PUBLIC BENEFIT ORGANIZATIONS AND SUSTAINABLE HOUSEHOLD POVERTY REDUCTION IN MWINGI NORTH SUB-COUNTY, KITUI COUNTY, KENYA

FAITH NTHENYA NYAMAI

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DECLARATION AND RECOMMENDATIONS

Declaration

This thesis is my original work and has not been presented for an award of a diploma or conferment degree in any other institution.

Signature ..... Date: 31/10/2025

Faith Nthenya Nyamai
AMT20/05911/22

Recommendation

This thesis has been submitted with our approval as University supervisors.

Signature ..... Date: 31/10/25

Dr. Urbanus Ndolo
Department of Social Sciences
Tharaka University

Signature: ..... Date: 31/10/2025

Dr. Simon Ndwiga
Department of Social Sciences
Tharaka University

DEDICATION

I dedicate this work to my late father, Joseph Mwangangi Nyamai, my mother, Dorcas Kinyenze, my sister, Elizabeth Nyamai and my brother, Jacob Nyamai. Your financial, moral, and unwavering spiritual support for my academic excellence in pursuing this course has greatly impacted me. The solutions you provided for my challenges are unforgettable. I also dedicate this work to my mentors and educators, whose guidance and belief in my potential have been invaluable. Lastly, to anyone who dreams big despite the odds—this is for you.

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ABSTRACT

Public Benefit Organizations have played a vital role in supporting poverty alleviation efforts in Kenya. Illiteracy and low school enrolment have increased, with evidence showing a rate of 41.9% despite interventions by Compassion International Kenya. The health sector has been partly addressed by Mumoni Nursing Home to improve public health through the provision of facilities and services; however, maternal deaths continue to rise despite these efforts. Food insecurity remains a major concern, with statistical evidence indicating a prevalence of 57%, despite intervention by Caritas Kitui. This trend suggests that poverty levels continue to worsen. The study investigated the influence of PBOs on sustainable household poverty reduction in Mwingi North Sub- County, Kitui County, Kenya. It was anchored on Social Capital Theory, supplemented with a Capability Approach, employing a descriptive and correlational research designs. The target population was 162,218 persons, while the accessible population was 131,883 persons, representing 81.3% of individuals affected by poverty. Slovin' s formula was used to determine a sample size of 399 respondents. Simple random sampling selected potential respondents, while purposive sampling targeted PBO staff. Interview schedules and questionnaires were the main data collection tools. Their validity was cross-checked while reliability was tested through a pilot study with 40 respondents. The Cronbach' s alpha was 0.967, exceeding the recommended minimum of 0.70. Quantitative data were analyzed using SPSS software and Pearson' s correlation, while qualitative data were analyzed thematically. To ensure data collection relevance, permits from the relevant bodies, such as Tharaka University Ethics Committee and NACOSTI, along with approvals from both the Faculty and Department, were obtained. The relationships between variables were examined at a 99% confidence level, revealing that Education, Health, and Food Insecurity had correlation coefficients of ($r = 0.051$, $p > 0.01$, $\beta = 0.192$), ($r = 0.048$, $p = 0. .000 < 0.01$, $\beta = 0.171$), and ($r = 0.200$, $p = 0. .000 < 0.01$, $\beta = 0.269$), respectively. These positive relationships indicate linear connections among the variables. Based on these findings, the study concludes that PBOs involve household members in raising awareness about the importance of education to increase school enrolment in the region. In the health sector, PBOs should prioritize providing medical equipment, essential supplies, and consistent medication for local health facilities. Finally, the study recommends study also recommends that PBOs advocate for supportive policies and collaborate with county governments to strengthen food systems, improve market access for smallholder farmers, and enhance food distribution infrastructure.

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ACRONYMS AND ABBREVIATIONS

ASAL:	Arid and Semi-Arid areas
ASGISA:	Share Growth Initiatives for South Africa
CAMFED:	Campaign for Female Education
DIL:	Development in Literacy
GEP:	Girl Education Programme
GES:	Ghana Education Service
GMPI:	Global Multidimensional Poverty Index
HIV/AIDS:	Human Immunodeficiency Virus, Acquired Immune Deficiency Syndrome
NACOSTI:	National Commission for Science, Technology and Innovation
NALEP:	National Agriculture and Livestock Extension Programme
NCDs:	Non-Communicable Diseases
NGOs:	Non-governmental Organization
PBOs:	Public Benefit Organization
PIA:	Private International Association
SDGs:	Sustainable Development Goals
TEAL:	Technology-Enabled Academic Learning
UNDP:	United Nations Development Programme

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Eradicating poverty is one of the Sustainable Development Goals (SDGs) as it is a universal call to action. John Creamer, Emily, Kalee and Frances (2022) defined poverty as the state of lacking basic needs, categorized as relative poverty, which refers to the state of earning at least 1 US dollar, while absolute poverty is the state of lacking basic needs completely. About 1.4 billion people in the world live in poverty and hence cannot access health, education, environment, food, clean water, shelter and employment (John Creamer et al., 2022). The dimensions of poverty are health, education and living standards that include: food, water, electricity, housing, assets and sanitation.

Gupta and Vegelin (2016) stated that the poverty level was measured with an income of 1.25 dollars. Poverty is multidimensional, meaning it affects economic, political, social and environmental sectors. Mohamed Buheji1, Katiane da Costa Cunha, Godfred, Bartola, Yuri, Simone and Mohammed (2020) investigated the magnitude of poverty globally and the outcome was that it was estimated that the number of households that lived in poverty could increase by 160 million. A study by Alkire, Kanagaratnam and Suppa (2022) showed there was a high poverty rate globally in the urban and rural areas, with 1.7% and 26.1% respectively. About 57 million primary school children were not in school (Holst, 2020).

Holst (2020) investigated in South Asia, as poverty was noted in the education sector, where school enrolment was low. The children were limited in accessing learning materials since the population was high in South Asia. This became a challenge for the schools to hold more capacity, as most of the children remained at home due to a lack of learning materials and school fees. This resulted in a greater number of children who did not go to school. (Holst, 2020). Reza (2022) investigated in Australia where statistics showed that 3.24 million people lived in absolute poverty. This was due to an increased population whereby the government was not in a position to help the whole population. On average, 774,000 children did not access food, water and education. Peter et al. (2020) noted that Sub-Saharan Africa had the largest poverty level, with statistical evidence of 57.7%. It was the most affected, as the people who lived in

poverty were about 534 million people out of 1 billion. Fosu (2015) investigated that Sub-Saharan Africa was noted to be at a high risk of increased poverty because their maternal mortality ratio was 546 deaths per 100,000 live births compared to the world's average of 216 deaths and 12 deaths per developing country. People did not have access to better health services, which led to a high number of deaths. Sub-Saharan African countries also faced an additional challenge in the increased illiteracy as there were not enough schools for people to enroll (Reza, 2022).

Statistics revealed that about 145 million people in Sub-Saharan Africa were facing hunger. The rate increased from 23.5% to 26.8%, with the children accounting for 22% (Lowe, 2021). This was supported by Harvey, Jones, Cochrane and Singh (2019) who stated that in Sub-Saharan Africa, the government called out for help from other countries and external organizations. Peterson (2022) investigated that 277 million people were on the brink of starvation. This was because the government did not produce enough food, whereas wars and conflicts increased.

South Africa on the other hand had been affected by poverty which led to challenges in social, economic, environmental and political areas. Yang, Jiang, Ren, Walker and Xie (2021) found out that about 49.2 % of the people in South Africa lived in poverty, with many people lacking food, better health and education. Through the establishment of Share Growth Initiatives for South Africa (ASGISA), the government developed various ways to reduce the poverty level. According to a Nigerian study by Anyanwu, Kayizzi-Mugerwa and John (2012), there was a strong correlation between poverty and households.

The results showed that, among other things, the poverty level increased 6.82 times with a household's size. Furthermore, a rise of 10 individuals resulted in a higher probability of household poverty, with 0.77 being impoverished and 0.23 not being impoverished. This brought a bigger challenge as the Nigerian government attempted to address the issue, however, the population increased gradually. Aikaeli, Garcés-Urzainqui and Mdadila (2021) investigated in Tanzania, where household heads who had not completed their primary education were at a high risk of poverty by 13%. The possibility of falling into poverty was 30% for individuals without a higher education. Tanzania had a larger population, as the majority of the people lacked access to food. Food scarcity led to about 49% of the people starving. The leading group was expectant

women and younger children who suffered from malnutrition. Kenya is one of the countries facing poverty. The Kenyan government came up with a Poverty Reduction Strategy Paper (PRSP) to help in reducing poverty. The numbers show that 45% of people in Kenya were estimated to be poor, with rural livelihoods accounting for the majority of these individuals, about 53% of the country's total population. Comparable research was conducted, yielding important data showing that, at 28–29%, poverty was more prevalent in rural than in urban areas.

Paslakis, Dimitropoulos and Katzman (2020) investigated that one of the major problems facing Kenya was food insecurity. Compared to 15% in 2018, 35% of the youngsters were exposed to malnutrition, with 42% of the population facing food insecurity. There were different interventions from donors, but the country did not achieve the goal of reducing food insecurity. This consequently led to about 3% who died from food scarcity. Non-communicable diseases (NCDs), including diabetes and cancer, increased throughout communities in Kenya as noted by Daniel and Moses (2016), compounding the country's health problems.

The treatment of non-communicable diseases (NCDs) was expensive for them because only 6% of Kenyans were eligible for health insurance. Due to their lack of means of subsistence, many people ended up selling what they owned to offset high medical bills (Margaret, Catherine, Flora & Beatrice, 2015). Similarly, Paslakis et al. (2020) noted that low enrolment of students in schools was related to high levels of illiteracy. This was associated with several factors, including the parents dying from HIV/AIDs. Additionally, the children lacked educational materials such as uniforms, books, writing materials and fees. The government offered free primary education however, the number of student enrolments was low.

As investigated by Andrew and Diwakar (2018) in Turkana County in the Northeast, the findings proved that it experienced a statistical poverty rate of 80. Turkana proved to have low food production as the number of people in the household increased. The number of children who did not attend school averaged 57%. Malnutrition was high, such that they did not attend school with hungry stomachs, leading to health problems. Kitui County, one of the Arid and Semi-Arid (ASAL) areas in Kenya, with a population of 1,147,200, experienced high poverty levels. The absolute poverty level was 39.4% above the national average of 36.1% (Kitui County Integrated Development Plan 2023-

2027, 2023). Under the health sector, there was a high prevalence of HIV/AIDS within the county (6.1%), above the national average of 5.6% (Kitui County Integrated Development Plan 2023-2027, 2023). However, most of the residents did not access health services since the population of the affected people was high.

As evidenced by many of the facilities being located in the county's urban areas, the majority of the rural population lacked access to the facilities. This led to most people suffering from health problems due to walking for long distances, and looking for health services, as some were too weak to walk for long distances. The number of medical centres in the sub-county of Mwingi North Sub-County, Kitui County, was only eight. Infant mortality was high, with 48 per 1000 compared to the national average of 54 per 1000 (Kitui County Integrated Development Plan 2023-2027, 2023). This was caused by the unavailability and inaccessibility of the health services.

In Mwingi North Sub-County, Kitui County, Kikuvi (2021) found out that the rate of food insecurity was high. The researcher found out in the Ngomeni ward that food insecurity-related issues affected about 57% of the people. Statistics revealed that out of ten people, seven suffered from severe malnutrition and hunger. Additionally, statistics revealed that most children did not attend school, accounting for about 41.9%, due to poverty (Kikuvi, 2021). To date, the illiteracy level within the sub-county has not dropped despite the interventions from the government and other agencies such as the PBOs. Globally, some of the PBOs worked towards reducing poverty by addressing poor education (Chankseliani, Qoraboyev & Gimranova, 2021).

A good example was World Vision, which helped at least 1 billion children access better education. The PBO used a mechanism of participatory development where the community suggested what they wanted to address regarding poor education. This gave the communities a sense of belonging as their views were taken into consideration. The PBO provided learning materials, scholarships and uniforms for the children, which increased school enrolment. However, the problem was not covered as a whole, as most of the children were still at home. The PBOs have been at the forefront of reducing hunger. According to Lowe (2021), about 2.1 billion people are suffering from malnutrition, with children being the most affected, with a frequency of seven out of ten. The elderly followed with a frequency of six out of ten. The PBOs provided dietary meals for the population and distributed certified seeds and clean water. However, this

was not achieved as the population was growing and the demand was higher than the supply. The World Health Organisation (WHO), in partnership with other PBOs, addressed the health concerns globally. During the COVID-19 pandemic, both organizations offered medical services, as a problem-solving approach was used to intervene at the grassroots level of the health issue (Buye, 2021).

As the number of people suffering from various health issues increased, the lingering question was why the condition persisted despite the interventions by different PBOs. Therefore, the PBOs intervened to reduce the burden of poverty however, they encountered challenges in reaching out to every community (Chiara, 2020), as supported by Dashti, Moulabuksh and Ali (2021). PBOs were at the front line to impact good education for children in marginalized communities in Sub-Saharan Africa through the provision of learning materials, scholarships, school fees and daily meals. However, the rate of illiteracy increased despite the PBOs' interventions (Lowe, 2021).

Rufo, Njuguna and Muiruri (2022); and Kilonzi (2014) stated that PBOs took the initiative of reducing poverty levels as evidenced by Caritas Kitui and World Vision, which reduced food insecurity and illiteracy. The approach of capacity building and training volunteers was used, which provided health services to the communities. Another piece of evidence was from the Nguni ward, which involved 248 households as the organization came up with initiatives for a resilient agricultural system and better technology. In Mwingi North Sub-County, Kitui County, World Vision was at the forefront of fighting illiteracy through giving free scholarships to students and providing educational materials. This led to a high enrolment of students in schools. The PBO used community participation as a mechanism for reducing poverty where they freely enrolled their children. However, the population outweighed the resources provided by the PBO hence most of them were not in school (Kavindu, 2023).

1.2 Statement of the Problem

Numerous sustained interventions by the National Government, County Government, and Public Benefit Organizations (PBOs) have been implemented to reduce poverty levels in Mwingi North Sub-County, Kitui County; however, poverty in the study area has persisted and continues to worsen. The health sector has received partial support from the Mumoni Nursing Home to improve people's health through the provision of health facilities and services; however, despite their efforts, maternal deaths are rising.

Food insecurity remains a major concern within the sub-county, as it is a semi-arid region, with statistical evidence indicating 57%. Illiteracy and low school enrolment have increased, showing an increase of 41.9%, despite interventions from one PBO, Caritas Kitui. This upward trend shows that poverty levels are not decreasing, despite the efforts of the PBOs. Most research studies have not focused on the role of PBOs in sustainable household poverty reduction, especially in Mwingi North Sub-County. Therefore, this research will focus on the study area.

1.3 General Objective

The general objective investigated the influence of Public Benefit Organizations on sustainable household poverty reduction in Mwingi North Sub-County, Kitui County, Kenya.

1.3.1 Specific Objectives

1. To examine the influence of PBO's education interventions on sustainable household poverty reduction in Mwingi North Sub-County, Kitui County, Kenya.
2. To investigate the influence of PBO's health interventions on sustainable household poverty reduction in Mwingi North Sub-County, Kitui County, Kenya.
3. To determine the influence of PBO's food insecurity intervention on sustainable household poverty reduction in Mwingi North Sub-County, Kitui County, Kenya.

1.4 Research Questions

1. What are the PBO's education interventions for sustainable household poverty reduction in Mwingi North Sub-County, Kitui County, Kenya?
2. What are the PBO's health interventions for sustainable household poverty reduction in Mwingi North Sub-County, Kitui County, Kenya?
3. What are the PBO's food insecurity interventions for sustainable household poverty reduction in Mwingi North Sub-County, Kitui County, Kenya?

1.5 Justification of the Study

Although the government has implemented various interventions, poverty remains a global challenge, necessitating increased involvement of Public Benefit Organizations

(PBOs). However, the PBOs experience challenges when addressing the issue of poverty, for example, financial constraints. This research will investigate the influence of the PBOs on Sustainable Household Poverty Reduction in Mwingi North Sub-County, Kitui County. This study will help the PBOs improve access to better education, health and improve food insecurity among poor households. Additionally, it will add more knowledge to the existing literature on the limited studies in Mwingi North Sub-County. It will generate essential insights to guide the fight against poverty, identified as Goal No.1 in the Sustainable Development Goals (SDGs).

1.6 Scope of the Study

The study investigated the influence of Public Benefit Organizations and sustainable household poverty reduction in Mwingi North Sub-County, Kitui County since there was a high rate of poverty in Mwingi North with statistical evidence of 81.3%. Mwingi North Sub-County has a population of 162,218. The variables of the research were Education, Health and Food insecurity. Poverty has been a trend that the global community is fighting to achieve; it still exists to date. Therefore, there was a need for more PBOs to intervene where the government has not in education, health and food insecurity problems. The research employed a mixed-methods approach using structured questionnaires and interview schedules to collect more reliable data.

1.7 Limitations of the Study

The research was limited as the interviews were conducted with few PBO staff members, while the use of questionnaires was limited to only the poor households. The sample size being 399 respondents was a limitation, as insufficient data was collected compared to using the whole population. The sample size was a barrier as the research did not focus on every poor household within the Sub-County, but on the selected ones. Illiteracy among respondents delayed the data collection process, requiring the assistance of an interpreter and longer engagement times. The research was limited to non-poor households.

1.8 Delimitation of the Study

The delimitation of the study was that there was engagement of an assistant who was familiar with the language to interpret for easier understanding of the respondents. Refreshments were provided to respondents to improve participation and comfort

during the data collection process. Since the study focused on the poor households, there was no need to get responses from non-poor households.

1.9 Assumptions of the Study

i It was assumed that the respondents gave detailed, accurate and correct information.

ii It was assumed that the communities were in absolute poverty and were aware of the PBOs available in their area.

iii It was assumed that the PBOs were interested in the research to help them know how to curb the problem.

iv It was assumed that the PBOs had adequate resources to implement their poverty reduction programs.

1.10 Operational Definition of Terms

Absolute Poverty	In this study, the household members those who were unable to meet their basic needs such as food, shelter, healthcare and were identified through their income level
Food insecurity	The condition where a household lacked consistent access to sufficient and nutritious food
Health Care Provision	Refers to the extent to which the healthcare services are made available and accessible and affordable
Household	People lived together as a family and experienced the problem
Household income	The amount that was earned by people in a family to cater to their basic needs from different sources
Livelihoods	Means through which the households secure their necessities of life including shelter, food and education
Mechanisms	The means employed by the PBOs to improve people's lives
Poverty	Refers to a condition that a household lacks resources to cater to their basic needs, like food, shelter and education
Public Benefit Organization	The not-for-profit, voluntary organizations that intervened for the communities' needs since the government could not fill the gap.
Relative poverty	The study referred to the household members who met at least some of the basic needs in through their income level
Sustainable Household Poverty Reduction	The condition where the households are able to meet their basic needs consistently in a long-term manner

CHAPTER TWO
LITERATURE REVIEW

Introduction

This chapter reviews existing literature on the influence of the PBOs on poverty on. It focuses on the three key dimensions: education, health and food insecurity. It also presents the theoretical and conceptual framework guiding the study.

2.1 PBO's Education Interventions on Sustainable Household Poverty Reduction

Hassan, Sufyan and Bin (2022) stated that many industrialized nations have the means to support their citizens' education. With the aid of PBOs and governments, the number of learner enrolments was high in nations like Asia. There was an increase in the number of PBOs in Asia, which increased by 4,000 in 2022, an equivalent of 66.6%. PBOs, therefore, intervened to reduce poverty in the communities. A good example was the World Vision in Asia, which used advocacy in addressing access to better education. The PBOs created initiatives that made the communities participate in activities that helped to reduce poverty (Chiara, 2020).

Reza (2022) investigated the success of 6 PBOs involved in education in Bangladesh, Asia. Using a qualitative study design through interviews, the researcher found out that; one of the organizations in Bangladesh known as Speak Up for the Poor, gave homes to young girls who came from marginalized communities and trained them professionally, so they became successful in their communities through a program known as Girls Education Programme (GEP). In thirty communities, more than 1300 females were reached. Similarly, development in Literacy (DIL) was established to provide better, more affordable education to Pakistani children by enrolling them in schools. Therefore, this research adopted the interview as a method of data collection, where the PBO was noticed to have intervened in the Education sector within the region.

