/> Advertisement</p> <p><input type="checkbox"/> Letter <input type="checkbox"/> Telegram <input type="checkbox"/> Congressional record</p> <p><input type="checkbox"/> Patent <input type="checkbox"/> Press release <input type="checkbox"/> Census report</p> <p><input type="checkbox"/> Memorandum <input type="checkbox"/> Report <input type="checkbox"/> Others</p>
2.	<p>Unique physical characteristics of the document (check one or more)</p> <p><input type="checkbox"/> Interesting letterhead <input type="checkbox"/> Notations</p> <p><input type="checkbox"/> Handwritten <input type="checkbox"/> "Received stamp"</p> <p><input type="checkbox"/> Typed <input type="checkbox"/> Others</p> <p><input type="checkbox"/> Seals</p>
3.	<p>Date(s) of document:</p>
4.	<p>Author (or creator) of document :</p> <p>Position (title):</p>
5.	<p>For what audience was the document written?</p>
6.	<p>Document information (A - C)</p> <p>A. What is the framework in Ghana to address the HIV/AIDS pandemic?</p> <p>B. Why was the framework developed?</p> <p>C. Are there any relationship between the HOPE programme and the National Framework?</p>

Modified documentary analysis worksheet: Policy implementation

1.	<p>Type of document (check one)</p> <p><input type="checkbox"/> Newspaper <input type="checkbox"/> Map <input type="checkbox"/> Advertisement</p> <p><input type="checkbox"/> Letter <input type="checkbox"/> Telegram <input type="checkbox"/> Congressional record</p> <p><input type="checkbox"/> Patent <input type="checkbox"/> Press release <input type="checkbox"/> Census report</p> <p><input type="checkbox"/> Memorandum <input type="checkbox"/> Report <input type="checkbox"/> Others</p>
2.	<p>Unique physical characteristics of the document (check one or more)</p> <p><input type="checkbox"/> Interesting letterhead <input type="checkbox"/> Notations</p> <p><input type="checkbox"/> Handwritten <input type="checkbox"/> "Received stamp"</p> <p><input type="checkbox"/> Typed <input type="checkbox"/> Others</p> <p><input type="checkbox"/> Seals</p>
3.	<p>Date(s) of document:</p>
4.	<p>Author (or creator) of document :</p> <p>Position (title):</p>
5.	<p>For what audience was the document written?</p>
6.	<p>Document information (A - C)</p> <p>A. How was the programme idea developed?</p> <p>B. What were the resources available for programme implementation?</p> <p>C. What were the changes that inhibited or enhanced the programme implementation?</p>

Modified documentary analysis worksheet: Policy accountability

1.	<p>Type of document (check one)</p> <p><input type="checkbox"/> Newspaper <input type="checkbox"/> Map <input type="checkbox"/> Advertisement</p> <p><input type="checkbox"/> Letter <input type="checkbox"/> Telegram <input type="checkbox"/> Congressional record</p> <p><input type="checkbox"/> Patent <input type="checkbox"/> Press release <input type="checkbox"/> Census report</p> <p><input type="checkbox"/> Memorandum <input type="checkbox"/> Report <input type="checkbox"/> Others</p>
2.	<p>Unique physical characteristics of the document (check one or more)</p> <p><input type="checkbox"/> Interesting letterhead <input type="checkbox"/> Notations</p> <p><input type="checkbox"/> Handwritten <input type="checkbox"/> "Received stamp"</p> <p><input type="checkbox"/> Typed <input type="checkbox"/> Others</p> <p><input type="checkbox"/> Seals</p>
3.	<p>Date(s) of document:</p>
4.	<p>Author (or creator) of document :</p> <p>Position (title):</p>
5.	<p>For what audience was the document written?</p>
6.	<p>Document information (A)</p> <p>A. What were the structures in place to assess the programme anticipated or unanticipated outcomes?</p>

References

- Abdale, F. & Kraak, V. 1995, *Community-based nutrition support for people living with HIV and AIDS: A technical assistance manual*, God's Love We Deliver, Inc, New York.
- Ackon, E.A. 2003. *Management of healthcare organisations in developing countries*, 2nd edition. Bel-Team Publications Ltd, Accra, Ghana.
- Acosta, C.M. 2003. Improving public health through policy advocacy. *Community-Based Public Health Policy & Practice* (8) 1-8
- Adekoga, N. 1994. Health care for the poor: lessons from the USA. *Africa Health.*, 16, (5) 29-32
- Adenrele, E. 2007. *Economics of HIV and AIDS*
http://www.nou.edu.ng/noun/NOUN_OCL/pdf/hem%20617.pdf National Open University of Nigeria.
- Alperin, D.E. & Richie, N.D. 1989. Community-based AIDS service organisations: challenges and educational preparation. *Health & Social Work*, 14, (3) 165-173
- Anarfi, J. 1995. The condition and care of AIDS victims in Ghana: AIDS sufferers and their relatives. *Health Transition Review*, 5, 253-263
- Anonymous 2000. Priority setting for health research: lessons from developing countries. The Working Group on Priority Setting. *Health Policy & Planning.*, 15, (2) 130-136
- Anthony, K., Steinberg, M., & Whiteside, A. 2001, "Responding to the socio-economic impact of HIV/AIDS, in HIV/AIDS prevention and care in resource constrained settings," *In A handbook for the design and management of programs*, Peter R Lamptey & Helena D Gayle, eds., Family Health International : Arlington, pp. 55-84.
- Antwi, P. 1999, *Consultant's report on economic impact of AIDS in Ghana*.
- Anyanwu, C.N. 1988. The technique of participatory research in community development. *Community Development Journal*, 23, (1) 11-5
- Asamoah-Odei, E., Antwi, P., & Dickerson, D. 1995, *AIDS in Ghana. National AIDS/STD control programme*, Ministry of Health, Accra, Ghana.
- Asante, F. A. & Asenso-Okyere, K. 2003, *Economic burden of malaria in Ghana : A technical report submitted to the WHO African regional office*, Institute of Statistical, Social and Economic Research, University of Ghana, Legon, Accra, Ghana.
- AVERT 2009, *AIDS and HIV Statistics for sub-Saharan Africa*
<http://www.avert.org/africa-hiv-aids-statistics.htm>.
- Awour, L., Achilili, F., & Amolo, D. 1998, *Nutrition for people with HIV/AIDS as health guard. Paper presented at the XII International AIDS Conference Geneva, Switzerland.*

