A CORRELATION STUDY ON THE EFFECT OF NON-CONDITIONAL CASH TRANSFER ON POVERTY ALLEVIATION AMONG OLDER PERSONS IN EMUHAYA SUB- COUNTY, KENYA

BY

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Declaration

This thesis is my own work and has not been presented for a degree award in any other institution.

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Dedication

I dedicate this work to my beloved husband, Radon and children Joy and Ravin

ABSTRACT

The world is experiencing growth in the number of older persons with those aged 60 years and above projected to double from 1.4 billion in 2015 to 2.8 billion in 2050. According to the Kenya Population and Housing Census, there were 1.3 million people who were above 65 years of age in 2009 with a declining mortality rate from 11/1000 in 2007 to 8.93/1000 in 2011 an indication that the number of those aging in Kenya is expected to increase significantly by 2030. In Vihiga County, the population of older persons aged 65 years and above stood at 33,475 by 2013. The growing numbers of older persons in Kenya have increased social, economic and political pressure necessitating introduction of various social protection programs which include non-conditional cash transfer initiatives. Although several studies show that cash transfer programs have a positive effect on access to food, healthcare and shelter, the studies focused on conditional cash transfers creating uncertainty on the effect of non conditional cash transfers such as Older Persons Cash Transfer(OPCT) on poverty alleviation. This study investigated the effect of non-conditional cash transfer on poverty alleviation among older persons in Emuhaya Sub-County, Kenya. Specifically, the study determined the effect of OPCT on access to food among older persons in Emuhaya Sub-County, Kenya. It also established the effect of OPCT on access to health care among older persons as well as effect of OPCT on quality of shelter among older persons. Case study research design was employed with a target population comprising of 1067 OPCT beneficiaries with a sample size of 290 obtained using Yamane formula which was obtained by simple random sampling and the participants were stratified based on the wards. Descriptive and inferential data analysis techniques were employed to define the participants' characteristics and established the effect of non-conditional cash transfers on poverty alleviation. The study established that there exists a positive correlation between OPCT and access to food with r=0.281 and p- value=0.00. The study also established that there exists a positive correlation between OPCT and access to health care with r=0.120 and p-value=0.004. The study also found a positive correlation between OPCT and access to a quality shelter with r=0.162 and p-value=0.000. The odds ratio predicted by the model for improved access to food, health care and quality was 1.534, 2.388 and 1.793 respectively. The study concluded that OPCT alleviates poverty. The recommendation for the study was that a large sample size should be considered to access poverty alleviation among the older persons on the OPCT program. Secondly since household size differ, this affect the quantity of food from the household and therefore the cash provided should put this in mind to ensure that the household have improved food access. Lastly, improved access to health care had a weak correlation with cash transfer and in order to strengthen the correlation the government should pay NHIF for all beneficiaries and not a sample.

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Abbreviation and acronyms

AU African Union

CTI Cash Transfer

DFID Department for International Development

HSN Hunger Safety Net

MEACLSP Ministry of East African Community, Labour and Social Protection

NSNP National Safety Net Program

NHIF National Health Insurance Fund

OPCT Older Persons Cash Transfer

CT-OVC Cash Transfer for Orphans and Vulnerable Children

PWSD-CT Persons with Severe Disability Cash Transfer

SCTS Social Cash Transfer Scheme

Definition of terms

Household people living and cooking together.

Older person adults above 65 years.

Policy a principled guide provided by the government used by administrative or executive branches with regard to public issues.

Social protection policies and actions aimed at enhancing the capacity and opportunity for the poor and vulnerable in the society in order to improve their. livelihood and welfare in regards to access to food, shelter, health care and education.

Social protection program both private and public programs that offer protection to the poor and vulnerable in the society as well as enhancing their human rights and maintaining their social status.

Cash transfer non- refundable money given to the poor and vulnerable by the government to improve their livelihood.

Poverty alleviation any process that is aimed at reducing the poverty level in a community or among a group of people measured by access to food,health care and shelter.

Conditional cash transfer non-refundable money given to the poor and vulnerable by the government to improve their livelihood after fulfilling set conditions by the government.

Unconditional cash transfers non-refundable money given to the poor and vulnerable by the government to improve their livelihood with no conditions.

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Chapter 1

INTRODUCTION

1.1 Background to the study

In every demographic of a country, the aged are an important component. The 2005/06 Kenya Integrated Household and Budget Survey data highlighted the most vulnerable groups in the country and identified the relatively high vulnerability of the elderly population to poverty compared to other age groups (Ikiara, 2009). The Kenyan Government introduced the Older Persons Cash Transfer that targets persons aged 65 years and above. The OPCT program is aimed at cushioning older persons from poverty by the government. The beneficiaries receive a bi-monthly stipend of Ksh. 4000. The program is aimed at improving the livelihood of these individuals. According to the 2009 Kenya Population and Housing Census, there are 1.3 million people who are aged above 65 years and 20.6 million are aged between 15 and 64 years. Therefore, the ministry of Labour for this reason selected the age of 65 years as the entry point for new beneficiaries into the program annually(Ministry of Labour, 2014). The United Nations 2015 report showed that every country in the world is experiencing growth in the number of older persons in their population (United Nations, 2015). The report further states that the increasing population of the older person is the most significant social transformation that is happening in the twenty-first century where between 2013 and 2015, the United Nations (2015) reported that

the number of people in the world aged 60 years and above grew by 56% from 901 million to 1.4 billion and in 2050 the older person's increase is projected to be double the size in 2015. According to the 2009 Kenya Population and Housing Census, there were 1.3 million people who were above 65 years of age and with a declining crude mortality rate from 11/1,000 in 2007 to 8.93/1,000 in 2011, this is an indication that the number of those aging is expected to increase significantly by 2030 (Republic of Kenya, 2014; Republic of Kenya, 2009).

Moreover, the released 2018 World Population Data Sheet from the Population Reference Bureau (PRB) shows that by mid-century the share of the population aged 65 will be 7% up from 3% currently (Population Reference Bureau, 2018). The report further shows that Kenya is gradually moving towards a high old-age dependency quotient. The change in the age structure has influenced the country's economic trajectories and how it allocates resources to ensure that all generations can thrive. The burden to care for elderly persons in Kenya has increased due to the increased dependency quotient.

Particularly, the Kenyan government has established that health care among older persons is a major concern. According to the Ministry of Labour (2014), older persons in Kenya are not just more likely to be ill but also disabled. The increase in their number continues to have an economic consequence because most of them are involved in informal work and do not have a pension, they therefore, rely on the cash transfer provided by the government. In Vihiga County, the population of older persons aged 65 years and above is 33,476 with Vihiga Sub County having 5,658,

Sabatia has 7,908, Hamisi, 8,849. Luanda 5,469 and Emuhaya 5, 592 (Society for International Development, 2017).

The 2010 Constitution of Kenya obligates the government to take measures that ensure older person's participation, personal development, dignity, respect and protection from abuse by providing reasonable assistance (Republic of Kenya, 2010). The Government of Kenya, in order to cushion the older persons came up with programs to protect the needy and the disadvantaged such as the social protection program through social transfers (UNICEF, 2012). The growing numbers of older persons in Kenya among the vulnerable groups have increased social, economic and political pressure hence the introduction of various social protection programs in the country which include non-cash and cash transfer initiatives (Ikiara, 2009).

