



Unravelling the wider benefits of social pensions: Secondary beneficiaries of the older persons cash transfer program in the slums of Nairobi

Gloria Chepngeno-Langat^a, Nele van der Wielen^{b,*}, Maria Evandrou^c, Jane Falkingham^d

^a Gerontology, Centre for Research on Ageing, University of Southampton, United Kingdom

^b Centre for Research on Ageing, University of Southampton, United Kingdom

^c Centre for Research on Ageing, Centre for Population Change, University of Southampton, United Kingdom

^d Faculty of Social Sciences, Centre for Population Change (CPC), University of Southampton, United Kingdom

ARTICLE INFO

Keywords:

Ageing
Africa
Kenya
Social protection
Cash transfer

ABSTRACT

A growing number of low and middle income countries have introduced social pension programs for older people. Research has highlighted that the impact of such programs can extend beyond the primary recipient when funds are shared. It is less clear the extent to which such redistribution persists in the lowest resource settings. Using data from a survey conducted in 2016, this paper examines how recipients of the Kenyan Older Persons Cash Transfer Program (OPCTP) living in two slum communities in Nairobi reallocate their social pension by examining the characteristics of older people who are more likely to share their cash and identifying secondary beneficiaries. Findings suggest that 40% of beneficiaries re-allocate some or all of the cash received. The majority of secondary beneficiaries are either grandchildren or children of the primary beneficiary. Overall, a higher proportion of the total cash is shared with secondary beneficiaries living in rural Kenya, as compared to those living in the same household. This highlights the role played by older people, even the most vulnerable, in providing support to wider kin networks; reinforcing the argument that investing in social pensions has much broader potential societal impact than the intended aims of reducing recipient household poverty. By enhancing economic opportunities and investments in human capital more broadly, societies that invest in social pension programs may improve the overall living conditions and experiences of ageing in their countries at a critical moment of global population ageing.

Introduction

The number of people aged 60 or older in less developed regions is increasing rapidly. It is estimated that by 2050, globally, eight out of ten people aged 60 and over will be living in less developed regions (United Nations, 2017). Currently, the majority of people in those regions enter older age with no entitlement to a formal pension or other guaranteed form of income security. Given the high prevalence of poverty and deprivation among older persons, over the last decade Governments in some developing countries have introduced social protection programs specifically targeted at older people (HelpAge, 2003). One such example is the Kenyan Older Persons Cash Transfer Program (OPCTP), introduced between 2006 and 2007 to support the most vulnerable in society.

The growing readiness to invest in social protection programs in sub-Saharan Africa has been shaped by the success of long established

social protection programs internationally, namely South Africa, Brazil and Mexico (Andrews, Das, Elder, Ovadiya, & Zampaglione, 2012; Barrientos, 2003; Sagner, 2000; Skoufias, Unar, & Gonzalez de Cossio, 2013; The Kenya CT-OVC Evaluation Team, 2012). Research has highlighted that social pension payments can improve older people's economic independence and increase their economic resources (Chen, Eggleston, & Sun, 2017). Moreover, although there is evidence that social pension recipients see those funds as their own income (Møller & Sotshongaye, 1996; Sagner & Mtati, 1999b; Schatz & Ogunmefun, 2007), such transfers can have an impact beyond the primary beneficiary through the sharing of pension benefits with other household members (Lloyd-Sherlock, Barrientos, Moller, & Saboia, 2012; Møller & Sotshongaye, 1996; Stewart & Yermo, 2009). Reliable income from cash transfers allow beneficiaries to not only sustain spending on food for the household, but also to use money for other purposes, including paying for healthcare and school fees for grandchildren (Case & Menendez,

* Corresponding author.

E-mail addresses: G.C.Langat@soton.ac.uk (G. Chepngeno-Langat), n.van-der-wielen@soton.ac.uk (N. van der Wielen), maria.evandrou@soton.ac.uk (M. Evandrou), J.C.Falkingham@soton.ac.uk (J. Falkingham).

<https://doi.org/10.1016/j.jaging.2019.100818>

Received 21 May 2019; Received in revised form 20 August 2019; Accepted 15 September 2019

Available online 10 November 2019

0890-4065/ © 2019 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

2007; DFID, 2011; Heslop, Agyarko, Adjetej-Sorse, & Mapetla, 2000; Tangwe & Gutura, 2013).

Schröder-Butterfill, 2004 argues that older people often act as the 'economic pillars' of multi-generational families, with pension income affording older people the opportunity to act as providers of support in the household and community. Data from rural Java (Indonesia) showed that pension funds provide a significant vehicle for economic redistribution within family networks (Schröder-Butterfill, 2004). Similarly, evidence from South Africa and Brazil revealed that the majority of non-contributory pension beneficiaries share a substantial sum of the pension fund within the household (Lloyd-Sherlock, Barrientos et al., 2012; Tangwe & Gutura, 2013). It is argued that older people's cash transfers can play a critical role in reducing the household poverty of beneficiaries, as well as improving investments in human capital among younger household members, given the tendency of recipients to share their cash transfer funds with younger kin (Duflo, 2000; Duflo, 2003; Holzmans, Robalino, & Takayama, 2009).

Most investigations of the wider benefits of social pensions have focused on middle income countries, such as South Africa and Brazil. Much less well understood, however, are transfers from the older generation to kin in very low resource settings, such as the informal settlements which are common across sub-Saharan Africa; according to UN-Habitat, over half the urban population of sub-Saharan Africa are living in slums (UN-Habitat, 2015). The populations of most cities in sub-Saharan Africa remain relatively youthful compared to the national average or rural populations, reflecting the youthful age structure of migration. The proportion of older people in some cities can be as low as 1%, compared with a national average of nearly 5% (Emina et al., 2011); however those aged 65 and over are now the fastest growing section of the population (Bennett, Chepngeno-Langat, Evandrou, & Falkingham, 2016; United Nations, 2015). Older people living in the informal settlements of urban areas face high income insecurity in a harsh environment (Aboderin, Kano, & Owii, 2017). Lloyd-Sherlock, Minicuci, Beard, and Chatterji (2012) argue that "in poorer households, it is more likely that the pension income will be redistributed" (p. 2161) and that even small benefits will have significant impacts as pension benefits provide a guaranteed and reliable income source.

Previous research has recognized the central role that older people in sub-Saharan Africa play in providing support to their kin networks. Aboderin and Beard (2015) point out that "within families, older people are often carers or guardians of younger kin. They directly shape younger generations' access to health, education, and other capabilities, and thus their future human capital" (p. 9). Much of existing research has focused on the emotional or practical support provided by older people to family members, with particularly older women providing childcare (Bohman, van Wyk, & Ekman, 2009; Nkosinathi Mduuzi, 2016) or help with domestic tasks (Mudege & Ezech, 2009). The evidence of monetary support provided by older people is more limited, with prior research on the impact of non-contributory pensions on beneficiaries and their households in sub-Saharan Africa mainly focused on South Africa's social pension scheme. Here, living arrangements appear to be important, with older people living in multi-generational households being more likely to share pension income (Møller & Sotshongaye, 1996). Similarly, van Vuuren and Groenewald (2000) found that among black South African pension beneficiaries, pension sharing was only common among multi-generational households, with pensioners living alone being less likely to share their funds. Barrientos (2005) found that living in a household with a pension recipient reduced the probability of the entire household being in poverty. Research suggests that pension receipt may even alter household structures (Mase, 2013); for instance, it was found that South African households with a pensioner were more likely to contain three generations (Case & Deaton, 1998). Using data from Agincourt (South Africa), Schatz, Madhavan, Collinson, Gómez-Olivé, and Ralston (2015) also found that pensioners' households are commonly multi-generational, whilst female beneficiaries not sharing their pension were

more likely to be living alone (Schatz & Ogunmefun, 2007).

