**Targeting cash transfers on the ‘poorest of the poor’ in the slums: how well did the Kenya’s Older Persons Cash Transfer Programme perform?**

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None

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The data used in this paper are products of the African Population and Health Research Centre based in Nairobi, Kenya. The data are shared through a collaboration between the African Population and Health Research Centre and the University of Southampton. The usage and handling of the data are in accordance with the Centre’s guidelines on data access and sharing policies which prohibit third party access unless specifically negotiated and authorized [http://aphrc.org/wp-content/uploads/2014/05/GUIDELINES-ON-DATA-ACCESS-AND-SHARING.pdf].

The African Population and Health Research Centre has also developed a web-based microdata portal for availing metadata and documentation conducted by the Centre that allow online data requests [http://aphrc.org/catalog/microdata/index.php/catalog].

**Targeting cash transfers on the ‘poorest of the poor’ in the slums: how well did the Kenya’s Older Persons Cash Transfer Programme perform?**

**Abstract**

In resource poor environments, identifying those most in need of limited available resources is challenging. Kenya’s older persons cash transfer programme (OPCTP) targeted at the most poor used a 2-stage targeting process to identify beneficiaries, combining community-based selection with a proxy means-test. This paper investigates whether the process ‘correctly’ identified targeted vulnerable older people in Nairobi’s informal settlements and whether receipt of the OPCTP resulted in an improvement in perceived financial wellbeing. Regression results show that individuals with greater need were covered under the OPCTP. Using propensity score matching, the paper evidences that the OPCTP improved subjective financial wellbeing among beneficiaries.

**Keywords:** Kenya, aging, cash transfer, targeting, basic needs

**Introduction**

The number of older people in sub-Saharan Africa is already significant and over the next three decades it is expected to increase rapidly, rising from 49 million in 2015 to 165 million by 2050 (United Nations, 2017). The rapid growth in the population of older people in sub-Saharan Africa presents considerable challenges as the majority are not covered by any social security programmes (Bailey & Turner, 2008). Less than one in five individuals of pensionable age receive an old-age pension (16.9%) compared to 51.5% globally (International Labour Organization, 2014). In response to old age poverty, a growing number of countries in the region have introduced or expanded non-contributory pension or cash transfer schemes for older people (Garcia & Moore, 2012; HelpAge International, 2017). Previous studies on cash transfer programmes have typically focused on vulnerable groups such as orphans and vulnerable children, reflecting the propensity for low and middle income countries to focus on anti-poverty programmes targeted at children and younger adults (Barrientos & Lloyd-Sherlock, 2003). Research on non-contributory pensions is less widespread and limited to specific countries.

In 2006, the Kenyan government implemented an Older Persons Cash Transfer Programme (OPCTP) aimed at vulnerable older people who were deemed most deserving based on a predetermined set of criteria. Identifying those most in need of cash transfer benefits is particularity problematic in resource-poor areas, against a backdrop of unreliable income, earnings and consumption information, and often involves differentiating the beneficiaries from other very poor community members who are almost as deserving of the cash transfer (Ellis, 2012). Unsuccessful targeting can lead to a sense of unfairness about the targeting process which can, in turn, have long running negative implications within the communities (Ellis, 2012) and can damage social cohesion (Freeland, 2018). To avoid this sense of unfairness and to minimize discord amongst otherwise relatively homogeneous populations, universal benefits are generally favored, hence the move towards the universal *Inua Jamii 70+* cash transfer for older people in Kenya. Universal programmes are also favored as being cost effective in countries where there is weak administrative capacity to administer complex targeting or conditional cash transfer programmes (Slater, 2011). In South Africa, targeted social protection programmes are favored as having the greatest impact in addressing extreme poverty (le Roux, 2002). However, programmes targeted at the poor or those facing extreme poverty are known to still exclude the poorest and vulnerable (Pouw et al., 2018). Nonetheless, successful implementation of targeted social protection programmes require effective targeting strategies, particularly in areas with minimal economic differences between individuals or households.

The paper addresses two research questions. The first question seeks to assess whether the OPCTP was effective in reaching the most vulnerable older adults in a resource-poor area by examining the household and individual-level characteristics associated with receipt of the cash transfer. We hypothesise that the hybrid targeting approach, a combination of Community Based Testing (CBT) and Proxy Means Testing (PMT), reaches the poorest older adults if it is observed that money metric measures determine being a beneficiary. If, however, the selection process is based on factors beyond poverty, for instance elite capturing, we hypothesisethat other factors will determine being a beneficiary.