Vaga Lume Association is one of the largest PBOs in Brazil, South America, which trains teachers to educate children from low-income backgrounds. It impacted more than 1,400 children who returned to school, as they were provided with uniforms, fees, and reading materials. This improved the children's reading and writing skills (Naguib et al., 2022). About 88 community members were also educated. A study by Dashti et al. (2021) investigated the influence of PBOs had on education in Pakistan, Southern

Asia. The researcher found out that there was a high rate of poverty in the country, which led to most of the children not enrolling in school. The organizations led to the establishment of schools where the children enrolled without paying fees. Evidence was proven through a PBO known as The Citizen Foundation in Pakistan, whose mission was to increase the children from poor backgrounds in schools.

It established more than 1600 schools and enrolled about 253,000 children from marginalized communities. Similarly, Care Foundation enrolled children from marginalized communities in nearby schools. Statistics showed that about 890 schools were established by the organization. According to Hind Vishwakarma and Sthapak (2017), there was awareness of the need to address disparities in education for marginalized communities in Lesotho, Southern Africa. As such, PBOs are at the front line in the implementation of interventions that help children in such communities to impact good education on children in marginalized communities. They do so by reaching the needy households, which often comprise a small portion of the population. People observe donors engaging with PBOs and communities to mobilize resources and create developmental programs within the education sector. An example is Save the Children, which has operated in large parts of Southern Africa, and the Africa Educational Trust (AET), which partnered with communities and other stakeholders to provide education for children (Brophya, 2020).

Naguib, Afandy and Elbagoury (2022) used a comparative approach and researched the effectiveness of 3 PBOs on education in Tunisia, Northern Africa. Evidence relating to one of them indicated that it created more than 35,000 non-formal schools and the number of children was about 1.2 million. The number of enrolments increased. This leveled up the ratio of male to female enrolment in schools. The study concluded that the number of non-formal schools established by the PBOs was many compared to those of the government and private. Additionally, there was evidence that they performed very well compared to the other formal schools in the country. A similar study conducted by Naguib et al. (2022) in Tunisia, Northern Africa investigated the contribution of two PBOs in education was investigated. One of the PBOs, known as Vaga Lume Association, established schools and provided education, while the other PBO created a stakeholder board that provided the schools with goods and services. Additionally, the PBOs impacted the children within the country through the building

of 300 rural schools and a total of 1000 schools in the whole country, which led to the high enrolment of children in school. On the other hand, the study found evidence of a successful PBO named Oasis of Science Organization, which provided field trips and workshops so that the children learned. This research concurred with the study above, where the PBO in Mwingi North Sub-County provided resources to train the children in schools.

According to Reza (2022) findings, donors provided resources, which supported the educational system. The study stated further that there was a reduction in girls who got married at a young age, which increased the school enrolment. The organization (Speak Up for the Poor) did not build schools because the government offered free primary education, though their work was to ensure that they sustained the girls in schools through the provision of items like fees, food, books and uniforms. DIL was examined and found that the organization offered tablets for the students to learn, which was known as Technology Enabled Academic Learning (TEAL). However, this research did not support the above findings as the PBO in Mwingi North, Kitui County, did not provide a school meal program due to the increased population of poor children in the school, as well as a shortage of resources.

Some PBOs have dedicated their efforts to ensure that they fulfil the SDGs' goals on education. According to the study by Eliasu (2017) which investigated the importance of the PBOs in education in the Northern Region of Ghana, established interventions like giving scholarships, upkeep, school uniforms and bicycles to keep them in school, as noted by the high number of parents who enrolled their children in school. Therefore, this research concurred with the above findings as the PBO in Mwingi North, Kitui County provided the school fee for the children in poor households as well as learning materials that kept them in school without having to buy.

These interventions were informed by the premise that both boys and girls had the same chances of being in school, hence the partnership between the PBOs in Ghana that fought for the empowerment of girls' education in partnership with the Ghana Education Service (GES). The researcher used a sample of 64, where 30 were head teachers, 30 pupils and 4 NGOs. The researcher used simple random sampling and conducted interviews. The Program Director of the Campaign for Female Education (CAMFED) highlighted that this partnership reached out to 16,000 girls in the region

in the year 2008. The organization trained the GES officials and empowered the girls to enrol in school until completion (Eliasu, 2017). The approach used was the formation of programs that included Action Aid and CAMFED. However, the study failed to acknowledge whether the organizations checked on their progress after the school completion.

An investigation of 1 PBO in Zambia, known as World Vision, created a difference in children's education. Research by Kuyenda (2021) indicated that the organization provided modern libraries, gave scholarships to poor students and trained local teachers. Additionally, the organization-built houses for them to stay near the school and provided learning materials to the school. There was high enrolment after the organization built the schools because the children within the country were poor, as most dropped out due to a lack of fee. Yusuf (2022) explored the influence of PBOs on primary education in Mogadishu.

A sample of 133 community members from a population of 200 was used and 67 were the PBO officials. The researcher used a descriptive research design and the methods of data collection were through the use of questionnaires. The findings were that 95% of the community members stated that the PBOs provided scholarships. The organization provided learning materials and school uniforms for the students. This study concurred with the research above as it used a descriptive research design and stated that the PBO provided scholarships to the children from poor backgrounds.

A study conducted by Yambo (2022) investigated the influence of the PBOs on children's education in Kisumu County, Kenya. The researcher used a descriptive research design using a sample of 241, which comprised 19 NGOs and 222 community members. The findings were that 76% of the respondents said that the PBO positively impacted the people in the area because the residents themselves were poor, hence could not afford to pay fees for their children in schools. Further evidence was from communities that embraced the initiatives that made them enrol their children in school. However, the researcher found out that the government gave little support to the PBOs, which brought a challenge since the organization had insufficient resources. When the PBOs were questioned, they stated that just 15% of the specified goals had been met. Most of the reviewed literature reported using data obtained through interviews, focused mostly on PBO officials. This study addressed this gap by including

information from the household members to fill the gap using both questionnaires and interviews as data collection methods. Additionally, the main focus of the PBOs was helping the children to have better education; however, most PBOs were not focusing on how they had helped the schools that had already enrolled the students. After enrolment, the schools were left with the burden of teaching the children. Through the capability approach, education initiatives were met since it created capabilities for the household members to reduce poverty.

2.2 PBO Health Care Interventions on Sustainable Household Poverty Reduction

Health is a vital aspect of life, but as poverty rates have risen, so has the cost to access quality health services. Various academics produced research on how various PBOs developed initiatives to enhance health care. Health care at the global level has been provided by several contributors: The Ministry of Health, the PBOs, the community and other agencies. Since the formulation of the SDGs, the urgency in improving the quality of health services has been heightened. Naguib et al. (2022) documents that one PBO in Dhaka, Bangladesh (Vision Organization) created workshops and equipped skills and knowledge to the households on how they could improve their health. The PBO created a program that ran across the village, which created awareness for the people. This organization built 191 health centres where the communities went for medical services. Since Bangladesh had a larger population and fewer health resources, the PBO took the initiative to provide clean water to the communities. However, this research disagreed that the PBO provided clean water that could be used at the household for consumption.

The organization also vaccinated about 85% of the young children. It had been noted that women who headed their households had ended up neglecting their health owing to rising poverty and the demands to manage their families. Consequently, Vision Organization campaigned for about 95% of the women to improve their health (Naguib et al., 2022). In Brazil, there was evidence from Naguib et al. (2022) on the influence of PBOs (Dara Organization) on the marginalized communities in accessing better health through the provision of food, milk and supplements that boosted their immunity. The researcher used interviews as the method of data collection. The findings stated that more than 1500 people accessed better health. The study stated that the organization provided foodstuffs to about 500 young children. The beneficiaries were

more than 3000. Supporting the research was Dashti et al. (2021), who investigated the influence of the PBO (Edhi Foundation) on health care in Pakistan. The study stated that the PBO created health facilities through clinics and camps. These offered medical services to the marginalized communities in Pakistan, as there was a high rate of poverty in the health sector. The rate at which people died without accessing medical services was high because the population was larger than the health services offered. The organization got its resources from donors through charitable programs. This ensured that the community accessed free medical services without paying any medical fees.

This was supported by Khan, Bashir, Muneera and Zarar (2023) who investigated the influence that the PBOs had towards reducing HIV/AIDS patients in Pakistan, Southern Asia. The researcher used a sample size of 100, which comprised 10 PBO officials and 90 community members. The statistics revealed that the PBOs provided about 85% of health services to complement the government's efforts. The organization provided health services through the provision of antiretroviral drugs (ARVs) and other services, such as educating the communities affected on a healthy diet and taking the medication as prescribed. Additionally, the organization provided training sessions to the people, which improved their healthcare. However, this research disagreed that the PBO in Mwingi North Sub-County, Kitui County provided medical services.

According to Davis, Menser, Juarez and Tomaszewski (2018), there was a noticeable decline in illnesses and fatalities in the country. Facilities improved people's health, which rose by 5% in both urban and rural locations, but despite all this, access to health was still a top concern because the amount of money allotted for health care decreased by roughly 1%. Storeng, Palmer, Daire and Maren (2019) investigated the influence of PBOs on improving health. The researchers used 5 PBOs in Ukraine, Europe, with interviews as the main method of data collection. The findings showed that PBOs created a conducive environment for change in health outcomes. First, the organizations influenced and changed policies. For example, the fight against abortion, which killed more women, as they were the most affected, at 25%. Additionally, the PBOs ran various campaigns. In Syria, a study by Sandor and Bahaa (2021) examined how the PBOs contributed to the Syrian West Asia health sector. The study reviewed 439 articles and 4 databases. The analysis proved that the people's health deteriorated and

that the women suffered the most, due to the conflict that led to the killings. Notably, most of the government health facilities were no longer running. Women suffered from unwanted pregnancies due to a lack of access to family planning methods. Statistics revealed that 24% of the expectant women who suffered were young girls due to early marriages.

They lacked proper care from the first day of conception to the last day of delivery, which led to more deaths. Similarly, the people suffered mentally from trauma and stress due to war, which increased from 36% to 61%. The PBOs focused on the segment of the Syrian population that encountered these problems rather than covering the whole population. However, the research only used secondary data, thus not collecting reliable data compared to the face-to-face interview, which brought the evidence of what the PBO had not achieved.

A similar study by Sanadgol, Doshmangir, Majdzadeh and Gordeev (2021) investigated the PBOs' interventions towards health care in Lusaka, Zambia. The study employed a review article from four databases, which were later analyzed using a mixed method. Their key findings were that the PBOs provided health services at the household level (38 studies) while 69 studies showed that the PBOs provided public health services. Additionally, they used the approach of community engagement, where the communities requested medical services. The PBOs provided health insurance coverage at the household level. This helped the communities in that they did not tire of looking for finances to pay for their bills. However, the study did not have a categorization of the health beneficiaries.

A study by Namirimo (2019) examined the impact of the PBO (World Vision) on healthcare in Kampala, Uganda. The study used a descriptive research design, developing questions for both interviews and questionnaires. Analysis showed that the PBO provided free health services to prevent people from struggling to access medical care. Most respondents received money for health purposes, which they used for additional check-ups if needed. Statistics indicated that about 34.4% responded significantly to assistance from the PBO. This research employed a descriptive design to gather reliable data on how the PBO in Mwingi North Sub-County, Kitui County, intervened in the health sector. In the reviewed literature, most studies focus on health service delivery but do not address the sustainability of long-term health services.

Therefore, this study aimed to fill the gap by exploring how PBOs create initiatives and examining their long-term sustainability in healthcare. Additionally, most of the reviewed studies examine the contribution of PBOs from a policy perspective; therefore, this study focused on community involvement. Using social capital theory, the PBOs built social networks that improved health outcomes in households and transformed these networks into collective health actions.

2.3 PBOs Food Insecurity Interventions on Sustainable Household Poverty Reduction

Dodd, Laura Jane Brubacher, Danilo Servano and Lau (2023) explored how the PBOs contributed to food insecurity in Manila, Philippines. The study employed qualitative methods of data collection in one PBO known as Rapid Emergencies and Disaster Intervention (REDI) through 25 interviews. The findings indicated that the PBO summed up the total number of marginalized households. Later, the organization analyzed how the food aid reached the people. The organization had a pick-up point where the communities collected the food aid. The organization used the approach of having a pick-up point since there was a challenge with the mode of transportation. When the respondents were asked, 93% showed that the PBO had a significant influence on the food problem, as it was during the COVID-19 pandemic. Most of the households depended on food aid. This research concurred with the above research as it employed qualitative data on the PBO staff to collect reliable information.

Dodd et al. (2021) explored how the PBOs intervened in food insecurity during COVID-19 in Bangkok, Thailand. The researchers used 25 semi-structured interviews from 17 communities. The interventions used included: the provision of immediate food and monitoring of the affected marginalized communities. This identified and categorized the communities. However, the PBOs were not able to cater to the communities as they relied mostly on aid rather than providing for themselves, as the population affected was high. In response to this, the organizations created networks and partnerships that helped households access food. Storeng et al. (2019) investigated how the PBOs intervened in addressing food insecurity in Mogadishu, Somalia. The study employed a review of articles on 5 PBOs and used a descriptive research design, which showed the correlation between the PBOs and food. The researcher conducted the study and claimed that the PBOs contributed towards food productivity at the

household level in Mogadishu, Somalia. The relationship between food insecurity and poverty was (r=0.324). There was a positive relationship in that an increase in household sizes increased reported poverty levels. The people in Somalia experienced a scarcity of food, which led to more deaths. The PBOs implemented programs that reduced food insecurity levels through the creation of seed aid and gave the communities animals to boost their food production (milk). This study employed the research design to discuss more on how the PBO intervened towards food insecurity in Mwingi North Sub-County, Kitui County.

Oryem and Noah (2022) investigated the influence of 1 PBO known as the Association of Christian Resources Organizations Serving Juba, South Sudan (ACROSS), which enhanced food insecurity in South Sudan. The researchers used a descriptive research design and mixed methods of data collection. From the findings, food was scarce within the country. Through the intervention of the organization, 67% of the respondents gave a positive view of how the PBO helped them. Through the initiatives, the organization gave the communities food. It created programs that gave the marginalized loans, which were used to establish sustainable livelihoods, especially by addressing food aid security. The beneficiaries, through the interviews, gave a response that the PBO provided food for the household three times a day.

This improved well-being and prevented more cases of starvation. Lowe (2021) investigated the contribution of PBOs to addressing food insecurity in Kenya. The researcher used a descriptive research design to explain how the organizations improved food security by providing supplements like iron to lactating mothers, enabling them to breastfeed longer without needing much food. The organizations supplied different foods to the communities, using a medium that delivered various foods daily. However, this approach was short-term. As a result, the organization opted to provide a single type of meal consistently. This research aimed to explore how the PBO intervened to reduce food insecurity in Mwingi North Sub-County, Kitui County. The findings indicated that the PBO did not supply a wide range of foods to poor households. Most studies employed a descriptive research design to examine how the PBO intervened in food insecurity. Therefore, this study used that design to gather reliable and valid information on the PBO's role. Additionally, many studies did not investigate whether the organizations involved the community in designing their food

provision initiatives; this study addressed that gap. It also identified whether the PBOs received support from external donors in tackling food insecurity. Through social capital theory, the PBOs strengthen community trust which transform resources into sustainable food access.

2.4 Theoretical Framework

2.4.1 Capability Approach

The founder was Amartya Sen, an economic philosopher, with further development by Nussbaum, Alkire, Robeyns, Crocker, Wolff De-Shalit, and Berry in 1980s. The approach provides more insight into sustainable poverty reduction. It argues that poverty is not just a lack of money but rather a lack of capabilities to lead a meaningful life. The key components of this approach are freedom, capabilities, factors, and functioning. Functioning refers to the achievements or outcomes of a person's life, such as having good health, which enables one to work without difficulties. Freedom means having the capabilities and opportunities that help individuals achieve a meaningful life; however, certain barriers can prevent access to these opportunities.

Factors include conversion factors that may hinder turning resources into opportunities, such as illiteracy. Therefore, this approach relates to the influence of the PBOs on sustainable household poverty reduction because it emphasizes whether communities have access to education, healthcare, and social services. l services (Kimhur, 2020). The PBOs ensure that they give open opportunities to the communities to access education, healthcare and social services. To improve access to education, the PBOs provide scholarships and training for the communities towards both informal and formal education. Their main focus is on ensuring that there is quality education. In accessing health care services, the PBOs ensure that the communities have access to better nutrition and maternal care while reducing mortality rates. They also focus on holding health education and vaccinations (Kimhur, 2020).

The approach guided the research by identifying the opportunities that the PBOs in Mwingi North Sub-County, Kitui County, created, which opened up access to education, healthcare, and social services for the communities, thereby sustaining people's lives in the long term. However, the approach's criticism was that it was hard to quantify and that most of the support needed was from the government to implement it. Additionally, under the education initiatives, the theory explored building human

capital for the poor households. The theory expanded the freedom for households to safeguard their health. Further, the theory ensured resilience and nourishment for the poor households for survival on food insecurity initiatives. Therefore, the theory was linked to social capital theory as it focused on opportunities while social capital theory focused on how the networking could create the opportunities for poor households.

2.4.2 Social Capital Theory

This theory came into existence in 1985, the proponent being Pierre Bourdieu, who stated that for development to take place, there is a need for social networks. This theory has been used by the researcher to bring out the concept of the PBOs creating social networks to help the communities in terms of education, health and food insecurity. The theory is divided into two: the social relationship and the resources. The social relationship exists between the communities and the PBOs, while the resources bring out the perspective of the amount and quality of resources provided by the PBOs to help the communities (Tsounis & Xanthopoulou, 2024). The theory's components are divided into three: bonding social capital, bridging social capital and linking social capital. Bonding social capital denotes a strong tie created within communities or organizations. Bridging social capital means weak ties that connect diverse groups, creating broader opportunities to reduce poverty.

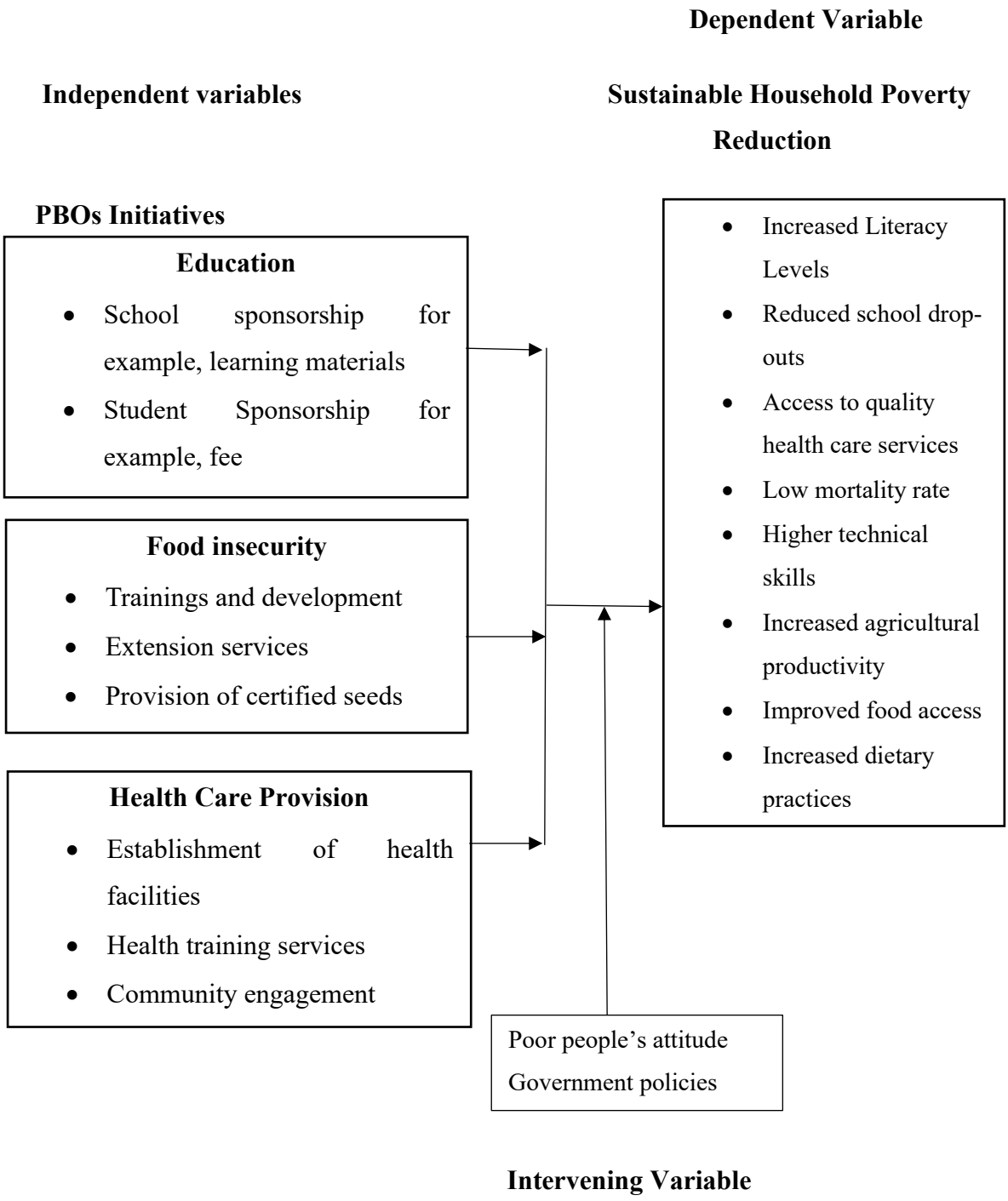
Linking social capital means the connection to those in power to gain access to resources, for example, a PBO and a donor. A thorough framework for examining PBOs' contributions to the creation and application of social capital in the context of sustainable poverty reduction is provided by social capital theory. To improve outcomes for impoverished households in Mwingi North Sub-County, Kitui County, Kenya, in the areas of education, healthcare, food insecurity, and income generation, it is beneficial to investigate how PBOs can strengthen social networks, foster trust, and encourage collective action.