- Babamento, G. & Kotler, D. 1997. Malnutrition in HIV infection. *American Journal of Nutrition*, 26, 393-415
- Barbour, R. 1999. The case for combining qualitative and quantitative approaches in health services research. *Journal of Health Services Research and Policy*, 4, (1) 39-43
- Barlow, D. & Hursen, M. 1984, *Single Case Experimental Designs: Strategies for studying Behaviour Change*. Pergamon : New York.
- Barriball, KL. & White, A. 1994. Collecting data using a semi-structured interview:A discussion paper. *Journal of Advanced Nursing*, 19, (2) 328-335
- Baum, M. & Shor-Posner, G. 1995. Micronutrients and HIV disease progression. *America Journal of Nutrition*, 9, 1051-1056
- Baum, MK. & Short-Posner, G. 1998, *Micronutrient Status in relationship to mortality in HIV-1 disease*.
- Bennett, F. 1979. Primary health care and developing countries. *Social Science and Medicine*, 13, 505-514
- Bijlsma, M. 2000, *Nutritional care and support for people living with HIV: Review of the literature, initiatives, and educational materials in sub-Saharan Africa*, FAO, Rome.
- Bogden, J., Kemp, FW., & Han, S. 2000. Status of selected nutrients and progression of Human Immunodeficiency Virus Type 1 Infection. *America Journal of Nutrition*, 72, (3) 809-815
- Bollinger, L., Stover, J., & Antwi, P. 1999, *Economic impact of AIDS in Ghana* <http://www.policyproject.com/pubs/SEImpact/ghana.pdf>.
- Bowen, G.A. 2009. Documentary analysis as a qualitative research method. *Qualitative Research Journal*, 9, (2) 27-40
- Bowling, A. 1992. *Measuring Health: a review of Quality Life Measures* Open University Press : Buckingham.
- Bowling, A. 2006, "Qualitative and combined research methods, and their analysis," *In Research methods in health: Investigating health and health services*, Open University Press : Berkshire, pp. 421-422.
- Braun, V. & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101
- Brennan, M. 1988. Training traditional birth attendants reduces maternal mortality and morbidity. *Tropical Journal of Obstetrics and Gynaecology*, 1, (1) 44-47
- Brookes, D. 2007. Understanding qualitative research and its value in healthcare. *Nursing Times*, 103, 32-33
- Bryman, A. 2008, "Mixed method research: Combining quantitative and qualitative research," *In Social Research Methods*, 3rd ed. Oxford University Press : Oxford, pp. 602-627.

- Bureau for Economic Research 2006, *'The Macro-economic impact of HIV/AIDS under alternative intervention scenarios (with specific reference to ART) on the South African economy'* National Department of Health, South-Africa, National Department of Health, South-Africa.
- Burke, R.J., Onwuegbuzie, A.J., & Turner, L. 2007. Towards a definition of mixed methods research. *Journal of Mixed Methods Research* 112-133
- Burns, L. 1995. Medical Organisation Structures that Promote Quality and Efficiency: Past Research and Future Considerations. *Quality Management in Health Care*, 3, (4) 10-18
- Caldwell, W. & McGranaghan, R. 2007, *Community-based participatory research and collaboration building: Detroit community*
http://rd100.cceb.med.upenn.edu/crcu_html/roadmap/mtgs/may_steering_2007/S_P_McGranaghan_color.pdf.
- Campbell, D. & Stanley, J. 1966. *Experimental and quasi-experimental designs for research*. Rand-McNally : Chicago.
- Castleman, T., Seumo-Fosso, E., & Cogill, B. 2004, *Food and Nutrition Implications of Antiretroviral Therapy in Resource Limited Settings*. *Food and Nutrition Technical Assistance Technical Note No. 7*.
- CDC 1987, *Revision of CDC surveillance case definition for acquired immunodeficiency syndrome*. *Morbidity and Mortality Weekly Report*. 36.
- Chen, RY., Westfall, AO., & Mugavero, M. 2003. Duration of Highly Active Antiretroviral Therapy. *Clinical Infectious Diseases*, 37, 714-722
- Cobb, M. & De Chabert, J.T. 2002. HIV/AIDS and care provider attributions: who's to blame? *AIDS Care*. 14(4):545-8,
- Cochrane, A. 1972. *Effectiveness and efficiency* London: Nuffield Provincial Hospitals Trust.
- Cochrane, A. & Blythe, M. 1989. *One Man's Medicine* British Medical Journal.
- Connell, J. & Kubisch, A. 1998. Applying a Theory of Change Approach to the Evaluation of Comprehensive Community Initiatives. *Progress, prospects and problems*, 2,
- Corcoran, C. & Grinspoon, S. 1999. Treatments for wasting in patients with the acquired immunodeficiency syndrome. *New England Journal of Medicine*, 340, (22) 1740-1750
- Creswell, JW., Clark, V., Gutmann, ML., & Hanson, W. 2003, "Advanced mixed methods research designs," *In Handbook of mixed methods in social and behavioural research*, A. Tashakkori & C. Teddlie, eds., Sage Publications : London, pp. 209-240.
- Cronbach, J. & Associates 1980, *Toward Reform of Program Evaluation* San Francisco: Jossey-Bass.