1.2 Overview of the Older Persons Cash Transfer (OPCT) in Kenya

The Kenya National Social Safety Net program aims at cushioning Kenya's poorest and most vulnerable households from the worst effects of crises such as drought, malnutrition and unemployment (Njuguna, 2011). The Safety Net merges five existing programs-the Cash Transfer for Orphans and Vulnerable Children, the Hunger Safety Net Program, the Urban Food Subsidy Cash Transfer, the Persons with Severe Disability Cash Transfer and the Older Persons Cash Transfer (Njuguna, 2011). The safety net program for the elderly aims at gradually expanding these existing efforts while achieving greater efficiency and coordination, including targeting the

most vulnerable older persons.

The Older Person Cash transfer started with an aim of alleviating poverty among the elderly who were living in extreme poverty following success stories from other countries like Brazil and Colombia (Odhiambo, 2014). The program is among other activities the government of Kenya has put in place to ensure that Sustainable Development Goals (SDGs) are realized together with the country's vision 2030 which has social protection in its blueprint (Odhiambo, 2014). The OPCT program began as a pilot in 2006 by providing a monthly cash transfer of Ksh. 1065, to 300 households with destitute elderly people in Nyando, Busia and Thika sub-counties with an annual government allocation of Ksh 4 million (Ikiara, 2009). The program has been expanding since 2009 following a budgetary allocation of Ksh 550 million, Ksh1 billion, Ksh 1.5 billion, Ksh 3.2 billion in the financial years 2009/2010, 2011/2012, 2012/2013, and 2013/2014 respectively (Republic of Kenya, 2014). Currently, the number of older person beneficiaries have increased to 310,000 from 164,000 in 2016 following an increase in budget allocation in the financial year 2017/2018 (Republic of Kenya, 2017)

Initially, the selection criteria were based on age (above 65 years), income status, geographical area, and that those selected should not be beneficiaries of another cash transfer program (Ikiara, 2009). Currently, the selection criteria have changed to target all older persons aged 70 years and above regardless of income status and their geographical locations. OPCT makes it possible for a household with an older person to have food security, access to health and better housing because the cash transfer increases the household disposable income (Adato & Bassett, 2009).

1.3 Association between poverty alleviation and cash transfer

The older persons are the most destitute group in Kenya (Ressler, 2008). The majority of them, in the country, are trapped in misery through a combination of low income and poor health (Muiruri & Elossy, 2012). Traditional support of the family is increasingly unable to cope with the problem of taking care of the older persons in the current dynamic world where the extended family is breaking down and children are unable to take care of their parents, thus the majority of the older persons face destitution (Ministry of Labour, 2014). The emerging demographic profile and socio-economic scenario of the country indicate that the vulnerability of older persons continues to worsen over years. Therefore, the Government of Kenya came up with an institutional framework under the Ministry of East Africa Community, Labour and Social Protection (MEACLSP) and the National Gender and Equality Commission to guide in the implementation of the non-conditional cash transfer program aimed at alleviating poverty among older persons (Ministry of Labour, 2014). This was premised on the success stories from other countries like Brazil and Colombia where it was established that cash transfer programs alleviated poverty among vulnerable groups (Odhiambo, 2014).

The evidence is corroborated by empirical literature where Bailey and Hedlund (2012), Leroy et al. (2009), Fernald et al. 2008), Legarde et al.(2007), (Owour, 2014) among others established that there was a positive association between cash transfers and poverty alleviation among vulnerable groups where cash transfers improved ac-

cess to food, healthcare and shelter. However, the studies were based on conditional cash transfers, therefore, creating uncertainty on the effect of non-conditional cash transfers such as OPCT on poverty alleviation.furthemore, the studies were focused on determining the nutrition status of the vulnerabe groups and not the statistical significance of the programs. Poverty alleviation was measured by looking at the improved ability of the beneficiaries to access food, health care and quality shelter. Conditional cash transfers are cash programs where conditions are set for beneficiaries to meet before benefiting from it(United Nations, 2015). For, instance the orphans and vulnerable cash transfer has set conditions like children must be immunized for those under five years, for school-going children, they must be in school for them to get the cash. Anyone who does not follow the set guidelines then will miss out on the cash transfer. For non-conditional cash transfers, there are no rules set for the beneficiaries as long as they meet the eligibility criteria.

1.4 Statement of the problem

The collapse of traditional support of the family arising from the breakdown of extended family and the inability of children to take care of their aging parents has worsened the vulnerability of older persons in Kenya condemning them to destitution. A cash transfer program for older persons to alleviate poverty among older persons by improving their ability to access food, healthcare and quality shelter was introduced. Studies focused on conditional cash transfers creating uncertainty on the effect of non-conditional cash transfers such as OPCT on access to food, health-

care and shelter and for those that studied non-conditional cash transfers they were focused on nutrition among vulnerables and not the statistical significance. To fill in the gap, this study therefore, uses statistical methods to correctly represent the effect of non-conditional cash transfer on poverty alleviation among older persons.

1.5 Objectives of the Study

1.5.1 Main objective

The main objective of the study was to determine the correlation of the effect of non-conditional cash transfer on poverty alleviation among older persons in Emuhaya Sub- County, Kenya.

1.5.2 Specific objectives

The specific objectives of the study were to;

1. Determine the influence of OPCT on access to food among older persons in Emuhaya Sub-County, Kenya.
2. Establish the impact of OPCT on access to health care among older persons in Emuhaya Sub-County, Kenya.
3. Examine the effect of OPCT on quality of shelter among older persons in Emuhaya Sub-County, Kenya.

1.6 Research hypothesis

To achieve the study objectives, the study hypothesis were as follows

1. H_0 : OPCT has no effect on access to food among older persons in Emuhaya sub-county, Kenya

   H_1 :OPCT has an effect on access to food among older persons in Emuhaya Sub-County, Kenya

2. H_0 : OPCT has no effect on access to health care among older persons in Emuhaya sub-county, Kenya

   H_1 :OPCT has an effect on access to health care among older persons in Emuhaya Sub-County, Kenya

3. H_0 : OPCT has no effect on access to quality of shelter among older persons in Emuhaya sub-county, Kenya

   H_1 :OPCT has an effect on access to shelter among older persons in Emuhaya Sub-County, Kenya

1.7 Significance of the study

Poverty alleviation has always been a concern for the Kenyan government. The concern not only stems from the need to achieve the vision 2030 but from the mere fact that poverty affects already vulnerable individuals in the society due to their age and physical well-being. Poverty reduces the purchasing power of a household with an older person thus affecting their living standards as well as increasing their life

uncertainty (Burchi, Scarlato, & d'Agostino, 2016). This study's findings will be of importance to policymakers by providing information on the program's impact on the livelihood of older persons. Furthermore, the findings add to literature that is useful to academia for reference purposes.

1.8 Overview of the Chapters

This Chapter gives an Introduction of the study, with the objectives stated and the statement of the problem; Chapter Two reviews the related Literature that relates to cash transfer for older persons; Chapter Three is on the Methodology that has been applied in the study, with the research design and the sampling procedures, while the data analysis and results are discussed in Chapter Four. Conclusions and recommendations are in Chapter Five of the document.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

The chapter reviews the literature on cash transfer and poverty alleviation. The chapter summarizes the works of literature as well as highlighting the gaps in the literature. The literatures are reviewed objective wise.