The second research question examines whether receipt of the OPCTP improved the beneficiaries’ perception of whether they have enough money to meet basic needs, using propensity score matching (PSM). Given the high prevalence of poverty among older people living in the Nairobi slums where the study was conducted, the paper hypothesises that if the OPCTP performed well, beneficiaries will be better off than non-beneficiaries in similar circumstances.

Previous analyses on the general impact of established cash transfer programmes have highlighted their role in promoting livelihoods (Fisher et al., 2017), improving intra-household status of female beneficiaries (Bonilla et al., 2017), and investing in human capital among individual household members through improved school enrolment (Fiszbein & Schady, 2009; Kenya CT-OVC Evaluation Team, 2012). Research on the effectiveness of non-contributory pensions or cash transfers, especially for older personsis less widely spread. The large majority of literature on non-contributory pension funds focuses on Brazil’s and South Africa's long-established social pension schemes. Research has dominated that such social pension schemes have improved economic opportunities and beneficiaries’ health status, reducing the probability of living in poverty and skipping a meal (Barrientos, 2003, 2005; Case & Wilson, 2000; HelpAge International, 2003).

The findings of this paper will be of particular interest to policymakers in Kenya, as well as other sub-Saharan African countries which use cash transfer anti-poverty interventions and similar targeting approaches to select beneficiaries for social protection programmes, and scholars focusing on social protection in later life.

**The** **Kenyan Older Persons Cash Transfer Programme**

The Older Persons Cash Transfer Programme (OPCTP) was one of four cash transfer programmes which comprise the Kenya National Safety Net Programme, the others being the Hunger Safety Net Cash Transfer, the Cash Transfer for Orphans and Vulnerable Children and the Persons with Severe Disabilities Cash Transfer. In Kenya, poverty rates and severity of poverty are much greater among older people compared with the general population. Less than 5% of older people have access to contributory pensions, which mainly target formal sector workers (Ezeh et al., 2006; Kakwani, Son, & Hinz, 2006), hence the introduction of OPCTP, a non-contributory pension targeted at the poorest and most vulnerable. The OPCTP aimed to guarantee a basic income for the most vulnerable and poorest older people aged 65 year or older. It was first piloted in three poor districts in 2006/2007, targeting 300 beneficiaries. Following this, it underwent significant expansion, with 343,751 recipients across the country recorded in 2017, each receiving a monthly stipend of 2,000 Kenyan shillings (US$20) dispersed by appointed payment agents (National Social Protection Secretariat, 2017b). In 2017, the Kenyan government extended the remit of the OPCTP to cover all older people aged 70 and over regardless of their income level, with the programme renamed as “*Inua-Jamii 70+*” (Derbyshire, 2018; Hunger Safety Net Programme, 2017). However, despite this enlargement, profound knowledge gaps remain concerning the effectiveness of the OPCTP’s targeting of recipients and the programme’s impact at the individual level.

Prior to the enlargement, the National Social Protection Secretariat (2017a) defined the OPCTP eligibility through the following criteria: 1) being 65 years or older; 2) being poor and vulnerable based on household consumption and expenditure (assessed though a screening questionnaire); 3) the household in which the older person resides must not be enrolled in any other cash transfer program; 4) a member of the household must not be in receipt of any pension and/or regular income; and 5) a member of the household must not be in any gainful employment. Exit from the programme was through death or if a recipient became ineligible having provided false information that meets the eligibility criteria.

The programme used a hybrid targeting model, a combination of Community Based Targeting (CBT) and Proxy Means-Testing (PMT), to select its beneficiaries in order to ensure the programme reaches the most vulnerable older people. First, community informants identified those who, to the best of their knowledge, meet the five programme eligibility criteria, and created a preliminary list of eligible individuals. Involving the community in the beneficiary selection process helps to overcome challenges related to conventional means testing in a context where there is often limited information on income and expenditure. It has been argued that the community is better able than government to determine deprivation using superior local knowledge of who needs assistance (Alatas, Banerjee, Hanna, Olken, & Tobias, 2012; Farrington, Sharp, & Sjoblom 2007).