The PBOs establish robust social networks to access resources that they utilize to support marginalized communities. A high level of trust and cooperation is noted when the networks are formed. The theory asserts that in a marginalized community, resources and networking have to be there for development to take place. Networks can be created with other agencies besides the Government. These agencies bring resources to the organizations where they are used to create sustainable development. However,

the theory has its challenges, such as dependency syndrome, which leads to the community relying more on the PBOs for help in terms of accessing education, improving healthcare and food insecurity.

The theory guided the research on the variables through mentorship and parental involvement under the PBOs' education initiatives. In health, the theory built trust and collective actions that improved the healthcare services, while in food insecurity initiatives, the theory fostered cooperatives and shared resource system for the poor households, which later enhanced food productivity.

2.5 Conceptual Framework



Source: Researchers' design (2025)

Figure 1: Conceptual Framework

The conceptual framework consists of the independent variable (Public Benefit Organization's initiatives and the dependent variable (Sustainable Household Poverty Reduction in Mwingi North Sub-County, Kenya. The PBO initiatives improve

conditions for poor households, while the sustainable household poverty reduction shows the impact of the PBO initiatives used. The intervening variable links the independent and the dependent variable. People's attitudes may hinder the success of the PBOs in reducing household poverty. If there is a positive people's attitude, then it encourages the PBOs to carry out their work. Strict government policies, if enforced, may hinder the PBOs from improving the poor households' livelihoods.

CHAPTER THREE
RESEARCH METHODOLOGY

Introduction

The chapter presented the methodology that was selected to explore how the PBOs' interventions in education, health and food insecurity influenced sustainable household poverty reduction in Mwingi North Sub-County.

3.1 Location of the Study

The study took place in Mwingi North Sub-County, Kitui County, which had a population of 162,218 and an area of approximately 4,824 square kilometers. The area covered 0˚ 56' 14.6796″ S and 38˚ 3' 37.8036″ E. The Sub-County has 5 wards, namely: Tseikuru, Kyuso, Mumoni, Tharaka and Ngomeni (Kitui County Integrated Development Plan 2023-2027, 2023). Mwingi North Sub-County, Kitui County, was the most affected by poverty in Kitui County, with a poverty index of 81.3%. Examining the whole Sub-County gave a comprehensive outlook of how the PBOs intervene in poverty. Most of the researches were limited to Mwingi North Sub-County; therefore, the research sought to explore more on the area of study.

3.2 Research Design

According to Ansari et al. (2022) researchers employ different research designs as they help to complete a task significantly in a given period. This study adopted a descriptive and correlational research design. A descriptive research design was appropriate as it enabled the collection of cross-sectional data on the household experiences with PBO services in a resource-constrained rural setting. On the other hand, a correlational research design helped in examining the relationship between the PBOs and sustainable household poverty reduction. Both research designs addressed all the research objectives through description and found the relationship existing between all the independent variables and the dependent variable.

3.3 Population of the Study

The population distribution of the people in Mwingi North Sub-County, Kitui County, is shown in the table below

Table 1: Population for Mwingi North Sub-County

Ward	Population
Kyuso	60, 375
Tseikuru	37, 890
Mumoni	32, 422
Ngomeni	18, 447
Tharaka	13, 084
Total	162, 218

Source: (Kitui County Integrated Development Plan 2023-2027, 2023)

The target population of the study was 162, 218; however, the accessible population was 131, 883. The accessible population was derived from 81.3%, which dictated the poverty index level within the sub-county (Kitui County Integrated plan 2023-2027, 2023).

3.4 Sampling Procedure

The study used multistage sampling for the poor household members, where the researcher defined the population, that is, within the sub-county. The wards were grouped into clusters, which were distributed within the 53 villages. Later, the researcher used simple random sampling to select the respondents from the selected clusters of the 53 villages, which were used as the sample for the whole representation (Mcewan, 2020). Purposive sampling was used to select the PBOs that engaged in activities that were of interest to the research as per the research objectives: education, food insecurity and health. Three PBOs were used: Caritas Kitui, Compassion and Mumoni Nursing Home.

3.5 Sample Size

The location of the site was Mwingi North Sub-County in Kitui County, which had a population of 162, 218. The researcher employed a sample size as calculated below (Mcewan, 2020). This research used the Slovin formulae as used by Namirimo (2019) who established how to calculate a sample from a population. The significance of this formula was that it calculated with a 95% confidence level accurately calculated a sample size when the population was too large to sample directly.

Therefore: $\frac{81.3}{100} \times 162,218 = 131,883$

$$n = \frac{N}{1 + N(e)^2}$$

Where;

N= total population in the area

n= sample size

e= margin of error (95% level of significance)

To get the number of households in poverty in Mwingi North Sub-County, Kitui County, 81.3% of the population as shown by the percentage of poverty in the sub-county

Calculation for the sample size;

$$n = \frac{131,883}{1 + 131,883(0.05)^2}$$

= 398.790…

Sample size (n) = 399

Table 2: Sampling Frame

Wards	Population size	Number of villages	Sample size
Kyuso	60, 375	12	74
Tseikuru	37, 890	12	74
Mumoni	32, 422	8	74
Ngomeni	18, 447	14	74
Tharaka	13, 084	7	73
TOTAL	162, 218	53	369

Source: (Kitui County Integrated Development Plan 2023-2027, 2023)

Table 3: Sample size for the PBOs

PBO	Population size	Sample size
Caritas Kitui	45	10
Compassion	30	10
Mumoni Nursing Home	25	10
TOTAL	100	30

Source: (Kitui County Integrated Development Plan 2023-2027, 2023)

3.6 Research Instruments

According to Löhr et. al (2020), it was important to have a data collection instrument that helped in data collection. To collect comprehensive information, multiple data collection instruments were used. Therefore, this research employed the use of questionnaires and interview schedules. This research collected both qualitative and quantitative data. The questionnaires aligned with the research objectives. A research instrument should be valid and reliable to collect sufficient data. (Kaplanidou, 2021).

3.6.1 Questionnaire for the Household Members

The use of a questionnaire was efficient in that it reduced bias and created uniformity as the questions were the same. Additionally, it produced structured data that was analyzed and interpreted easily. It created confidentiality as the respondents answered based on how they felt while being unnoticed by another respondent. Therefore, this research employed the use of structured closed-ended questionnaires for the household members. The questions were based on the research objectives. The instrument was suitable as it gave the respondent multiple choices based on their feeling. (Kaplanidou, 2021).

3.6.2 Interview Schedule for the PBO Officials

The use of interview schedules provided the researcher with an opportunity to gather in-depth data, as respondents were free to answer based on how they felt without being limited to specific choices. It also helped build a strong rapport with the respondents, as the researcher observed their expressions. Clarity was achieved because respondents asked for more understanding of the questions posed by the researcher. Confidentiality was maintained because respondents answered honestly, without feeling pressured. The researcher conducted face-to-face interviews with officials from the three PBOs:

Caritas Kitui, Compassion, and Mumoni Nursing Home, Compassion and Mumoni Nursing Home.

Data Collection Method	Data Collection Instrument	Respondent
1. Use of a questionnaire	Structured Questionnaire	Household
2. Key informant Interview	Interview schedule	PBO staff

3.7 Piloting

Piloting is a preliminary study that is carried out before the main data collection to ensure that the data collection instruments are reliable and valid. It ensured that the researcher identified the weaknesses in the data collection instruments and adjusted them. Piloting eased the main data collection process since the weaknesses were identified. Additionally, it assisted the researcher in identifying whether the data collection instruments were valid and reliable (Moore, Barbour, Ngo, Sinclair, Chambers, Auret, Hassed, Playford, 2020). The pilot testing was conducted in Kitui South Sub-County, which had a close poverty index level of 74.2%. Therefore, the researcher used the piloting site to determine whether the questionnaires were reliable and valid (Kitui County Integrated Development Plan 2023-2027, 2023). Piloting ensured that the data collection process ran smoothly and improved accuracy. The pilot sample was 10% of the sample size, which was 39 persons, to be used in the research. Additionally, it identified and increased the probability of acquiring meaningful and reliable information, where the reliability results were above 0.7 for acceptability before the full-scale data collection.

3.8 Reliability

A research instrument could be termed reliable if, once measured repeatedly, it gave out the same results as the original. Reliability enhanced the sincerity of the outcome and ensured that measurement errors did not influence the interpretation. Reliability ensured that the research instrument tools were accurate. Reliability was measured for all the thematic areas: education, health and food insecurity. A Cronbach's alpha coefficient score was 0.967. Cronbach's Alpha coefficient tested the reliability of the questionnaire, where the results were 0.7 and above for it to be acceptable, while below 0.7 was determined to be unreliable (Schrepp, 2020).

3.9 Validity

Validity assessed whether the research instrument captured what was intended to do with accuracy and offered meaningful conclusions. It identified the challenges such as wrong participant interpretation if not well structured, therefore, adjusting in the right manner for understanding. Piloting was done on the validity of the research instruments and assessed whether they were meaningful and captured what was omitted, this was done before the main scale data collection. It was enhanced through consultation with the experts. The research employed face validity which assessed the appearance of the use of questionnaires and interview guides in the research, with the help of the supervisors who were experts in the field, to ensure they were well structured. Face validity helped the respondent to trust in the importance of the research instrument (Quintão et al., 2020).

The study employed content validity which portrayed the whole domain that the research tended to cover all aspects of the content. The researcher ensured that the research instruments covered what was to be captured with the help of supervisors who were experts in the research. Additionally, the research used construct validity to capture whether the research instrument measured the speculative concept on the indicators and performance of the PBOs towards poverty reduction in the communities. This was enhanced through a review of the literature to understand what the questionnaires needed to capture (Quintão et al., 2020).

3.10 Data Collection Procedure

The data collection procedure was essential to follow the steps in collecting data. After being cleared from the faculty defense, the researcher got a go-ahead from Tharaka University Ethics committee to apply for the National Commission for Science, Technology and Innovation (NACOSTI) permit. The researcher proceeded to the field for one week with the help of a research assistant to collect data from the respective respondents; the poor households and the PBOs' staff. The main methods of data collection were the use of questionnaires and interviews. The researcher counterchecked the questions to be asked with the help of the supervisors to administer and gave them a period to collect the feedback.

3.10.1 Procedure for Administering Questionnaires to Poor Households

The researcher used the NACOSTI permit as proof for the respondents to be at ease while giving information. The researcher sampled the poor households and briefly explained the main purpose of the research. Afterward, the researcher produced a consent form that the respondents signed, agreeing that they would give out information for academic purposes while confidentiality was maintained. The researcher briefed the respondents on the closed-ended questions as well as offered clarity for understanding any unclear questions. The respondents ticked as per their feelings on a Likert Scale measuring 1-5 which had been indicated respectively on the questionnaire. The respondents were given three weeks to answer and later the researcher was to come back for feedback.

3.10.2 Procedure for the PBOs' Interview Schedule

The researcher briefed the selected PBO staff on the nature of the interview schedule. The respondents signed a consent form to affirm that they were willing to answer the open-ended questions without being coerced. The interview schedule did not have choices; this was to give the respondent free will to answer the questions asked by the researcher. The researcher had a face-to-face communication with the selected PBO staff. Therefore, the data was collected.

3.11 Data Analysis

The researcher collected both quantitative and qualitative data. Quantitative data were analysed using the Statistical Package for Social Sciences (SPSS) version 29.0, where double data entry was done to ensure reliability of the results, while qualitative data were analyzed using thematic analysis. Therefore, regression analysis analyzes the quantitative data. The relationship between the influence of the PBOs on sustainable household poverty reduction was analyzed using simple linear regression for each independent variable with the dependent variable- PBOs' interventions towards education, healthcare and food insecurity. The formulae below show how each was analyzed:

$$\mathbf{Y_1} = \boldsymbol{\alpha} + \boldsymbol{\beta_1}\mathbf{E} + \boldsymbol{\varepsilon} \qquad \ldots(1)$$

Where: Y_1= Household Poverty Reduction (Education)

α= constant

β_1= beta coefficient of education interventions

E= PBO interventions in Education

ε= error (significant at 0.01 level)

$$\mathbf{Y_2 = \alpha + \beta_2 H + \varepsilon} \quad \ldots(2)$$

Where Y_2= Household Poverty Reduction (Health)

α= constant

β_2= beta coefficient of health interventions

H= PBOs' interventions in Health

ε = error (significant at 0.01 level)

$$\mathbf{Y_3 = \alpha + \beta_3 F + \varepsilon} \quad \ldots(3)$$

Where Y_3= Household Poverty Reduction (Food insecurity)

α= constant

β_3= beta coefficient of food insecurity interventions

F= PBOs' interventions in Food insecurity

ε = error (significant at 0.01 level)

3.12 Diagnostic Test

A diagnostic test was used to investigate whether the calculated model and the assumption made about the data and the model were compatible with the recorded data, in this case, the primary data. This diagnostic test included a graphical representation to check whether the assumptions made were not affected by the detected outliers that distorted the results.

3.12.1 Test for Multicollinearity

Shrestha (2020) stated that Multicollinearity occurred when the regression model consisted of several variables that were significantly compatible not only with the dependent variable but also with each other. Therefore, in this study, the technique used under this diagnostic test was the Variance Inflation Factor (VIF) since it was more

effective in estimating whether the independent variables were compatible. If the VIF=1, it indicated that the independent variable was not compatible, if VIF was between 1 and 5, it was moderately compatible and if it was between 5 and 10, it was highly compatible.

3.12.2 Test for Heteroscedasticity

Heteroscedasticity was used in how the dependent variable was measured. For example, the PBOs' initiatives were likely to work best in those areas that embraced their work, compared to those areas that were not covered or did not embrace the initiatives. The Breusch-Godfrey test was used to show the relationship between the variables (Astivia & Zumbo, 2019).

3.12.3 Test for Normality

Testing statistics for data that had already been obtained for a normally distributed population was of concern. According to the Central Limit Theorem, for the test of normality, the population sample was to be above 30. It was best to check out the best technique under the normality test. Therefore, this research used a normality test for regression since the population sample was above the stated sample size and revealed a significant relationship (Hernandez, 2021).

3.13 Data Analysis Matrix

Table 4: Data Analysis Matrix

Research Questions	Independent variable	Dependent variable	Test statistics
What are the PBO's education interventions on sustainable household Poverty reduction in Mwingi North Sub-County, Kitui County, Kenya?	Public Benefit Organization Initiatives	Sustainable households' poverty reduction (Education)	Use thematic analysis, Pearson Correlation coefficient (Simple Linear regression)
What are the PBO? health interventions on sustainable household poverty reduction in Mwingi North Sub-County, Kitui County, Kenya?	Public Benefit Organizations Initiatives	Sustainable household poverty reduction (Health care)	Use thematic analysis, Pearson Correlation coefficient (Simple Linear regression)
What are the PBO? Food insecurity interventions on sustainable household Poverty reduction in Mwingi North Sub-County, Kitui County, Kenya?	Public Benefit Organization's Initiatives	Sustainable household poverty reduction (food insecurity)	Use thematic analysis, Pearson Correlation coefficient (Simple Linear regression)

3.14 Ethical Consideration

The researcher obtained approval from the Tharaka University Ethics Committee before applying for the National Commission for Science, Technology and Innovation (NACOSTI) permit. The researcher applied for an NACOSTI permit, which facilitated data collection. The researcher avoided bias in collecting data by ensuring that the questionnaires were distributed to the specified respondents. Participation was voluntary, with respondents not being coerced, as they signed a written informed consent form indicating whether they agreed to participate or failed to sign and withdraw from the data collection process in the research. The illiterate respondents were also informed about the informed consent. This allowed respondents to provide information freely and reliably. The researcher ensured that no harm came to respondents who chose not to provide information. The information collected was treated with confidentiality and used solely for academic purposes.

CHAPTER FOUR
RESEARCH FINDINGS AND DISCUSSIONS

4.0 Introduction

This chapter presents the research findings based on the study's objectives: education, healthcare and food insecurity interventions by the PBO and their influence on sustainable household poverty reduction. Further, it presents data analysis, presentation and discussion.

4.1 Response Rate

Three hundred and sixty-nine (369) questionnaires (s) were initially distributed, as shown in Table 5 below. Of those, 279 (75.6%) were filled out and returned, while 90 (24.4%) were unanswered. For the interviews with officials working with PBOs, a total of 24 interviews were conducted. Studies argue that a questionnaire should be judged suitable and adequate for analysis if the response rate is at least 70% or more. If it is at least 50% is deemed fair for data analysis. The response of 75.6% confirms that the study had met the threshold for analysis.

Table 5: Response Rate

Respondent rate	Questionnaires		Key Interview Schedule	
	Frequency	(%)	Frequency	(%)
Completed	279	75.6	24	80.0
Not completed	90	24.4	6	20.0
Total	369	100.0	30	100.0

Source: Field Data (2025)

4.2. Respondents' Age Group

Table 6: Respondents' Age Group

Age-group	Frequency	(%)
15-19 years	1	0.4
20-24 years	13	4.7
25-29 years	69	24.7
30-34 years	94	33.7
35 and above years	102	36.6
Total	279	100.0

Source: Field Data (2025)

As shown in Table 6 above, the respondents' age-groups ranged between 15-19 which represented 1 (0.4 %), while 20-24 accounted for 13 (4.7%). Then, the age group was equivalent to 69 (24.7%). The age group between 30-34 had 102 (33.7%). Those aged 35 and above were represented by 102 (36.6%) indicating that they were the majority.

4.3 Respondents' Gender

Table 7: Respondents' Gender

Respondents' Gender	Frequency	(%)
Male	150	53.8
Female	129	46.2
Total	279	100.0

Source: Field Data (2025)

As shown in Table 7 above reveals, the study attracted more males at 150 (53.8%) while the females were 129 (46.2%). A study by Calvi (2020) stated that most males in the households were poor because the women's bargaining power tends to increase as age progresses, compared to that of men. While another study by Madekwe, Madekwe and Obeagu (2022), argued that more females were in poverty at the household level compared to males because of chronic diseases and the fragile nature of their income, which is never steady. However, in our view, the situation has not changed much, since

males tend to die earlier than women in the recent past in the study area, which makes widowed women even vulnerable and poor.