2.2 Cash transfer and access to food among older persons

Bailey and Hedlund (2012) studied the impact of cash transfers on nutrition in emergency and transitional settings by reviewing evidence on humanitarian policy. It was revealed that a household uses cash transfer to improve the quality, the quantity ande variety of food they consume hence alleviating poverty. The authors explained that consumers can invest the cash they receive into an income-generating activity which in return improves the food consumption rate of the cash transfer beneficiaries thus indirectly improving food consumption. Importantly, the study further revealed that as a result of this cash transfer households were not skipping meals and there was an increased dietary diversity because they can purchase food that is available whenever they have cash. The study concluded that CCT programs provided a potentially powerful delivery mechanism for improving child nutrition, however, this

study sought to find out if non-conditional cash transfer has the same impact on nutrition among older persons. Additionally, the study used statistical methods to explain the impact of non-conditional cash transfer.

Leroy, Marie and Verhofstadt (2009), studied the impact of cash transfer programs on child nutrition. They used a program theory framework to develop a program impact model and developed an impact pathway model. They hypothesized that CCT programs affected nutrition through several different pathways. They considered household income, food security and diet quality pathway. Their study concluded that CCT has a positive impact on several of the outcomes in the pathway to improved nutrition. They also concluded that there are gaps in knowledge about the mechanism in which CCT programs improve nutrition. Furthermore, the study also used conditional cash transfer and it also focused on children's nutrition and thus this study sought to establish the impact of non-conditional cash transfer among older persons. The findings were presented in form of nutrition indicators of stunting, wasting and overweight and were missing statistical methodology thatcould expain the impact and thus.this study sort use.

Adato and Bassett (2009) in their study on social protection to support vulnerable children and families considered the potential of cash transfers to protect education, health and nutrition. Their study found out that cash transfers have demonstrated large impacts on the education, health and nutrition of children. The study outlined empirical evidence on the impact of cash transfer in South Africa where they based their findings on an extensive literature review and primary evidence from 20 social

transfer programs based in Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe. The evidence from South Africa suggests that cash transfers targeting the elderly can improve children's nutritional status especially if the cash is given to the female pensioners. The current study seeks to develop on this by assessing the food accessibility for the older persons on the program.

Hidrobo et al.(2012) studied the impact evaluation of Cash, Food Vouchers, and Food Transfers among Colombian Refugees and poor Ecuadorians in Carchi and Sucumbíos found that there was a relationship between cash transfer and access to food. Their study measured the dietary food intake (kilocalories) to show the impact of cash transfer on food consumption. Their study showed that cash transfer led to 15% increase in the value per capita calorie consumption. Although the findings provided evidence that there was a relationship between cash transfer and enhanced access to food, the main outcome of the research was to find out between food vouchers and cash transfers which method was the best. Since the study only looked at child nutrition then the study seeks to build on the impact of cash transfer on the older person's access to food. furthermore, their study only measerured the dietary intake as a tool in nutritional study and not the statistical methods to measure associations among older persons.

2.3 Cash transfer and access to health care among the older persons

Fernald, Paul and Neufeld (2008) carried out a study in Mexico on the role of cash in conditional cash transfer programs for child health, growth and development in low-income communities using linear and logistic regression. The study had 2449 children from 506 households enrolled in CCT program. The results revealed that the cash transfer component is associated with better outcomes in child health, growth and development. It also revealed that cash transfer was also associated with children doing well on a scale of motor development. Apart from the study using CCT, it also studied child nutrition and therefore, it is necessary to establish the older person's health care in relation to non-conditional cash transfer. Similarly, like those studies on access to food, the results were focused on nutrition indicators of stunting and wasting in children and statistical method were missing in the way their results were present and thus this study focused on presenting the out of the study in a statistical manner by fitting the output on logistic regression models.

Ranganathan and Lagarde (2012) examined the effect of CCT programs in low and middle-income countries on improving health and encouragement of healthy behavior in Latin America. The study used bibliographic databases and websites that provided evidence of the effects of financial incentive conditions upon specific health-related behavior. From the databases, 13 CCT programs were identified. The results from this study revealed that CCT has been effective in the use of preventive services, improving immunization coverage and other health outcomes as well as encouraging healthy behavior. The study concluded that CCTs are a valuable tool in addressing

obstacles faced by people in poorer countries to access health care services. The study also put more focus on CCT and child health and therefore this study focuses on the non-conditional cash transfer and health care among the older persons. Additionaly, the methodology the study used to make its conclusion was not statitical because it only reviewed bibliographical databases and thus to fill the gap the study used statistical methodology to adress it.

Legarde, Harnes and Palmer (2007) examined how CCT improved uptake of health interventions by determining the effect of cash transfer in improving access to and use of health services as well as improving health outcomes. The authors used publications that met the study design criteria that are randomized control, interrupted time series analysis and controlled before and after study that measured one of the outcomes. The study used 28 reviewed papers and it revealed that that CCT programs are effective in increasing the use of preventive services and sometimes improving health status. Like other studies, this study also used conditional cash transfer and therefore, establishing the effect of non-conditional cash transfer on health care is necessary. Moreover, it is necessary to determine the statistical significance of unconditional cash transfer on healthcare as it is missing in this study.

In a study by Help Age International (2017) titled Cash transfer and older person's access to health care carried out in four countries, Ethiopia, Mozambique, Zimbabwe and Tanzania indicated that older person's in these areas faced difficulties in accessing healthcare. This involved the expenses they incur on transportation and getting the required treatment. The study found out that cash transfers play a major role in removing some of the barriers to the healthcare of the older persons particularly

those related to out-of-pocket expenses. It showed that older persons on the cash transfer program were able to pay for their transportation fee, consultation fee and treatment fee. Health promotions linked to cash transfers were also found to be a factor in encouraging the older persons to seek treatment when the need arises. However, the older persons in these four countries felt that the monetary value of the cash transfer was insufficient to have a major effect on their ability to seek health-care. The study used a desk review of data and literature in all four countries. It used 15 focus group discussions with a total of 134 participants together with a semi-structured interview with older persons and 24 semi-structured interviews with key stakeholders. Qualitative data were complemented by a quantitative survey from Mozambique. 0ut 0f 134 participants 51% of them were on cash transfer. The study showed that as the amount provided in the cash transfer was little the beneficiaries used it on food. Although this study focused on older person's health, their finding was based on a desk-based review of data and literature, therefore this study adopts an interview approach to determine the effect of cash transfer on access to health care by the older persons.

Basically, the literature reviews regarding the effect of cash transfer program and access to healthcare indicate that their exists a relationship between cash transfer and access to health care. However, all these studies analyzed the relationship between conditional cash transfer and access to healthcare among households receiving cash transfers. It is important also to know if the impact is the same when non-conditional cash transfer is given especially among the older persons.

2.4 Cash transfer and access to shelter among older persons

Owour (2014) studied the influence of older person's cash transfers on poverty alleviation. This was a case study carried out in Kibera slums. The author used a descriptive research design and systematic random sampling with a sample of 66 respondents. The study found out that 50% of the beneficiaries believed that cash transfer had achieved its objective on poverty alleviation since they were able to get shelter from the cash provided to them. However, the study showed that even though the program impact is yet to be felt by all beneficiaries, all the beneficiaries agreed that the mode of payment was the best. The author used housing and the amount given to beneficiaries to determine the impact of this program and this study further seeks to find the impact of the cash transfer by looking more at other factors like food accessibility and healthcare.