Conning and Kevane (2002) critically reviewed CBT, pointing out the possible drawbacks of CBT which relate mainly to potential increases in community conflicts and the risk of elite capture, where community elites favor their relatives and friends instead of targeting the most vulnerable community members. To overcome such drawbacks, once the OPCTP community-based screening had beens completed, enumerators from the Ministry returned to the identified households to verify eligibility and evaluate the household’s poverty level using a poverty score card by assigning each household a vulnerability score based on answers to 101 questions primarily on household consumption and expenditure. Finally, based on the poverty score, the identified households were ranked and those considered below a cut-off point are deemed ‘extremely poor’ and added to the beneficiary list (Ministry of Labour and East African Affairs, 2016).

**Methods**

**Data sources and study setting**

This paper focuses on two informal settlements in Nairobi, Korogocho and Viwandani, where the African Population and Health Research Centre (APHRC) runs the Nairobi Urban Health Demographic Surveillance System (NUHDSS). The two settlements are typical of slums in Nairobi where the majority of residents live in severe poverty (Ezeh, Chepngeno-Langat, Kasiira, & Woubalem, 2006; World Bank, 2006). Both slums are situated in a district where the OPTCP was first launched in 2006 and therefore represent areas where the aged urban poor have had the most sustained exposure to cash transfer programmes. The OPTCP was also initially rolled out in selected rural districts where there are similarly high concentrations of poverty and vulnerability.

The NUHDSS was established in 2002. The NUHDSS follows the population living in these two slum areas and collects periodic data on demographic, economic and health transitions as well as household level information on livelihoods and amenities (Emina et al., 2011). The NUHDSS provides a platform for ‘nested’ studies which can be linked to the NUHDSS information using a unique identifier. This paper linked a cross-sectional nested study to the regular NUHDSS information. The cross-sectional survey titled "*Realities and Perceived Impacts of Long Term Care and Social Protection for Older Adults-An Exploratory Study in the Nairobi Urban Health and Demographic Surveillance System (NUHDSS)***"** collected in May 2016. The survey included information on respondents’ enrolment in the OPCTP. The survey aimed to collect data on *all* slum residents 60 years or older. In 2016, 2% of the resident population in the two slums were aged 60 year or older and 1,026 individuals completed the interview, resulting in an overall response rate of 70%. The analytical sample used here was restricted to people 65 years or older (n=601) to correspond to the cut-off age for eligibility in the OPCTP.

**Outcome variables**

The first outcome variable is a binary measure which compares beneficiaries with non-beneficiaries. A beneficiary is defined as an older adult aged 65 plus who was enrolled and receiving OPCTP payments.

The second outcome variable is perceived financial wellbeing which seeks to capture the impact of OPCTP. While cash transfer programmes aim to improve multiple dimensions of poverty, including improvements in human capital and investments in economic activity, impact evaluations for programmes in Sub-Saharan Africa recognise that basic survival are primary issues that have to be tackled (Garcia & Moore, 2012). Given the high prevalence of poverty among older adults living in the Nairobi slums, the paper hypothesises that if the OPCTP was preforming well, beneficiaries will be better off than non-beneficiaries. Perceived financial wellbeing was based on the questions ‘*do you have enough money to meet your basic need*s?’ Studies widely use objective financial indicators such as income to assess perceived financial wellbeing. Criticism of relying only on income posit that other factors that affect financial wellbeing such as ability to cope with unexpected financial situations or preparedness to face unexpected financial shock contribute to the assessment of financial wellbeing (Abrantes-Braga Farah Diba, 2019). Further, perceived financial wellbeing could be based on both objective assessment of finances, for example actual income as well as subjective assessment of for instance desired standard of living, stress over current or future financial security (Netemeyer, Warmath, Fernandes, & Lynch, 2017). Nonetheless, income is strongly positively correlated with overall wellbeing, especially at lower income levels. The argument is that meeting universal basic needs is important, particularly at lower income levels and hence a strong association between income and financial wellbeing among those with lower income levels. (Netemeyer et al., 2017).