DCP2 2008, *Using cost-effectiveness analysis for setting health priorities*
<http://www.dcp2.org/file/150/DCPP-CostEffectiveness.pdf>.

Deming, W.E. 1986. *Out of the crisis* Cambridge, Mass:MIT.

Donabedian, A. 1966. Evaluating the Quality of Medical Care. *Milbank Memorial Fund Quarterly*, 44, (1) 166-203

Donabedian, A. 1988. The Quality of Care: How Can It Be Assessed? *Journal of the American Medical Association*, 260, (12) 1743-1748

Dongbo, FU., Ruitai, S., & Mark, O. 2008. Community-based intervention for prevention and control of cardiovascular diseases
http://www.gfmer.ch/International_activities_En/Community-based_Prevention_Cardiovascular_Diseases.htm. Geneva Foundation for Medical Education and Research

Dovlo, D. 1998. Health sector reform and deployment. *Training and motivation of human resources towards equity in health care: Issues and concerns in Ghana, Human Resources for Health Development Journal(HRDJ)*

Drummond, M., Stoddard, G., & Torrence, G. 1987. *Methods for the economic evaluation of health care programmes*, Oxford University Press : Oxford.

Edwards, S., Braunholtz, D., Lilford, R., & Stevens, A. 1999. Ethical issues in the designs and conduct of cluster randomised controlled trials. *British Medical Journal*, 318, (7195) 1407-9

Efere, P. 2004. HIV/AIDS prevention, management and strategy. Vortex publications : London.

Elbourne, D. & Campbell, M. 2001. Extending the CONSORT statement to cluster randomized trials: for discussion. *Statistics in Medicine*, 20, 489-496

Engelkes, E. 1993. What are the lessons for evaluating PHC projects? A personal view. *Health Policy and Planning*, 8, (1) 72-77

Family Health International 2001. *Evaluating Programs for HIV/AIDS Prevention and Care in Developing Countries*
<http://www.fhi.org/NR/rdonlyres/ez7svqsmatlnjiupck35ipxkbfwqr43tmidspsesufm2ptudeudeiithei2ufzwfbcsebjilt4ca/31776textR1enhv.pdf>.

Family Health International 2007, *New partnership reaches cocoa farmers in Côte d'Ivoire and Ghana*
http://www.fhi.org/en/CountryProfiles/CotedIvoire/res_CocoaFarmers.htm.

Fawzi, WW., Msamanga, G., & Hunter, D. 2000. Randomized trial of vitamin supplements in relation to vertical transmission of HIV-1 in Tanzania. *Journal of Acquired Immune Deficiency Syndrome*, 23, 246-254

Florentino, R. 2003. Food fortification: issues on quality assurance and impact evaluation in developing countries. *Forum of Nutrition*.56:359-60,

Food and Agriculture Organization of the United Nations 2001, *Rural women carry family burdens. Focus, AIDS - A threat to rural Africa.*

Forss, K. & Carlsson, J. 1997, *The quest for quality: or can evaluation findings be trusted. European Evaluation Society Conference, Stockholm.* European Evaluation Society Conference, Stockholm.

Fox, M.P., Lash, T.L., & Hamer, D.H. 2005. A sensitivity analysis of a randomized controlled trial of zinc in treatment of falciparum malaria in children. *Contemporary Clinical Trials*.26(3):281-9,

GAC 2004a, *National HIV/AIDS and STI Policy.* Ministry of Health, Accra, Ghana.

GAC 2004b, *National Monitoring and Evaluation Plan for HIV/AIDS.* Ministry of Health, Accra, Ghana.

GAC 2005, *National Report on the Follow-up to the UNGASS on HIV/AIDS.* Ministry of Health, Accra, Ghana.

GAC 2006, *National Strategic Framework 2006-2010.* Ministry of Health, Accra, Ghana.

GAC 2009, *Modes of HIV transmission Report.* Ministry of Health, Accra, Ghana.

General Accounting Office 2001, *Global health challenges in improving infectious disease surveillance systems.* US General Accounting Office : Washington, DC.

Global Campaign for Education 2004, *Learning to survive How education for all would save millions of young people from HIV/AIDS.*

Global Forum for Health Research 2002, *The 10/90 report on health research 2001 - 2002,* Global Forum for Health Research, Geneva, Switzerland.

Global Fund 2008, *Fighting AIDS - The Global Fund to fight AIDS, tuberculosis and malaria* <http://www.theglobalfund.org/en/about/aids/>.

GOG 2005, *Government of Ghana, 2006 Budget Statement and Economic Policy* Accra, Ghana.

Grant, E., Brown, E., Muray, SA., & Leng, M. 2009, *Summary Report: Evaluation of three funded programmes in Africa,* Centre for Population Health Sciences, University of Edinburgh, Edinburgh.