Wu and Ramesh (2014) examined the poverty-alleviation effects of one of the largest targeted cash transfer programs in the world: The Minimum Living Standard Assistance (MLSA) in China for 1993-2009. The study used linear models of regression analysis in examining the effects. The findings indicated that cash transfer programs were an effective tool in increasing access to shelter and education hence reducing poverty. Although the study used a regression model, the effect on the accessibility to shelter was not brought out in this study and therefore, this study seeks to fill this gap. Masunzu (2014) reviewed the literature on the role played by Conditional Cash Transfers (CCTs) in the process of poverty alleviation by focusing on the most vulnerable children in Jamaica and Tanzania. The study found out that the provi-

sion of CCTs alleviated poverty by enabling poor families to increase enrolling their school-going children as well as pay more visits to health facilities and putting up a decent shelter. This study like the rest focused on children and not older persons hence necessitating a similar study with a focus on the older persons. Additionally, the outcome of the study was based on the review of the literature to make conclusions and therefore, this study focus on interviews by use of questionnaires to establish the effect of the cash transfer.

The studies on the effect of cash transfers on access to quality shelter like the rest focused on conditional cash transfers. Hence, it's important to assess if non-conditional cash transfers have the same impact as conditional cash transfers.

2.4.1 Summary and gaps in the literature

Based on reviews regarding the effect of cash transfer programs and poverty alleviation it is clear that several studies have been conducted on the subject around the world. However, it has been noted that the studies mainly focused on conditional cash transfers and poverty alleviation. Therefore, the impact of unconditional cash transfers on poverty alleviation cannot be established using these studies. Furthermore, some studies have focused on one factor or two measure poverty alleviation living out other factors that contribute towards poverty alleviation. Also, some of the studies have also used different methodologies that do not use statistical approach. There is therefore a need to establish the effect of OPCT on poverty alleviation, especially in Emuhaya sub-county of Kenya.

Chapter 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives an outline of the area of study, the research design which includes how the research was conducted and what data was collected. It further shows the instruments the study used in data collection and how the data was analyzed.

3.2 Area of study

The study took place in Emuhaya Sub- County of Vihiga County. It is one of the five Sub-Counties in Vihiga County. It borders Luanda and Khwisero sub-counties. The Sub-County occupies the western part of Vihiga County.

According to the Population Reference Bureau (2018) report 18% of the population in Emuhaya have a secondary level of education and above with 64% of the residents having a primary level of education only. The Sub-County has the highest percentage use of firewood (96 %) and only 77% of the population uses improved sanitation compared to the other sub-counties. All these factors show that of the five sub-counties of Vihiga county Emuhaya is the the poorest (Population Reference Bureau, 2018).

The report further indicated that the aged dependency ratio for the old in Vihiga

County is 0.124, with Vihiga sub-county having a ratio of 0.125, Hamisi has 0.125, Sabatia 0.125, Luanda 0.114 and Emuhaya has 0.130. Of the five sub-counties, Emuhaya Sub County was selected due to accessibility to the payroll of the OPCT beneficiaries in the sub-county.

3.3 Research Design

The study adopted a case study research design. According to Kothari (2004), a case study often narrows down a very broad field of research problem into one or a few researchable examples. The OPCT program is currently in every part of the country but the study was only based in Emuhaya Sub-county.

3.3.1 Target populatin

The target population for this study was 1067, which is the total number of older persons in Emuhaya Sub-county that are Inua Jamii cash transfer program for the older persons in Emuhaya Sub-County at the time of the research.

3.4 Sample size and Sampling procedure

A sample of 290 was obtained from the target population using simple random sampling. The sample was stratified based on the wards the beneficiary comes from and a participant was drawn by systematic sampling from each stratum. Stratification was done based on the three wards in Emuhaya Sub-County namely, North

East Bunyore, Central Bunyore and West Bunyore Ward. Stratified sampling was selected because payments are normally done per ward therefore it was necessary to group the participants using this method.

The payments are done at the wards on different days and every 5th beneficiary on the line at the pay point who is on older person cash transfer beneficiary was selected if not the category is skipped and the counting continues until the 5th person is an older person beneficiary. The sample size was determined using the Yamane(1967) simplified formula for calculating the sample size. The formula was selected purposefully for the study.

$$n = \frac{N}{1 + Nd^2} \tag{3.1}$$

Where;

n = desired sample size

N =population size

d = the desired level of precision (the range in which the value of the population is estimated to be that is often expressed as a percentage for instance in this study it is ± 5 %)

$$n = \frac{1067}{1 + [1067 \times 0.05^2]} = 290.134 \tag{3.2}$$

Therefore for this study, the desired sample size was 290. To get beneficiaries per ward (nw) that is

The desired sample size for this study is 290.

The sample size per ward was allocated proportionally to the number of beneficiaries in the ward. The beneficiaries per ward were hence obtained using Equation (3.3).

$$n_w = \frac{n_{0w}}{n} \times 290 \tag{3.3}$$

where;

n_w - sample size per ward

n_{0w} - beneficiaries in the ward who are on the payroll

n - total number of beneficiaries on the payrol

3.5 Inclusion and Exclusion criteria

During payment, there are three groups of cash transfer that are normally paid namely; older persons cash transfer, persons with severe disability, and orphans and vulnerable children cash transfer. The participants of the study were older persons living in the three wards of Emuhaya Sub-County namely; North East Bunyore, Central Bunyore and West Bunyore Wards and were on OPCT. Any beneficiary receiving payment in the selected pay points yet does not reside in the ward was excluded from participating in the study. Furthermore, those on the other cash transfer were also excluded from the study.

3.6 Data collected and mode of analysis

The data collected contained a binary variable that represented the dependent variables that are improved access to food, healthcare and quality shelter such that 1- improved and 0- not improved. The independent variables were the responses on the Likert scale that were complimenting the binary variables. The study used both descriptive and inferential data analysis techniques. Descriptive statistics were used to describe the characteristics of the respondents such as the time when the respondent picked their cash, knowledge of the cash they are entitled to and their general household characteristic. Correlation analysis and logistic regression was used to determine the effect of cash transfer and poverty alleviation such that the household cash transfer in a household was compared to the household capability to access food, health care and quality shelter. Furthermore, binary logistic regression was used to establish the probability of the dependent variable (improved access to food, healthcare and quality shelter) on the independent variables that were categorical. Data was obtained from every 5th beneficiary of the older person's cash transfer on the line at the pay point who resides in either North East Bunyore, Central Bunyore and West Bunyore.

3.7 Definition of variables

The main objective of the study was to determine the correlation of the effect of non-conditional cash transfer on poverty alleviation among older persons in Emuhaya

Sub- County, Kenya. In order, to access the effect of OPCT, variables that were used were defined.

1. Food

   The variable was used to measure the ability of the household to get food. The variable was also used to classify whether the beneficiaries had improved access to food or not and was measured on a Likert scale.

2. Healthcare

   The variable measured the ability of older persons to access health care. This variable helps in determining whether beneficiaries have improved health care or not. The ability to access health care was also measured on the Likert scale

3. Quality shelter

   The variable measured the ability of the older person to access quality shelter (this was measured by the current state of the house of the beneficiary's houses). This was based on the opinion of the respondents that were measured on a Likert scale.