**Independent variables**

Money metric measures of welfare (expenditure), as well as nonmonetary measures, were used to evaluate the targeting efficiency and impact of the OPCTP. Expenditure information was collected at household level. Additional indicators used to represent the socioeconomic position of the older adults were *education* and *engaging in livelihood activities*. Due to the low level of education in the informal settlements, education was coded as *no formal education*; *primary education*; *secondary and higher education*. Engaging in livelihood activities distinguished between individuals that *have had an income generating activity in the past 30 days* and those who *did not participate in income generating activities in the past 30 days*. The majority of the population in these informal settlements work in the informal sector. Among the older population, the main type of income generating activity that most of them engage in is petty trading such as selling wares and foodstuff in the streets (Ezeh et al. 2006). Only 16% of those 50 years or older have a salaried job and the proportion is even lower among those 65 years or older (Falkingham, Chepngeno-Langat, Kyobutungi, Ezeh, & Evandrou, 2011).

Other variables were age, partnership status, and health. A*ge* was collapse into 5 year categories (65-69, 70-74, 75 plus). Partnership status distinguished between *currently in partnership* (cohabiting, married) or *not in a partnership* (never married, widowed, separated, divorced)*.* Current and previous health status was used to control for greater prevalence of disabilities and morbidity in older age that can hinder older adults in carrying out income generating actives. Here, it is hypothesised that older adults in poor health depend especially on the OPCTP.

The coding and description of the outcome and control variables are described in Table 1.

<Table 1 about here>

**Statistical analysis**

Bivariate analysis investigated the profile of beneficiaries versus non-beneficiaries.

Fisher's exact test (accounting for few cell observations) and a two sample t-test were used to assess whether there are significant associations between the outcome and control variables, using a 5% significance level. Owing to the dichotomous nature of the outcome variable (beneficiary vs non-beneficiary), binary logistic regression was used to understand the determinants of receiving OPCTP benefits. Some of the individual and household level variables (Table 2) had missing data. The rate of missing data was particularly high for the *expenditure* variable(nearly 8%)which was collected at household level. This study used multiple imputation to impute missing data. The variables in the imputation model included: the outcome variable, all independent variables, and the interaction term. The Stata command **smcfcs** was used and 10 multiple datasets were created. The **mi estimate**command combined the multiple imputed datasets into a single multiple-imputation result (StataCorp, 2013). From the combined file, coefficients and standard errors were adjusted based on the Rubin (1987) combination rules The supplementary materials show the results of sensitivity analyses carried out to identify sources of missing data. Analyses using only complete cases showed very little difference to using multiple imputation for the analysis. For additional information on the missing data analysis, please see supplementary material.

Further analysis was then conducted aimed at understanding the treatment effect of the OPCTP on meeting basic needs. In order to account for any potential selection bias in the receipt of the OPCTP, Propensity Score Matching (PSM) was used. PSM creates a control group that is as similar as possible, in its observable characteristics, to the treatment group, allowing the determination of the treatment effect (Caliendo & Kopeinig, 2005). When the differences between the intervention and control group are purely based on observable differences, matching allows determination of the effect of an intervention when actual randomisation is not possible.

The propensity score was estimated through logistic regression as the estimation involved exploring the differences between older persons enrolled and non-enrolled in the OPCTP in a range of observed characteristics. In order to predict the propensity score accurately it was essential to include those variables in the analysis that determine the receipt of the OPCTP. The validity of PSM is based on the assumption of conditional independence, meaning that all factors that determine the receipt of the OPCTP are observed.

Different matching algorithms can be applied to match the OPCTP beneficiaries (treatment group) to non-beneficiaries (control group) using the estimated propensity score. This paper used the Gaussian Kernel matching technique. The advantage of Kernel matching is that, in contrast to the commonly used nearest-neighbor method, information from all individuals are used instead of the closest match only. The technique compares “the outcome of each treated person to a weighted average of the outcomes of all the untreated persons, with the highest weight being placed on those with scores closest to the treated individual“ (Heinrich, Maffioli, & Vázquez, 2010, p.27). To adjust for cases that were missing in one in the surveys, the propensity score was computed in each imputed dataset and then averaged across datasets (Hill, 2004). Detailed information is provided in the supplementary material.

All analysis was conducted using Stata version 14. The Stata command **psmatch2** was used for the PSM analysis. Kernel matching involved choosing an accurate bandwidth parameter. The default bandwidth for kernel matching using the **psmatch2**command is 0.06. This paper also used a bandwidth of 0.04 and 0.08. Choosing several different bandwidth parameters allows analysis of the sensitivity of the matching results to the choice of the bandwidth. Bootstrapping was used to estimate standard errors, with 1,000 replications.

**Results**

*Is a hybrid targeting approach (CBT and PMT) reaching the poorest older people?*

Out of the 601 study participants, 36% of age-eligible older people (65 and above) had been enrolled and were receiving OPCTP payment (n=218) at the time of the survey (2016).