4.4 Reliability Analysis

A research instrument is deemed reliable when it consistently delivers similar results across repeated applications. Reliability enhances the credibility of research findings and ensures that interpretations remain unaffected by measurement errors. It confirms that the research tools can be relied upon to provide accurate and consistent data. In this study, the reliability of the questionnaire was evaluated using Cronbach's alpha coefficient. A coefficient value of .70 or higher was deemed acceptable, indicating adequate internal consistency, whereas values below .70 were considered indicative of poor reliability (Schrepp, 2020).

Table 8: Reliability Analysis

Variable	Cronbach's Alpha
PBO's interventions on sustainable household poverty reduction	0.967

4.5 PBOs Education Initiatives

Table 9: PBOs Education Initiatives

Descriptive Statistic (Variable)	SD	D	N	A	SA	St. Dev	Mean
Provision of school fees and uniform	4.3	7.2	16.1	49.1	23.3	1.0156	3.799
Provision of support for learning materials	5.7	11.5	13.3	43	26.5	1.1424	3.731
Construct learning classrooms	28.7	24.7	15.8	14.3	16.5	1.4435	2.452
Provide resources and specialized training	17.2	21.9	14.7	27.6	18.6	1.3885	3.686
Promote digital literacy	14.3	26.2	22.9	31.2	5.4	1.1991	2.413
Provide school meal programs	26.5	25.1	22.2	22.9	3.2	0.8560	1.5125
Train local teachers	65.2	24.7	4.7	4.3	1.1	1.0679	2.4133
Engage parents and communities to raise awareness about education	14.7	29	28.7	25.4	2.2	1.1619	2.871

Source: Field Data (2025)

The PBO provided school fees and uniforms to the children in poor households with a cumulative combined response of 72.4%, with a mean of 3.7993, which leaned towards “agree” when rounded off, indicating overall strong satisfaction and a standard deviation of 1.01563. Therefore, a conclusion was drawn that the majority of the respondents agreed. The results concurred with the findings from Anyango (2024) and Dashti et al. (2021) that the PBOs provided school fees and uniforms for the girls in Alego Usonga Sub-County, Siaya County and Pakistan respectively, which led to an increase in school enrollment as the girls could report to school without any inconveniences.

The data indicated that regarding the provision of supportive learning materials, the respondents’ views were as follows: 5.7% strongly disagreed, 11.5% disagreed,

resulting in a combined total of 17.2%. Meanwhile, 13.3% were neutral, 43.0% agreed, and 26.5% indicated strong agreement, leading to a high level of agreement and a combined total of 69.5% positive feedback. With a mean score of 3.7312, which skews toward "agree," and a standard deviation of 1.14244, this concluded that the PBO provided supportive learning materials, with most respondents agreeing, resulting in a cumulative response of 69.5%. The findings supported the research that the PBOs provided learning materials focused on building the capacity of adult literacy facilitators in Enugu State, Nigeria. Additionally, this research concurred with the findings from Action Aid on the PBOs providing learning materials in Tamale Metropolis, Ghana (Reza, 2022) and (Sunday & Florence, 2024).

To determine whether the PBO constructed learning classrooms, respondents expressed their opinions in the following manner: strongly disagree - 28.7%, disagree - 24.7%, resulting in a combined total of 53.4% disagreement; neutral - 15.8%; agree - 14.3%; and strongly agree - 16.5%, which together accounted for a cumulative total of 30.1%. The mean score of 2.4523, indicating a tendency towards “disagree,” along with the standard deviation of 1.44351, suggested that most respondents did not believe the PBO constructed learning classrooms for students in the region. In conclusion, the majority of respondents disagreed in a combined total of 53.4%.

The findings from the respondents on whether the PBO provided resources and specialized training were: strongly disagree - 17.2%, disagree - 21.9%, with a combined cumulative 39.1%, neutral- 14.7%, agree - 27.6% and strongly agree - 18.6% with a combined result of 46.2% showing a strong agreement. The mean of 3.6860, which leans towards “agree,” and a standard deviation of 1.38846 proved strong reliability that the PBO provided resources and specialized training to the school children in the area. A conclusion was drawn with a high percentage of the respondents (46.2%) agreeing that the PBO provided resources and specialized training to the school children in the area.

These results concurred with the findings from Abiddin et al. (2022) and Reza (2022), the PBOs in Malaysia, which provided resources and specialized training to the communities. The resources were used to identify projects that would benefit both future and existing generations. Further the research agreed with the findings from Rana et al. (2020) on the PBOs providing digital resources in rural schools in Nepal. From

the findings on whether the PBO promoted digital literacy, the respondents' feedback was: strongly disagree - 26.5%, disagree - 25.1%, with a combined satisfaction result of 51.6%; neutral - 22.2%; agree - 22.9%; and strongly agree - 3.2%, resulting in a combined total of 26.1%. The mean was 2.4125, which leaned towards "disagree," with a standard deviation of 1.19908, concluding that the PBO did not provide digital literacy. Most respondents expressed that the PBO did not promote digital literacy, leading to a combined total of 51.6%. In contrast, the PBOs in Malaysia and Ghana were investigated, showing that they promoted digital literacy in rural households by providing digital infrastructure to underprivileged families (Reza, 2022).

The responses on whether the PBO provided school meal programs to the children were: strongly disagree - 65.2%, disagree - 24.7%, with a high combined cumulative of 89.9%, neutral - 4.7%, agree - 4.3% and strongly agree - 1.1%, with a combined result of 5.4%. The mean was 1.5125, which leaned towards "disagree," and a standard deviation of 0.85601. A conclusion was drawn from the findings that the PBO did not provide meals for the school-going children with a combined cumulative of 89.9%. On the contrary, the findings from Mawela and van den Berg (2020), Wang, Shinde, Young and Fawzi (2021) and Cupertino, Ginani, Cupertino and Botelho (2022) showed that the PBOs in South Africa, Europe and Central Asia, respectively, provided school meal programs to the children where there was a meal program system that enrolled every student in taking meals.

On the training of the local teachers, the respondents gave their views; strongly disagree - 14.7%, disagree - 29.0%, with a combined result of 43.7%, neutral - 28.7%, agree - 25.4% and strongly agree - 2.2%, combining 27.6%. The mean was 2.4133, which leaned towards "disagree" with a standard deviation of 1.06795. This implied that the PBOs did not train local teachers as the majority of the respondents disagreed with a combined result of 43.7%. On the contrary, the findings from Kuyenda (2021), Saud and Ashfaq (2022), Lu, Wei, Cao and Li (2021) and Lee, Meadan, Oyunbaatar and Amar (2024) research revealed that most of the respondents agreed that PBOs in Pakistan, Tanzania and Mongolia, respectively, trained the local teachers, which empowered the communities and hence did not look for teachers from far away to teach.

The initiatives organised for workshops that helped the local teachers have better relationships while teaching, leverage information and have a conducive learning

environment. Additionally, Gali and Schechter (2020) and Samina Rauf and Shahid (2019) supported that the PBOs trained local teachers as they participated in workshops. This increased school enrolment, as the teachers were readily available supported that the PBOs trained local teachers in Shah Faisal Town, Pakistan, which made it easier for the children to be taught since the teachers were available and equipped to disseminate knowledge and skills.

To find out whether the PBO engaged parents and communities to raise awareness of education, the responses were: strongly disagree - 14.3%, disagree- 26.2% with a combined result of 40.5%, neutral - 22.9%, agree - 31.2% and strongly agree - 5.4% with a combined cumulative of 40.5%. The mean was 2.8710, which leaned towards "disagree" with a standard deviation of 1.16198. The conclusion drawn was that most of the respondents disagreed that the PBO engaged the parents and communities to raise awareness on education, with a cumulative of 40.5%.

A similar study by Saud and Ashfaq (2022) concluded from responses that, the PBOs in Pakistan did not engage parents and communities to raise awareness of education. On the contrary, Hind Vishwakarma and Sthapak (2017) and Gali and Schechter (2020) supported that the PBOs engaged the communities in creating awareness on education. The strategies used to create awareness were workshops and barazas. The findings support the research by Lawal (2023) and Samina Rauf and Shahid (2019) The PBOs engaged community members to raise awareness and accelerate school enrolment in Shah Faisal Town, Pakistan.

In line with the views of various scholars, this study concluded that the PBO played a vital role in promoting education within Mwingi North Sub-County, Kitui County. However, supporting sub-sectors, especially community engagement, required more emphasis to achieve comprehensive and sustainable improvements in the region's education results. The application of the capability approach was particularly important in evaluating how well household members had meaningful opportunities to access and benefit from quality education. This framework not only focused on the availability of educational resources but also examined whether individuals had the freedom and enabling conditions to turn these resources into actual educational achievements. By emphasizing capabilities rather than just inputs or outcomes, the approach revealed underlying inequalities, such as socio-economic barriers, gender disparities, and

community-level challenges, which influence households' ability to fully utilize educational opportunities.

4.6 The PBO's Health Care Initiatives

Table 10: The PBO's Health Care Initiatives

Descriptive Statistic (Variable)	SD	D	N	A	SA	St. Dev	Mean
Establish health facilities	19.0	37.3	9.0	21.9	12.9	1.34077	2.7240
Provide medical equipment, Supplies	57.7	26.5	5.7	5.7	4.3	1.08580	1.7240
Provide health data collection	11.8	22.9	28.7	33.0	3.6	1.08429	2.9355
Provide training on healthcare	18.3	26.5	20.8	32.6	1.8	1.15185	2.7312
Provide health insurance	60.9	19.0	6.5	10.8	2.9	1.14337	1.7563
Provide clean water and adequate	13.6	28.7	27.6	25.4	4.7	1.11000	2.7885
Engage communities to raise awareness of healthcare	12.5	34.8	16.1	29.7	6.8	1.18202	2.8351

Source: Field Data (2025)

To find out whether the PBO established health facilities, the findings from the respondents' view were: strongly disagree - 19.0%, disagree – 37.3% with a combined cumulative of 56.3%, neutral – 9.0%, agree – 21.9% and strongly agree – 12.9% with a combined cumulative of 34.8%. The mean was 2.7240, which leaned towards "disagree" with a standard deviation of 1.34077. Therefore, most respondents disagreed with a combined cumulative 56.3% that the PBO established facilities. On the contrary, the research findings from Sanadgol, Doshmangir, Majdzadeh and Gordeev (2021) and Bhuiyan and Haque (2024) indicated that the PBOs established facilities, thus making it easier for the communities to assess the facilities. This research supported the findings from Besançon, Sidibé, Sow, Sy, Ambard, Yudkin and Beran (2022) who found that the PBOs in Santé Diabète, Mali, established clinics for the diabetic residents who could

not access services. Later, this improved the population suffering from non-communicable diseases. Based on these arguments, the study concludes that the PBO should be at the frontline to establish health facilities to avoid mortality rates.

On the findings of whether the PBO provided medical equipment, supplies and medications, the respondents' view was: strongly disagree- 57.7%, disagree – 26.5% with a combined cumulative of 84.2%, neutral – 5.7%, agree – 5.7% and strongly agree – 4.3% with a combined cumulative of 10.0%. The mean was 1.7240, which leaned towards "strongly disagree" with a standard deviation of 1.08580. Therefore, a conclusion was made with the majority (84.2%) disagreeing that the PBO provided medical equipment, supplies, and medications. On the contrary, Sanadgol et al. (2021) and Besançon et al. (2022) from the respondents' views, the PBOs provided medical equipment, supplies, and medications. Additionally, Khodayari-Zarnaq, Kakemam, Arab-Zozani, Rasouli and Sokhanvar (2020) supported the above statement, where the Iranian PBOs contributed to the health sector in providing medical equipment and supplies to the established facilities.

The results from whether the PBO provided health data collection systems were: strongly disagree - 11.8%, disagree - 22.9%, with a combined cumulative of 34.7%, neutral - 28.7%, agree - 33.0% and strongly agree - 3.6%, with a combined cumulative of 36.6%. The mean was 2.9355, which leaned under "neutral" with a standard deviation of 1.08429. Therefore, a conclusion was made with the majority (36.6%) who agreed that the PBO provided health data collection systems. The research agreed that the PBO provided health data collection. These findings supportted the research by Besançon et al., (2022) and Khodayari-Zarnaq et al. (2020) who agreed that the PBOs in Santé Diabète, Mali and Iran, respectively. This helped in accessing the records of how the health sector was governed. The findings contradicted those from Sanja, Stanko, Ana Miloš (2016) who stated that the PBOs did not provide health data collection records since the population was large and suffered from severe health problems. On whether the PBO provided training on healthcare the responses were: strongly disagreed -18.3%, disagree - 26.5%, with a combined cumulative of 44.8%, neutral - 20.8%, agree - 32.6% and strongly agree - 1.8%, with a combined cumulative of 34.4%. The mean was 2.7312, which leaned under "disagree" with a standard deviation of 1.15185. The majority of the respondents disagreed with a cumulative of

44.8% that the PBO provided training on healthcare. The PBO did not provide training on healthcare based on the findings. The results supported the findings from Bdaiwi, Rayes, Sabouni, Murad, Fouad, Zakaria, Hariri, Ekzayez, Tarakji and Abbara (2020) who found that the PBOs did not train in healthcare, since there was a challenge in accessing the resources for training. On the contrary, Sanja et al. (2016) and Sanadgol and Doshmangir (2022) stated that the PBOs trained in healthcare by conducting physical and practical workshops, for example, training on how to clean their hands and clean their latrines.

The study found out whether the PBO provided health insurance; the responses were: strongly disagreed - 60.9%, disagreed - 19.0%, with a combined cumulative of 79.9%, neutral - 6.5%, agreed - 10.8%, strongly agreed - 2.9%, with a combined cumulative of 13.7%. The mean was 1.7563, which leaned towards “strongly disagree” with a standard deviation of 1.14337. A conclusion was made where the majority of the respondents disagreed with a cumulative result of 79.9% that the PBO provided health insurance. The results confirmed the findings by Sanadgol and Doshmangir (2022), who stated that the PBOs in Iran did not provide health insurance to households. On the contrary, Wu, Amporfro, Boah, Yingqi, Cheteu Wabo, Zhao, Ngo Nkondjock, Raissa (2021) supported that the PBOs in Ghana did not provide health insurance cover to the members since the population was large. However, their main focus was on patient-centered though the PBOs did not meet the need for providing health insurance.

On the findings of whether the PBO provided clean water and adequate sanitation facilities, the responses were: strongly disagree - 13.6%, disagree - 28.7%, with a cumulative response of 42.3%, neutral - 27.6%, agree - 25.4% and strongly agree - 4.7% with a tallying of 30.1%. The mean was 2.7885, which leaned towards “disagree” and the standard deviation was 1.11000. A conclusion was made that the majority, a cumulative of 42.3%, disagreed that the PBO provided clean water and adequate sanitation facilities. The results supported findings from Sanadgol and Doshmangir (2022) and Grönwall and Danert (2020), who stated that the PBOs in Iran did not provide clean and adequate water because the population was large and could not benefit from all of them. This led to most of the household members suffering from health problems like cholera, typhoid and bilharzia.

Findings whether the PBO engaged communities to raise awareness of healthcare, the responses were: strongly disagree - 12.5%, disagree - 34.8%, which accumulated to 47.3%, neutral - 16.1%, agree - 29.7% and strongly agree -6.8%, accounting for 45.8%. The mean was 2.8351, which leaned towards “disagree,” while the standard deviation was 1.18202. The majority of the respondents, with a cumulative of 47.3%, disagreed that the PBO engaged communities to raise awareness of healthcare. The findings supported the findings from Mohebi, Parham, Sharifirad, Gholamreza Gharlipour et al. (2018) who found that the PBOs encountered challenges in creating awareness; therefore, they could not engage the communities to raise awareness of healthcare. On the contrary, Sanadgol and Doshmangir (2022) stated that the PBOs played a significant role in creating awareness of healthcare.

Creating awareness was one of their strategies to reduce the health diseases that affected the communities. While social capital theory highlighted the importance of networks, trust, and reciprocity in improving access to services, it negatively affected PBO healthcare interventions. Sometimes, strong community ties may promote exclusionary practices where only well-connected households benefit from health programs, leaving marginalized groups behind. Overreliance on bonding social capital within close-knit groups may also slow the spread of accurate health information, reinforce harmful cultural practices, or create resistance to new interventions.

Additionally, excessive dependence on trust-based networks may decrease accountability, as beneficiaries might avoid questioning the quality or effectiveness of healthcare services provided by PBOs. Therefore, although social capital can support PBO healthcare efforts, if not managed carefully, it may also reinforce inequalities and hinder fair healthcare delivery.

4.7 The PBOs Food Insecurity Initiatives

Table 11: The PBOs Food Insecurity Initiatives

Descriptive Statistic (Variable)	SD	D	N	A	SA	St. Dev	Mean
Offer agricultural extension services	11.1	10.8	15.4	43.7	19.0	1.23164	3.4875
Provide certified seeds	5.0	20.8	10.8	45.9	17.6	1.15015	3.5018
Provide livestock production	8.6	16.8	16.5	45.2	12.9	1.16139	3.3692
Provide agricultural equipment	40.5	44.1	4.3	7.9	1.4	5.28788	2.5376
Provide technical skills and knowledge through training	16.8	12.5	22.9	43.0	4.7	1.19044	3.0609
Distribute a variety of foods	47.0	32.6	8.2	11.1	1.1	1.03898	1.8674
Involve the community in nutrition education programs	16.1	14.0	31.9	31.2	6.8	1.17213	2.9857

Source: Field Data (2025)

From the findings, whether the PBO offered agricultural extension services, the responses were: strongly disagree - 11.1%, disagree - 10.8%, with a combined cumulative of 21.9%, neutral – 15.4%, agree – 43.7% and strongly agree – 19.0%, with a combined cumulative of 62.7%. The mean was 3.4875, which leaned towards "neutral" with a standard deviation of 1.23164. Therefore, most respondents agreed with a combined cumulative (62.7%) that the PBO offered agricultural extension services. The results supported the findings from Danso-Abbeam (2022), Antwi-Agyei and Stringer (2021) and Saha, Prusty and Nanda (2025) noted that most of the respondents' views agreed that the PBO offered agricultural extension services, evidenced by Northern Ghana, Ghana and India, respectively, which increased food productivity. They did so because the population was higher than the supply of food. The strategy was known as the extension and advisory services.

Finding whether the PBO provided certified seed, the responses were: strongly disagreed - 5.0%, disagreed – 20.8%, with a combined cumulative of 25.8%; neutral – 10.8%; agreed – 45.9%; and strongly agreed – 17.6%, with a combined cumulative of 63.5%. The mean was 3.5018, which leaned between “neutral” and “strongly agree” with a standard deviation of 1.15015. Therefore, a conclusion was made with the majority (63.5%) agreeing that the PBO provided certified seeds. The results supported the findings from Longley, Ferris, O'Connor, Maina, Rubyogo and Templer (2021) and Antwi-Agyei and Stringer (2021) who stated that most of the respondents in Uganda agreed that PBO provided certified seeds. From the results, the PBOs provided certified seeds. The findings of Win, Maredia and Boughton (2023) and Dey, Visser, Tin, Mahamadou Laouali, Baba Toure Mahamadou, Nkhoma, Alonzo Recinos, Opiyo and Bragdon (2022) stated that the PBOs provided chickpea and green gram certified seed to the communities, which grew fast and increased in production, benefiting from consumption and commercial sales.

Under the PBO provided livestock production, the responses were: strongly disagree - 8.6%, disagree - 16.8%, with a combined cumulative of 25.4%, neutral—16.5%, agree—45.2%, and strongly agree—12.9%, with a combined cumulative of 58.1%. The mean was 3.3692, which leaned towards “neutral,” while the standard deviation was 1.16139. Therefore, a conclusion was made, with the majority (58.1%) agreeing that the PBO provided livestock production. The results supported the findings by Mengistu, Nurfeta, Tolera, Bezabih, Adie, Wolde-Meskel and Zenebe (2021) and Waiswa, Günlü and Mat (2021) who found that the PBO provided livestock production in the Damot Gale District of Wolaita Zone, Ethiopia, with a cumulative of 90.8% and Uganda, respectively. Gebreyohanes, Yilma, Moyo and Mwai (2021) supported that the PBOs provided livestock production in Ethiopia. These led to growth in the dairy industry where the community members worked.