4. Cash transfer

   The amount beneficiaries use on food and health care from the allocation they receive from OPCT. In regards to shelter the amount, the beneficiaries used

on either renovating or building up a new shelter from the cash transfer.

5. Socio-demographic characteristics

   The data describes the composition of the population under study namely age, number of dependents, gender, socio-economic status and income.

6. Poverty Index

   The variable measures the poverty level of a household. This is pre-calculated before the beneficiary gets into the older person's cash transfer.

3.8 Validity and Reliability of the research instruments

Validity refers to the ability of a scale to measure what it was intended to. The validity of a questionnaire refers to the extent to which it measures what it was designed to measure (Oladimeji, 2015). The validity of the research instrument was measured using content validity where social development experts who are the program officers in charge were used to verify the content of the questionnaires. According to Oladimeji (2015) content validity refers to the degree to which the questionnaire fully measures the construct of interest.

The reliability of an instrument is measured by evaluating the extent to which the questionnaires produce the same results on repeated trials (Oladimeji, 2015). In this study, reliability was tested by calculating the Cronbach alpha test using results ob-

tained during the pilot study.

3.9 Pilot study

The pilot study was done by using the beneficiary welfare committee members who are also beneficiaries of the older person's cash transfer. The committee contains 10 members so this study used them to pretest the tool. The reliability was then tested by using the Cronbach alpha test given by the formula;

$$\alpha = \frac{N.\bar{c}}{\bar{v} + (N-1)\bar{c}} \tag{3.4}$$

Where;

N= the number of items (in this case the items are 6)

$\bar{c}$=average covariance between item-pairs

$\bar{v}$= average variance

Test results in Table 3.1 indicate a Cronbach's alpha value of 0.743. According to Mohsen and Reg (2011), Cronbach alpha above 0.80 is exemplary, and that in the range of 0.70 and 0.79 is extensive level of consitency. Therefore the index of 0.743 indicate that the instrument is reliable

Table 3.1: Reliability test

Cronbach's Alpha	No. of Items
0.743	6

3.10 Data collection procedures and instruments

3.10.1 Study instruments

Data was collected by administering a questionnaire that contained both closed and open-ended questions. The open-ended questions provided room for the beneficiaries to provide their opinions, remarks and clarify some points that may not have been covered by the close-ended questions. The instruments were administered to the participants face to face by the research assistants. The research assistants were used to avoid biased answers because the participants know the researcher. On the questionnaire, there was a provision for participant identification number which was used to track the beneficiary poverty index at the time of enrolment into the program.

The questionnaire was divided into two sections namely A and B where A provided the socio-demographic characteristics of the participant. This enables to understand in details the characteristics surrounding the participant in the study. Section B of the questionnaire had questions about the objectives of the study. The questions were grouped into four categories, knowledge of the program, OPCT and access to food, OPCT and healthcare and OPCT and access to quality shelter.

3.10.2 Data collection procedure

Data was obtained from every 5th beneficiary of the older persons cash transfer on the line at the pay point who resides in either N.E Bunyore, Central Bunyore and

West Bunyore.

The data collected contained a binary variable that represented the dependent variables that are improved access to food, healthcare and quality shelter such that 1- improved and 0- not improved. The independent variables were the responses on the Likert scale that were complimenting the binary variables.

3.11 Data analysis

The study used both descriptive and inferential data analysis techniques. Descriptive statistics were used to describe the characteristics of the respondents such as the time when the respondent picked their cash, knowledge of the cash they are entitled to, poverty index and their general household characteristic.

Correlation analysis was used to determine the association of cash transfer and poverty alleviation such that the household cash from OPCT was compared to the household capability to access food, health care and quality shelter. The responses on the Likert Scale for each of the objectives were transformed in SPSS to get one variable for each namely; afford food, afford treatment and afford shelter. A correlation was then run against the amount spent on food, healthcare and shelter against each of the variables transformed to get the correlation table. For the logistic regression, the transformed data were run against the binary response of improved access to food, health care and shelter respectively.

3.12 Model specification

Logistic regression models to establish whether cash transfer improved access to food, healthcare, and quality shelter, were specified as models Equations 3.5 ,3.6 and 3.7

$$
\begin{aligned}
In[\frac{P(f)}{1-P(f)}] &= \beta_0 + \beta_1 f_1 \\
\frac{P(f)}{1-P(f)} &= \exp[\beta_0 + \beta_1 f_1] \\
P(f) &= \exp[\beta_0 + \beta_1 f_1][1 - P(f)] \\
P(f) + P(f)[exp[\beta_0 + \beta_1 f_1]] &= \exp[\beta_0 + \beta_1 f_1] \\
P(f)[1 + exp[\beta_0 + \beta_1 f_1]] &= \exp[\beta_0 + \beta_1 f_1] \\
\hat{p}(f) &= \frac{\exp[\beta_0 + \beta_1 f_1]}{1 + exp[\beta_0 + \beta_1 f_1]} \qquad (3.5)
\end{aligned}
$$

where;

f - Binary dependent variable (Improved access to food=1, not improved access to food=0)

$\hat{p}(f)$-Estimated probability that there is improved access to food

$\frac{P(f)}{1-P(f)}$- odds

f_1 - Independent variable (able to feed the whole family)

β_0-Constant β_1-The regression coefficient on the dependent variable food

The full model being tested is such that;

Natural log odds of being able to have improved access to food = Intercept + am

able to feed the whole household (predictor)

$$
\begin{aligned}
In[\frac{P(h)}{1-P(h)}] &= \beta_2 + \beta_3 h_1 \\
\frac{P(h)}{1-P(h)} &= \exp[\beta_2 + \beta_3 h_1] \\
P(h) &= \exp[\beta_2 + \beta_3 h_1][1 - P(h)] \\
P(h) + P(h)[exp[\beta_2 + \beta_3 h_1]] &= \exp[\beta_2 + \beta_3 h_1] \\
P(h)[1 + exp[\beta_2 + \beta_3 h_1]] &= \exp[\beta_2 + \beta_3 h_1] \\
\hat{p}(h) &= \frac{\exp[\beta_2 + \beta_3 h_1]}{1 + exp[\beta_2 + \beta_3 h_1]} \qquad (3.6)
\end{aligned}
$$

where;

h- Binary dependent variable (Improved access to health care=1, not improved access to health care=0)

$\hat{p}(h)$-Estimated probability that there is improved access to health care

$\frac{P(h)}{1-P(h)}$- odds

h_1 - Independent variable (on NHIF as a result of OPCT)

β_2-Constant β_3-The regression coefficient on the dependent variable healthcare

The full model being tested is such that;

Natural log odds of being able to have improved access to food = Intercept + am on

NHIF as a result of OPCT (predictor)

$$
\begin{aligned}
ln[\frac{P(s)}{1-P(s)}] &= \beta_4 + \beta_5 s_1 \\
\frac{P(s)}{1-P(s)} &= \exp[\beta_4 + \beta_5 s_1] \\
P(s) &= \exp[\beta_4 + \beta_5 s_1][1 - P(s)] \\
P(s) + P(s)[exp[\beta_4 + \beta_5 s_1]] &= \exp[\beta_4 + \beta_5 s_1] \\
P(s)[1 + exp[\beta_4 + \beta_5 s_1]] &= \exp[\beta_4 + \beta_5 s_1] \\
\hat{p}(s) &= \frac{\exp[\beta_4 + \beta_5 s_1]}{1 + exp[\beta_4 + \beta_5 s_1]} \qquad (3.7)
\end{aligned}
$$

where;

s- Binary dependent variable (Improved quality of shelter=1, not improved quality of shelter=0)