The socio-demographic characteristics of beneficiaries are compared to non-beneficiaries in order to assess descriptive differences (Table 2). Beneficiaries and non-beneficiaries differed significantly in age, gender, partnership status, level of education, whether they were engaged in livelihood activities and their health status.

OPCTP beneficiaries were more likely to be female (51%) compared to 39% of non-beneficiaries (p<0.001). The two groups were also significantly different in their livelihood status. A higher proportion of beneficiaries (54%) were currently *not* engaged in livelihood activity compared to non-beneficiaries (32%), again reflecting beneficiary eligibility criteria. Correspondingly, 62% of those reporting receipt of OPCTP also reported current health problems that hindered their ability to work, compared with only 52% of non–beneficiaries reported the same (p<0.05).

Furthermore, beneficiaries were found to have lower education (p<0.05) with 48% of beneficiaries having no education, compared to 40% of non-beneficiaries. A higher proportion of non-beneficiaries (9%) had a secondary or higher education against only 4% of OPCTP beneficiaries. Partnership status was found also to be significantly different between beneficiaries and non-beneficiaries, with a higher proportion of non-beneficiaries currently in a partnership (60%) compared to beneficiaries (50%).

Beneficiary households reported a slightly higher proportion of children (aged under 15) living in the household, where 29% of beneficiary households had a child in the households compared to 26% of non-beneficiary households; however, this difference was not statistically significant. The two groups were also not significantly different in terms of which of the two slum areas they resided in.

<Table 2 about here>

Analysis of the above described cross-sectional survey indicated thatin 2016, only 1.8% of non-beneficiaries and 1.4% of beneficiaries reported that they have enough money to meet their basic needs (see Figure 1). However, Figure 2 shows that overall OPCTP households had a significantly lower household expenditure compared to non-beneficiary households (p<0.05).

<Figure 1 about here>

<Figure 2 about here>

Table 3 presents the results of multivariate analysis, modelling correlates of OPCTP receipt. The imputed regression results provide a clear picture of the targeting effects and highlight that receipt of OPCTP was primarily associated with economic rather than socio-demographic characteristics. Those older people who were not engaged in any livelihood activity had a significantly greater likelihood of receiving the OPCTP benefits, and the probability of being selected as a beneficiary decreased with increasing household expenditure. In addition to expenditure and livelihood activities, age was significantly associated with receipt of OPCTP. The likelihood of being selected as a beneficiary increased with age. Other characteristics such as sex, partnership status and education status were found not to be significantly associated with receipt of the OPCTP when the other factors are accounted for.

<Table 3 about here>

*Did the OPCTP improve the beneficiaries’ perception of financial wellbeing?*

While the analysis so far has focused on the targeting of the OPTCP, the next phase of analysis uses PSM to examine whether the OPCTP improved beneficiaries’ perception of having enough money to meet basic needs.

Table 4 reveals that beneficiaries of the OPCTP were more likely to report that they were slightly better off in meeting their basic needs compared to non-beneficiaries. Half (50%) of the beneficiaries reported that they had at least some money to meet their basic needs, compared to 41% of non-beneficiaries (p<0.05).

<Table 4 about here>

Due to potential selection bias, it is open to question as to whether the differences described in Table 4 reflect the accurate impact of OPCTP receipt. The above logistic regression findings (Table 3) were therefore used to estimate the propensity score. The impact of OPCTP, controlling for potential selection bias, is illustrated in Table 5. When conditioning on observable characteristics, a positive significant effect of OPCTP receipt on older people’s perception of their financial wellbeing was found. The difference in reporting having at least some money to meet basic needs between beneficiaries and non-beneficiaries was 13.29% (bandwidth 0.06). Half of the beneficiaries (50%) reported having at least some money to meet their basic needs, compared to just over 36% of non-beneficiaries.

<Table 5 about here>

The three alternative bandwidth parameters used in the PSM analysis shows similar results, indicating the robustness of the above findings. Sensitivity analysis indicated that it was possible to balance the distribution of observed characteristics across the beneficiaries and non-beneficiaries, indicating an overall good matching performance (see supplementary material for detailed information).