GSS, GHS, & ICF Macro 2009, *Ghana Demographic and Health Survey 2008,* ICF Macro, Calverton, Maryland, U.S.A..

Gumber, A. & Berman, P. 1997. Measurement and pattern of morbidity and the utilization of health services: some emerging issues from recent health interview surveys in India. *Journal of Health & Population in Developing Countries*.1(1):16-43,

Guo, X. 1999. Integrate FP with community-based health service: Xuanwu, Beijing. *China Population Today*.16(4-5):6-8,

- Gustafson, D. & Hundt, A. 1995. Findings of Innovation Research Applied to Quality Management Principles for Health Care. *Health Care Management Review*, 20, (2) 16-33
- Hale, J. 2000. What contribution can health economics make to health promotion? *Health Promotion International*, 15, (4) 341-348
- Hale, J., Cohen, D., Ludbrook, A., Phillips, C., Duffy, M., & Parry-Langdon, N. 2008, *Moving from evaluation into economic evaluation : a health economics guide for health improvement programme*, Cardiff, Welsh Assembly.
- Hall, J. & Taylor, R. 2003. Health for all beyond 2000:the demise of the Alma-Ata Declaration and primary health care in developing countries http://www.mja.com.au/public/issues/178_01_060103/hal10723_fm.html#elementd-1069233. *The Medical Journal of Australia*, 178, (1) 17-20
- Harris, G.E. 2006. Practicing HIV/AIDS community-based research. *AIDS Care*, 18, (7) 731-8
- Hart, E. & Bond, M. 1996. *Action research for health and social care* Open University Press : Buckingham.
- Heron, J. 1981, "Self and peer assessment for managers," *In Handbook of management self-development*, T.Boydell & M.Pedler, eds., Gover : London, pp. 8-15.
- Hosegood, V., McGrath, N., Herbst, K., & Timaeus, I. 2004. The impact of adult mortality on household dissolution and migration in rural South Africa. *AIDS*, 18, (11) 1585-90
- IAE & UNFPA 2003, *Distance Education Programme on HIV/AIDS Counselling and Care Giving*, Institute of Adult Education Press, Accra, Ghana.
- ILO 2004, *HIV/AIDS and Work: Global Estimates, Impact, and Response*, ILO, Geneva.
- International Planned Parenthood Federation IPPF.Evaluation and Management Audit Department 1989. The integrated project in Tanzania. *Integration*.(19):23-33,
- Issiaka, S., Cartoux, M., Ky-Zerbo, O., Tiendrebéogo, S., Meda, N., Dabis, F., Van de Perre, P., & Ditrane Study Group 2001. Living with HIV: Women's experience in Burkina Faso, West Africa. *AIDS Care*, 13, (1) 123-8
- Jarrett, S. & Ofosu-Ammah, S. 1992. Strengthening health services for MCH in Africa. *The first four years of the Bamako Initiative: Health Policy and Planning*, 7, (2) 164-176
- Johannessen, H., LaunsQ, L., Gosvig, S., & Staugard, F. 1994, *Studies in alternative therapies: Contributions for the Nordic Countries*. Odense University Press, Kopenhagen.
- Johannessen, T. 1991. Controlled trials in single subjects. *British Medical Journal*, 303, 173-174

- JOICFP 1986. A Philippine experiment in community development. *Joicfp Review*. 11:6-11,
- JOICFP 1992. Chinese endorse integrated approach. *Joicfp News*.(217):1,
- Kaisernetwork 2005, *US has increased global condom distribution in recent years, targeting mostly high-risk groups*
http://www.kaisernetwork.org/daily_reports/rep_index.cfm?DR_ID=32437.
- Kalibala, S. & Kaleeba, N. 1989. AIDS and community-based care in Uganda: the AIDS support organisation, TASO. *AIDS Care*, 1, (2) 173-175
- Kane, J. & Kane, R. 1988. Long-Term Care: Variation on a Quality Assurance Theme. *Medicare Care*, 25, (1) 132-146
- Kara, H. & Mcpake, B. 1993. The Bamako Initiative: where is it going? *Health Policy and Planning*, 8, (3) 267-274
- Karen, R. & Susan, W. 1999. The effectiveness of Condoms in Reducing Heterosexual Transmission of HIV. *Family Planning Perspective*, 31, (6) 272-279
- Katoff, L. 1991. Community-based services for people with AIDS. *Primary Care Clinics in Office Practice* (1) 231-243
- Kawata, P.A. & Andriote, J.M. 1988. NAN- a national voice for community-based services to persons with AIDS. *Public Health Reports*, 103, (3) 299-304
- Kellog Foundation, W.K. 2004. *Evaluation Handbook*. Michigan, USA.
- Kelly, P., Musonda, R., & Kafwembe, E. 1999. Micronutrient supplementation in the AIDS diarrhea-wasting syndrome in Zambia : A randomized controlled trial. *Journal of Nutrition*, 13, 495-500
- Kinn, S. & Curzio, J. 2005. Integrating qualitative and quantitative research methods. *Journal of Research in Nursing*, 3, 317-336
- Koplan, J. 1999, *Framework for programme evaluation in public health*. CDC *Morbidity and Mortality Weekly Report*, 48(RR 11), Atlanta, Georgia.
- Kosecoff, J. & Arlene, F. 1982, *Evaluation Basics: A practitioner's Manual*, CA: Sage Publications, Newbury Park.
- Kristin, P. 2006, *Health-South Africa : A Burden That Will Only Become Heavier*
<http://www.ipsnews.net/africa/nota.asp?idnews=33396>, Inter Press Service News Agency.
- Kupka, R. & Fawzi, W. 2000. Nutrient requirements for people living with HIV/AIDS. *American Journal of Nutrition*, 72, (3) 809-815
- Layzell, S. & McCarthy, M. 1992. Community-based health services for people with HIV/AIDS: a review from health service perspective. *AIDS Care*, 4, (2) 203-215
- Lindsay, A.C. 2002. Integrating quantitative and qualitative methods to assess the impact of child survival programs in developing countries: the case of a program