$\hat{p}(s)$-Estimated probability that there is improved quality of shelter

$\frac{P(s)}{1-P(s)}$- odds

s_1 - Independent variable (completely built the house using OPCT)

β_4-Constant

β_5-The regression coefficient on the dependent variable shelter

The full model being tested is such that;

Natural log odds of being able to have quality shelter = Intercept + completely built the house as a result of OPCT (predictor)

3.13 Logit model variable description

The variables in the logistic models 3.5 ,3.6 and 3.7) are described in Table 3.2

Table 3.2: Variable description for logit model

Variable name	Type	Description
Dependent variable		
Improved access to food	Categorical	Whether or not the beneficiary is able to have three meal a day
Improved access to health care	Categorical	Whether the beneficiary and the household are able to access healthcare
Improved quality of shelter	Categorical	Whether beneficiaries have a decent house or not
Independent variable		
I am able to feed the whole family	Categorical	The beneficiaries are able to buy food with the money received
I am on NHIF as a result of OPCT	Categorical	The beneficiaries are able to seek treatment with ease
I completely built the house using OPCT	Categorical	The beneficiaries are able to live in a decent house

3.14 Logistic Regression Model Evaluation

The evaluation of a logistic regression model involves several parts. First, it looks at the overall model where the relationship between all the independent variables and the dependent variable is assessed. Second, the importance of each of the independent variables needs to be assessed. Third, the predictive accuracy of the model needs to be evaluated and finally, the model needs to be validated.

3.14.1 Statistical significance of individual regression coefficients

If the overall model works well, then the next thing is to establish the importance of each of the independent variables. The logistic regression coefficient for the ith independent variable shows the change in the predicted log odds of having an outcome for a one-unit change in the ith independent variable, all other things being equal. That is if the ith independent variable is changed one unit while all of the other predictors are held constant, log odds of outcome are expected to change by i units. There are a couple of different tests designed to assess the significance of an independent variable in logistic regression, the likelihood ratio test and the Wald statistic (Menard, 2001).

3.14.2 Odds ratio

The odds ratio (OR) is a comparative measure of two odds relative to deferent events. For two events A and B, the corresponding odds of A occurring relative to B occurring is the odds ratio. An OR is a measure of association between an exposure and an outcome. The OR represents the odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure. When a logistic regression is calculated, the regression coefficient is the estimated increase in the logged odds of the outcome per unit increase in the value of the independent variable. In other words, the exponential function of the regression coefficient (exp ( )) is the OR associated with a one-unit increase in the independent variable.

3.14.3 Assumption of logistic regression

Logistic regression does not require many of the principle assumptions of linear regression models that are based on ordinary least squares method-particularly regarding linearity of the relationship between the dependent and independent variables, normality of the error distribution, homoscedasticity of the errors, and measurement level of the independent variables. Logistic regression can handle non-linear relationships between the dependent and independent variables because it applies a non-linear log transformation of the linear regression.

The model assumptions are;

- The outcome must be discrete, otherwise explained as, the dependent variable should be dichotomous (e.g., imoroved vs. not improved).
- There should be no outliers in the data, which can be assessed by converting the continuous predictors to standardized, or z scores, and remove values below -3.29 or greater than 3.29.
- There should be no high inter-correlations (multi-collinearity) among the predictors.
- There should be a linear relationship between the log of odds ratio, or EXP (B) and each independent variable. Linearity with demonstrated if the beta coefficients increase or decrease in linear steps (Garson, 2009). an ordinal or

interval independent variable and the odds ratio can be checked by creating a new variable that divides the existing independent variable into categories of equal intervals and running the same regression on these newly categorized versions as categorical variables.

Chapter 4

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results and discussion of analysis that included descriptive statistics, correlation analysis and regression analysis.

4.2 Household characteristics

Results in Table 4.1indicate the general characteristics of the participants of the study. The mean age of the participants was between 76 years and 80 years. the participants mean number of years on the program was 3 years. 257 of the participants picked the cash by themselves and the household had a mean of 40.01.

Table 4.1: Household characteristics

characteristic	N	mean	standard deviation
Age	290	3	0.889
Time on cash transfer	290	3	0.599
how to receive cash	290	self(257)	0.318
poverty index	290	40.01	4.402

4.2.1 Person who picks cash during payment

Results in Table 4.2 indicate that out of the 290 older persons cash transfer beneficiaries, 257 (88.6 %) of them pick the cash themselves while 33 (11.4%) rely on their caregivers to pick their cash. This determines whether the beneficiary gets all the required amount of cash or not and thus validates the answers provided to answer the study objectives.

Table 4.2: Person who picks cash during payment

variable	frequency	percent
self	257	88.6
caregiver	33	11.4

4.2.2 Knowledge of the beneficiaries on the amount they are to be paid every payment cycle

Results in Table 4.3 revealed that 247 older persons representing 85.2% know exactly how much they were entitled to every payment cycle, 42 of them that is 14.5% were quiet confident to know the amount they are entitled to, 1 of them did not know exactly how much they were entitled to get representing 0.3 of the beneficiaries.

Table 4.3: Knowledge on cash transfer

variable	frequency	percent
No idea	1	0.3
Not quite sure	42	14.5
very sure	247	85.2

4.2.3 Test of normality

Table 4.4 shows result of normality among the main variables that were used to answer the objective of the study. Since the sample was less than 2000, the Shapiro-Wilk test was used to test normality. The study found out that all the variables had a p-value of 0.000. This shows that the data used is normally distributed because their p-value is significant.

Table 4.4: Test of Normality

Variable	statistics	df	sig
Poverty index	0.940	290	0.000
Can afford food as a result of cash transfer	0.928	290	0.000
Can afford treatment as a result of cash transfer	0.867	290	0.000
Can afford shelter as a result of cash transfer	0.929	290	0.000

4.3 Correlation analysis between major factors of poverty alleviation and OPCT

The study conducted correlation analysis to identify the existence of an association between; OPCT and poverty alleviation among older persons in Emuhaya Sub-County. This was done in line with the study objectives based on the null hypothesis of no correlation between non-conditional cash transfer and poverty alleviation.

4.3.1 OPCT and access to food

The second objective of this study was to determine the effect of OPCT on access to food among older persons in Emuhaya Sub-County, Kenya. The results in 4.5 indicate that the correlation between cash transfer and access to food had a correlation coefficient of r=0.739 with a p-value of 0.000. This means that there exists a significant positive association between non-conditional OPCT and access to food an indication of improved access to food.

The findings concur with that of Adato and Bassett (2009) in their study on social protection to support vulnerable children and families and the potential of cash transfer to protect education, health and nutrition who found out that cash transfers improved food security and nutritional status of a household. The beneficiaries indicated that they were able to have three meals per day compared to when they were not on cash transfer and this proves further how their households have improved access to food. A similar finding was projected by Roman, (2010) in his study on Zimbabwe Emergency Cash Transfer (ZECT) pilot program that established that the increase in meals is a result of getting shares of the cash transfers.