The research sought to determine whether the PBO provided agricultural equipment; the responses were: strongly disagree - 40.5%, disagree -44.1%, with a combined cumulative of 84.6%, neutral - 4.3%, agree - 7.9% and strongly agree - 1.4%, with a combined cumulative of 9.3%. The mean was 2.5376, leaning towards “disagree” with a standard deviation of 5.28788. The majority of the respondents disagreed with a cumulative of 84.6% that the PBO provided agricultural equipment. On the contrary,

Antwi-Agyei and Stringer (2021) stated that the PBOs provided the agricultural equipment to the communities that could be used for cultivation and livestock. This enabled the communities to access with no cost.

The study found out whether the PBO provided technical skills and knowledge through training; the responses were: strongly disagree - 16.8%, disagree - 12.5% with a combined cumulative of 29.3%, neutral - 22.9%, agree - 43.0% and strongly agree - 4.7% with a combined cumulative of 47.7%. The mean was 3.0609, which leaned towards “neutral” with a standard deviation of 1.19044. A conclusion was made with the majority of the respondents agreeing with a combined cumulative of 47.7% that the PBO provided technical skills and knowledge through training. The results supported the findings from Gupta (2020) who stated that the PBOs in Uttarakhand, India, provided workshops that helped the women in the community on how to increase their food productivity.

On the findings of whether the PBO distributed a variety of foods, the responses were: strongly disagree - 47.0%, disagree - 32.6%, with a cumulative response of 79.6%, neutral - 8.2%, agree - 11.1% and strongly agree - 1.1%, with a cumulative of 12.2%. The mean was 1.8674, which leaned towards “strongly disagree” and a standard deviation of 1.03898. A conclusion was made with the majority, a cumulative of 79.6% disagreeing that the PBO distributed a variety of foods. These results supported the findings from Elayah, Gaber and Fenttiman (2022) who found that the PBOs distributed a variety of foods in Yemen as well as money for the community members to buy more food that they needed.

Finding whether the PBO involved the community in nutrition education programs, the respondents’ views were: strongly disagree - 16.1%, disagree - 14.0%, which accumulated to 30.1%, neutral - 31.9%, agree - 31.2% and strongly agree -6.8%, accounting for 38%. The mean was 2.9857, which leaned towards “disagree” while the standard deviation was 1.17213. The majority of the respondents, with a cumulative of 38%, agreed that the PBO involved the community in nutrition education programs. Supported by the findings from Dodd et al. (2021) and Quaidoo et al. (2022) proved that the PBOs involved the community in nutrition education programs in Ghana, with 70% agreeing.

Both social capital theory and the capability approach provided important insights into how PBOs addressed food insecurity. From a social capital perspective, PBOs depended on community trust, networks, and collective action to mobilize resources, distribute relief food, and encourage participation in agricultural programs. These social ties strengthened cooperation but also, at times, created risks of favoritism and exclusion of vulnerable groups. The capability approach, on the other hand, highlighted whether households had meaningful opportunities to secure adequate and nutritious food. It emphasized not only the availability of food aid and agricultural inputs but also the removal of barriers—such as poverty, limited land access, or gender inequalities—that constrained households from converting these resources into real food security. Taken together, the two frameworks showed that PBO interventions against food insecurity required both strong community networks and enabling conditions that expanded households' genuine capabilities to achieve sustainable livelihoods.

4.8 Inferential Statistics

This was necessary to draw conclusions about the variables and make predictions about how they affected each other. Therefore, correlation and regression statistics were analyzed.

4.8.1 Correlation Analysis

According to Makowski, Ben-Shachar, Patil and Lüdecke (2020) Correlation analysis is important in establishing the relationship between the independent and dependent variables. The study used a Likert scale, so the Pearson Correlation technique was used to establish the relationship. Coscia (2021) stated that the Pearson Correlation technique is mostly tested for linear regression, where all variables contribute equally to the correlation. The results below indicate the correlation between Education initiatives undertaken by the PBO and Sustainable Household Poverty Reduction. It is seen that there exists a significant correlation between Education initiatives undertaken by the PBO and Sustainable Household Poverty Reduction, $r = .226$, $p = .00 < 0.01$. This implies that as PBO (Education) increases, the Sustainable Household Poverty Reduction increases and vice versa. This is supported by Abiddin et al. (2022) where there was a positive correlation between the PBOs in Malaysia towards Education improvement and Sustainable Poverty Reduction.

Table 12: Correlation Analysis for Public Benefit Organisations and Sustainable Household Poverty Reduction

Correlations					
		Sustainable Household Poverty Reduction	Education	Healthcare	Food
Poverty reduction	Pearson Correlation	1			
	Sig. (2-tailed)				
Education	Pearson Correlation	.226**	1		
	Sig. (2-tailed)	.000			
Healthcare	Pearson Correlation	.219**	.461**	1	
	Sig. (2-tailed)	.000	.000		
Food	Pearson Correlation	.447**	.291**	.255**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	279	279	279	279

** Correlation is significant at the 0.01 level (2-tailed)

As shown in Table 12 indicates the correlation between healthcare initiatives undertaken by the PBO and Sustainable Household Poverty Reduction, $r = .219$, $p = .00 < 0.01$. It is noted that there exists a positive correlation between healthcare initiatives undertaken by the PBO and Sustainable Household Poverty Reduction. This brings an insight; into the health care initiatives increase as the Sustainable Household Poverty Reduction increases and vice versa. Further, the table shows the correlation between Food insecurity initiatives undertaken by the PBO and Sustainable Household Poverty Reduction, $r = .447$, $p = .00 < 0.0$. It is noted that there is a positive correlation between Food insecurity initiatives undertaken by the PBO and Sustainable Household Poverty Reduction. Therefore, a conclusion is made that the Food insecurity initiatives

undertaken by the PBO increase, the Sustainable Household Poverty Reduction increases and vice versa.

4.8.2 Regression Analysis

Regression analysis was used to establish the nature of the relationship among the variables through equations**.** However, before conducting the simple linear relationship between the variables, the diagnostic test was done through Multicollinearity, heteroscedasticity and normality.

4.8.2.1 Multicollinearity

Variable	Tolerance	VIF
Education	.755	1.324
Healthcare	.771	1.297
Food	.897	1.115

a. Dependent Variable: Poverty reduction

Multicollinearity assumes that when two or more independent variables in a regression model are highly correlated, one can be predicted from the others with considerable accuracy. Therefore, the Variance Inflation Factor (VIF) was used to examine this assumption and is presented in the table below.

4.8.2.2 Heteroscedasticity

As stated, heteroscedasticity is used to measure multiple linear regression. It does not require strong assumptions regarding error distribution. All errors are distributed equally, meaning that the errors were constant.

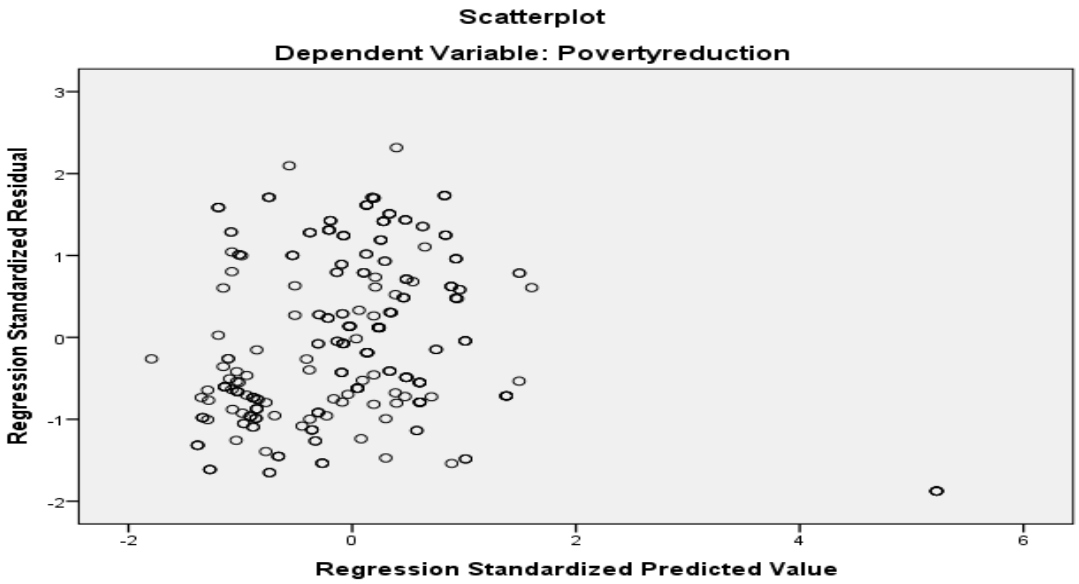


Figure 2: A Scatterplot for the Heteroscedasticity of Poverty Reduction.

4.8.2.3 Normality

The histogram of regression standardized residuals for the dependent variable, poverty reduction, provided a preliminary assessment of the normality assumption in the regression analysis. The distribution generally aligns with the expected normal curve, especially around the central values, indicating approximate symmetry. However, a slight positive skew is evident, with a modest extension in the right tail, suggesting minor deviations from perfect normality. The mean of the residuals (6.71E-16) is effectively zero, and the standard deviation (0.995) closely approximates the expected value of one, supporting the general sufficiency of the normality assumption.

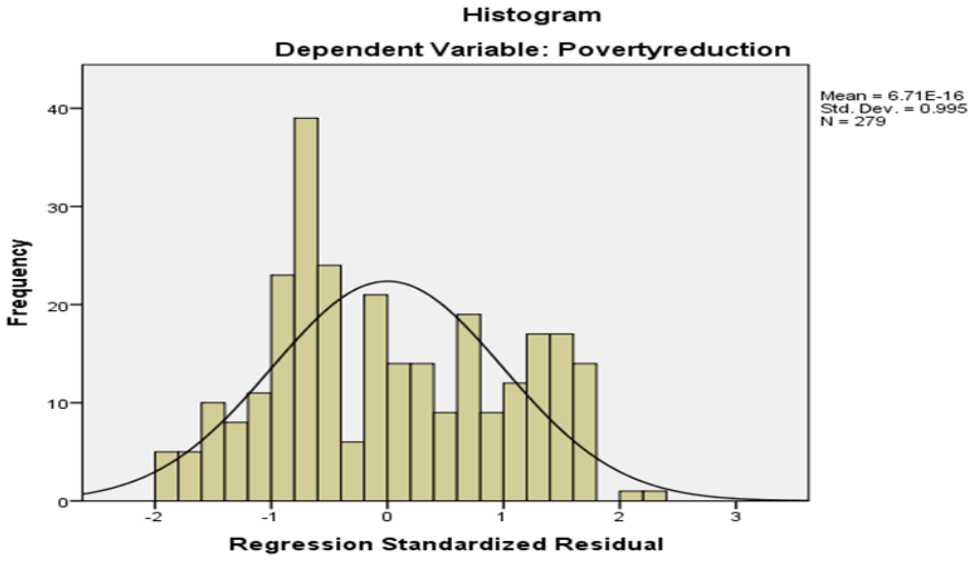


Figure 3: A histogram of residuals indicating the normality of PBOs' Initiatives

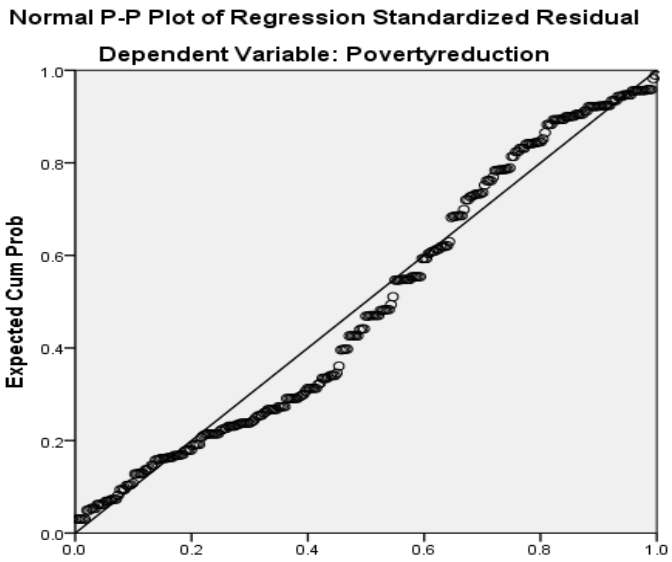


Figure 4: A Q-Q plot indicating the normality of PBOs' Initiatives

4.8.3 Regression Analysis Results

After validating that the assumptions of the regression analysis technique were met, the analysis was carried out in the following tables.

Table 13: Model summary for PBO Education Initiatives and Sustainable Household Poverty Reduction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.226[a]	.051	.048	.60887

a. Predictors: (Constant), Education

b. Dependent Variable: Poverty reduction

Information on Table 13 indicates that R Square = .051, implying that Education Initiatives undertaken by the PBO can only explain approximately 5.1% of the Sustained Poverty Reduction. This means that the Education initiatives are little but significant.

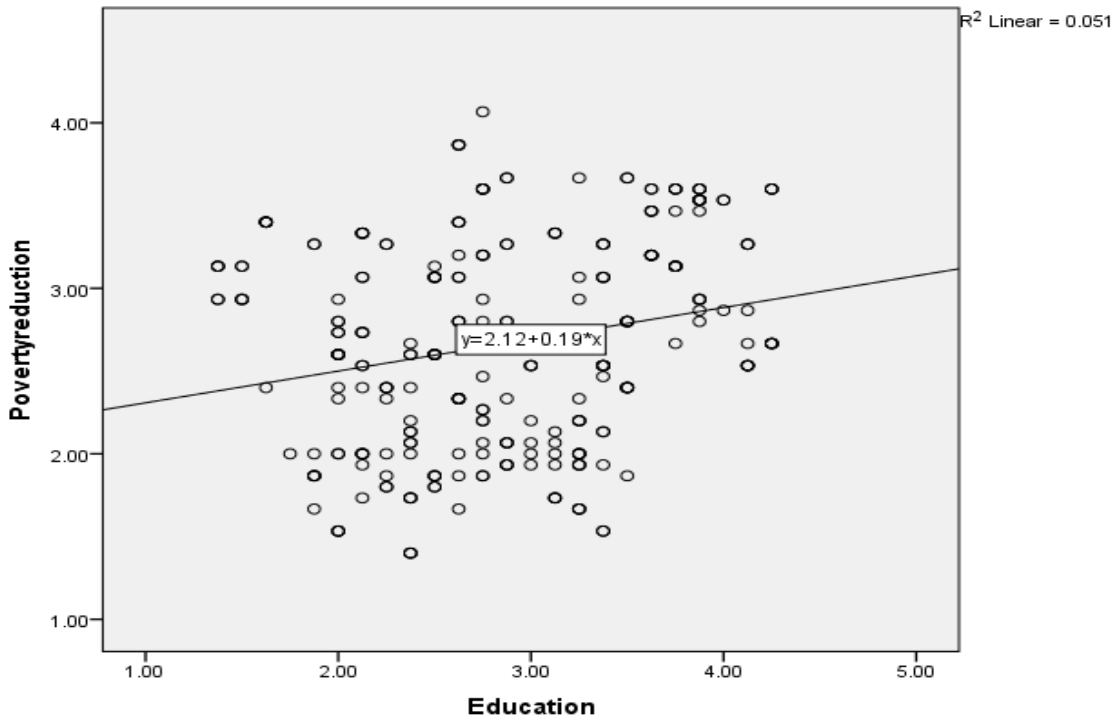


Table 14: Regression ANOVA for PBO Education Initiatives and Sustained Household Poverty Reduction

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.535	1	5.535	14.931	.000[b]
	Residual	102.691	277	.371		
	Total	108.226	278			

a. Dependent Variable: Poverty reduction

b. Predictors: (Constant), Education

The ANOVA results in Table 14 emphasize the relationship between Education Initiatives undertaken by the PBO and Sustainable Poverty Reduction. The results indicate that $F(1, 277) = 14.931$, $p < 0.01$, implying that a relationship exists between the Education Initiatives undertaken by the PBO and Sustainable Household Poverty Reduction.

Table 15: Regression Analysis for PBO Healthcare Initiatives and Sustainable Household Poverty Reduction

Model Summary [b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.219[a]	.048	.045	.60985

a. Predictors: (Constant), Healthcare

b. Dependent Variable: Poverty reduction

The model summary results in Table 15 show that the R-squared is .048, which implies that approximately 4.8% of the variability in sustainable household poverty reduction is explained by the Healthcare initiatives undertaken by the PBO, with a remainder of 95.2%.

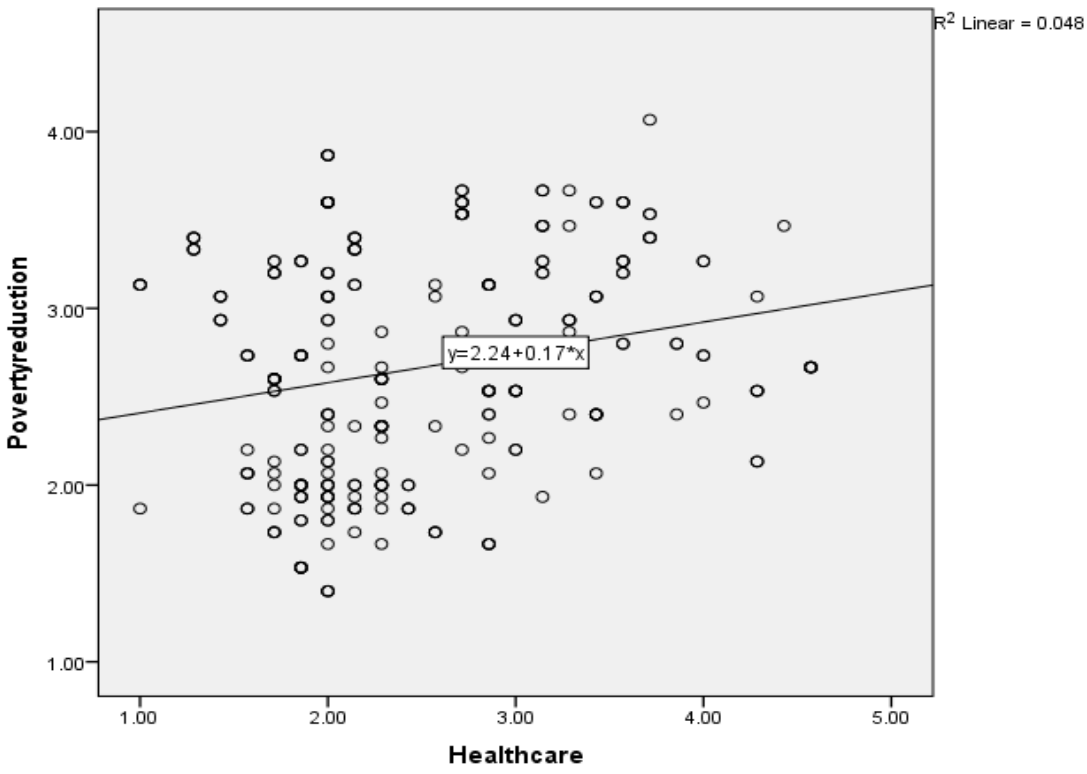


Table 16: Regression ANOVA for PBO Healthcare Initiatives and Sustainable Household Poverty Reduction

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.204	1	5.204	13.992	.000[b]
	Residual	103.022	277	.372		
	Total	108.226	278			

a. Dependent Variable: Poverty reduction

b. Predictors: (Constant), Healthcare

The ANOVA results in Table 16 emphasized the relationship between Healthcare Initiatives undertaken by the PBO and Sustainable Poverty Reduction. The results indicate that $F(1, 277) = 13.992$, $p < 0.01$, implying a relationship exists between the Healthcare Initiatives undertaken by the PBO and Sustainable Household Poverty Reduction.

Table 17: Regression Analysis for PBOs Food Insecurity Initiatives and Sustainable Household Poverty Reduction

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.447[a]	.200	.197	.55922

a. Predictors: (Constant), Food

b. Dependent Variable: Poverty reduction

The model summary results in Table 17 show that R-squared is .200, which implies that approximately 20.0% of the variability in sustainable household poverty reduction is explained by the Food insecurity initiatives undertaken by the PBO with a remainder of 80.0%.