- evaluation in Ceara, Northeast Brazil. *Health Education & Behavior.*, 29, (5) 570-584
- Lohr, K. & Donaldson, M. 1990. Assuring Quality of Care for the Elderly. *Law, Medicine and Health Care*, 18, (2) 244-253
- Macallan, D. 1999a, *Dietary intake and weight loss patterns in HIV infection*, Oxford University Press, New York.
- Macallan, DC. 1999b. Wasting in HIV infection and AIDS. *Journal of Nutrition*, 129, 238-242
- Macdonald, J. 1993, *Primary health care: Medicine in its place*, University of Bristol, UK.
- MacNeil, J.M. & Hogle, J. 1998. Applying social, behavioral and evaluation research to developing country HIV prevention programs. *AIDS.12 Suppl 2:S99-108*,
- Mansa, E. 1991. Growing confidence. Villagers in Ghana's IP pilot areas learn the power of self-help. *Integration.(29):35-7*,
- Marino, P., Simoni, JM., & Silverstein, L. 2007. Peer support to promote medication adherence among people living with HIV/AIDS: the benefits to peers. *Social Work in Health Care*, 45, (1) 67-80
- Marks, S., Greenlick, M., Hurtado, A., Johnson, D., & Henderson, J. 1980. Ambulatory surgery in an HMO. *Medical Care*, 18, (2) 127-146
- Maro, J.J. 1988. Progress report. *Integration*, 18, 46-50
- Marsh, D., Schroeder, D., Dearden, K., Sternin, J., & Sternin, M. 2004. The power of positive deviance. *British Medical Journal*, 329, 1177-1179
- Mathers, N., Fox, N., & Hunn, A. 2007, *Surveys and questionnaires*, Trent RDSU-National Institute for Health Research, Nottingham.
- Merson, M.H., Dayton, J.M., & O'Reilly, K. 2000. Effectiveness of HIV prevention interventions in developing countries. *AIDS.14 Suppl 2:S68-84*,
- Morse, S.W. 2003. Bending the Ivory Tower: communities, health departments and academia. *Community-Based Public Health Policy & Practice.(7):1-6*,
- Mpumalanga department of health and social sciences 2002, *Voluntary HIV Counselling and Testing*.
http://www.mpumalanga.gov.za/healthsocserv/health_programmes/hiv_and_aids.htm.
- Mutharika, B. 2005, *Malawi issues food crisis appeal*
<http://news.bbc.co.uk/1/hi/world/africa/4345246.stm>, BBC News Channel.
- Nabila, P., Antwi, P., Yeboah, K., & Kwankye, S. 2001, *A Study of the economic impact of HIV/AIDS on selected business organisation in Ghana*, Policy Project, Accra, Ghana <http://www.policyproject.com/pubs/countryreports/Ghanaecimb.pdf>.

- NACP 2004, *HIV/AIDS in Ghana: Current Situation, Projections, Impacts and Interventions*, Accra, Ghana.
- NACP 2005, *HIV Sentinel Survey 2004 Report* Accra, Ghana.
- NACP 2006, *HIV Sentinel Survey Report 2005* Accra, Ghana.
- NACP 2009, *HIV Sentinel Surveillance Report 2008* Accra, Ghana.
- NARA 1970, *Theory of documentary analysis: Documentary analysis worksheet* <http://www.archives.gov/education/lessons/worksheets/document.html>, U.S educational staff, National Archives and Records Administration, Washington, DC 20408.
- Nordberg, E., Oganga, H., Kazibwe, S., & Onyango, J. 1993. Rapid Assessment of an African District Health System. *International Journal of Health Planning and Management*, 8, 219-233
- Nzimande, B. 2010, *Address by the Minister of Higher Education and Training at the higher education HIV and AIDS heads conference in Johannesburg* <http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=8935&tid=8952>, South-Africa Government Information, South-Africa.
- Oakley, P. 1988. Conceptual problems of the monitoring and evaluation of qualitative objectives of rural development. *Community Development Journal*.23(1):3-10,
- OICI Ghana 2003, *Baseline Survey Report*.
- OICI Ghana 2005, *Thank you to our Partners 3*.
- Okine, V, 2010. Only 10 Percent of Ghanaians Know their HIV Status <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=180497> , *Public Agenda*.
- Olsen, J. & Donaldson, C. 1993, *Willingness to pay for public sector health care programmes in Northern Norway*, University of Aberdeen, Aberdeen.
- Øvretveit, J. 1994, *Evaluation of a Community Mental Health Resource Centre*. Mental Health Unit, Hillingdon Hospital Trust, Uxbridge
- Øvretveit, J. 1998. *Evaluating health interventions: An introduction to evaluation of health treatments, services, policies and organisational interventions* Open University Press, Maidenhead.
- Øvretveit, J. 2002, "Action evaluation of health programmes and changes," *In A handbook for a user focussed approach*, Radcliffe Medical Press, Abingdon pp. 1-54.
- Parlett, M. & Hamilton, D. 1976. Evaluation as illumination. *Evaluation Studies Review Annual*, 1, 144
- Patton, M. 1980. *Qualitative evaluation methods* Sage : London.