4.3.2 OPCT and access to health care

The third objective of the study was to establish the effect of OPCT on access to health care among older persons in Emuhaya Sub-County, Kenya. Table 4.5results showed that the correlation between better life as a result of cash transfer and access to health care had a correlation coefficient of r=0.275 with a p-value = 0.04 thus an

indication of improved health care access.

The findings were consistent with Fernald, Paul and Neufeld (2008) study on the role of conditional cash transfer program on child health, growth and development in a low-income household in Mexico which revealed that the cash transfer component was associated with better outcomes in child health.

4.3.3 OPCT and access to quality shelter

The fourth objective of the study was to examine the effect of OPCT on the quality of shelter among older persons in Emuhaya Sub-County Kenya. The results in Table 4.5 indicated that there exists a significant positive correlation r= 0.395 and p-value =0.006 between better life experienced as a result of cash transfer and access to quality shelter.

The study findings concur with Wu and Ramesh (2014) in China who found out that cash transfer was an efficient tool in access to shelter among the beneficiaries.

The study conducted correlation analysis to identify the existence of an association between; non-conditional OPCT cash transfer and poverty alleviation among older persons in Emuhaya Sub-county. This was done in line with the study objectives based on the null hypothesis of correlation between non-conditional cash transfers.

Table 4.5: Correlation between poverty elevation and cash transfer

Variable		Cash transfer	Afford food	Afford treatment	Afford shelter
Cash Transfer	Pearson (ρ)	1	0.739**	0.275**	0.395 **
	Sig. 2-tail	0.000	0.041	0.006	0.041
Afford food	Pearson (ρ)		1	−0.098	0.271**
	Sig. 2-tail		0.094	0.000	0.064
Afford treatment	Pearson (ρ)			1	0.256**
	Sig. 2-tail			0.436	0.00
Afford shelter	Pearson (ρ)				1
	Sig. 2-tail				0.436

** indicate that correlation is significant at 0.05 level (2-tailed)

4.4 Logistic regression

4.4.1 OPCT and access to food

The second objective of this study was to determine the effect of OPCT on access to food among older persons in Emuhaya Sub-County, Kenya. It was based on the null hypothesis that OPCT has no effect on access to food among older persons in Emuhaya Sub-County, Kenya. Results in Table 4.6 give the estimated logistic regression equation which predicts the odds that an older person on cash transfer is able to improve accessibility to food as a result of the money they receive. The coefficient (0.428) with a p-value of 0.08 for the variable - able to feed the entire family which also has an odds ratio of 1.274. This is an indication that an OPCT beneficiary is 1.274 times likely to rely on cash transfers for food as compared to other sources. The predictor is statistically significant in the logistic model. Furthermore,

the odds ratio predicted by the model is 1.5334. this means that the odds for an OPCT beneficiary relying on cash transfer for food is 1.534 times higher than for those who do not rely on cash transfer.

The results imply that the null hypothesis that OPCT has no effect on access to food among older persons in Emuhaya Sub-County, Kenya is rejected at 5% level of significance. The findings of the study concur with that of Bailey and Hedlund (2012) who studied the impact of cash transfers on nutrition in emergency and transitional settings and found out that cash transfers improve the quality, quantity and variety of food the beneficiaries consume. Substituting the results inTable 4.5 into Equation 3.5 we obtain;

$$\hat{p}(f) = \frac{\exp[0.242 + 0.428f_1]}{1 + \exp[0.242 + 0.428f_1]}$$

Therefore, the logistic regression model for access to food will be;

$$odds(F) = exp[0.242 + 0.428f_1]$$

Table 4.6: Logistic regression of OPCT and access to food

Variable	B	S.E.	Wald	Df	Sig	Exp(B)
Able to feed the entire family	0.428	0.161	7.053	1	0.008	1.534
Constant	0.242	0.421	0.330	1	0.015	1.274

4.4.2 OPCT and access to health care

The third objective of the study was to establish the effect of OPCT on access to health care among older persons in Emuhaya Sub-County, Kenya. This relied on the null hypothesis that OPCT has no effect on access to health care among older persons in Emuhaya Sub-County, Kenya. Results in 4.7 provide the estimated logistic regression equation that predicts the odds that an older person on cash transfer is able to have an improved access to health care as a result of the money they receive. The coefficient (0.870) with a p-value of 0.01 for the variable - able to get treatment which also has an odds ratio of 0. 981. This is an indication that an OPCT beneficiary is 0.981 times likely to rely on cash transfers for food as compared to other sources. The predictor is statistically significant in the logistic model. The number is small because most of the beneficiaries were using on treatment since their NHIF was not active. Furthermore, the odds ratio predicted by the model is 2.388 indicating that the odds for an OPCT beneficiary relying on cash transfer for treatment is 2.388 times higher than for those who do not rely on cash transfer. The equation for estimated probability for improved access to health care after substituting into equation 3.6 was;

$$\hat{p}(h) = \frac{\exp[-0.019 + 0.870h_1]}{1 + exp[-0.019 + 0.870h_1]}$$

The odds prediction model for improved access to health care is;

$$odds(H) = exp[-0.019 + 0.870h_1]$$

Table 4.7: Logistic regression of OPCT and access to health care

Variable	B	S.E.	Wald	Df	Sig	Exp(B)
On NHIF because of OPCT	0.870	0.259	11.317	1	0.001	2.388
Constant	-0.019	0.507	0.001	1	0.010	0.981

Therefore, the study results imply that the null hypothesis that OPCT has no effect on access to healthcare among older persons in Emuhaya Sub-County, Kenya is rejected at 5% level of significance. Legarde et al. (2007) revealed that cash transfer improved uptake of health interventions and thus complementing the findings of this study.

4.4.3 OPCT and access to quality shelter

The fourth objective of the study was to examine the effect of OPCT on the quality of shelter among older persons in Emuhaya Sub-County Kenya. This was based on the null hypothesis that OPCT has no effect on access to quality shelter among older persons in Emuhaya Sub-County, Kenya. The results in Table 4.8 show the coefficient (0.584) with a p-value of 0.000 for the variable access quality shelter which also has an odds ratio of 0. 283. This is an indication that an OPCT beneficiary is 0.283 times likely to rely on cash transfers for shelter as compared to other sources. This indicates that although cash transfer influences the quality of shelter the impact is small and this could be explained by the irregular payment made to the beneficia-

ries which cannot help them put up a house at once.The predictor is statistically significant in the logistic model. Furthermore, the odds ratio predicted by the model is 1.793 indicating that the odds for an OPCT beneficiary relying on cash transfer for quality is 1.793 times higher than for those who do not rely on cash transfer. Likewise, the odds prediction model equation for improved access to shelterafter substitution in Equation 3.7 is;

$$\hat{p}(s) = \frac{\exp[-1.262 + 0.584s_1]}{1 + exp[-1.262 + 0.584s_1]}$$

The corresponding binary regression equation for access to quality shelter would be

$$odds(S) = exp[-1.262 + 0.584s_1]$$

Table 4.8: Logistic regression of OPCT and access to quality shelter

Variable	B	S.E.	Wald	Df	Sig	Exp(B)
Completely build the House as a result of OPCT	0.584	0.132	19.645	1	0.00	1.793
Constant	-1.262	0.331	14.529	1	0.0	0.283

Chapter 5

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter of the study provided a summary of the findings, conclusions and recommendations in line with the study objectives. The main objective of this study was to investigate the association between non-conditional cash transfer and major factors of poverty alleviation among older persons in Emuhaya Sub-County, Kenya. The study specifically did a correlation between cash transfer and food, healthcare and shelter and the study also used logistic regression models to show improved access to food, improved access to health care and improved access to quality shelter. The study employed binary logistic regression analysis to determine the relationship between the variables. It also produced a model for estimated probabilities for each of the variables.