**Discussion**

The Older Persons Cash Transfer Programme (OPCTP) is one of the prominent elements of the Kenyan government’s response to the challenges of a growing population of older people who are living in poverty. Between 2006 and 2017, the OPCTP benefit was aimed at the most vulnerable older people who were deemed deserving based on a predetermined set of criteria. A combination of community based targeting and proxy means-testing were used to identify and select beneficiaries (National Social Protection Secretariat, 2017b). This paper aimed to provide evidence whether the OPCTP successfully targeted the most vulnerable older people in an urban poor setting and whether the cash transfer programme fulfils its aim of satisfying beneficiary’s basic needs. Data from two informal settlements in Nairobi, Korogocho and Viwandani, are used.

The regression results provide evidence that, taking different dimensions of living standard into account, individuals with greater needs were covered under the OPCTP. In particular, the differences in benefit receipt by expenditure and livelihood activities confirm that the targeting strategy is operating to identify the poorest older people without alternative sources of income. Whereas almost half of the beneficiaries reported to be engaged in a livelihood activity, it is important to bear in mind that the type of engagement, which the majority of slum dwelling older people participate in, is petty trading such as selling foodstuffs along the footpaths in the community or hawking, with minimal or no gainful returns (Ezeh et al., 2006). The other factor that was significantly associated with benefit receipt was the age of the recipient. The finding on age is most likely explained by the fact that carrying out an income generating activity becomes more difficult with increasing age and suggests that going forward, the age of the oldest household member may be used as a vulnerability criterion.

Community Based Targeting (CBT) risks community elites favoring their relatives and friends, basing selection on factors beyond poverty (Alatas et al., 2012; Conning & Kevane, 2002) as was the case in a ‘farm input starter pack program’ on food security in Malawi (Chinsinga, 2005). The results presented in this paper provide support for a multi-layered targeting approach within a context of widespread chronic poverty where identifying the most vulnerable individuals can be challenging. This is in line with Coady, Grosh, and Hoddinott (2004) that assessed the effectiveness of different cash transfer targeting methods using data from 48 countries. Their study found that no single targeting method is superior compared to other methods, but rather highlights that a combination of different targeting methods seems to perform best.

A key objective of the Kenyan OPCTP is to improve the living standard of the most vulnerable older people by providing regular and predictable cash transfer. This paper indeed finds evidence to support the argument that the OPTCP has had a positive impact. Results from the propensity score matching analysis indicated that 50% of beneficiaries felt that they had at least some money to meet basic needs compared to just over 36% of non-beneficiaries. Although a positive effect of the OPCTP was found, it has to be acknowledged that the OPCTP stipend alone may not be sufficient to meet older people’s needs. Half (50%) of the beneficiaries reported that despite the OPCTP stipend, they still do not have sufficient money to meet their basic needs. This is in line with the findings of Kindiki and Wambu (2015) who interviewed 340 beneficiaries in Nakuru County in Kenya and found that 73% of the beneficiaries complained that the value of the OPCTP stipend was too low to cover their needs. In the current study, 25% of the beneficiaries reported that they primarily depend on the OPCTP as a source of living.

The results of the study outlined in this paper show that the 2-stage selection process encompassing Community Based Targeting (CBT) and Proxy Means Testing (PMT) appears to deliver beneficiaries based on the programme’s officially prescribed guidelines (National Social Protection Secretariat, 2017b). However, as Cruz-Martinez (2016) observes “whether social protection benefits should be assigned to all (universal) or kept only for those who meet certain criteria (targeting) remains one of the most contentious questions in social policy research” (p.1). The concept of poverty targeting has been challenged and the debate on means-testing vs. universal targeting has gained fresh prominence with Freeland (2018) arguing that universal or near-universal approaches perform better compared to means-tested approaches. Universal programmes avoid exclusion and can also reduce costs and complexity related to means-testing (Freeland, 2018). The new universal older person cash transfer programme in Kenya, which was rolled out in July 2017, is expected to have a positive impact, particularly in resource-poor settings such as the Nairobi slums, as it will avoid excluding older people 70 years or older living in poverty. The new programme will be an individual entitlement instead of household entitlement, meaning that more than one person within a household can receive the stipend. This will improve the coverage among those older people currently not enrolled in the OPCTP but still classified as poor. Conversely, raising the OPCTP eligibility age from 65 to 70 will mean that potential beneficiaries have to wait another 5 years before being eligible for the funds.