- Patton, M. 2009, *Developmental evaluation*
http://www.evaluationcanada.ca/distribution/20090601_quinn_patton_michael_a.p df, Guilford Press.
- Patton, M. 1990, *Qualitative evaluation and research methods*, 2nd edition
 Sage Publications : Newbury Park (CA).
- PEPFAR 2008, *U.S President's Emergency Plan for AIDS Relief, Care for People Living With HIV/AIDS* <http://www.pepfar.gov/documents/organization/84863.pdf>.
- Perera, R. 1983. The Nakulugamuwa experience. *Joicfp Review*.(7):20-30,
- Perret, F., Mooser, V., Hayoz, D., Tardy, Y., Meister, J.J., Etienne, J.D., Farine, P.A., Marazzi, A., Burnier, M., & Nussberger, J. 1991. Evaluation of arterial compliance-pressure curves. Effect of antihypertensive drugs. *Hypertension*.18(4 Suppl):1177-83,
- Piot, P. 1999, *U.N. Issues grim report on the 11 million children orphaned by AIDS*.<http://query.nytimes.com/gst/fullpage.html?res=9900E3D91F3FF931A35751C1A96F958260>, Lawrence Altman.
- Piwoz, E. & Preamble, E. A Review of the Literature and Recommendations for Nutritional Care and Support in sub-Saharan Africa. *HIV/AIDS and Nutrition* , 1-45. 2000. SARA.
- Piwoz, E., Bonnard, P., Castleman, T., Cogill, B., Elder, L., Remancus, S., & Tanner, C. 2004, *10 Key messages on Nutrition and HIV/AIDS*, United States Agency for International Development.
- Polit, F. & Hungler, B. 1993, "Methods, appraisal and utilisation," *In Essentials of Nursing Research*, 3rd edition. J.B Lippincott, ed., Philadelphia.
- Pope, C. & Mays, N. 1995. Reaching the parts other methods cannot reach: an introduction to qualitative methods in health and health services research. *British Medical Journal*, 311, 42-45
- Population Division Department of Economic and Social Affairs, U. N. S. 2003, *Workshop on HIV/AIDS and Adult Mortality in Developing Countries* New York.
- Praag, E. & Tarantola, D. 2006, "Operational approaches for evaluating intervention strategies
<http://www.fhi.org/en/HIVAIDS/pub/Archive/evalchap/evalchap7.htm>," *In Evaluating programs for HIV/AIDS prevention and care in developing countries*, R. Thomas et al., eds., Family Health International.
- Quartey, F. A, 2010. Ghana has lowest HIV/AIDS prevalence rate in sub-region, *Ghana News Agency*.
- Radelet, S. & Siddiqi, B. 2007. Global Fund grant programmes: an analysis of evaluation scores. *Lancet*., 369, (9575) 1807-1813
- Raeburn, J. & Beaglehole, R. 1989. Health promotion: can it redress the health effects of social disadvantage? *Community Health Studies*.13(3):289-93,

- Raleigh, V.S., Cooper, J., Bremner, S.A., & Scobie, S. 2008. Patient safety indicators for England from hospital administrative data: case-control analysis and comparison with US data. *British Medical Journal*.337:a1702,
- Rawat, R., Kadiyala, S., & McNamara, P. 2010. The impact of food assistance on weight gain and disease progression among HIV-infected individuals accessing AIDS care and treatment services in Uganda. *BMC Public Health*, 10, (316) available from: <http://www.ncbi.nlm.nih.gov/pubmed/20529283>
- Rehle, T. & Hassig, S. 2006, "Role of evaluation in HIV/AIDS programs <http://www.fhi.org/en/HIVAIDS/pub/Archive/evalchap/evalchap1.htm>," R. Thomas et al., eds., Family Health International.
- Richardson, J. 1992, *Cost-utility analyses in health care: present status and future issues*. Tavistock Routledge, London.
- Rist, R. 1994, "Influencing the policy process with qualitative research," *In Handbook of qualitative research*, N.K. Denzin & Y.S. Lincoln, eds., Sage : London pp. 545-557.
- Roger, D., Alvaro, M., Glen, M., Lawrence, K., Joseph, B., John, P., & Lewis, S. 1998. Effectiveness of potent antiretroviral therapy on time to AIDS and death in men with known HIV infection duration. *The Journal of the American Medical Association*, 280, 1497-1503
- Roper, W.L. 1991. Current approaches to prevention of HIV infections. *Public Health Reports*, 106, (2) 111-115
- Rosen, S., Vincent, J., Macleod, W., Fox, M., Thea, D., & Simon, J. 2004. The cost of HIV/AIDS to businesses in southern Africa. *AIDS*, 18, (2) 317-324
- Rossi, P. & Howard, E. 1993, *Evaluation: A Systematic Approach*, CA: Sage Publications, Newbury Park.
- Rousseau, MC., Molines, C., Moreau, J., & Delmont, J. 2000. Influence of Highly Active Antiretroviral Therapy on Micronutrient Profiles of HIV-infected patients. *American Journal of Nutrition*, 44, (5-6) 212-216
- Rowan, P. 2003, *Funerals Spell Financial Suicide* <http://www.aegis.org/news/suntimes/2003/ST030823.html>, Sunday Times[South Africa], South Africa.
- Roy, C.M. & Cain, R. 2001. The involvement of people living with HIV/AIDS in community-based organisations: contributions and constraints. *AIDS Care*, 13, (4) 421-432
- Sacks, H., Chalmers, T., & Smith, H. 1982. Randomized versus historical controls for clinical trials. *American Journal of Medicine*, 72, 233-240
- Shadish, W., Cook, T., & Leviton, L. 1991, *Foundations of Programme Evaluation: Theories of Practice*, Sage, London.
- Shapiro, D. & Firth, J. 1987. Prescriptive Vs exploratory psychotherapy. *British Journal of Psychiatry*, 151, 790-799