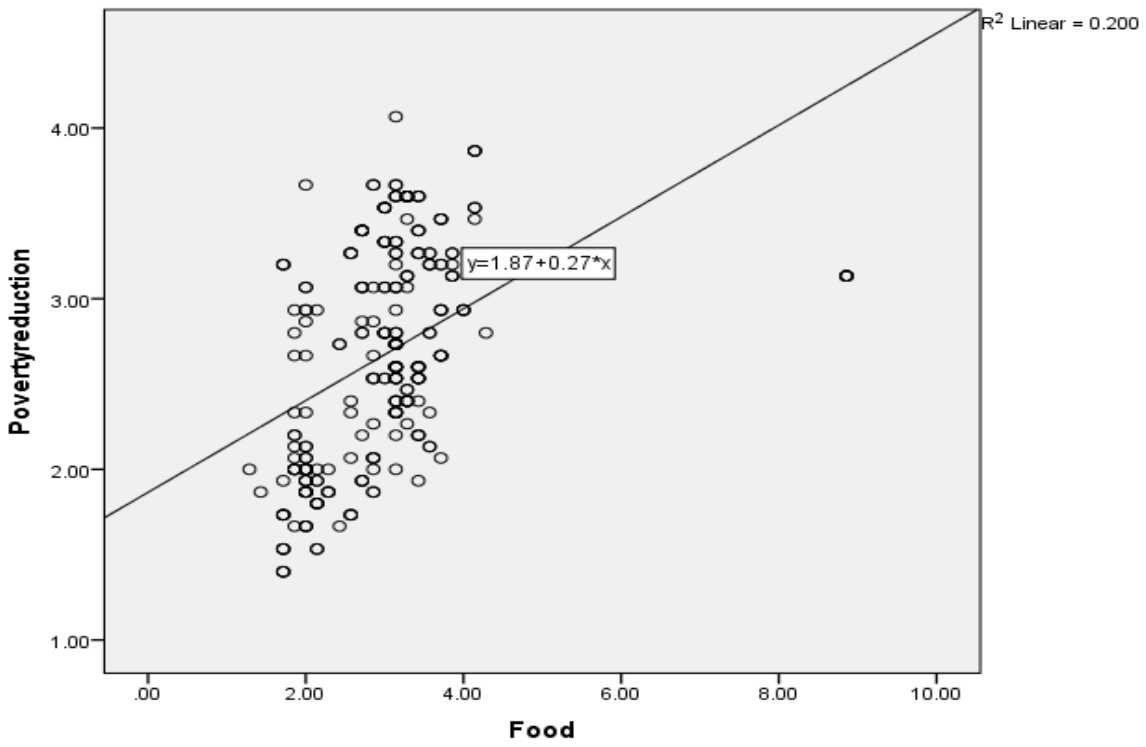


Table 18: Regression ANOVA for PBOs Food Insecurity Initiatives and Sustainable Household Poverty Reduction

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.600	1	21.600	69.068	.000[b]
	Residual	86.626	277	.313		
	Total	108.226	278			

a. Dependent Variable: Poverty reduction

The ANOVA was beneficial in examining whether the model was significant to determine the influence of PBO's intervention on Food insecurity and Sustainable household poverty reduction in Mwingi North Sub-County, Kitui County. The results in Table 18 show that F (1, 277) = 69.068, p = .000 < 0.001, meaning that there is a linear relationship between PBO's intervention in Food insecurity and Sustainable household poverty reduction in Mwingi North Sub-County, Kitui County.

4.9 Regression Coefficients

The tables below show the regression coefficient of the PBOs and Sustainable Household Poverty Reduction.

Table 19: Regression Coefficient for PBO Education Initiatives and Sustainable Household Poverty Reduction

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.116	.147		14.442	.000
	Education	.192	.050	.226	3.864	.000

a. Dependent Variable: Poverty reduction

The coefficients were beneficial in determining the influence of the Education initiatives undertaken by the PBO on Sustainable household poverty reduction in Mwingi North Sub-County, Kitui County. The results below, in Table 19, show that the beta value (unstandardized) is 0.192, implying that a one-unit rise in Education initiatives undertaken by the PBO results in a 0.192-unit increase in Sustainable poverty reduction. The significant value is 0.000 and being less than the significance level of 0.01, a conclusion is made that there is a linear regression relationship between PBO (Education Initiatives) and sustainable household poverty reduction.

The study supports the findings from Rumenya and Kisimbi (2020) who found that there was a positive linear relationship between the PBOs' initiatives and the Education sector, where ($r=0.015$, $p>0.01$). The PBOs used different approaches to satisfy the Educator sector to reduce the number of school dropouts and increase new enrolments. Further, the research supports the study by Kabiru (2020), who found that there was a positive linear regression between PBOs' initiatives and Education. The initiatives accelerated the school enrolment within Mwingi North Sub-County, Kitui County. The regression equation is given by:

$Y = 2.116 + .192\ E$

Where Y is the Sustainable household poverty reduction and X is the PBO (Education Initiatives)

Table 20: Regression Coefficients for PBO (Healthcare Initiatives) and Sustainable Household Poverty Reduction

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.236	.120		18.598	.000
	Healthcare	.171	.046	.219	3.741	.000

a. Dependent Variable: Poverty reduction

The regression coefficient shows the sustainable household poverty reduction following a change in the Healthcare Initiatives undertaken by the PBO. The results in Table 20 show that the beta coefficient undertaken by the PBO is 0.171, meaning its increase leads to an increase in sustainable household poverty reduction by 0.171. Therefore, a positive linear relationship exists between PBO (Healthcare Initiatives) and Sustainable Household Poverty Reduction. Similarly, these findings aligned with Kitole, Tibamanya and Sesabo (2023) who stated that there was a positive linear relationship between the PBOs' Healthcare Initiatives and Sustainable Household Poverty Reduction. This shows that the PBO influences the healthcare sector.

The regression equation was:

Y = 2.236 + .171HC, where Y is the sustainable household poverty reduction, while X is the Healthcare Initiatives undertaken by the PBO

Table 21: Regression Coefficients for PBOs Food Insecurity Initiatives and Sustainable Household Poverty Reduction

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.865	.102		18.307	.000
	Food	.269	.032	.447	8.311	.000

a. Dependent Variable: Poverty reduction

The regression coefficient shows the sustainable household poverty reduction following a change in the Food insecurity initiatives undertaken by the PBO. The results in Table 21 show that the Sustainable Household Poverty Reduction beta coefficient of Food insecurity initiatives undertaken by the PBO is .269, meaning its increase leads to an increase in the sustainable household poverty reduction by 0.269. Therefore, there is a positive linear relationship between Food insecurity initiatives undertaken by the PBO and Sustainable Household Poverty Reduction. These results align with the findings from (Andrianarison, 2022) who stated that there was a strong positive linear relationship between the initiatives undertaken by the PBOs and Sustainable Household Poverty Reduction.

The regression equation was:

$$Y = 1.865 + .269F$$

Where Y is the sustainable household poverty reduction, while X is the Healthcare Initiatives undertaken by the PBO

4.10 Key Informant Interviews

The interviews were conducted in the three PBOs: Compassion, Mumoni Nursing Home, and Caritas Kitui. The respondents were the PBO officials.

4.10.1 Interviews for Compassion (Education Initiatives)

The interview with the official stated that the primary target of the organization was the residents of Mwingi North Sub-County, Kitui County. The response is shown below:

> *"Our main target for our initiatives is the poor households, more so the children in Mwingi North Sub-County,* Kitui County*."* (KII, Compassion)

The PBO employed a systematic approach to assessing and prioritizing the education needs of the communities. Under the assessment and prioritization of needs in different communities, the organization stated that it paid school fees for children in poor households. The respondents highlighted that special attention was given to marginalized communities such as girls and children with disability. They also took care of the children from abusive families. The response below shows:

> *"The organization paid 90% of the school fee for the children, while the remaining 10% was to be covered by the guardians or parents. We first look at the situational factors that can lead to us offering scholarships to children from needy families."* (KII, Compassion).

Further, the organization emphasized engaging local communities in implementing the education initiatives. Engagement occurred through focus group discussions, public barazas, participatory workshops, regular meetings, and creating awareness. This approach fostered strong and active participation within the communities. The collaborative method ensured that the initiatives were tailored specifically to serve the communities' needs. The organization fostered a sense of responsibility and empowered the communities to participate actively in education initiatives. The response is shown below:

> *"We engage the local communities through face-to-face meetings where they are empowered to support the children's education and develop ideas for the Education sector. We give them time to air out what they think we should adjust in the Education sector."* (KII, Compassion).

The organization collaborated with stakeholders and school administrators to ensure their programs aligned with government policies. This collaboration strengthened relationships and created additional networks that benefited the Education sector. Regular meetings were held to discuss educational matters and identify improvements. According to the interview, the PBO involved the local authority in decision-making related to the Education sector. Additionally, it supported the parent-teacher association, which enhanced the sustainability of the education initiatives. This is shown below:

> *"We collaborate with the local authorities to create new ideas on how we could improve the education initiatives. This helped make sustainable initiatives and ensured that the children did not lack access to education."* (KII, Compassion)

The project that the organization achieved was the goat-selling project, which created more funds to pay for school fees for the children. This brought significance to the community as they did not tire of looking for money to pay for education. The participatory approach involved the community members in bringing success to the

projects. The organization trained personnel to grow certified seeds that were sold at the nursery level to bring more funds in, ensuring that educational materials were bought. However, the initiatives met the immediate goals but also laid a strong groundwork for sustainability. The statement below shows the response:

> *"We train a capacity of 13 people to grow and sell certified seeds. The money is accounted for materials that will be used by children in the learning process. Additionally, there is also goat-selling that helps to increase money geared towards the education sector in the region."* (KII, Compassion)

The main challenge experienced by the organization was limited parental support; most parents had no educational background in being role models to their children, therefore, they did not pay attention to their children, who were supposed to go to school. The dependency syndrome was high, where parents and caregivers did not help in ensuring that the learning materials were available to their children. The statement below shows the response:

> *"We experience the problem of ignorance where most parents have failed to provide educational materials for their children. This has created a large number of children not going to school."* (KII, Compassion).

The interview with the officials provided valuable insights into the diverse sources of funding, which were Compassion International and religious organizations. They helped align the organization's objectives. This created networking as well as improved the children's attendance in schools. The funding was on time; therefore, most of the poor children attended. Additional financial support was provided by government bodies, which provided in-kind contributions towards the education programs. The funding enabled the organization to implement a broad range of initiatives while reducing single-donor sources. The statement below shows the response:

> *"Our main donor is Compassion International, as well as religious organizations like the churches. They provide both money and resources that shelter, or rather encompass, every poor child towards education. These sustained the poor children in school as they had access to educational materials."* (KII, Compassion).

The information gathered revealed that the organization was guided by a long-term vision for education initiatives. The vision was to open an academy for teaching in the area because most of the trained teachers were employed from a distant region. Therefore, to empower the communities, the organization sought to expand by opening an academy to train local teachers. This will improve access to quality education for marginalized groups. The statement below shows the response:

> *"We tend to see the future in opening an academy for training and teaching within the region. This will increase the school enrolment of children. This is our main goal and we are sure that with the support given, we shall surely achieve it. Thank you"* (KII, Compassion)

4.10.2 Interviews for Mumoni Nursing Home (Health Care Initiatives)

Through the interview, the officials agreed that the primary target of the organization was the communities. This is shown by the statement below:

> *"Our main focus is mostly the residents who are also beneficiaries of the initiatives in Mwingi North Sub-County,* Kitui County. *Our coverage is mainly the whole region"* (KII, Mumoni Nursing Home)

The organization stated that it prioritized needs in conducting monitoring and evaluation processes in the health sector. Officials engaged directly with the local population, healthcare workers, and communities to identify the most pressing healthcare issues. They further used surveys and focus group discussions to assess the immediate healthcare needs that required interventions. Additionally, the initiatives embraced vulnerable groups, namely, people with disabilities and expectant mothers. The statement below was the response:

> *"We assess the healthcare needs through campaigns and meetings. The meetings help us identify the healthcare needs. We create both preventive measures, such as sanitation training and curative measures, such as testing and treating diseases like high blood pressure, that engage the local communities."* (KII 2 and 3, Mumoni Nursing Home).

Through the interviews, it was noted that the organization collaborated with the local Kitui County Government, which involved a formal agreement. These created

resources and improved access to quality healthcare services. The collaboration was strengthened through regular meetings, where the organizations discussed what they could improve. The statement below was the response:

> *"We have collaborated with the Kitui County Government to help us in resource provision to provide better health care services in Mwingi North Sub-County,* Kitui County. *We have signed agreements that have enabled us to access resources"* (KII, Mumoni Nursing Home).

The organization played a significant role in achieving projects in healthcare. Through target interventions, the organization successfully achieved the World Vision Projects in Mwingi North Sub-County, Kitui County. The success depended on the liaison with other organizations that helped with resources to ensure its effectiveness. The statement below was the response:

> *"We have achieved one of the projects that is a World Vision-funded project in Mwingi North Sub-County,* Kitui County, *whereas the rest are ongoing. These projects have helped in addressing health problems as well as solving them."* (KII, Mumoni Nursing Home).

The challenges faced by the organization were fear of intimidation, as most of the healthcare donors had issues granting them funds to boost the healthcare services that they offered to the community. The other challenge was a limited source of funding, as they stated that most of the donors demanded to take the largest share in the organization so that they could offer support, whereas it was a non-profit organization. This hindered them from achieving some of the projects they had started. The following statement was their response:

> *"We only work as a not-for-profit organization; however, we have a limited source of funding, which hinders our capabilities in providing healthcare services. If only we could get reliable donors, then our work of delivering services would be made easier."* (KII 5 and 6, Mumoni Nursing Home).

The main funding sources were through donations from various organizations. However, the government did not chip in to help them with resources. These donations helped in a short-term period despite the population being huge, which needed

immediate interventions. Through the interview, it was noted that most of the proposals that were made by the organizations in raising sources of funding were neglected, therefore, straining to provide healthcare services. This statement below was the response:

> *"We have partnered with other organizations for more donations, but it seems that our efforts have not borne fruit. This is because we are still growing and it is unrecognizable. The population is huge; however, we have reached our threshold in offering extensive healthcare services. We now offer local services since we don't have enough resources."* (KII, Mumoni Nursing Home).

Promoting better healthcare was the long-term vision of the organization. This showed that if the organization got the resources, then they would offer and reach out too many populations with better healthcare services. The organization decided to employ better interventions to improve their funding for the communities to access better and quality healthcare services. The response below was the response:

> *"Our vision is to have a better and healthier society. Therefore, we are aiming that in the next five to ten years we will have covered a huge population and be recognizable even to the Government."* (KII, Mumoni Nursing Home).

4.10.3 Interviews for Caritas Kitui (Food insecurity initiatives)

The research utilized an interview schedule with PBO officials, where each organization expressed its understanding. The research was initially conducted in Caritas Kitui, which dealt with Food Security Initiatives. When asked about the primary target for their initiatives as a PBO, the responses indicated that it was the general public, specifically every household within the Mwingi North Sub county region. The response was provided as shown below:

> *"Our primary target is mainly the general public who are encompassed within the Mwingi North Sub-County,* Kitui County*"* (KII, Caritas Kitui)

Regarding how the PBO assessed and prioritized the needs of different communities, the responses indicated that the organization facilitated communities in identifying their most pressing needs under Food Initiatives. Additionally, the organization developed food initiatives such as providing certified seeds and supporting animal production,

including donkeys and goats, which increased food productivity within the communities. Below is the response:

> *"Mostly we prioritize the immediate food needs, where we issue animal production that is the goat for milk and the donkey to ease work. This is because the communities trek for long distances to look for water; therefore, with the help of the donkey, they do not have to walk carrying Jerri cans for water. We also provide them with certified seeds that they grow, taking a short time to grow and harvest; hence they cannot sleep hungry"* (KII, Caritas Kitui)

The research investigated how the PBO engaged communities in its various programs. This was aligned with the responses that the strategy used was through various media programs that helped voice their needs regarding Food. The engagement created a platform where the communities felt at ease in airing out their food issues. Similarly, the PBOs engaged them through public barazas to find out what the communities needed to be adjusted. This was shown through the response:

> *"We engage the communities through various media platforms such as Athiani F.M., Kamba TV, Thome F.M., talk shows, public barazas, training and workshops, road shows, Kitui Agricultural Shows, which helped the communities air out their need towards food and where they needed us to work more on. Further, the platforms helped in identifying the areas where we had not covered in providing food initiatives."* (KII, Caritas Kitui)

The PBO stated that they collaborated with the local government to implement food security initiatives that were tailored towards the community's needs. They aligned with their objectives which maximized their resources. These included the Kitui County Government and the Ministry of Agriculture. They worked with the PBO to provide service delivery to the communities. Together, they worked to provide food programs to the households, a nutritional awareness campaign, as well as training and workshops. This created a cooperative model of governance, which later helped in making these initiatives successful. The response is shown below:

> *"We collaborate with the Kitui County Government and the Ministry for Agriculture, which helps create a food day in the area. We also offer training*

and workshops for the communities concerning food issues." (KII, Caritas Kitui)

The PBO stated that they had completed an initiative project where they ensured that food was available and self-reliant. By creating strong networks, the organization ensured that it promoted both immediate and long-term sustainable food security initiatives. The communities used the food production given to increase their productivity, therefore reducing dependency syndrome. Further, the organization conducted monitoring and evaluation of the effectiveness of its initiatives towards the communities. Another successful project was the establishment of a community food garden that helped the members access food production easily. The response is shown below:

> *"One of the successful projects that we have completed is the establishment of many community food gardens that have contributed a lot to accessing food by the community members. Further, we have built sand dams, boreholes and offtake wells that contribute to providing sufficient water in the communities."* (KII, Caritas Kitui)

The challenges that the organization stated were that most of the community members slaughtered the goats and donkeys that were provided to help them increase food productivity and make work easier, respectively. The interviews revealed that they also experienced limited funding from donors, as well as no timely funds. This was evidenced when they stated that the donors funded from time to time, but not consistently. This limited their resources in providing food access to the communities. The level of awareness was not consistent; therefore, engaging the communities became a challenge. The response is shown below:

> *"Our main challenge is the donor funding, which is not always available. We have to write a proposal to the donors on why we need their funds. later, the responses will be slow and time will have already passed, creating more poor population towards food problems."* (KII, Caritas Kitui)

The main funding sources for the organizations were Brook East Africa and Brook UK. These helped provide resources for the organization; however, they only provided them

but did not implement the services. Furthermore, they launched campaigns that raised funds from the private sector. The response is shown below:

> *"We depend fully on two donors, that is, Brook East Africa and Brook UK. They provide food resources that we issue to the communities"* (KII, Caritas Kitui)

The interview revealed a strong commitment to a long-term vision of food problems. The long-term vision for the organization was to collaborate with the county government to provide resources that helped with food issues in the region, promoting sustainable agricultural practices as well as local food systems that the communities created. They embraced all races who were in dire need of food, as well as mentoring the communities to depend on themselves for food problems. The response is shown below:

> *"We mentor the communities to reduce dependency syndrome when it comes to food issues, stating 'Punda si wa kupigwa mateke ni wa kutunzwa' meaning a donkey is to be cared for, not beaten thoroughly as if it will not help you someday."* (KII, Caritas Kitui)

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of the Findings

This chapter presents the study's summary, conclusion, and recommendations on the influence of the PBOs and sustainable household poverty reduction in Mwingi North Sub-County, Kitui County Kenya. The analysis used 75.6% of the filled questionnaires and 83.3% of the Interview responses.

5.1.1 Summary of Background of Respondents' Characteristics

Under the demographic section, age appeared to be a factor when filling in the questionnaire. To ensure accuracy, the respondents stated their age within the specified range. The age range between 15-19 years covered 0.4 %, 20-24 years at 4.7%, 25-29 years at 24.7%, 30-34 years at 33.7% and 40 and above years at 36.7%. This showed that the age range of 40 and above constituted the largest segment of those affected by poverty. The male covered 53.8%, having a larger percentage than the female, who covered 46.2%.