Much less is known about who the secondary beneficiaries are in an urban poor context, where traditional multigenerational living arrangements are not always the norm. Unlike older people living in rural areas, older people living in the informal settlements of Viwandani and Korogocho (Nairobi) were found to predominantly live alone (Ezech, Chepngeno-Langat, Kasiira, & Woubalem, 2006). A study in Uganda found that older people living in urban areas are more likely to feel lonely due to a more isolated lifestyle and the traditional African spirit of sharing being less strong in urban areas (Nzabona, Ntozi, & Rutaremwa, 2015). Previous research has highlighted that secondary beneficiaries are not exclusively household members of the pension recipient. Bohman et al. (2009) argue that "the African extended family does not necessarily solely include in the household those ties of kinship, but also other individuals who are defined as family members" (p. 446). Sagner and Mtati (1999b) report that households in Africa can be "stretched" over considerable geographical spaces" (p. 401). Research confirms that pension beneficiaries reallocate their stipend to family members living in the same household, but also those living elsewhere (HelpAge International, 2003), which makes it necessary to examine patterns of exchange within and beyond the household. Within sub-Saharan Africa, households are inter-connected between rural and urban areas with families and kin dispersed across space. While part of the household migrates to urban areas, others remain located elsewhere, mostly in rural areas. Research has found that remittances from migrants towards those 'left behind' are sent as a form of obligation, social insurance, connectedness, or to cement a return option (Batista & Umblijs, 2016; De Weerd & Hirvonen, 2016; Lux, 1972). However, the assumption has been that over time these connections would become more symbolic than material (Mberu et al., 2013). If this is the case, then older migrants living in the Nairobi slums may be linked more through social or cultural ties rather than financial transfers and we may not expect to see significant sharing of pensions with kin living outside of the slum settlements.

Cox and Rank (1992) argue that the motivation for making inter-generational transfers can be explained by reciprocity and exchange. Sagner and Mtati (1999b) research in Khayelitsha, South Africa found that "many older Africans [...] believe that if they do not share their pensions with their kin, they do not have much chance of being helped in times of need" (p. 393). On the other hand, there is evidence that altruistic feelings between family and kin networks may lead to generational (within and between) obligations and transfer of material resources, care and support (Aldieri & Fiorillo, 2015; Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002). Highlighting the significance of kinship in the African context of pension sharing, Sagner and Mtati (1999a) argue that mass unemployment and poverty in sub-Saharan Africa place pressure on beneficiaries to share their pension funds with other family members. Similarly, Schwartz and Querino (2002) found that pension sharing in Brazil can have a significant impact on family solidarity.

Numerous studies reveal that if pension income is shared, children or grandchildren are the recipients. In Africa, migration of working age adults in search of employment and the HIV/AIDS epidemic resulted in older people raising grandchildren in skip-generation households (Foster, 2000; Schatz, 2007). Nyirenda, Falkingham, Evandrou, Hosegood, and Newell (2014) found that in households where the older person is the only source of income, the direction of support tended to be downwards (from the older person to the younger person). Møller and Sotshongaye (1996) found that the South African old-age grant was used to support school-age children by paying grandchildren's school fees. Case (2004) showed that in households where pension income was pooled, the probability of children skipping a meal reduced. Duflo (2003) found that pension receipt by women improved the nutritional status of girls within the household but not those of boys. Yet, Ardington et al. (2010) reported that female South African older adults were less likely than men to provide financial support to their own

children. A primary concern for pension re-allocation is the potential negative effects of competing intra-familial claims on the resource, unmanageable responsibilities upon older people to care for younger family members, as well as the risks of conflict between beneficiaries and other family members potentially resulting in abuse towards older beneficiaries (Aboderin & Ferreira, 2008; Barrientos & Lloyd-Sherlock, 2003; Ferreira & Lindgren, 2008; Lloyd-Sherlock, Penhale, & Ayiga, 2018; Sagner & Mtati, 1999a).

While the existing literature supports the view that social pension provision can have an impact beyond benefiting older people, particularly in multigenerational households, important knowledge gaps remain. Although countries in Africa such as Kenya, Lesotho and Zambia introduced social protection programs for older people (Holzmann et al., 2009), there is only a very limited set of studies in the region outside the exemplar of South Africa (Case & Deaton, 1998; Ralston, Schatz, Menken, Gómez-Olivé, & Tollman, 2015) and pilot work from Uganda (The World Bank, 2014).

This paper therefore adds to the evidence base by focusing on the Kenyan OPCTP. In doing so it both extends the regional reach and adds a new dimension by examining the extent to which the benefits of social pensions are shared by recipients living in the slums, examining the characteristics of both the primary and secondary beneficiaries living in two informal settlements. This research can inform policy debates on the future development of the OPCTP in Kenya and comparable schemes in sub-Saharan Africa, advancing academic and political discourse on the central role of older people in sub-Saharan Africa in providing material support to their kin networks and on the role of non-contributory pensions as a vehicle for fulfilling this obligation.

The Kenyan older persons cash transfer program

The Kenya government introduced the Older Persons Cash Transfer Program in 2006 in response to high levels of poverty and vulnerability among older people. It was first piloted in selected counties with known high levels of poverty, including Nairobi, prior to being rolled out to the entire country. By 2017, the scheme covered 343,751 beneficiaries (National Social Protection Secretariat, 2017b).

A stipend of 4000 Kenya shillings (US \$38) is paid to beneficiaries at bi-monthly intervals which is delivered through the Equity Bank and Kenya Commercial Bank (National Social Protection Secretariat, 2017a). Between 2006 and 2017, the OPCTP was targeted at the most poor and vulnerable people aged 65 years or older. The benefit was reformed and as of July 2017 all older people aged 70 and above are now eligible to receive a universal old age pension; however, the OPCTP continues to exist for those aged 65–69 who already received payments under the OPCTP. This paper analyses data from 2016 and thus predates the roll out of the new universal pension. Although the eligibility criteria for the benefit have been reformed, the research presented here remains relevant, providing important insights into the lives of the beneficiaries and, in particular, the wider social and familial pathways of OPCTP benefit redistribution.