- Shelton, J. & Johnston, B. 2001, *Condom gap in Africa: evidence from donor agencies and key informants*.
- Shevitz, A. & Knox, T. 2001. Nutrition in the era of highly active antiretroviral therapy. *Clinical Infectious Diseases*, 32, 1769-1775
- Short, S.D. 1989. Community participation or community manipulation? A case study of Illawarra Cancer Appeal-a-thon. *Community Health Studies*, 13, (1) 34-38
- Smith, G. & Cantley, C. 1985. *Assessing Health Care: a study in Organisational Evaluation*. 173
- Solon, F.S. 1985. Parasites of all types must be controlled. *Joicfp Review*. 10:44,
- Steinberg, M., Johnson, S., Schierhout, G., & Ndegwa, D. 2002, *Hitting Home: How Households Cope with the Impact of the HIV/AIDS Epidemic* <http://www.kff.org/southafrica/20021125a-index.cfm>, The Henry J.Kaiser Family Foundation.
- Stern, E. 1990, *Evaluating innovatory programmes*. Tavistock Institute, London.
- Stern, E. 1993, *The challenge of 'real-time' evaluation*, Tavistock Institute, London.
- Stevenson, O. & Parsloe, P. 1993. *Community care and empowerment* Joseph Rowntree Foundation.
- Tashakkori, A. & Creswell, J. 2007. Exploring the nature of research questions in mixed methods research. *Journal of Mixed Methods Research*, 1, 207-211
- Tashakkori, A. & Teddie, C. 1998, *Mixed methodology : Combinning quanlitative and quantitative approaches*, SAGE Publications, Thousand Oaks.
- UNAIDS 2000, *Global HIV/AIDS Epidemic* http://www.nigeria-aids.org/pdf/AIDS_in_Ghana.pdf.
- UNAIDS 2002, *Global AIDS Epidemic* http://data.unaids.org/pub/Report/2002/brglobal_aids_report_en_pdf_red_en.pdf New York.
- UNAIDS 2006a, *Report on the global AIDS epidemic*. <http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/Default.asp>.
- UNAIDS 2006b, *Report on the Global AIDS Epidemic : The Impact of AIDS on People and Societies* http://data.unaids.org/pub/GlobalReport/2006/2006_GR_CH04_en.pdf.
- UNAIDS 2006c, *Report on the global AIDS epidemics : Treatment and care* http://data.unaids.org/pub/GlobalReport/2006/2006_GR_CH07_en.pdf.
- UNAIDS 2007, *AIDS epidemic update*. <http://www.unaids.org/en/KnowledgeCentre/HIVData/EpiUpdate/EpiUpdArchive/2007/>.
- UNAIDS 2009a, *AIDS Epidemic Update* http://data.unaids.org/pub/Report/2009/JC1700_Epi_Update_2009_en.pdf.

UNAIDS 2009b, *Global Facts & Figures*

http://data.unaids.org/pub/FactSheet/2009/20091124_FS_global_en.pdf.

UNDP 2003, *HIV/AIDS results*. <http://www.undp.org/hiv/publications/>.

UNDP 2005, *Human Development Report*.

<http://hdr.undp.org/en/reports/global/hdr2005/>.

UNFPA 2005, *Comprehensive condom programming: A strategic response to HIV/AIDS*. <http://www.unfpa.org/hiv/programming.htm>.

Unger, J. & Killingsworth, J. 1986. Selective primary health care: a critical review of methods and results. *Social Science and Medicine*, 22, (10) 1001-1013

UNICEF 2000, *The Progress of Nations 2000: Background paper*, UNICEF, New York.

USAID 2003, *Ghana 2002 Annual Report*.

Van Wyke, B. & Peltzer, K. Evidence-based community HIV prevention interventions: Are they useful for developing countries?

<http://gateway.nlm.nih.gov/MeetingAbstracts/ma?f=102284730.html>. International conference on AIDS . 2004.

Varkevisser, C., Pathmanathan, I., & Brownlee, A. 1991, "Proposal development and fieldwork," *In Designing and conducting health system research projects*, vol. 2 p. 212.

Veneman, A. 2005, *Integrated approach to child survival achieving important results, UNICEF finds*, UNICEF, 034.