5.1.2 PBO's Education Interventions on Sustainable Household Poverty Reduction

The dependent variable was Sustainable Household Poverty reduction, while the independent variable was the PBOs' initiatives towards Education. Most of the responses revealed that the PBOs provided school fees and uniforms to the children in poor households, provided learning materials, provided resources and specialized training. However, the majority of the respondents disagreed that the PBO constructed learning classrooms, promoted digital literacy, provided school meal programs to the children, trained local teachers and did not engage parents and communities to raise awareness of education.

5.1.3 PBO's Health Interventions on Sustainable Household Poverty Reduction

The majority of the respondents disagreed that the PBO established facilities, provided medical equipment, supplies, and medications, provided health data collection systems, provided healthcare training, provided health insurance, provided clean water and adequate sanitation facilities and engaged communities to raise awareness of

healthcare. However, the majority agreed that the PBO provided health data collection systems.

5.1.4 PBO's Food Insecurity Interventions on Sustainable Household Poverty Reduction

From the findings, the majority of the responses agreed that the PBO offered agricultural extension services, provided certified seeds, provided chickpea and green gram-certified seeds to the communities, provided livestock production, provided technical skills and knowledge through training and involved the community in nutrition education programs. However, the majority disagreed that the PBO provided agricultural equipment and distributed a variety of foods.

5.2 Conclusion of the Study

The study found that the PBOs provided school fees and uniforms to children from poor households and supported learning materials. This demonstrated that the PBO played a significant role in increasing school enrolment. However, it was further noted that the PBO did not furnish resources, specialized training, or promote digital literacy. Additionally, the PBO failed to establish school meal programs for the children, offer training to local teachers, or engage parents and communities to raise awareness about education. This illustrated why poverty continued to exist in Mwingi North Sub-County, Kitui County. Therefore, the study concludes that the Public Benefit Organizations influence Sustainable Household Poverty Reduction through Education Initiatives.

Under the Health Initiatives, the study found that the PBO did not establish facilities or provide medical equipment, supplies, and medications. However, it was concluded that the PBO provided health data collection systems as well as healthcare training. No health insurance was offered to the poor households in Mwingi North Sub-County, Kitui County. Additionally, the PBO did not provide clean water or adequate sanitation facilities. As a result, many household members suffered from health issues such as cholera, typhoid, and bilharzia. The PBO did not engage communities to raise awareness about healthcare. Therefore, the study concludes that the Public Benefit Organizations influence Sustainable Household Poverty Reduction through Health Care Initiatives. Under the food insecurity initiatives, the study found that the PBO offered agricultural extension services, provided certified seed that increased food

productivity, and supported livestock production. Additionally, the PBO supplied agricultural equipment that enabled poor households to utilize it. The PBO also offered technical skills and knowledge through training and engaged the community in nutrition education programs. However, the PBO did not distribute a variety of foods. Therefore, the study concludes that the Public Benefit Organizations influence Sustainable Household Poverty Reduction under Food Insecurity Initiatives.

5.3 Recommendations of the Study

The recommendations below have been offered in line with the research objectives.

5.3.1 PBO's Education Interventions on Sustainable Household Poverty Reduction

The research findings indicated that the PBOs played a significant role in coming up with initiatives towards Education. However, it is further noted that the PBO did not provide resources and specialized training nor promote digital literacy. Neither did the PBO provide school meal programs to the children, offer training to the local teachers, nor engage parents and communities to raise education awareness. Since the study concluded that the Public Benefit Organizations influence Sustainable Household Poverty Reduction under Education Initiatives, this research recommends;

i. The Government to offer support to the PBOs in the form of funding to help children in poor households.
ii. The PBOs should involve household members in raising awareness on the importance of education.
iii. The PBOs can also link education with job opportunities such that after the children are done with schooling, they can work in the organization, thus earning a salary to help cater to their basic needs.
iv. The PBOs should implement regular monitoring and evaluation of educational interventions to assess their impact on poverty reduction among low-income households.
v. In conclusion, it is recommended that the PBO adopt an inclusive, community-based learning model to facilitate access to education for all members of the community, including the elderly, thereby contributing to the reduction of illiteracy.

5.3.2 PBO's Health Interventions on Sustainable Household Poverty Reduction

The research findings indicated that the PBOs did not establish facilities, or provide medical equipment, supplies, or medications. No health insurance was provided to the poor households in Mwingi North Sub-County, Kitui County. Additionally, no clean water and adequate sanitation facilities were provided by the PBO. This led to most of the household members suffering from health problems like cholera, typhoid and bilharzia. The PBO did not engage communities to raise awareness of healthcare. Since the study concluded that the Public Benefit Organizations influence Sustainable Household Poverty Reduction under Health Care Initiatives, this research recommends;

i The PBOs should prioritize the provision of medical equipment, essential supplies, and a consistent supply of medications to local health facilities.
ii Furthermore, the PBOs should facilitate access to health insurance coverage for all households to ensure treatment for conditions requiring specialized diagnosis and care beyond the capacity of local health facilities.
iii PBOs should adopt a holistic, multi-sectoral approach that treats health not just as a service, but as a building block for resilience.
iv The PBOs prioritize accessible and affordable healthcare services as a foundation for sustainable household poverty reduction.

5.3.3 PBO's Food Insecurity Interventions on Sustainable Household Poverty Reduction

The PBOs have tried their best to create better interventions for food insecurity. However, the PBO did not distribute a variety of foods. Since the study concluded that the Public Benefit Organizations influence Sustainable Household Poverty Reduction under Food Insecurity Initiatives, this research recommends;

i The PBOs should advocate for supportive policies and collaborate with local governments to strengthen food systems, improve market access for smallholder farmers, and enhance food distribution infrastructure.
ii PBOs should promote community food banks, which will act as safety nets during crises, while school feeding programs boost attendance, health and learning outcomes.

iii The PBOs should integrate nutrition education into food security programs, teaching communities about balanced diets, proper food storage, and child feeding practices.

iv To ensure lasting impact, PBOs should incorporate nutrition education into food security interventions.

5.3.4 Recommendations for Further Studies

The study may not have covered the whole aspects; however, it further recommends the following studies:

i To determine the comparative analysis of the PBOs and Government approaches towards sustainable household poverty reduction.

ii To investigate the qualitative impact of community engagement on the PBOs' projects, sustainably.

iii To examine the role of PBOs towards gender disparities having their focus on women since they are viewed as agents of change at the household level.

REFERENCE

Abiddin, N. Z., Ibrahim, I., Azuwar, S., & Aziz, A. (2022). Non-Governmental Organisations (NGOs) and Their Part towards Sustainable Community Development. *Sustainability*, *14*, 1–13.

Aikaeli, J., Garcés-Urzainqui, D., & Mdadila, K. (2021). Understanding poverty dynamics and vulnerability in Tanzania: 2012–2018. *Review of Development Economics*, *25*(4), 1869–1894. https://doi.org/10.1111/rode.12829

Alkire, S., Kanagaratnam, U., & Suppa, N. (2022). The global Multidimensional Poverty Index (MPI) 2022 country results and methodological note. *Oxford Poverty and Human Development Initiative*, *October*, 1–20.

Andrew, S., & Diwakar, V. (2018). Understanding Poverty in Kenya: A multidimensional analysis. *Chronic Poverty Advisory Network*, 1–53.

Andrianarison, F. (2022). Unravelling the Linkage between Food Security, Poverty Reduction, and Education for Sustainable Development. *Journal of Development Studies*, *58*(11), 2198–2221. https://doi.org/10.1080/00220388.2022.2096445

Ansari, M. R., Rahim, K., Bhoje, R., & Bhosale, S. (2022). A study on research design and its types. *International Research Journal of Engineering and Technology*, *9*(7), 1132–1135.

Antwi-Agyei, P., & Stringer, L. C. (2021). Improving the effectiveness of agricultural extension services in supporting farmers to adapt to climate change: Insights from northeastern Ghana. *Climate Risk Management*, *32*(March), 100304. https://doi.org/10.1016/j.crm.2021.100304

Anyango, D. S. (2024). Diana Silvia Anyango the Catholic University of Eastern Africa http://doi.org/10.35409/IJBMER.2024.3602. *International Journal of Business Management and Economic Review*, *7*(04), 245–257.

Anyanwu, J. C., Kayizzi-mugerwa, S., & John, C. (2012). Accounting for Poverty in Africa: Illustration with Survey Data from Nigeria. *African Development Bank*, 1–35.

Astivia, O. L. O., & Zumbo, B. D. (2019). Heteroskedasticity in multiple regression analysis: What it is, how to detect it and how to solve it with applications in R and SPSS. *Practical Assessment, Research and Evaluation*, *24*(1), 1–16.

Bdaiwi, Y., Rayes, D., Sabouni, A., Murad, L., Fouad, F., Zakaria, W., Hariri, M., Ekzayez, A., Tarakji, A., & Abbara, A. (2020). Challenges of providing healthcare worker education and training in protracted conflict: a focus on non-government controlled areas in north west Syria. *Conflict and Health*, *14*(42), 1–13.

Besançon, S., Sidibé, A., Sow, D. S., Sy, O., Ambard, J., Yudkin, J. S., & Beran, D. (2022). The role of non-governmental organizations in strengthening healthcare systems in low- and middle-income countries: Lessons from Santé Diabète in Mali. *Global Health Action*, *15*(1). https://doi.org/10.1080/16549716.2022.2061239

Bhuiyan, M. I., & Haque, A. (2024). Role of NGOs in providing available and affordable health care services to the slum people in Dhaka. *Clinical Epidemiology and Global Health*, *25*(November 2023), 101478. https://doi.org/10.1016/j.cegh.2023.101478

Brophya, M. (2020). The Role of NGOs in Supporting Education in Africa. *Journal of International and Comparative Education*, *9*(1), 45–56. https://doi.org/10.14425/jice.2020.9.1.0612

Buye, R. (2021). *Effective approaches to community development*. Https://Www.Researchgate.Net/Publication/353244989.

Calvi, R. (2020). Why Are Older Women Missing in India? The Age Profile of Bargaining Power and Poverty Rossella Calvi. *Journal OfPolitical Economy*, *128*(7), 1–49.

Chankseliani, M., Qoraboyev, I., & Gimranova, D. (2021). Higher education contributing to local, national, and global development: new empirical and conceptual insights. *Higher Education*, *81*(1), 109–127. https://doi.org/10.1007/s10734-020-00565-8

Chiara. (2020). *The importance of NGOs in the current system and the need of Financial Measurement and Performance Management in the Social Sector*.

Coscia, M. (2021). Pearson correlations on complex networks. *Journal of Complex Networks*, *1*, 1–14. https://doi.org/10.1093/comnet/cnab036

Cupertino, A., Ginani, V., Cupertino, A. P., & Botelho, R. B. A. (2022). Programas de alimentación escolar: ¿Qué ocurre en el mundo? *International Journal of Environmental Research and Public Health*, *19*(4), 1–12.

Daniel, M., & Moses, M. (2016). Economic Effects of Non-Communicable Diseases on Household Income in Kenya: A Comparative Analysis Perspective. *Public Health Research*, *6*(3), 83–90. https://doi.org/10.5923/j.phr.20160603.02

Danso-Abbeam, G. (2022). Do agricultural extension services promote adoption of soil and water conservation practices? Evidence from Northern Ghana. *Journal of Agriculture and Food Research*, *10*(August), 100381. https://doi.org/10.1016/j.jafr.2022.100381

Dashti, Dr. A., Moulabuksh, M., & Ali, M. (2021b). Role of NGOs in South Asia: A case study of Pakistan. *Pak. Journal of Int'L Affairs*, *4*(2), 479–493.

Davis, E. C., Menser, T., Juarez, A. C., & Tomaszewski, L. E. (2018). Examining healthcare systems: a market analysis for Kenya. *Journal of Training and Development*, *43*, 2–20. https://doi.org/10.1108/EJTD-06-2016-0041

Dey, B., Visser, B., Tin, H. Q., Mahamadou Laouali, A., Baba Toure Mahamadou, N., Nkhoma, C., Alonzo Recinos, S., Opiyo, C., & Bragdon, S. (2022). Strengths and weaknesses of organized crop seed production by smallholder farmers: A five-country case study. *Outlook on Agriculture*, *51*(3), 359–371. https://doi.org/10.1177/00307270221115454

Dodd, W., Kipp, A., Bustos, M., Mcneil, A., Little, M., & Lau, L. L. (2021). COVID-19 Pandemic in Low- and Middle-Income Countries: A Review of Actions among Non-State Actors. *Nutrients*, *13*, 1–16.

Dodd, W., Laura Jane Brubacher, S. S., Danilo Servano, Go, D. J., & Lau, L. L. (2023). International Journal of Disaster Risk Reduction The contributions of religious leaders in addressing food insecurity during the COVID-19 pandemic in the Philippines: A realist evaluation of the Rapid Emergencies and Disasters Intervention. *International Journal of Disaster Risk Reduction*, *86*(1), 2212–4909. https://doi.org/10.1016/j.ijdrr.2023.103545

Elayah, M., Gaber, Q., & Fenttiman, M. (2022). From food to cash assistance: rethinking humanitarian aid in Yemen. *Journal of International Humanitarian Action*, *7*(1), 1–13. https://doi.org/10.1186/s41018-022-00119-w

Eliasu, A. (2017). Addressing Gender Inequality in Enrolment and Atttendance in Basic. *UDS International Journal of Development*, *4*(2), 59–74.

Fosu, A. K. (2015). Growth, Inequality and Poverty in Sub-Saharan Africa: Recent Progress in a Global Context Growth, Inequality and Poverty in Sub- Saharan Africa: Recent Progress in a Global Context. *Oxford Development Studies*, *43*(1), 44–59. https://doi.org/10.1080/13600818.2014.964195

Gali, Y., & Schechter, C. (2020). NGO involvement in education policy: principals' voices. *International Journal of Educational Management*, *34*(10), 1509–1525. https://doi.org/10.1108/IJEM-02-2020-0115

Gebreyohanes, G., Yilma, Z., Moyo, S. and, & A., M. O. (2021). Dairy industry development in Ethiopia: Current status, major challenges and potential interventions for improvement. *ILRI POSITION PAPER Dairy*, 1–39.

Gupta, J., & Vegelin, C. (2016). Sustainable development goals and inclusive development. *International Environmental Agreements*, *16*(3), 433–448. https://doi.org/10.1007/s10784-016-9323-z

Gupta, M. (2020). Role of NGOs in women empowerment: case studies from Uttarakhand, India. *Journal of Enterprising Communities*, *15*(1), 26–41. https://doi.org/10.1108/JEC-04-2020-0066

Harvey, B., Jones, L., Cochrane, L., & Singh, R. (2019). The evolving landscape of climate services in sub-Saharan Africa: What roles have NGOs played? *Climatic Change*, *157*(1), 81–98. https://doi.org/10.1007/s10584-019-02410-z

Hassan, M., Sufyan, R. M., & Bin, D. W. (2022). A Review of Educational Problems in Rural Areas of Sindh: Role of Private NGOs. *Reviews of Management Sciences*, *4*(2), 117–129.

Hernandez, H. (2021). *ForsChem Research Reports* (Vol. 6). https://doi.org/10.13140/RG.2.2.13926.14406

Hind Vishwakarma, J., & Sthapak, S. (2017). A review paper on the role of NGO's in educational development. *International Journal of Advanced Educational Research*, *2*(5), 150–152. http://www.aiaer.net/ejournal/vol24212/P2.

Holst, J. (2020). Global Health – emergence, hegemonic trends and biomedical reductionism. *Globalization and Health*, *16*(1), 1–11.

John Creamer, Emily, S., Kalee Burns, & Frances, C. (2022). Poverty in the United States. In *Poverty in the United States:2021* (Issue September). https://doi.org/10.2307/j.ctv310vn9p.10

Kabiru, S. A. (2020). The relationship between education and agricultural productivity: The moderating effect of NGO. *Universal Journal of Educational Research*, *8*(3), 866–871. https://doi.org/10.13189/ujer.2020.080317

Kaplanidou, K. (2021). Sport events and community development: resident considerations and community goals. *International Journal of Sports Marketing and Sponsorship*, *22*(1), 53–66. https://doi.org/10.1108/IJSMS-05-2020-0082

Khan, J., Bashir, S., Muneera, & Zarar, R. (2023). The Role of Non-Governmental Organizations (NGOs) in Prevention and The Role of Non-Governmental Organizations (NGOs) in Prevention and Treatment of HIV / AIDS in District Kech. *International Journal of Special Education*, *38*(1), 1–23.

Khodayari-Zarnaq, R., Kakemam, E., Arab-Zozani, M., Rasouli, J., & Sokhanvar, M. (2020). Participation of Iranian non-governmental organizations in health policy-

making; barriers and strategies for development. *International Journal of Health Governance*, *25*(1), 46–56. https://doi.org/10.1108/IJHG-07-2019-0056

Kikuvi, M. M. (2021). *Drought on Household Livelihoods* (Vol. 7, Issue 3).

Kimhur, B. (2020). How to Apply the Capability Approach to Housing Policy? Concepts, Theories and Challenges. *Housing, Theory and Society*, *37*(3), 257–277. https://doi.org/10.1080/14036096.2019.1706630

Kitole, F. A., Tibamanya, F. Y., & Sesabo, J. K. (2023). Cooking energy choices in urban areas and its implications on poverty reduction. *International Journal of Sustainable Energy*, *42*(1), 474–489. https://doi.org/10.1080/14786451.2023.2208680

Kitui County Integrated Development Plan 2023-2027. (2023). *KITUI CIDP 2023-2027 Popular Version 1*.

Kuyenda, D. L. (2021). Role of NGOs in Rural Development. *International Journal for Research in Social Science and Humanities*, *7*(9), 1–12.

Lawal, A. (2023). Formidable Role of Parents, Community and Non-Government Organizations (Ngos) in the Enhancement of Pre-Primary School Education in Developing Countries Aminu Lawal. *Journal of Education in Developing Areas*, *31*(2), 253–262.

Lee, J. D., Meadan, H., Oyunbaatar, E., & Amar, A. (2024). Strategies for capacity building in a low-resource setting: Stakeholders' voices. *Autism Research in a Global Context Strategies*, *28*(1), 162–173. https://doi.org/10.1177/13623613221127077

Löhr, K., Weinhardt, M., & Sieber, S. (2020). The "World Café" as a Participatory Method for Collecting Qualitative Data. *International Journal of Qualitative Methods*, *19*, 1–15. https://doi.org/10.1177/1609406920916976

Longley, C., Ferris, S., O'Connor, A., Maina, M., Rubyogo, J. C., & Templer, N. (2021). *Uganda seed sector profile*.

Lowe, N. M. (2021). *The global challenge of hidden hunger: perspectives from the field*. https://doi.org/10.1017/S0029665121000902

Lu, Y., Wei, L., Cao, B., & Li, J. (2021). Participatory child-centered disaster risk reduction education: an innovative Chinese NGO program. *Disaster Prevention and Management: An International Journal*, *30*(3), 293–307. https://doi.org/10.1108/DPM-03-2020-0066

Madekwe, C. C., Madekwe, C. C., & Obeagu, E. I. (2022). *Inequality of monitoring in Human Immunodeficiency Virus, Tuberculosis and Malaria: A Review*. *2*(3), 6–15.

Makowski, D., Ben-Shachar, M., Patil, I., & Lüdecke, D. (2020). Methods and Algorithms for Correlation Analysis in R. *Journal of Open Source Software*, *5*(51), 2306. https://doi.org/10.21105/joss.02306

Margaret, N., Catherine, M., Flora, F., & Beatrice, N. (2015). Universal Primary Education in Kenya: Advancement and Challenges. *Journal of Education and Practice*, *6*(14), 87–96.