**Limitations**

A number of important limitations need to be considered. First, the survey used for the analysis in this paper includes no information on the length of time the beneficiary has been enrolled within the OPCTP. This can impact the analysis on the effect of the OPCTP on perceived financial wellbeing. Individuals who received the pension funds for a longer period may experience a greater impact on their perceived financial wellbeing. Second, this paper focuses only on the impact of the OPCTP on material dimensions of well-being. Research shows that other advantages of cash transfer programmes include subjective effects like empowerment of vulnerable groups, such as women and maintaining people’s dignity (Bastagli et al., 2016; Creti & Jaspars, 2006).

Third, the combination of community-based selection and PMT under the OPCTP here seems to ensure targeting of the poorest; however, such hybrid models are not without criticism. Ideally, both methods (PMT and CBT) need to be closely aligned to avoid conflicting results. While the PMT is based on the prediction of household consumption and expenditure, the community informants tend to focus on asset possession, household demographic composition, as well as the work status of adult members (Villa, 2016). Qualitative evidence from the Kenyan Hunger Safety Net Programme confirms the difficulties of hybrid targeting methods where community decisions are overturned (Fitzgibbon, 2014). This paper is unable to address the question of whether CBT alone would have led to a different selection of beneficiaries compared to the hybrid model.

Finally, the limitations of PSM need to be taken into account when interpreting this paper’s results. It cannot be completely ruled out that unobserved individual differences invalidated the assumption of conditional independence. Mantel-Haenszel test statistics can determine how much positive or negative hidden bias is essential for an unobservable factor to affect the findings significantly. Sensitivity analysis helped to recognize the strength of the results presented. The results (shown in the supplementary materials) indicate that the findings for the outcome variable, ‘*having at least some money to meet basic needs’*,are sensitive to possible deviations. This means that some caution is advisable when interpreting the above results; however, it does not mean that unobserved heterogeneity necessarily exists or that there is no treatment effect.

**Conclusion**

The results of this study indicate that the targeting method of selecting beneficiaries for the OPCTP seems to deliver beneficiaries based on money metric measures in line with the officially prescribed guidelines. The findings show no evidence of elite favoring. Moreover, the paper indicates that the programme helped to improve beneficiaries’ perception of having sufficient money to meet basic needs, highlighting that cash transfers to older people can be an instrument in reducing vulnerability, especially in a resource-poor environment. However, this paper also demonstrates that more needs to be done to improve the living standard of older slum residents. Issues of adequacy remain particularly important; a monthly stipend of KES 2,000 (US$20) is too low to cover all beneficiaries’ basic needs. Cash transfer programmes have to be integrated into a wider social security package to considerably improve the financial wellbeing of older people.

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Table 1: Description and coding of variables

|  |  |
| --- | --- |
| Variable | Coding |
| Beneficiary | Coded dichotomously: *yes* - enrolled and receiving payment from the OPCTP; *no* – all other older people aged 65 plus |
| Money to meet basic needs | Based on the question: do you have enough money to meet your basic need. Grouped into 2 categories: ‘*at least a little money’* (completely/moderately/a little) versus ‘*none at all’* |
| Expenditure | Monthly expenditure was grouped into bands of KES 2,000. Given that the OPCTP is a household entitlement, the OPCTP stipend of KES 2,000 (US$20) was deducted from the monthly expenditure for beneficiary households to obtain a measure of ‘ex ante’ expenditure, i.e. prior to the intervention |
| Age | Treated as a categorical variable: (65-69, 70-74, 75+) with 65-69 used as reference category |
| Sex | Coded dichotomously using the category *female* as reference |
| Partnership status | Grouped into 2 categories: currently in partnership, currently not  in partnership (reference) |
| Education | Converted into 3 categories from none (reference) to secondary and higher education |
| Engaging in livelihood activity | Converted into 2 categories with *had no income generating activity in the past 30 days* as reference category |
| Current health problems that affect ability to work | Coded dichotomously (yes, no) |
| Slum area | Coded dichotomously. Reference: Viwandani |
| Household size | Converted into 4 categories: single household, two person, three to four and five plus |
| Child in household | Converted into 3 categories: one, one child in household, two or more children in household |
|  |  |