Victoria, M., Granich, R., Gilks, C.F., Gunneberg, C., Hosseini, M., Were, W., Raviglone, M., & Cock, K.M. 2009. The global fight against HIV/AIDS, Tuberculosis and Malaria current status and future perspectives. *American Society for Clinical Pathology*, 131, 844-848

Walker, D. & Fox-Rushby, J.A. 2000. Economic evaluation of communicable disease interventions in developing countries: a critical review of the published literature. *Health Economics*, 9, (8) 681-698

Walsek, C., Zafonte, M., & Bowers, J. 1997. Nutritional Issues and HIV/AIDS: Assessment and treatment strategies. *J Assoc Nurses AIDS Care*, 8, 71-80

Waltz, CF., Strickland, OL., & Lenz, E. 1991. *Measurement in Nursing Research*, 2nd edition. London.

Wang, Y. 1985. Making twin concerns of family planning and primary health care. *Joicfp*, 10, 4-6

Wanke, CA., Silve, M., & Knox, T. 2000. Weight loss and wasting remain common complications in individuals infected with human immunodeficiency virus in the era of highly active antiretroviral therapy. *Clinical Infectious Diseases*, 31, 803-805

- Warren, K. 1988. The evolution of selective primary health care. *Social Science and Medicine*, 26, (9) 891-898
- Wellmann, G., Aduonum-Darko, L., Bonney, C., Alhassan, S., & Amwami, S. 2007, *HOPE Mid-term evaluation report. USAID.*
- Whitney, EN., Hamilton, EM., & Rolfes, S. 1990. *Understanding Nutrition*, 5th ed. ed. New York, West Publishing Company.
- WHO 1981, *Global strategy for health for all by the year 2000* <http://whqlibdoc.who.int/publications/9241800038.pdf>, World Health Organisation.
- WHO 1986, Ottawa Charter for health promotion http://www.who.int/hpr/NPH/docs/ottawa_charter_hp.pdf, Ontario, Canada: pp. 1-4.
- WHO 1994, *Implementation of the global strategy for Health for All by the year 2000, second evaluation 8*, Geneva.
- WHO 2000, *The World Health Report 2000. Health system: improving performance* http://www.who.int/whr/2000/en/whr00_en.pdf Geneva.
- WHO 2001, *Community-based noncommunicable disease interventions: Lessons from developed countries for developing ones* 10.
- WHO 2003a, *Declaration of Alma-Ata. International conference on primary health care, Alma-Ata, USSR, 6-12th September, 1978* http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf, World Health Organisation.
- WHO 2003b, *Nutrient requirement for people living with HIV/AIDS: Report of a technical consultation* <http://whqlibdoc.who.int/publications/2003/9241591196.pdf>, World Health Organisation, Geneva.
- WHO 2005a, *HIV/AIDS Epidemiological Surveillance Report for WHO Africa Region, 2005 Update* WHO AFRO, Harare.
- WHO 2005b, *Progress on Global Access to HIV Antiretroviral Therapy: An Update on '3 by 5'* Geneva.
- WHO 2006a, *Preventing HIV/AIDS in Young People: A systematic review of evidence from developing countries*, World Health Organisation, Geneva, WHO Technical Report Series No. 938.
- WHO 2006b, *Progress on global access to HIV antiretroviral therapy: A report on "3 by 5" and beyond*, Geneva. http://www.who.int/hiv/progressreport2006_en.pdf, World Health Organisation, Geneva.
- WHO 2007, *Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector* http://www.who.int/hiv/mediacentre/universal_access_progress_report_en.pdf.
- WHO 2008a, *Call for letters of intent: Integrated community-based interventions.* http://www.who.int/tdr/grants/grants/bl11_community.htm, Research and Training in Tropical Diseases(TDR).

WHO 2008b, *Primary health care and social determinants of health*
<http://www.eldis.org/go/topics/resource-guides/health-systems/geneva-health-forum/primary-healthcare-and-social-determinants-of-health&id=36616&type=Document>, Regional office for Africa.

WHO 2008c, *Report on the review of primary health care in the African Region*
http://afro.who.int/phc_hs_2008/documents/En/review_pc_2003.pdf, WHO Regional office for Africa.

WHO 2010, *Fast facts on HIV/AIDS*
http://www.who.int/hiv/data/fast_facts/en/index.html.

WHO & UNAIDS 2007, *New data on male circumcision and HIV prevalence: Policy and programme implications*, World Health Organisation, Geneva.

WHO, UNICEF, & GO Mali 1999, *Report on the review of the implementation of the Bamako Initiative in Africa, Mali*.

WHO, UNICEF, & UNAIDS 2009, *Towards Universal Access: Scaling up Priority HIV/AIDS Interventions in the Health Sector. Progress Report 2009*, WHO, Geneva.

Wholey, J. 1983, *Evaluation and effective public management*. Little Brown, Boston.

Wilcox, D. 1994, *Community participation and empowerment: putting theory into practice* <http://www.jrf.org.uk/sites/files/jrf/h4.pdf>, Joseph Rowntree Foundation, York.

World Bank 2003, *Provision of ARV therapy in resource-limited settings: The challenges of drug resistance and adherence*, Global HIV/AIDS of the World Bank.

World Food Programme 2008, *Report by the office of evaluation : Thematic evaluation of WFP'S HIV and AIDS interventions in sub-Saharan Africa*.

Worobey, M. HIV/AIDS pandemic started 100 years ago
<http://www.medicalnewstoday.com/articles/123845.php>. Medical News Today . 2-10-2008.

Yamey, G. & Torreele, E. 2002. The world's most neglected diseases. *British Medical Journal*, 325, (7357) 176-177

Zorrilla, C.D. & Santiago, L.E. 1988. "Redefining empowerment and sexual negotiation for women living with HIV". *Puerto Rico Health Sciences Journal*, 17, (3) 253-6