Methods and study context

The objective of this paper is to examine transfers by older people who are in receipt of the OPCTP in Kenya. This paper first investigates factors associated with an older person reallocating their social pension, followed by an in-depth analysis of the patterns of primary and secondary beneficiary dyads. It aims to address two vital research questions: i) *what are the characteristics of older people who are more likely to transfer their cash, and ii) who are the secondary beneficiaries?*

This study focuses on two informal settlements in Nairobi, namely Korogocho and Viwandani, where the African Population and Health Research Centre (APHRC) established the Nairobi Urban Demographic Surveillance System (NUHDSS) in 2002. The NUHDSS is the first urban demographic surveillance platform in sub-Saharan Africa (Beguy et al.,

2015), and the two slums are characterized by a high level of poverty, poor sanitation, pollution, poor housing conditions and overcrowding (Amendah, Buigut, & Mohamed, 2014; Ezeh et al., 2006). Although the two study areas are very similar, they also differ in some crucial respects. Viwandani is closely located to Nairobi's industrial area, which is reflected in the population's age and sex structure. Most of Viwandani's residents are young male industrial workers with slightly higher education levels compared to residents living in Korogocho (Ezeh et al., 2006).

The NUHDSS collects key periodic data on demographic and health transitions, livelihoods and amenities on all usual residents in the two slums and provides a robust platform for nested surveys using the NUHDSS infrastructure. For detailed information on the NUHDSS see Beguy et al. (2015). A 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)*' was conducted in the NUHDSS between May and September 2016 by APHRC. Based on information from the surveillance database, in 2016 only 2%¹ of the 73,803 resident population in the two slums were aged 60 year or older. The target was to collect information on all older slum residents aged 60 years or older; 1026 individuals completed the interview, resulting in an overall response rate of around 70%. The OPCTP is means tested, thus not every older person in the Nairobi slums received the stipend. Among the respondents, 215 age-eligible older people (65 and above) reported that they were in receipt of the OPCTP. These 215 recipients comprise the sample for the analysis in this paper. The survey further collected additional information on all secondary beneficiaries with whom OPCTP funds have been shared.

The main outcome variable of interest, the re-allocation of OPCTP funds, is a binary measure (shared OPCTP funds directly or indirectly through in kind payments vs did not share OPCTP stipend with others). Participants were asked how they spent the most recent OPCTP stipend and whether they '*gave any of it to someone else*' (direct transfer) or '*used some of the OPCTP funds to pay for personal needs of others*' (indirect transfer). Those who responded 'yes' were asked to list these secondary beneficiaries and their details, including how they are related, where the person lives, the amount given and for what purpose. Each primary beneficiary (older person) could report on the details for multiple but a maximal of seven secondary beneficiaries.

The first part of the analysis focuses on the association between individual characteristics, self-perceived wellbeing and socio-economic characteristics on the likelihood of pension sharing. The variable age was included as a categorical variable (65–69, 70–74, 75 plus). Partnership status was coded as a dummy variable capturing whether the respondent was 'currently in partnership' (cohabiting, married) or 'not in a partnership' (never married, widowed, separated, or divorced).

The survey participants were asked to self-rate their wellbeing on a five-point Likert scale. Participants were asked whether they had 'enough money to meet basic needs' and to rate their current overall happiness. For the analysis in this paper, both variables were collapsed into three categories (see Table 1). Different indicators were used to represent the socio-economic position of the respondents, including education level and working status, combined with the main source of livelihood. Due to the low educational attainment among older people in this study site, the variable *education* distinguished between 'no formal education' vs 'received primary or higher education'. The main source of income was categorized into three groups; 'currently working', 'not working and depending on the OPCTP funds'; 'not working and depending on other income sources'. Other income sources included 'own or spouse work', 'savings', or 'support from relatives or others'. Current working status was based on the survey question

¹ In comparison, 4.3% of the total population in Kenya is estimated to be aged 60 or above (United Nations, 2017).

Table 1
Description and coding scheme of variables.
Source: Authors.

Variable	Description
OPCTP transfers	Coded dichotomously; yes gave part of OPCTP funds someone else/used funds to pay for personal needs of others = 1.
Sex	Dummy variable; female = 1.
Age group	Treated as a categorical variable; “65–69,” “70–74,” “75 and above”.
Ethnicity	Categorized into 5 categories; “Kikuyu”, “Luhya”, “Luo”, “Kamba”, and “other”.
Partnership status	Grouped into 2 categories; currently in partnership (cohabiting, married), currently not in partnership (never married, widowed, separated, or divorced).
Self-reported overall happiness	Converted into 3 categories: “very happy/happy”, “neither happy nor unhappy”, “unhappy/very unhappy”.
Enough money to meet basic needs	Converted into 3 categories: “completely/moderately”, “a little”, “none at all”.
Main source of livelihood	Grouped into 3 categories: “currently working”, “not working and depending on the OPCTP funds”; “not working and depending on other income sources”. Latter includes own or spouse work, savings, support from relatives or others.
Education	Grouped into 2 categories: “no education” and “some form of formal education (primary or higher)”.
Child in household	Coded dichotomously (yes, no). Child defined as a household member below the age of 15.

^a Based on a 5-point Likert scale (none to completely): only 3 people reported that they have completely enough money to meet basic needs, no one reported “mostly”.

whether or not the individual has had an income generating activity in the past 30 days. Table 1 summarizes all the variables used in this paper as well as their coding scheme.

Owing to the dichotomous nature of the outcome variable, binary multiple logistic regressions examined the characteristics of older people who are more likely to transfer their cash. A sequential model-building process was applied to understand how individual characteristics, self-perceived wellbeing and socio-economic characteristics determine the likelihood of sharing the OPCTP funds. The first model controlled for individual level variables. The second model expanded upon the first model and added self-rated or self-perceived wellbeing. Socio-economic and household level characteristics were controlled for in the final model (model three). Fisher's Exact test, accounting for small cell sizes, was used for bivariate analysis of outcome and independent variables.

Descriptive analysis explored who the secondary beneficiaries are. The Stata command `mrtab` was used to allow tabulation of multiple responses. Here, the Bonferroni adjustment to the *p*-values was employed to address the problem of multiple comparisons. The complete analysis was carried out with the data software Stata 14 (StataCorp, 2018).

Results

What are the characteristics of older people who are more likely to transfer their cash?

Table 2 shows that 40% of beneficiaries reported having shared their OPCTP funds either directly or indirectly with someone else. A greater proportion of beneficiaries (24%) reported that they shared the OPCTP funds directly with someone else (direct transfers), while only 10% reported that they used part of the money to pay for the needs of someone else (indirect transfers). Furthermore, 6% of beneficiaries reported that they made direct as well as indirect transfers. Table 3 illustrates some of the main characteristics of the beneficiaries who re-

Table 2
Percentage of older OPCTP beneficiaries engaged in transfers.
Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016.

	Percentage
Any transfers	6.05
Shared OPCTP funds directly and used funds to pay for needs of others	6.05
Gave OPCTP money to someone else	24.19
Used OPCTP funds to pay for needs of others	9.77
Did not share OPCTP funds	60.00
N	215

Table 3
Prevalence of OPCTP sharing by background characteristics.
Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016.