Table 2: Profile of beneficiaries and non-beneficiaries

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Categories | Non-beneficiary (%) | Beneficiary (%) | Total (%) |
| Age group\*\*\* | 65-69 | 55.09 | 33.49 | 47.25 |
| 70-74 | 23.50 | 27.98 | 25.12 |
| 75 plus | 21.41 | 38.53 | 27.62 |
| Age\*\*\* | Mean | 70.47 | 73.81 | 71.68 |
| Gender\*\* | Female | 38.38 | 51.38 | 43.09 |
| Male | 61.62 | 48.62 | 56.91 |
| In partnership\*\* | Yes | 60.31 | 50.46 | 56.74 |
| No | 37.08 | 49.08 | 41.43 |
| Missing | 2.61 | 0.46 | 1.83 |
| Education\*\* | None | 39.69 | 48.17 | 42.76 |
| Primary | 48.30 | 48.17 | 48.09 |
| Secondary | 9.14 | 3.67 | 7.15 |
| Missing | 2.87 | 0.46 | 2.00 |
| Engaged in livelihood activity\*\*\* | Yes | 67.10 | 46.33 | 59.57 |
| No | 32.11 | 53.67 | 39.93 |
| Missing | 0.78 | 0.00 | 0.50 |
| Current health problems that  affect ability to work\* | Yes | 52.48 | 62.39 | 56.07 |
| No | 47.52 | 37.61 | 43.93 |
| Slum area | Korogocho | 73.11 | 77.52 | 74.71 |
| Viwandani | 26.89 | 22.48 | 25.29 |
| Household size | Single | 42.30 | 39.45 | 41.26 |
| Two Person | 17.23 | 18.81 | 17.80 |
| Three to four | 18.28 | 18.81 | 18.47 |
| Five plus | 19.84 | 22.94 | 20.97 |
| Missing | 2.35 | 0.00 | 1.50 |
| Number of children in household  (0-14) | None | 71.80 | 70.64 | 71.38 |
| One | 11.23 | 11.01 | 11.15 |
| Two or more | 14.62 | 18.35 | 15.97 |
| Missing | 2.35 | 0.000 | 1.50 |
| Observations |  | **383** | **218** | **601** |

1 Total observations=414, 2 Total observations=360, \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table 3: Logistic regression of the probability of receiving OPCTP benefits

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Categories | Odds Ratio | | 95% Conf.  Interval | |
| Expenditure |  | 0.76 | \*\*\* | 0.70 | 0.83 |
| Engaged in livelihood activity | No | 1.00 |  |  |  |
| Yes | 0.48 | \*\*\* | 0.32 | 0.72 |
| Highest education level | Never attended | 1.00 |  |  |  |
| Primary | 1.17 |  | 0.76 | 1.80 |
| Secondary | 0.61 |  | 0.24 | 1.53 |
| Age group | 65-69 | 1.00 |  |  |  |
| 70-74 | 1.65 | \* | 1.05 | 2.60 |
| 75plus | 1.99 | \*\* | 1.25 | 3.17 |
| Gender | Female | 1.00 |  |  |  |
| Male | 0.82 |  | 0.51 | 1.33 |
| In partnership | No | 1.00 |  |  |  |
| Yes | 1.27 |  | 0.79 | 2.03 |
| Slum area | Viwandani | 1.00 |  |  |  |
| Korogocho | 0.83 |  | 0.53 | 1.30 |
| N |  | **601** | | | |

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table 4: Individual’s assessment of having sufficient money to meet basic needs by beneficiary status

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Categories | Beneficiary (%) | Non-beneficiary (%) | Total (%) |
| Enough money to meet basic needs\* | Not at all | 49.54 | 59.01 | 55.57 |
| At least a little | 50.46 | 40.99 | 44.43 |
| Observations |  | **218** | **383** | **601** |

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table 5: Propensity score matching results of ‘having at least a little money to meet basic needs’

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bandwidth | Beneficiary (%) | Non-Beneficiary (%) | Difference (%) | SE\* | P-value |
| 0.04 | 50.00 | 36.54 | 13.46 | 5.17 | 0.009 |
| 0.06 | 50.00 | 36.71 | 13.29 | 5.17 | 0.010 |
| 0.08 | 50.00 | 36.16 | 13.84 | 5.03 | 0.006 |

*\*Bootstrapped*Figure 1: Individual’s assessment of having sufficient money to meet basic needs

Figure 2: Comparison of beneficiaries and non-beneficiaries by monthly expenditure

Exchange rate July 2018: 2000 Kenyan Shilling = 20 US Dollar. Urban poverty line: KSh 5,995.