5.2 Summary

5.2.1 OPCT and access to food

The first and main objective of this study was to conduct a correlation study on the effect of non-conditional cash transfer on poverty alleviation among older per-

sons in Emuhaya Sub- County, Kenya, This was measured by looking at three main factors that were used to measure poverty alleviation that is; ability to access food by determining whether the beneficiary is able to have three meals a day, ability to access treatment and the quality of their shelter. The second objective of the study was to determine the effect of OPCT on access to food among older persons in Emuhaya Sub-County, Kenya. It was established that there exists a significant positive correlation between cash transfer and access to food with a p-value of 0.000. The logistic regression model showed that cash transfer improved access to food with a coefficient of 0.428 with a p-value of 0.08 odds ratio of 1.274. Furthermore, the null hypothesis that OPCT has no effect on access to food among older persons in Emuhaya Sub-County, Kenya is rejected at 5% level of significance.

5.2.2 OPCT and access to health care

The third objective of the study was to establish the effect of OPCT on access to health care among older persons in Emuhaya Sub-County, Kenya. The study found out that there exists a positive correlation between OPCT and access to health care with a correlation of r=0.275 and a p-value = 0.04 thus proving that health care has improved. Furthermore, the results from logistic regression showed improved access to health care with the coefficient (0.870) with a p-value of 0.01 for the variable - able to get treatment which also has an odds ratio of 0. 981. The study further tested the null hypothesis that OPCT has no effect on access to healthcare among older persons in Emuhaya Sub-County, Kenya, which was rejected at 5% level of

significance.

5.2.3 OPCT and access to quality shelter

The fourth objective of the study was to examine the effect of OPCT on the quality of shelter among older persons in Emuhaya Sub-County Kenya. It was clear that there exists a positive correlation of r= 0.162 and p-value =0.006 implying improved access to quality shelter. The results from the binary logistics also showed improved access to the quality shelter with the coefficient (0.584) with a p-value of 0.000 for the variable access quality shelter which also has an odds ratio of 0. 283. A null hypothesis based on this objective was such that OPCT has no effect on access to quality shelter among older persons in Emuhaya Sub-County, Kenya was rejected at 5% level of significance.

5.3 Conclusion

5.3.1 OPCT and access to food

The second objective of the study was to determine the effect of OPCT on access to food among older persons in Emuhaya Sub-County, Kenya. The study concluded that there exists a positive relationship between OPCT and access to food. Also using the logistic regression equation, it was clear that cash transfer had improved accessibility to food. Therefore, the first objective of the study was answered by this study.

5.3.2 OPCT and access to health care

The third objective of the study was to establish the effect of OPCT on access to health care among older persons in Emuhaya Sub-County, Kenya. The study concluded that there exists a correlation between cash transfer and access to health care. It was also clear that the level of improvement was significant based on the null hypothesis of this objective. Therefore, the second objective of the study was answered by the study.

5.3.3 OPCT and access to quality shelter

The fourth objective of the study was to examine the effect of OPCT on the quality of shelter among older persons in Emuhaya Sub-County Kenya. It was concluded that there exists a positive correlation between cash transfer and accessing quality shelter. Basing on the null hypothesis it was clear that the quality of shelter of beneficiaries has improved thus answering the third objective.

In conclusion, access to food, health care and quality shelter have improved as a result of older person's cash transfer. Since these three variables are measures of poverty under the OPCT program, then it is clear that poverty has been alleviated as result of cash transfer.

5.4 Recommendation

This study based on the results and conclusions indicated that poverty was alleviated by the use of OPCT. The beneficiary's ability to access food, healthcare and quality shelter which were the measures of poverty alleviation has improved since they became OPCT beneficiaries. It is against these empirical findings that the study made the following recommendations.

First, the sample size used for the study was small due to financial constraints therefore, a large sample size should be considered to access poverty alleviation among the older persons on the OPCT program.

Secondly, the study revealed that access to food is improved and the whole household is able to feed the household. Since household size differs and this affects the quantity of food from the household and therefore the cash provided should put in mind to ensure that the household has improved food access.

Thirdly, improved access to health care had a weak correlation with cash transfer and in order to strengthen the correlation, the government should pay NHIF for all beneficiaries and not a sample.

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APPENDIX

Research Questionnaire for the Beneficiaries

SECTION A: SOCIO-DEMOGRAPHIC INFORMATION

1. What is your ID number?.....
2. What is your age? 65-70 [ ] 71-75 [ ] 76-80 [ ] 81 & Above [ ]
3. How many dependents do you have? None [ ] 1-3 [ ] 4-6 [ ] 7 & Above [ ]
4. How long have you been on the OPCTprogram? Less than 3 years [ ] 3-4 years [ ] More than 4 years [ ]
5. How do you receive the cash from the government? I collect it myself [ ] I use family members [ ] It is delivered to me by government officials [ ] Others(specify)

SECTION B: EFFECT OF UNCONDITIONAL CASH TRANSFER

The table below rates your opinion, Strongly disagree (SD), Disagree (D) Neutral (N) Agree (A) and Strongly Agree (SA) in establishing your source of income for each of the three objectives of the study according to the statements . Please respond

Statement	SD	D	N	A	S A
I know the amount of money am entitled to receive every month					
I get the full amount every time I get paid					
I am able to buy food with the money allocated					
I have acquired a shelter from the money allocated					
I am able to access treatment from the money allocated					
I have other reliable sources of income besides this cash transfer programd					

by ticking in the boxes provided.

OPCT AND ACCESS TO FOOD

a. Am able to have three meals a day with the money I receive from OPCT Yes ()

No ()

Statement	SD	D	N	A	S A
Before enrolment to the program I was able to have three meals a day					
The meal is able to feed my whole household for the entire period until the next payment					
I set my budget to ensure I have food before the next payment					
I stick to my budget always					
I have other sources of getting food					

b. How much do you budget for food every time you receive your money?

c. How much money does your household spend on food in a day?

OPCT AND ACCESS TO HEALTH CARE

a. 1 am able to get treatment as a result of OPCT Yes () No ()

	SD	D	N	A	S A
Before enrolment on cash transfer I was able to seek treatment whenever I felt sick					
Am a beneficiary of NHIF as a result of OPCT					
My whole household is able to benefit from NHIF					
I have other source of getting money for treatment					

OPCT AND ACCESS TO QUALITY SHELTER

a. The house I live in is a result of OPCT Yes () No ()

Statement	SD	D	N	A	S A
Before enrolment I had my own house					
I completely built the house using the cash allocated from the program					
I repaired the house using the cash allocated from the program					
I had other sources that helped me build my house					

CONSENT LETTER

Dear respondent,

RE: REQUEST FOR DATA COLLECTION

I am a student at Maseno University taking masters in Applied Statistics. This is to request for your participation in a study that examines the effect of unconditional cash transfers on poverty alleviation among older persons of Emuhaya Sub-County. Your cooperation and assistance will be highly appreciated.

Thank you.

Yours faithfully,

Josphine Mwaniga