Variable	Characteristic	Shared OPCTP funds (%)	N
Sex	Female	39.64	111
	Male	40.38	104
	<i>p-value</i>	0.511	
Age group	65–69	36.99	73
	70–74	44.26	61
	75 plus	39.51	81
	<i>p-value</i>	0.692	
Ethnicity	Kikuyu	40.32	124
	Luhya	45.45	11
	Luo	53.33	15
	Kamba	44.00	25
	Other	30.00	40
	<i>p-value</i>	0.532	
Marital status	Not married	41.51	106
	Married	38.53	109
	<i>p-value</i>	0.678	
Main source of livelihood	Currently working	45.97	124
	Pension	27.08	48
	Other source of income	37.21	43
	<i>p-value</i>	0.072	
Education	None	38.46	104
	Primary and higher	41.44	111
	<i>p-value</i>	0.678	
Child in household	No	40.40	151
	Yes	39.06	64
	<i>p-value</i>	0.880	
Self-reported happiness	Happy	40.45	89
	Neither happy or unhappy	34.67	75
	Unhappy	47.06	51
	<i>p-value</i>	0.383	
Enough money to meet basic needs	Moderately	39.73	73
	A little	34.29	35
	None	42.06	107
	<i>p-value</i>	0.732	
Total		40.00	86

Analysed the data with Fisher's Exact test.

allocated their OPCTP funds.

It is apparent from Table 3 that few older people whose main source of income is the OPCTP, shared their funds. Only 27% of people who depend on the OPCTP as a main source of income shared their funds, compared to 46% of those whose current job is the main source of income. No gender differences in the likelihood of sharing the funds were found in Table 3. Both males and females who are currently working are most likely to share their pension benefits with kin.

Table 4
Logistic regression results: probability of sharing OPCTP funds with someone else.
Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016.

		Model 1			Model 2			Model 3		
		Odds ratio	95% CI		Odds ratio	95% CI		Odds ratio	95% CI	
Sex	Female	1.00			1.00			1.00		
	Male	1.29	0.59	2.82	1.45	0.65	3.25	1.31	0.56	3.04
Age group	65–69	1.00			1.00			1.00		
	70–74	1.27	0.62	2.60	1.24	0.60	2.56	1.30	0.62	2.73
	75 plus	1.14	0.57	2.27	1.05	0.52	2.12	1.24	0.58	2.66
Ethnicity	Kikuyu	1.00			1.00			1.00		
	Luhya	1.33	0.37	4.82	1.15	0.31	4.34	1.06	0.27	4.16
	Luo	1.68	0.56	5.00	1.55	0.51	4.75	1.40	0.45	4.37
	Kamba	1.19	0.49	2.84	1.21	0.50	2.91	1.15	0.46	2.83
	Other	0.65	0.30	1.42	0.59	0.27	1.33	0.71	0.29	1.72
Marital status	Not married	1.00			1.00			1.00		
	Married	0.73	0.33	1.61	0.68	0.30	1.53	0.75	0.33	1.73
Self-reported happiness	Happy				1.00			1.00		
	Neither happy or unhappy				0.72	0.37	1.42	0.79	0.40	1.58
	Unhappy				1.34	0.63	2.86	1.53	0.70	3.35
Enough money to meet basic needs	Moderately				1.00			1.00		
	A little				0.75	0.31	1.82	0.77	0.31	1.88
	None				1.07	0.55	2.07	1.11	0.56	2.18
Main source of livelihood	Currently working							1.00		
	Pension							0.44*	0.20	0.98
	Other source of income							0.67	0.30	1.48
Education	None							1.00		
	Primary and higher							0.98	0.49	1.95
Child in household	No							1.00		
	Yes							1.02	0.53	1.96
N		215			215			215		

* $p < .05$.

Table 4 summarizes the logistic regression results. Model 1 indicates no significant differences in the likelihood of pension sharing by socio-demographic characteristics. Model 2 further reveals no significant differences in the likelihood of sharing OPCTP funds between those who reported that they have ‘no money to meet their basic needs’, compared to those who reported having ‘moderate amounts of money’. Likewise, overall happiness was found to have no effect on the likelihood of pension sharing.

Model 3 adds social-economic and household characteristics. While, educational status was found to have no significant effect, Model 3 suggests that those older people who solely depend on pension income are significantly less likely to share their funds compared to those who are currently working. Having a child in the household was found to have no effect on the likelihood of pension sharing. Sensitivity analysis conducted using household size and number of children in the household also showed no significant effect.

Who are the secondary beneficiaries?

Table 5 shows that the majority of direct or indirect secondary beneficiaries were either children or grandchildren of the primary beneficiary. While indirect transfers were mainly given to

Table 5
Relationship of secondary beneficiaries to respondent.
Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016.

	Direct transfers			Indirect transfers		
	Frequency	Percent of responses	Percent of cases	Frequency	Percent of responses	Percent of cases
Own child	36	40.00	56.25	14	43.75	50.00
Spouse	13	14.44	20.31	1	6.25	7.14
Grandchild	32	35.56	50.00	15	46.88	53.57
Other relative	9	10.00	14.06	1	3.13	3.57
Total	90			32		

grandchildren, direct cash transfers were also made to the spouse or other relatives.

From the data in Table 6, it can be seen that the majority of secondary beneficiaries lived with the respondent in the same household, although it has to be acknowledged that the usual place of residence was unknown for 35% of indirect secondary beneficiaries. 25% of direct secondary beneficiaries were living in rural Kenya and 11% of direct secondary beneficiaries lived elsewhere in Nairobi, indicating that funds were shared beyond the household. Fig. 1 enhances Table 6 and shows that the majority of direct secondary beneficiaries who lived in the same household were grandchildren of the primary beneficiary, while secondary beneficiaries not living in the same household were predominantly the (adult) children of the primary beneficiary or the beneficiary's spouse.

What proportion of the OPCTP funds was shared directly?

Table 7 shows the proportion of the OPCTP cash transferred by residence and relationship to secondary beneficiary. The results indicate that on average, 44% of the total value of the cash received was given directly to secondary beneficiaries. However, the range of the amount shared differed considerably, from only 3% to re-allocating the

Table 6

Usual place of residence of secondary beneficiaries.

Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016.

	Direct transfers			Indirect transfers		
	Frequency	Percent of responses	Percent of cases	Frequency	Percent of responses	Percent of cases
Within same household	58	64.44	90.63	14	43.75	50.00
Nairobi/other urban	10	11.11	15.63	4	12.50	14.29
Rural Kenya	22	24.44	34.38	3	9.38	10.71
Unknown	0			11	34.38	39.29
Total	90			32		

entire OPCTP fund to someone else. The overall amount shared did not differ considerably by the relationship to the secondary beneficiary. Only a slightly higher share was given to children or grandchildren of the primary beneficiary (47% and 46% respectively), compared to the spouse or other relatives (44% and 42% respectively). Males on average re-allocated around 49% of their OPCTP benefits. This was higher than that for female beneficiaries, who shared on average 38% of their funds (Fig. 2).

Interestingly, although the majority of secondary beneficiaries lived in the same household, a higher share of the cash was shared with secondary beneficiaries living in rural Kenya (51%), compared to those living in the same household (45%) (Table 7). Yet, when looking at the frequency of sharing, it can be seen that secondary beneficiaries living in the same household or elsewhere in Nairobi were more frequently supported, compared to those not living in the same household (Fig. 3). Almost half (46%) of secondary beneficiaries not living in the same household only received one off support.

Did the beneficiaries experience any negative impact?

Fig. 4 explored the potential negative impacts of the OPCTP. The figure showed that the majority of beneficiaries reported that the OPCP did not cause tension between family members or among younger and older community members.

Table 7

Average proportion of the OPCTP cash transferred by gender and relationship to secondary beneficiary.

Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016.

		Mean	SD	Min	Max
Total		43.51	25.59	2.50	100.00
Relationship to secondary beneficiary	Own child	47.10	30.81	2.50	100.00
	Spouse	43.54	18.52	18.75	75.00
	Grandchild	46.25	24.51	6.25	100.00
	Other relative	41.61	25.99	12.50	87.50
Location of secondary beneficiary	Same household	44.63	26.38	6.25	100.00
	Nairobi/other urban	33.61	24.59	2.50	75.00
	Rural Kenya	51.27	26.37	6.25	87.50

Discussion

The family system in sub-Saharan Africa is characterized by complex relationships of material and financial support systems between members of an extended family network. Due to the limited and underdeveloped nature of formal support systems, the family meets most of the financial obligations towards the welfare of household members and kin, with transfers usually from the financially better-off towards the less well-off family members (Baland, Bonjean, Guirking, & Ziparo, 2016; di Falco & Bulte, 2011; Kazianga & Wahhaj, 2017).

Understanding the role of older people within intergenerational

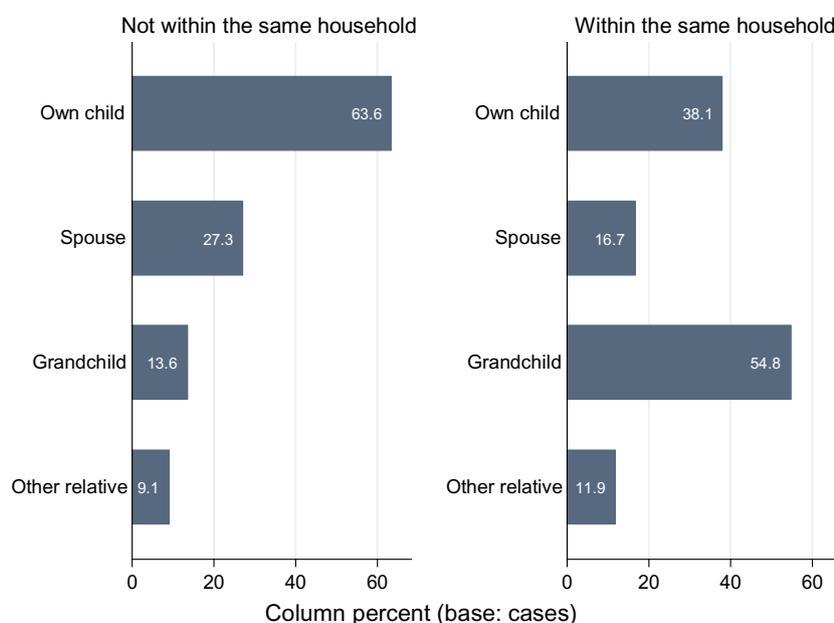


Fig. 1. Secondary beneficiaries by usual place of residence.

(Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016)

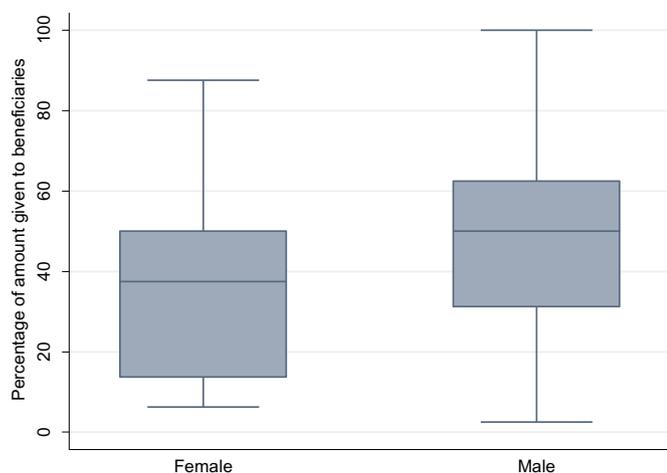


Fig. 2. Proportion of OPCTP cash transferred by gender. (Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016)

support mechanisms is critical due to the rapidly increasing number of older people in the region and the higher proportion of older people living in poverty, compared with the working age population (Kakwani & Subbarao, 2005). To date, little research has been conducted on transfers from older people to members of their kin networks, specifically within an urban slum context. The results of this study show that benefits of the OPCTP extend beyond the primary recipient as a result of older beneficiaries sharing their pension.

In this study, 40% of OPCTP recipients reported having made a direct or indirect transfer of their most recent OPCTP payment. While this is in line with findings from other countries that introduced similar non-contributory pension schemes, it is interesting to see this pattern in the Nairobi slums where the prevalence of multigenerational households is low. In reviewing the literature, it was found that although beneficiaries regard their pension funds as individual rather than family income, they commonly re-allocate their benefits, especially when living in multigenerational households (Møller & Sotshongaye, 1996; Sagner & Mtati, 1999a). Møller and Sotshongaye (1996), who studied

the long established South African pension system, argue that “pension sharing conforms with the ideals of the kinship support system” (p.17). Stewart and Yermo (2009) argue that “receiving and sharing a pension cements intergeneration relationships and makes the elder more integrated into communities, rather than feeling like a burden on their families” (p.4). Tangwe and Gutura (2013) found that the Old Age Grant (OAG) in rural South Africa was used to not only improve the beneficiary’s provision of food but also to pay for school fees and to purchase uniforms, books and other necessities. Due to the vast impact of the OAG on beneficiaries and their households, Tangwe and Gutura (2013) claim that the grant turned from a poverty relief program for the older people into a poverty alleviation program.

Redistribution of pensions by older people shows that the traditional systems of shared support persists and is even stronger in poorer communities in the absence of formal welfare programs and established financial credit facilities or insurance markets (Coate & Ravallion, 1993). The current study found that obligations to share the OPCTP were not differentiated for the most part. The paper found no significant difference between older people who redistribute their cash and those who do not. The exception was older people whose main source of income is the OPCTP being significantly less likely to share their funds, which suggests that funds were only shared if the basic needs of the primary beneficiary were met. This finding corroborates previous research establishing a strong correlation between income and propensity to share, demonstrating that those with financial ability, relatively speaking, conform to societal norms that they share with the less fortunate members of their households and kin (Baland et al., 2016).

This is an important finding, as it shows that the benefits of old age social protection programs extend well beyond the primary recipient as a result of older beneficiaries sharing their pension. This reinforces the role of social pensions as a major income source and highlights the benefits across generations and the relevance of intergenerational relations, as the majority of secondary beneficiaries were either grandchildren or children of the primary beneficiary. Møller and Ferreira (2003) argue that multigenerational living arrangements in Africa lead to pension sharing and income pooling.

Our findings reveal that the majority of secondary beneficiaries indeed lived in the same household as the primary beneficiary. However, the results of this study also indicate that pension sharing

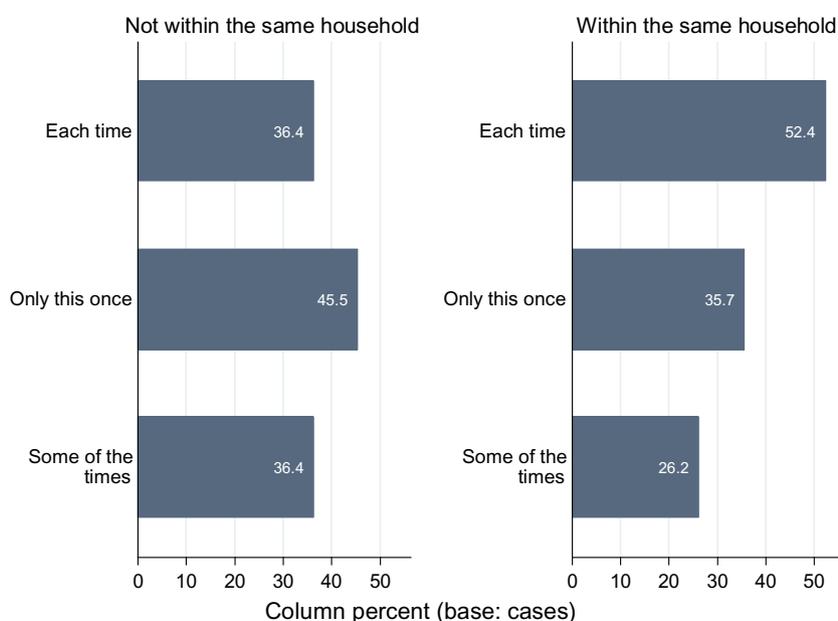


Fig. 3. Frequency of direct OPCTP cash transfer by location of recipient. (Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016)

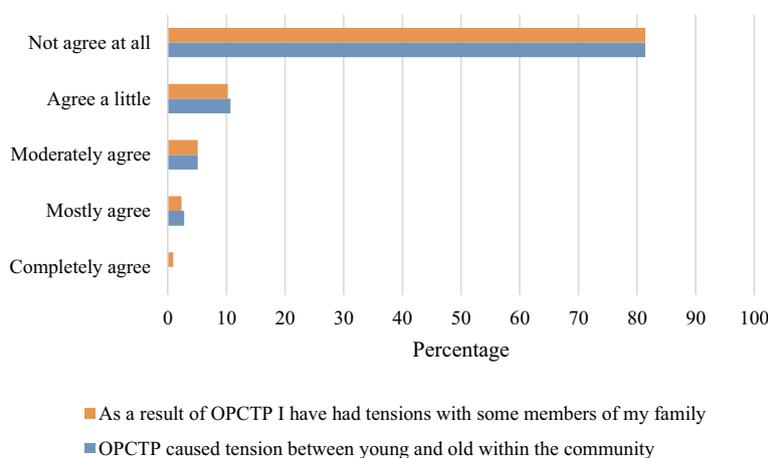


Fig. 4. Impact of OPCTP on tensions within families and community.

(Source: Authors, with data from Nairobi Urban Health Demographic Surveillance System data collected in 2016)

transcends the nuclear family and space; 10% of direct secondary beneficiaries were “other” relatives. Further, 24% of direct secondary beneficiaries lived in rural Kenya, confirming findings of [HelpAge International \(2003\)](#) that pension sharing goes beyond households. Whilst [Mberu et al. \(2013\)](#) found that older people in the Nairobi slums keep their family ties in rural areas but that those ties decline with length of stay, this paper found that significant cash continues to flow to family outside Nairobi. This is in contrast to our prior expectations that the transfers of the Kenyan OPCTP outside of the Nairobi slums would be limited. The study found that secondary beneficiaries not living in the same household were more likely to receive support ‘in the past year,’ whereas regular support was given to members within the same household; nevertheless, the scale of the one-off support was often substantial. This could be explained through support in crisis situations or through payments that occur less frequently, including school fees. [Schatz and Ogunmefun \(2007\)](#) found that the South African Old Age Pension acts to support coping strategies for crisis survival. [HelpAge International \(2003\)](#) reported that “in South Africa, the most common motivation for pension sharing is to help with the education costs of relatives living elsewhere” (p. 13). A further plausible explanation for the one-off payments to members outside the household is to reduce or minimize the cost associated with transferring money ([Jack & Suri, 2014](#)).

Our analysis further revealed that secondary beneficiaries living in the same household were mainly grandchildren of the primary beneficiary, whereas the majority of those secondary beneficiaries living elsewhere were children of the OPCTP recipient. Correspondingly, [Edmonds, Mammen, and Miller \(2005\)](#) found that pension receipt in South Africa led to an increase in the number of children aged under five years living in the pensioners’ household and a decline in the number of co-resident women aged 30–39. The latter finding can be explained by the fact that additional income from old-age support and the presence of pensioners who can care for children enables labor migration of working age adults ([Ardington, Case, & Hosegood, 2009](#)). It may be that a similar mechanism is occurring in the Nairobi slums, although this cannot be confirmed without longitudinal analysis.

Although the analysis in this paper did not find any gender differences in the likelihood of pension sharing, the results did show significant gender differences in who was supported. Men were more likely to be providing support to their spouse, while women were more likely to be supporting their grandchildren. This may reflect the fact that < 20% of the older women living in the slums are in a marital union compared with over 80% of the men. The results also showed that females shared a lower proportion of the cash transfer (38%) compared to males (49%). This could be explained by key demographic differences between the older men and women living in the two slum

areas. Men are younger and more likely to be married, compared to women ([Ezeh et al., 2006](#)).

Recent evidence from [Lloyd-Sherlock et al. \(2018\)](#) demonstrates how older people in South Africa are subject to financial abuse and previous research has raised concerns about competing intra-familial claims of the pension funds leading to problematic intergenerational dependencies ([Aboderin & Ferreira, 2008](#)). This study, however, found little evidence to support such a hypothesis, as the majority of primary beneficiaries did not report increasing tension with family members or within the community due to the OPCTP.

Conclusion

This research was unable to determine the motivation for inter-generational transfers. Apart from the main source of income, we found no significant differences in individual, socio-economic or household level characteristics which influence the likelihood of sharing the OPCTP fund. Questions remain as to whether older slum residents share their pension as a future oriented security strategy, as found by [Sagner and Mtati \(1999a\)](#), or whether altruistic feelings between family and kin network leads to generational transfer of material support. Further work, using qualitative research tools and longitudinal designs, is required to address those limitations.

Nonetheless, we demonstrate that the impact of the Kenyan social pension program extends far beyond the primary recipient. This is an important message for policy debates and provides support for the further expansion of the Kenya OPCTP and similar schemes in sub-Saharan Africa. This study has shown that older people play a key role in supporting younger generations within their families. Older people in the Nairobi slums remain an important family resource, and the OPCTP has an impact across age-groups, shaping both older and younger individuals’ opportunities. Furthermore, the study also indicated that financial obligations transcend the nuclear family; that is, older beneficiaries are a wider societal resource as well. This advances the political debate on poverty dynamics by highlighting the central role of older people, even those living in poverty and vulnerable positions, in providing material support to their kin networks and beyond.

Ethical approval

Ethical approval was obtained from the University of Southampton Faculty of Social, Human and Mathematical Sciences ethics committee in the UK (ID 25194) and the Amref Health Africa Ethics and Scientific Review Committee in Kenya (P382-2017).

Statement of funding

This research is supported in part by the Economic and Social Research Council (ESRC) and the Department for International Development (DFID) (ES/N014510/1).

Declaration of Competing Interest

None.

Acknowledgements

This work was supported by the Economic and Social Research Council (ESRC) and the Department for International Development (DFID) under Grant (ES/N014510/1).

References

- Aboderin, I., & Beard, J. R. (2015). Older people's health in sub-Saharan Africa. *The Lancet*, 385(9968), e9–e11.
- Aboderin, I., & Ferreira, M. (2008). Linking ageing to development agendas in sub-Saharan Africa: Challenges and approaches. *Journal of Population Ageing*, 1(1), 51–73.
- Aboderin, I., Kano, M., & Owii, H. A. (2017). Toward “age-friendly slums”? Health challenges of older slum dwellers in Nairobi and the applicability of the age-friendly city approach. *International Journal of Environmental Research and Public Health*, 14(10), <https://doi.org/10.3390/ijerph14101259>.
- Aldieri, L., & Fiorillo, D. (2015). Private monetary transfers and altruism: An empirical investigation on Italian families. *Economic Analysis and Policy*, 46(Supplement C), 1–15.
- Amendah, D. D., Buigt, S., & Mohamed, S. (2014). Coping strategies among urban poor: Evidence from Nairobi, Kenya. *PLoS One*, 9(1), <https://doi.org/10.1371/journal.pone.0083428>.
- Andrews, C., Das, M., Elder, J., Ovadiya, M., & Zampaglione, G. (2012). *Social protection in low income countries and fragile situations. Background paper for the world bank 2012–2022 social protection and labor strategy social protection & labor discussion paper no 1209*. The World Bank.
- Ardington, C., Case, A., & Hosegood, V. (2009). Labor supply responses to large social transfers: Longitudinal evidence from South Africa. *American Economic Journal: Applied Economics*, 1(1), 22–48.
- Ardington, C., Case, A., Islam, M., Lam, D., Leibbrandt, M., Menendez, A., & Olgiati, A. (2010). The impact of AIDS on intergenerational support in South Africa: Evidence from the cape area panel study. *Research on Aging*, 32(1), 97–121.
- Baland, J. M., Bonjean, L., Guirkinger, C., & Ziparo, R. (2016). The economic consequences of mutual help in extended families. *Journal of Development Economics*, 123, 38–56.
- Barrientos, A. (2003). *What is the impact of non-contributory pensions on poverty? Estimates from Brazil and South Africa. CPRC/DEPP working paper 33*. Manchester: IDPM, University of Manchester.
- Barrientos, A. (2005). *Non-contributory pensions and poverty reduction in Brazil and South Africa*. University of Manchester: Institute for Development Policy and Management.
- Barrientos, A., & Lloyd-Sherlock, P. (2003). *Non-Contributory pensions and social protection. Issues in social protection*. Geneva: International Labour Organization.
- Batista, C., & Umblijs, J. (2016). Do migrants send remittances as a way of self-insurance? *Oxford Economic Papers*, 68(1), 108–130.
- Beguy, D., Elung'ata, P., Mberu, B., Oduor, C., Wamukoya, M., Nganyi, B., & Ezech, A. (2015). Health & demographic surveillance system profile: The Nairobi Urban Health and Demographic Surveillance System (NUHDSS). *International Journal of Epidemiology*, 44(2), 462–471.
- Bennett, R., Chepngeno-Langat, G., Evandrou, M., & Falkingham, J. (2016). Gender differentials and old age survival in the Nairobi slums, Kenya. *Social Science & Medicine*, 163, 107–116.
- Bohman, D. M., van Wyk, N., & Ekman, S.-L. (2009). Tradition in transition – Intergenerational relations with focus on the aged and their family members in a South African context. *Scandinavian Journal of Caring Sciences*, 23, 446–455.
- Case, A. (2004). Does money protect health status? Evidence from south African pensions. In D. A. Wise (Ed.), *Perspectives on the economics of aging* (pp. 287–305). University of Chicago Press.
- Case, A., & Deaton, A. (1998). Large cash transfers to the elderly in South Africa. *The Economic Journal*, 108(450), 1330–1361.
- Case, A., & Menendez, A. (2007). Does money empower the elderly? Evidence from the Agincourt demographic surveillance site, South Africa. *Scandinavian Journal of Public Health*, 35(69), 157–164.
- Chen, X., Eggleston, K., & Sun, A. (2017). *The Impact of social pensions on intergenerational relationships: comparative evidence from China. Discussion paper series. IZA DP No. 10731: IZA – Institute of Labor Economics*.
- Coate, S., & Ravallion, M. (1993). Reciprocity without commitment: Characterization and performance of informal insurance arrangements. *Journal of Development Economics*, 40(1), 1–24.
- Cox, D., & Rank, M. R. (1992). Inter-vivos transfers and intergenerational exchange. *The Review of Economics and Statistics*, (2), 305.
- De Weerd, J., & Hirvonen, K. (2016). Risk sharing and internal migration. *Development and Cultural Change*, 65(1), 63–86.
- DFID (2011). *Cash transfers evidence paper*. London: Department for International Development.
- Dufo, E. (2000). Child health and household resources in South Africa: Evidence from the old age pension program. *The American Economic Review*, 90(2), 393–398.
- Dufo, E. (2003). Grandmothers and granddaughters: Old-age pensions and intrahousehold allocation in South Africa. *The World Bank Economic Review*, 17(1), 1–25.
- Edmonds, E. V., Mammen, K., & Miller, D. L. (2005). Rearranging the family? Income support and elderly living arrangements in a low income country. *The Journal of Human Resources*, 40(1), 186–207.
- Emina, J., Beguy, D., Zulu, E. M., Ezech, A. C., Muindi, K., Elung'ata, P., & Yé, Y. (2011). Monitoring of health and demographic outcomes in poor urban settlements: Evidence from the Nairobi urban health and demographic surveillance system. *Journal of Urban Health*, 88(2), 200–218.
- Ezech, A. C., Chepngeno-Langat, G., Kasiira, A. Z., & Woubalem, Z. (2006). The situation of older people in poor urban settings: The case of Nairobi, Kenya. In B. Cohen, & J. Menken (Eds.), *Ageing in Sub-Saharan Africa: recommendations for furthering research*. Washington D.C.: The National Academies Press.
- di Falco, S., & Bulte, E. (2011). A dark side of social capital? Kinship, consumption, and Savings. *The Journal of Development Studies*, 47(8), 1128–1151.
- Ferreira, M., & Lindgren, P. (2008). Elder abuse and neglect in South Africa: A case of marginalization, disrespect, exploitation and violence. *Journal of Elder Abuse & Neglect*, 20(2), 91–107.
- Foster, G. (2000). The capacity of the extended family safety net for orphans in Africa. *Psychology, Health & Medicine*, 5(1), 55–62.
- HelpAge International (2003). *Non-contributory pensions and poverty prevention: A comparative study of Brazil and South Africa*. Manchester & London: Institute of Development and Policy Management and HelpAge International.
- Heslop, A., Agyarko, R., Adjetei-Sorse, E., & Mapetla, T. (2000). The contribution of older people to society: Evaluation of participatory research methodology employed in studies in Ghana and South Africa. *Southern African Journal of Gerontology*, 9(2), 6–12.
- Holzmann, R., Robalino, D. A., & Takayama, N. (2009). *Closing the coverage gap*. Washington, DC: The World Bank.
- Jack, W. J., & Suri, T. (2014). Risk sharing and transactions costs: Evidence from Kenya's mobile money revolution. *The American Economic Review*, 104(1), 183–223.
- Kakwani, N., & Subbarao, K. (2005). *Ageing and poverty in Africa and the role of social pensions*. Washington, DC: The World Bank and Africa Human Development.
- Kazianga, H., & Wahhaj, Z. (2017). Intra-household. Resource allocation and familial ties. *Journal of Development Economics*, 127, 109–132.
- Lloyd-Sherlock, P., Barrientos, A., Moller, V., & Saboia, J. (2012). Pensions, poverty and wellbeing in later life: Comparative research from South Africa and Brazil. *Journal of Aging Studies*, 26(3), 243–252.
- Lloyd-Sherlock, P., Minciuci, N., Beard, J., & Chatterji, S. (2012). Social protection and preventing illness in developing countries: Establishing the health effects of pensions and health insurance. *International Social Security Review*, 65(4), 51–68.
- Lloyd-Sherlock, P., Penhale, B., & Ayiga, N. (2018). Financial abuse of older people in low and middle-income countries: The case of South Africa. *Journal of Elder Abuse & Neglect*, 30(3), 236–246.
- Lux, A. (1972). Gift exchange and income redistribution between Yombe rural wage-earners and their kinsfolk in Western Zaire. *Africa*, 42(3), 173–191.
- Mase, J. (2013). *Do households recombine around the South African social pension?* (PhD thesis) University of Manchester.
- Mberu, B. U., Ezech, A. C., Chepngeno-Langat, G., Kimani, J., Oti, S., & Beguy, D. (2013). Family ties and urban–rural linkages among older migrants in Nairobi informal settlements. *Population, Space and Place*, 19, 275–293.
- Møller, V., & Ferreira, M. (2003). *Getting by: Benefits of non-contributory pension income for older South African households*. Grahamstown and Cape Town: Institute of Social and Economic Research and The Albertina and Walter Sisulu Institute of Ageing in Africa.
- Møller, V., & Sotshongaye, A. (1996). My family eat this money too: Pension sharing and self-respect among Zulu grandmothers. *Southern African Journal of Gerontology*, 5(2), 9–19.
- Mudege, N. N., & Ezech, A. C. (2009). Gender, aging, poverty and health: Survival strategies of older men and women in Nairobi slums. *Journal of Aging Studies*, 23(4), 245–257.
- National Social Protection Secretariat (2017a). *National safety net program: Older Persons Cash Transfer (OPCT)*. <http://www.socialprotection.or.ke/national-safety-net-program/older-persons-cash-transfer-opct>.
- National Social Protection Secretariat (2017b). *Single registry for social protection*. <http://mis.socialprotection.go.ke:20301/Public/Payments>.
- Nkosinathi Mduduzi, M. G. (2016). Role Reversal of Rural Black Grandparents in South Africa. *Journal of Comparative Family Studies*, 47(3), 369–377.
- Nyirenda, M., Falkingham, J., Evandrou, M., Hosegood, V., & Newell, M. L. (2014). Employment, government cash transfers and household living arrangements in old age: Implications for intergenerational support in rural South Africa. *IUSSP Scientific Panel on Family Demography in Developing Countries International Cyberseminar*.
- Nzabona, A., Ntozi, J., & Rutaremwa, G. (2015). Loneliness among older persons in Uganda: Examining social, economic and demographic risk factors. *Ageing and Society*, 36(4), 860–888.
- Ralston, M., Schatz, E., Menken, J., Gómez-Olivé, F. X., & Tollman, S. (2015). Who benefits—Or does not—From South Africa's old age pension? Evidence from characteristics of rural pensioners and non-pensioners. *International Journal of Environmental Research and Public Health*, 13(1), <https://doi.org/10.3390/ijerph13010085>.
- Sagner, A. (2000). Ageing and social policy in South Africa: Historical perspectives with

- particular reference to the eastern cape. *Journal of Southern African Studies*, 26(3), 523–553.
- Sagner, A., & Mtati, R. Z. (1999a). Politics of pension sharing in urban South Africa. *Ageing and Society*, 19(4), 393–416.
- Sagner, A., & Mtati, R. Z. (1999b). Politics of pension sharing in urban South Africa. *Ageing and Society*, 19, 393–416.
- Schatz, E. (2007). Taking care of my own blood': Older women's relationships to their households in rural South Africa. *Scandinavian Journal of Public Health*, 35(69), 147–154.
- Schatz, E., Madhavan, S., Collinson, M., Gómez-Olivé, F. X., & Ralston, M. (2015). Dependent or productive? A new approach to understanding the social positioning of older south Africans through living arrangements. *Research on Aging*, 37(6), 581–605.
- Schatz, E., & Ogunmefun, C. (2007). Caring and contributing: The role of older women in rural South African multi-generational households in the HIV/AIDS era. *World Development*, 35(8), 1390–1403.
- Schröder-Butterfill, E. (2004). Inter-generational family support provided by older people in Indonesia. *Ageing and Society*, 24(4), 497–530.
- Schwartz, H., & Querino, A. C. (2002). *Non-contributory pensions in Brazil: The impact on poverty reduction*. Geneva: International Labour Office: ILO Social Security Policy and Development Branch.
- Silverstein, M., Conroy, S., Wang, H., Giarrusso, R., & Bengtson, V. (2002). Reciprocity in parent-child relations over the adult life course. *The Journals of Gerontology Series B, Psychological Sciences and Social Sciences*, 57B(1), 3–13.
- Skoufias, E., Unar, M., & Gonzalez de Cossio, T. (2013). The poverty impacts of cash and in-kind transfers: Experimental evidence from rural Mexico. *Journal of Development Effectiveness*, 5(4), <https://doi.org/10.1080/19439342.19432013.19843578>.
- StataCorp (2018). StataCorp LLC. <https://www.stata.com/stata14/>.
- Stewart, F., & Yermo, J. (2009). Pensions in Africa. *OECD working papers on insurance and private pensions no. 30*<https://doi.org/10.1787/227444006716>.
- Tangwe, P. T., & Gutura, P. (2013). The impact of the old age grant on rural households in Nkonkobe municipality in the eastern Cape Province of South Africa. *Mediterranean Journal of Social Sciences*, 4(13), 627–635.
- The Kenya CT-OVC Evaluation Team (2012). The impact of the Kenya cash transfer program for orphans and vulnerable children on household spending. *Journal of Development Effectiveness*, 4(1), <https://doi.org/10.1080/19439342.19432011.19653980>.
- The World Bank (2014). *Reducing old age and economic vulnerabilities: Why Uganda should improve its pension system*. DC The World Bank: Washington.
- UN-Habitat (2015). *Toward an African urban agenda*. Nairobi: United Nations.
- United Nations (2015). *World population ageing 2015*. New York: United Nations Department of Economic and Social Affairs, Population Division.
- United Nations (2017). *World population ageing 2017*. New York: Department of Economic and Social Affairs.
- van Vuuren, S. J. E. J., & Groenewald, D. C. (2000). The pattern of expenditure of social pension income of older blacks in rural and urban areas of the Free State, South Africa. *Southern African Journal of Gerontology*, 9(2), 13–17.