Mawela, A., & van den Berg, G. (2020). Management of school nutrition programmes to improve environmental justice in schools: A South African case study. *South African Journal of Clinical Nutrition*, *33*(2), 30–35. https://doi.org/10.1080/16070658.2018.1507208

Mcewan, B. (2020). Sampling and validity. *Annals of the International Communication Association*, *44*(3), 235–247. https://doi.org/10.1080/23808985.2020.1792793

Mengistu, S., Nurfeta, A., Tolera, A., Bezabih, M., Adie, A., Wolde-Meskel, E., & Zenebe, M. (2021). Livestock Production Challenges and Improved Forage Production Efforts in the Damot Gale District of Wolaita Zone, Ethiopia. *Advances in Agriculture*, *1*(1), 1–10. https://doi.org/10.1155/2021/5553659

Mohamed Buheji1, Katiane da Costa Cunha, G. B., Mavrić, B., Souza, Y. L. do C. de, Silva, S. S. da C., Hanafi, M., & Yein, T. C. (2020). The Extent of COVID-19 Pandemic Socio-Economic Impact on Global Poverty. A Global Integrative

Multidisciplinary Review. *Journal of Economics*, *10*(4), 213–224. https://doi.org/10.5923/j.economics.20201004.02

Mohebi, S., Parham, M., Sharifirad, G., & Gharlipour, Z. (2018). *Social Support and Self - Care Behavior Study*. *January*, 1–6. https://doi.org/10.4103/jehp.jehp

Moore, S., Barbour, R., Ngo, H., Sinclair, C., Chambers, R., Auret, K., Hassed, C., & Playford, D. (2020). Determining the feasibility and effectiveness of brief online mindfulness training for rural medical students: A pilot study. *BMC Medical Education*, *20*(1), 1–12. https://doi.org/10.1186/s12909-020-02015-6

Naguib, M. A. M., Afandy, Dr. A. H., & ELbagoury, Dr. A. A. (2022). The Role of NGOs in Combating Poverty in Developing Countries ، A Comparative Study & Lessons Learned. *Arab Journal of Administration*, *45*(4), 1–18. https://doi.org/10.21608/aja.2022.158121.1308

Namirimo, F. (2019). *Role of NGOs in poverty alleviation* (Issue September).

Oryem, O. S., & Noah, S. (2022). Role of Non-governmental organizations (NGOS) in enhancing Food Security: A Case of Association of Christian Resources Organizations Serving South Sudan (ACROSS) - Pibor County, Greater Pibor Administrative Area (GPAA), South Sudan. *Nkumba International Research Journal*, *2*(1), 1–15.

Paslakis, G., Dimitropoulos, G., & Katzman, D. K. (2020). A call to action to address COVID-19-induced global food insecurity to prevent hunger, malnutrition, and eating pathology. *Nutrition Reviews*, *79*(1), 114–116. https://doi.org/10.1093/nutrit/nuaa069

Peter, D., Bruce, B., & Melissa, W. (2020). Poverty in Australia 2020 - Part 1: Overview. *Poverty and Inequality Partnership Report No.*, *3*, 1–32.

Peterson, E. W. F. (2022). The Coming Global Food Crisis. *Agricultural Economics Department*, *5*(8), 1–5.

Quaidoo, E., Ohemeng, A., Kushitor, M. K., & Antwi, J. (2022). Nutrition education incorporation into mainstream primary school curriculum in Ghana: Stakeholders'

sources of nutrition information and perceived barriers. *PLoS ONE*, *17*(1), 1–15. https://doi.org/10.1371/journal.pone.0262359

Quintão, C., Andrade, P., & Almeida, F. (2020). How to Improve the Validity and Reliability of a Case Study Approach? *Journal of Interdisciplinary Studies in Education*, *9*(2), 264–275. https://doi.org/10.32674/jise.v9i2.2026

Rana, K., Greenwood, J., & Fox-Turnbull, W. (2020). Implementation of Nepal's education policy in ICT: Examining current practice through an ecological model. *Electronic Journal of Information Systems in Developing Countries*, *86*(2), 1–16. https://doi.org/10.1002/isd2.12118

Reza, F. (2022). The Role of NGOs in Promoting Education: Success and Challenges. *International Journal of Education, Learning, and Development*, *10*(1), 24–43.

Rumenya, H., & Kisimbi, Dr. J. M. (2020). Influence of Monitoring and Evaluation Systems on Performance of Projects in Non-Governmental Organizations: A Case of Education Projects in Mombasa County, Kenya. *Journal of Entrepreneurship and Project Management*, *5*(2), 46–66. https://doi.org/10.47941/jepm.494

Saha, P., Prusty, A. K., & Nanda, C. (2025). An Overview of Pluralism in Agricultural Extension and Advisory Services. *International Research Journal of Multidisciplinary Scope*, *6*(1), 131–138. https://doi.org/10.47857/irjms.2025.v06i01.02074

Samina Rauf, & Shahid, W. (2019). Open access Open access. *Faktor Presdiposisi Ibu Usia Remaja Terhadap Pemberian ASI Eksklusif Pada Bayi Di Kecamatan Luahagundre Maniamolo Kabupaten Nias Selatan*, *2*(2), 192–199.

Sanadgol, A., & Doshmangir, L. (2022). Role of non-governmental organizations in moving toward universal health coverage: A case study in Iran. *Public Health*, *1*, 1–12.

Sanadgol, A., Doshmangir, L., Majdzadeh, R., & Gordeev, V. S. (2021). Engagement of non-governmental organisations in moving towards universal health coverage: a scoping review. *Globalization and Health*, *17*, 1–19.

Sandor, J., & Bahaa, A. A. (2021). Public health consequences after ten years of the Syrian crisis: a literature review. *Globalization and Health*, *17*, 1–11.

Sanja, S., Stanko, B., Ana Miloš, A. M., & Perušina, P. (2016). Transforming Healthcare: The Role of NGOS in Promoting and Building a P4 Medicine Health System. *Research in Education and Rehabilitation*, *4*(1), 1–23.

Saud, M., & Ashfaq, A. (2022). NGOs schools are promoting education for sustainable development in rural areas. *Globalisation, Societies and Education*, *20*(5), 682–694. https://doi.org/10.1080/14767724.2021.1993796

Schrepp, M. (2020). On the Usage of Cronbach's Alpha to Measure Reliability of UX Scales. *Journal of Usability Studies*, *15*(4), 247–258.

Shrestha, N. (2020). Detecting Multicollinearity in Regression Analysis. *American Journal of Applied Mathematics and Statistics*, *8*(2), 39–42. https://doi.org/10.12691/ajams-8-2-1

Storeng, K., Palmer, J., Daire, J., & Maren, K. (2019). Behind the scenes: International NGOs' influence on reproductive health policy in Malawi and South Sudan. *Global Public Health*, *14*(4), 555–569. https://doi.org/10.1080/17441692.2018.1446545

Sunday, R., & Florence, N. (2024). The Role of Non-Governmental Organizations in the Delivery of Adult Basic Education Programme in Enugu. *Review of Education*, *36*(1), 1–15.

Tsounis, A., & Xanthopoulou, D. (2024). Social Capital Theory: A Review. *Theory Hub Book: Social Capital Theory*, *July*, 1–20.

Waiswa, D., Günlü, A., & Mat, B. (2021). Development opportunities for livestock and dairy cattle production in Uganda: A Review. *Res. J. Agriculture and Forestry Sci. International Science Community Association*, *9*(1), 18–24. www.isca.me

Wang, D., Shinde, S., Young, T., & Fawzi, W. W. (2021). Impacts of school feeding on educational and health outcomes of school-age children and adolescents in low-

and middle-income countries: A systematic review and meta-analysis. *Journal of Global Health*, *11*, 1–27. https://doi.org/10.7189/jogh.11.04051

Win, M. T., Maredia, M. K., & Boughton, D. (2023). Farmer demand for certified legume seeds and the viability of farmer seed enterprises: Evidence from Myanmar. *Food Security*, *15*(2), 555–569. https://doi.org/10.1007/s12571-022-01338-0

Wu, Q., Amporfro, D. A., Boah, M., Yingqi, S., Cheteu Wabo, T. M., Zhao, M., & Ngo Nkondjock, V. R. (2021). Patients satisfaction with healthcare delivery in Ghana. *BMC Health Services Research*, *21*(1), 1–13. https://doi.org/10.1186/s12913-021-06717-5

Yambo, J. M. O. (2022). Involvement of Government and Non- Governmental Organisations' Teamwork in the Advancement of Quality Education in Kisumu West. *Journal of Advances in Education and Philosophy*, *6*(4), 194–202. https://doi.org/10.36348/jaep.2022.v06i04.001

Yang, L., Jiang, C., Ren, X., Walker, R., & Xie, J. (2021). Determining Dimensions of Poverty Applicable in China: A Qualitative Study in Guizhou Determining Dimensions of Poverty Applicable in China: A Qualitative Study. *Journal of Social Service Research*, *47*(2), 181–198. https://doi.org/10.1080/01488376.2020.1734712

Yusuf, M. A. (2022). The Role of Non-Governmental Organizations on promotion of primary education service delivery in Mogadishu-Somalia. *Daha International University Academic Journal*, *1*(2), 138–154.

APPENDICES

Appendix I: Questionnaires for the Household members

I am Faith Nthenya Nyamai a Master of Science in Community Development student at Tharaka University. I am conducting academic research on **"Public Benefit Organizations and Sustainable Household Poverty Reduction in Mwingi North Sub-County, Kitui County, Kenya".** For this reason, I request your consent to participate and assist us with any information that is relevant to this topic. The information you provide would be treated with utmost confidentiality for academic purposes only.

Do you authorise me to proceed: ***Yes*** *(...).* ***No*** *(…….). If yes, the researcher continues with the interview.*

SECTION A

Please tick appropriately (√)

1. Gender	Male	( )
	Female	( )
2. Age	15 - 19	( )
	20 - 24	( )
	25 - 29	( )
	30 -34	( )
	40 and above	( )

SECTION B

A) The PBOs' Initiatives towards Poor Education in Mwingi North, Kitui County

Please tick appropriately **(√)**, where 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5 strongly agree.

Questions	1	2	3	4	5
1. The PBOs provide school fees and uniforms to the school-going children					
2. The PBOs provide learning materials to the children in my area					
3. The PBOs construct learning classrooms for the pupils/students in my area					
4. The PBOs provide resources and specialized training for schools and educators to accommodate children with disabilities in my area					
5. The PBOs promote digital literacy by providing access to digital devices, the internet, and e-learning platforms					
6. The PBOs provide school meal programs in area					
7. The PBOs train local teachers on effective instructional learning techniques in my area					
8. The PBOs engage parents and communities to raise awareness about the value of education					

B) The PBOs' Initiatives Towards Health Care in Mwingi North, Kitui County

Please tick appropriately **(√)**, where 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-5-strongly agree

Questions	1	2	3	4	5
1. The PBOs have established health facilities in my area					
2. The PBOs provide medical equipment, supplies, and medications in my area					
3. The PBOs provide health data collection systems essential for monitoring the health					

trends of the communities in my area					
4. The PBOs provide skills and knowledge through training in healthcare to the communities in my area					
5. The PBOs provide health insurance or financial assistance for healthcare in my area					
6. The PBOs provide clean water and adequate sanitation facilities for food preparation in my area					
7. The PBOs engage communities to raise awareness of health care in my area					

C) The PBOs' Initiatives towards Food Insecurity in Mwingi North, Kitui County

Please tick appropriately **(√)** where: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree.

Questions	**1**	**2**	**3**	**4**	**5**
1. The PBOs offer agricultural extension services to the communities in my area					
2. The PBOs provide certified seeds to the people in my area					
3. The PBOs provide livestock production to the community to increase food production in my area					
4. The PBOs provide agricultural equipment in area					
6. The PBOs provide technical skills and knowledge through training on improving food production in my area					

7. The PBOs distribute a variety of foods in my area					
8. The PBOs involve the community in nutrition education programs in my area					

SECTION C: SUSTAINABLE HOUSEHOLD POVERTY REDUCTION

Please tick appropriately where: 1-strongly disagree, 2- disagree, 3-neutral, 4-agree, 5-strongly agree **(√)**

Questions	**1**	**2**	**3**	**4**	**5**
1. There is a high enrolment of children in school in my area					
2. There is a reduction in school dropouts in my area					
3. There are higher completion rates and good academic performance in my area					
4. There is a high literacy level in my area					
4. There is increased access to essential healthcare services in my area					
6. There is a low mortality rate in my area					
7. There is an enhanced quality of healthcare services in my area					
8. There is better crisis preparedness and emergency response towards health care in my area					
9. There are reduced healthcare costs and economic burden on communities in my area					
10. There is increased health awareness in my area					

11. There is a reduction in hunger and malnutrition rates in my area					
12.There is increased agricultural productivity and sustainable farming in my area					
13. There is improved food access and distribution in my area					
14. There is increased promotion of healthier dietary practices in my area					
15. There is a strengthening of community-based food systems in my area					

Please provide any other information: …….

THANK YOU FOR YOUR PARTICIPATION AND CONTRIBUTION

Appendix II: Interview Guide for PBO Officials

I am Faith Nthenya Nyamai a Master of Science in Community Development student at Tharaka University. I am conducting academic research on **"Public Benefit Organizations and Sustainable Household Poverty Reduction in Mwingi North Sub-County, Kitui County, Kenya".** For this reason, I request your consent to participate and assist us with any information that is relevant to this topic. The information you provide would be treated with utmost confidentiality for academic purposes only.

Do you authorise me to proceed: ***Yes*** *(...).* ***No*** *(....). If yes, the researcher continues with the interview.*

1. Who is the primary target group for your initiatives as a PBO? (Education, Health care, Food insecurity)

2. How does your organization assess and prioritize the needs of different communities? (Education, Health care, Food insecurity)

3. How do you engage local communities in your various programs? (Education, Health care, Food insecurity)

4. Do you collaborate with local governments or other organizations in delivering services? (Education, Health care, Food insecurity)

5. Could you describe a successful project that your organization has achieved and its impact on the community? (Education, Health care, Food insecurity)

6. What are the main challenges your organization faces in implementing programs? If yes, explain how you overcome them (Education, Health care, Food insecurity)

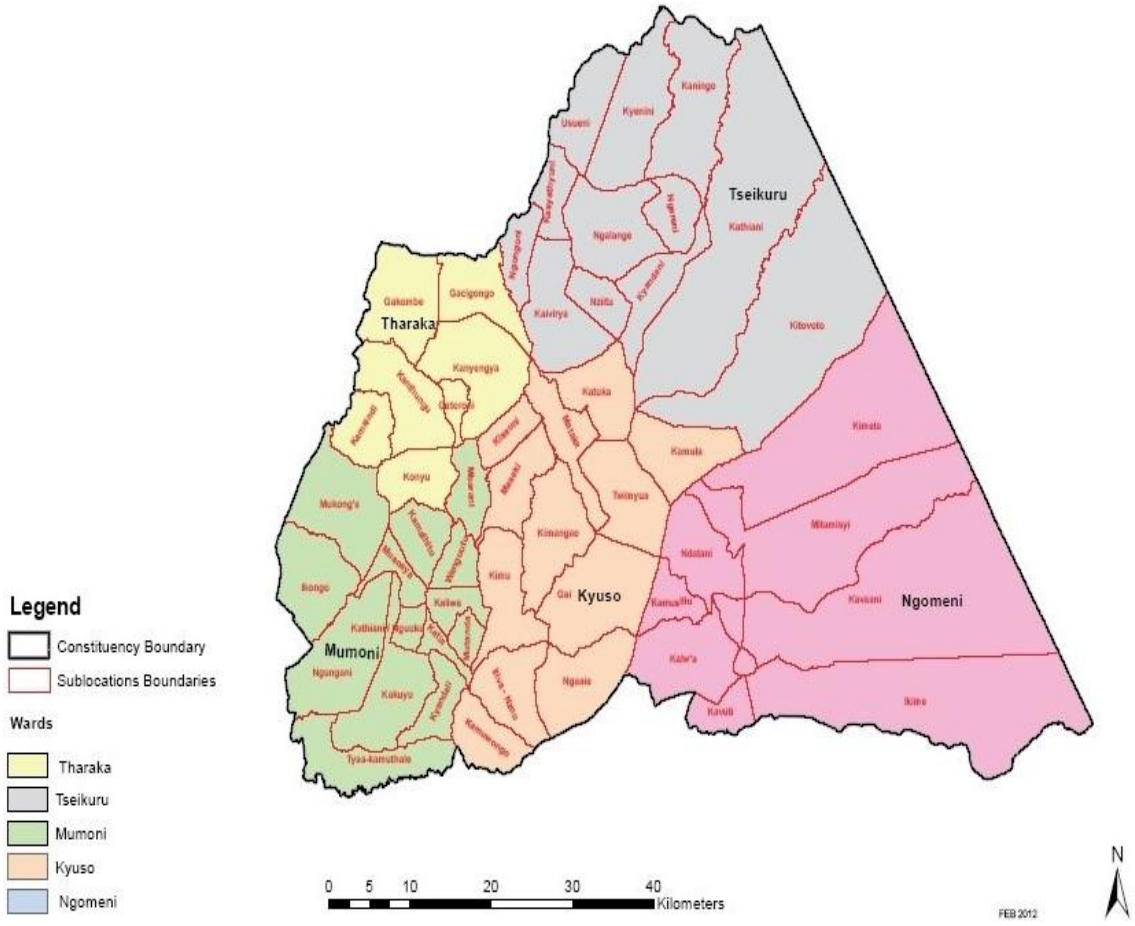
7. What are the main sources of funding for your initiatives, and how do you ensure sustainability? (Education, Health care, Food insecurity)

8. What is your long-term vision for improving the programs you undertake within the communities you serve? (Education, Health care, Food insecurity)

THANK YOU FOR YOUR PARTICIPATION AND CONTRIBUTION

Appendix III: Location of the Study Map

Map of Mwingi North Sub-County, Kitui County



Source: Kitui County Integrated Plan 2023-2027

Appendix IV: Tharaka University Introductory Letter

THARAKA UNIVERSITY

P.O BOX 193-60215,
MARIMANTI, KENYA

Website: https://tharaka.ac.ke
Social Media: tharakauni
Email: info@tharaka.ac.ke
Phone : +254745 838 353

OFFICE OF THE DIRECTOR
BOARD OF POSTGRADUATE STUDIES

REF: TUN/BPGS/PL/12/24 **5th December, 2024**

To Whom It May Concern

Dear Sir/Madam,

RE: FAITH NTHENYA NYAMAI ADMISSION NUMBER AMT20/05911/22

Ms. Faith Nthenya Nyamai is a postgraduate student at Tharaka University undertaking a Master's degree in **Community Development**. The student has completed her coursework and is expected to proceed for collection of data after successfully defending her proposal at faculty level. The title of the study is **"Public Benefits organizations and sustainable Household Poverty Reduction in Mwingi North Sub-County, Kenya."**

Any assistance accorded to her will be highly appreciated.

Thank you in advance.

Yours faithfully,

THARAKA UNIVERSITY
DIRECTOR BOARD OF POST GRADUATE STUDIES
05 DEC 2024
P. O. Box 193-60215
MARIMANTI, KENYA

Dr. Ambrose Vengi, Ph.D.
Director, Board of Postgraduate Studies

Appendix V: Ethics Review Letter

THARAKA UNIVERSITY

P.O BOX 193-60215,
MARIMANTI, KENYA

Telephone: +(254)-0202008549
Website: https://tharaka.ac.ke
Social Media: tharakauni
Email: info@tharaka.ac.ke

INSTITUTIONAL SCIENTIFIC AND ETHICS REVIEW COMMITTEE

5th December 2024.

REF: TUNISERC/NSEC/ M024
Dear, Faith Nthenya Nyamai.

RE: Public Benefits organizations and sustainable Household Poverty Reduction in Mwingi North Sub-County, Kenya.

This is to inform you that ***Tharaka University ISERC*** has reviewed and approved your above research proposal. Your application approval number is ***ISERC04023.*** The approval period is ***5th December 2024–5th December 2025.***

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***Tharaka University ISERC.***
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***Tharaka University ISERC*** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to ***Tharaka University ISERC*** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to ***Tharaka University ISERC.***

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

Dr. Fidelis Ngugi
Chair, ISERC Tharaka University

Appendix VI: NACOSTI Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 614784

Date of Issue: 29/January/2025

RESEARCH LICENSE

This is to Certify that Ms. FAITH NTHENYA NYAMAI of Tharaka University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kitui on the topic: PUBLIC BENEFIT ORGANIZATIONS AND SUSTAINABLE HOUSEHOLD POVERTY REDUCTION IN MWINGI NORTH SUB-COUNTY, KENYA for the period ending : 29/January/2026.

License No: NACOSTI/P/25/415547

614784

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions