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ANALYSIS OF POVERTY AMONG THE ELDERLY IN SOUTH AFRICA USING THE 2018 GHS DATA

Abstract:

The different approaches to poverty reduction will only be effective if no category of people is left behind or miss diagnosed. There has been attention on gendered poverty, poverty among the youth, and fewer studies have focused on poverty among the elderly. The seniors face a different kind of poverty that is due to the dynamics that comes with age. As people get older their ability to participate in a productive capacity declines and that reduced their ability to earn or maintain the level of income earned in their productive age. There is need to understand the nature of poverty and which categories within the age group are more vulnerable. Using data collected in 2018 by statistics South Africa, this paper analyses the nature of poverty among the elderly (>60 years old). Focus will be on the individual and household characteristics that determine the poverty status. The paper use both descriptive statistics and a logistic regression in the analysis on poverty among the elderly.

Keywords:

Poverty, Elderly poverty, poverty status, household poverty, South Africa,

JEL Classification: I32, I30, J14

1   Introduction

The global population is aging, practically all countries are experiencing population ageing (Gasparini, Alejo, Haimovich, Olivieri, & Tornarolli, 2007; United Nations, 2019), and none more so has this been evident than in developing countries where between 2000 and 2015, the number of the elderly[1] grew by 60 percent to 602 million with the growth expected to reach 1 billion by 2030 (UNDESA, 2015:9). The efforts made over the years to reduce mortality rates and increase life expectancy across the global have yielded results. The year 2018 saw the number of older than 65 years exceed the number of children below five years globally, making population aging one of the major worldwide issues in the present years. (United Nations, 2019). Various population subgroups, be they based on gender, ethnicity, race, or income, have confronted and keep on confronting obstructions that have eased back the pace of poverty alleviation (Munoz Boudet, Buitrago, de la Briere, Newhouse, Matulevich, Scott & Suarez-Becerra, 2018). The fact that the percentage of people falling in the elderly category has been increasing over time implies that risk levels of poverty among the elderly have also increased. Regardless of significant advancement in reducing poverty in recent years, substantial pockets of poverty remain among the elderly, especially among elderly women living alone (Gornick *et al.*, 2009). Poverty studies continue to take a central role especially considering the back and forth trends being observed globally. The elderly in particular have been pointed out as one of the age categories encountering poverty and deprivation on account of where they are in the lifecycle (World Bank, 2000). The literature shows that the elderly are vulnerable to poverty especially in areas where the provision structures of retirement are poor or non-existent (Gasparini *et al.*, 2007; UNDESA, 2017).

Even though poverty levels have declined globally across all ages, the numbers are still very high in certain parts sub-Saharan Africa (World Bank, 2018) and the rate for elderly women remains almost twice as high as that for men (Rupp, Strand & Davies, 2003). The fact that other areas are experiencing increasing levels of poverty is testimony of the failure of generalised approaches to dealing with poverty. There is need to contextualise approaches by understanding the idiosyncratic differences within different groups or categories of society. Understanding poverty in the later phases of the lifecycle and creating fitting approach, requires recognising the contribution of the elderly to their family units, networks, and the development process (Barrientos & Gorman & Heslop, 2003). The curiosity for this study is predominantly driven by worsening poverty levels in South Africa over the past decade. Despite the availability of data and studies on general poverty including child poverty, literature on poverty among the South Africa elderly is still relatively scant. The aforementioned aspects of poverty among the elderly warrants the

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[1] The elderly are normally esteemed to be 60 and older

importance of the issue. Understanding the extent of elderly poverty at a time when economic security among women is in threat is critical for evidence based planning for old age (Srivastava & Mohanty, 2012). The next section delves deeper into the literature surrounding elderly poverty.

2   Literature review

2.1   Poverty among the elderly

Poverty is a multidimensional phenomenon, which varies across all age groups. As stated by Marchand and Smeeding (2016:906) *"Poverty may be embodied in many different forms across the age distribution: from a small child, dependent upon the resources of his parents or guardian, which might not be enough to adequately cover the needs of multiple individuals; to a working-age adult, who may not have the skills necessary to find gainful employment, whose unemployment benefits were exhausted weeks earlier; to an older widow, who could be in poor health, no longer being able to maintain the lifestyle to which she was accustomed."* The estimation of elderly poverty has attracted a lot of debates over the past few decades. According to Sen (1979) determining poverty starts with two crucial inquiries, i.e. how the poor are defined impartially, and once the poor are known, how the collection is done, especially concentrating on those without sufficient resources, which all depend on a specific poverty threshold. Old age is itself an intricate sort, problematic to characterise, and therefore operationalize. For individuals, the aging process people, the process of aging is an inevitable natural reality, yet it is the social development of individual aging that produces both limitations and process (Barrientos et al., 2003). According to Kwan and Walsh (2018) older people assume contributory roles (economically, socially, and culturally) in the social orders when given an opportunity to do so. Be that as it may, poverty and social marginalisation signify two the most critical obstructions for the elderly to both add to growth and also benefit from it (UNFPA & HAI, 2012).

Income sources of the elderly have been very much unfavourably influenced by economic changes brought by globalisation and changing labour market conditions (Barrientos et al., 2003). Indeed, observational proof (World Bank, 2011) proposes a u-shaped association between poverty and age which implies that poverty is pervasive and stubbornly high among the elderly than it is for other age categories. This according to Rafeh (2016) is explained by the fact that those in seniority often have their labour market participation halted in light of retirement or medical problems, and when they need or want to keep working, many find themselves earning lower compensation since they work less hours. Any kind pay they have is normally insufficient to sustain themselves indefinitely. Even more so, the risk of poverty is significantly more unmistakable among elderly women than elderly men. The adversity that women encounter as they age is underpinned by the lack of economic security and ability to earn (Pandey, 2012). According to Justice in Aging (2018) the pervasive effects of widening gender gaps in both access to employment and equality in as far as remuneration is concerned, combined with societal standards that place women as prime caregivers in several households often result in more women aging into poverty.

2.2   Poverty trends among the elderly

Poverty estimates among older people are scant and even when issued, they are frequently not constant neither ample, particularly in low income countries (Barrientos *et al.*, 2003; Srivastava & Mohanty, 2012). This as indicated by Rafeh (2016) is fueled by the absence of a consistent global database of poverty rates tallied by age, where developing countries continue to lag behind. The risk of elderly poverty is commonly increasingly more prominent in less developed countries where social security is likely to be less inclusive and large proportion of old people are reliant on extended family support (Rafeh, 2016). In 2015, global poverty among old people between the ages of 66 and 75 had widened to 10.9 percent compared to rates among those older than 76 years with poverty rates of 14.7 percent (OECD, 2015). In most instances elderly poverty rates are higher in developing countries than developed ones (Sumner, 2019). In countries such as Korea and the US, the gap between elderly (+66 years) poverty and total poverty remain considerably wide, with the former very high (OECD, 2019). Between 2015 and 2019, an estimated 70 percent of the global population living in poverty, including the elderly were found in Africa, a number expected to increase to over 80 percent by 2023 (Kharas, Hamel & Hofer, 2018). In certain countries like Poland, the elderly over 75 years of age face lower poverty rates relative to those below the 75 years. In developed countries, as argued by Gasparini *et al.* (2007) the combination of strong social protection systems, well-developed capital markets which enhance saving and retirement security and small household sizes contribute considerably to improved relative living standards of the elderly. This is not the case in developing countries, particularly in Africa since pension systems are mostly accessed by those who are not poor and the elderly find themselves in overcrowded households where they have to share income with many family members (Barrientos *et al.*, 2003; Gasparini *et al.*, 2010).

Growing population numbers have fueled elderly poverty in developing regions and this according to Barrientos et al. (2003) has had significant ramifications for the state of poverty as well as its reduction policies to the degree the older one gets, the more likely they are to encounter higher rates of poverty. In regions like sub-Saharan Africa, older female headed households regardless of their marital status (single, divorced or widowed) are more inclined to poverty than households headed by older male, particularly in parts of the locale that are male centric (UN Statistics Division, 2015). In the case of South Africa, there appears to have been pervasive poverty increases at the same time, those already in poverty have continued to be worse off. Even though poverty is more astounding among children, that is, those in the 0-17 age category, levels of will in general decline as one gets older and begin to increase again from 55 years (Stats SA, 2017).

2.3   Empirical review on the determinants of poverty among the elderly

A number of studies have investigated factors that determine poverty at old age. In India and China, location of residence was found as a one of the factors that influence poverty among the elderly. Srivastava and Mohanty (2012) found the prevalence of poverty to be high among elderly living in rural regions of India, contrary to findings of Wang et al. (2011) who reported high incidents of elderly poverty in urban areas of China. Race has additionally been reported as one of the factors that have an influence of old age poverty. Differing findings are reported in the United States, with elderly poverty found to be high among blacks (Rank & Williams, 2010) whereas Butrica et al. (2010) finds a higher prevalence amongst whites. Mohanty and Sinha (2010) use a simple measure of deprivation and conclude that poverty among the elderly living in

nuclear households was higher compared to that among the elderly co-residing with children or non-elderly households.

Brady and Kall (2007) investigated the gender facet of poverty and the findings reiterate gender as a striking factor that influences old age poverty. A poverty assessment in Ghana report demographic idiosyncrasies including the combination for elderly women, widowhood and lack of adult children was frequently associated with chronic vulnerability (Norton, Aryeety, Korboe, & Dogbe, 1995). These findings resonate with those of (Moletsane, Reddy, Ntombela, Dayal, Wiebesiek, Munthree, Kongolo & Masilela, 2010). Marital status on the other hand particularly being widowed (Butrica et al., 2010) and unmarried (Rank & Williams, 2010) is also found as a significant determinant of elderly poverty. A study by Cherchye, De Rick and Vermeulen (2012) analysing economic wellbeing and poverty among the elderly in Netherlands found a decline in material security after the spouse's death is rather substantial for women, with the opposite being true for men.

Old people who are not in good health (Wallace *et al.*, 2013) and those with lower levels of education (Jerliu *et al.*, 2012) are found to have higher chances of being in poverty. Housing insecurity also seem to be associated with a higher prevalence of poverty where home owners rather than those who are renting have higher chances of experiencing poverty (Wallace et al., 2013). At the same time, the lack of access to paid employment is an important determinant of poverty in old age (Lloyd-Sherlock, 2000; Cherchye *et al.*, 2012). On the other hand, those in informal employment usually have insufficient or no social protection coverage, as the systems for collection of contributions or tax payments to finance public pension systems is underdeveloped (Rafeh, 2016). The contribution of older workers to economic activity is commonly undervalued, and this renders older people, and the households in which they live, progressively more vulnerable to unfavorable economic conditions, increasing the risk of long-term poverty.

Kaida and Boyd (2011) finds high poverty levels among elderly immigrants in Canada which are lessened by financial assistance from their families. This could be clarified by the restricted access they have to government income support systems. In Africa, few studies examining elderly poverty exist. In trying to understand the perceived causes of poverty among the elderly in Uganda, Najjumba-Mulindwa (2003) finds that the poor elderly ruminates unemployment, chronic ill-health, lack of skills, HIV/AIDS, lack of social security systems, low land productivity, political instability, low agricultural returns and functional inability due to old age as major causes of chronic poverty in old age. Other factors which ought to decrease the livelihoods of the elderly in the study additionally entail the absence of social protection and pension systems. In trying to delineate the poverty among the elderly in 15 low-income sub-Saharan countries, Kakwani and Subbarao (2007) finds that, when defined by household structure, the elderly-only, elderly with children and elderly-headed households are poorer than other household structures in 11 out of 15 sample countries. The findings suggest that even in the 11 countries where certain categories of the elderly happen to be at a higher risk of poverty. The subsequent section discusses the methodology and presents the results and discussions.

3   Data and methodology

The data used in the paper was collected by statistics South Africa in the 2018 general household survey (GHS) a sample of 20902 households was selected across the nine provinces of the country. This paper however uses data on heads of households that are 60 years or older, categorised as the elderly. Thus after filtering the data to only remain with the elderly, the sample of heads of households that fall in that category is 5273, which is 25.23% of the original sample size. Table 1 presents the descriptive statistics of the distribution of age among the elderly. The maximum age in the sample was 108 years old, the average age was 69.78 years old. The fact that the elderly population among the head of household sample was 25% indicates the growing number of the elderly in the population, this is in agreement with global trends that show that the proportion of the elderly in the population is growing (UNDESA, 2017).

Table 1: descriptive statistics of Age and household size in the elderly sample

	N	Minimum	Maximum	Mean	Std. Deviation
Age of household head	5273	60	108	69.78	7.916
Household size	5273	1	22	3.91	2.691

Source: Calculations from the GHS 2018

The household size is also captured in Table 1 with the maximum household size of 22 and minimum of 1. The average household size in the elderly sample is 3.91. Gender of the head of household in the elderly sample is shown in Table 2. The distribution of gender has more female headed household at 53% and the male headed household are 47%. This is a reversal of the total sample distribution when all ages are considered as it has more male headed households at 57.1% and female headed households at 42.9%.

Table 2: gender distribution in the elderly sample

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	2476	47.0	47.0	47.0
Female	2797	53.0	53.0	100.0
Total	5273	100.0	100.0	

Source: Calculations from the GHS 2018

The change in the gender distribution when the elderly sample is compared to the total sample may indicate that females are on average living longer than males. It may also be that these female headed households are single headed households where the male may have died at an earlier age leaving the female to head the household alone. To check the marital status of the head of household a contingency table of gender and marital status is presented in Table 3.

Table 3: marital status and gender

Marital status * Sex of household head Cross tabulation					
			Sex of household head		Total
			Male	Female	
Marital status	**Legally married**	Count	1735	129	1864
		% within Marital status	93.1%	6.9%	100.0%
		% within gender	70.1%	4.6%	35.3%
		% of Total	32.9%	2.4%	35.3%
	Living together like husband and wife/partners	Count	144	46	190
		% within Marital status	75.8%	24.2%	100.0%
		% within gender	5.8%	1.6%	3.6%
		% of Total	2.7%	0.9%	3.6%
	Divorced	Count	74	156	230
		% within Marital status	32.2%	67.8%	100.0%
		% within gender	3.0%	5.6%	4.4%
		% of Total	1.4%	3.0%	4.4%
	Separated, but still legally married	Count	51	51	102
		% within Marital status	50.0%	50.0%	100.0%
		% within gender	2.1%	1.8%	1.9%
		% of Total	1.0%	1.0%	1.9%
	Widowed	Count	335	1887	2222
		% within Marital status	15.1%	84.9%	100.0%
		% within gender	13.5%	67.5%	42.1%
		% of Total	6.4%	35.8%	42.1%
	Single, but have lived together with someone as husband/wife	Count	26	54	80
		% within Marital status	32.5%	67.5%	100.0%
		% within gender	1.1%	1.9%	1.5%
		% of Total	0.5%	1.0%	1.5%
	Single and have never been married/never lived together as	Count	111	474	585
		% within Marital status	19.0%	81.0%	100.0%
		% within gender	4.5%	16.9%	11.1%

husband/wife	% of Total	2.1%	9.0%	11.1%
Total	Count	2476	2797	5273
	% within Marital status	47.0%	53.0%	100.0%
	% within gender	100.0%	100.0%	100.0%
	% of Total	47.0%	53.0%	100.0%

Source: Calculations from the GHS 2018

Table 3 shows that the majority of the female headed households are single parent households with 84.9% of the widowed being the female headed households, 67.8% of the divorced also being female headed households. Thus the gender dimension of the elderly population is an important component in understanding the poverty status of these households. Table 4 presents the distribution by race. As expected the majority are African/Black which is a reflection of the population distribution in South Africa.

Table 4: The distribution of race in the elderly sample

	Frequency	Percent	Valid Percent	Cumulative Percent
African/Black	4048	76.8	76.8	76.8
Coloured	483	9.2	9.2	85.9
Indian/Asian	124	2.4	2.4	88.3
White	618	11.7	11.7	100.0
Total	5273	100.0	100.0	
African/Black	4048	76.8	76.8	76.8

Source: Calculations from the GHS 2018

3.1   Model specification

Statistics South Africa uses three poverty measures, namely the food poverty line, the lower bound poverty line and the upper bound poverty line, as shown in Table 5 based on the 2018 and 2019 inflation adjusted figures.

Table 5: Inflation adjusted national poverty lines

Poverty lines	2018 line values	2019 line values
Food poverty line (FPL)	R547	R561
Lower-bound poverty line (LBPL)	R785	R810
Upper-bound poverty line (UBPL)	R1183	R1227

Based on the 2018 food poverty line of R547 the paper will calculate the poverty status of the households since the income figures to be used were collected in 2018. The household poverty status will be calculated by comparing the household total income to the household poverty line. Each household will have a calculated poverty line based on the household size. A simple household poverty line will be the per capita poverty line multiplied by the household size, (FPL*HHsize). Thus a household with a household size of 3 will have a poverty line of 3*R547 = R1,641. The household total income will therefore be compared with this household poverty line. For those household with total income of equal to or greater than the household poverty line, will be considered non poor and will be coded as 0. For a household with a total income less than its corresponding poverty nine will be considered as poor and will be coded as 1. Thus a poverty status (PS) variable will be a binary variable coded as follows:

PS = 1: poor household

PS = 0: non-poor household

The modelling of the household's determinants of poverty status among the elderly sample will therefore follow a conditional probability model considering that the dependent variable, poverty status is a categorical variable. Thus the model will estimate the probability of the household falling in the success category defined as poor in this case. A binary logistic model to be estimated is specified as follows:

$$\frac{p}{1-p} = Z = \beta_0 + \sum_i \beta_i X_i$$

(1)

Where p is the probability of being poor, X_i are the determinants to be considered in the model which include age, gender (defined as 1 for male and 0 for female), population group, or race defined white as the reference category, then Black, Coloured and Indian/Asians. In the interpretation of the race variable, all the other categories will be compared to the white category. The last variable included in the model is total household income. Three regression models have been estimated with the FLP, LBPL and the UBPL as the three dependent variables.

4   Results and discussion

The elderly poverty rates based on the three poverty lines discussed in Table 5, are presented in Table 6. The results in table 6 show that the poverty rates are 16.5% for the food poverty line, 27.5 for the lower bound poverty line and 46% for the upper bound poverty line.

Table 6: Poverty rates among the elderly based on the three poverty lines

Household poverty status based on the food poverty line				
Poverty status	Frequency	Percent	Valid Percent	Cumulative Percent
Non Poor	4405	83.5	83.5	83.5
Poor	868	16.5	16.5	100.0
Total	5273	100.0	100.0	

Household poverty status based on the lower bound poverty line				
Poverty status	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Non Poor	3823	72.5	72.5	72.5
Poor	1450	27.5	27.5	100.0
Total	5273	100.0	100.0	
Household poverty status based on the upper bound poverty line				
Poverty status	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Non Poor	2849	54.0	54.0	54.0
Poor	2424	46.0	46.0	100.0
Total	5273	100.0	100.0	

Thus based on the upper bound which is more realistic requirement for a basic living beyond just food, the elderly people have a higher poverty rate of 46% compared to the general population which is at 35.2% as presented in Table 7.

Table 7: Poverty rates for the whole sample using the upper bound poverty line

Poverty status	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Non poor	13545	64.8	64.8	64.8
Poor	7363	35.2	35.2	100.0
Total	20908	100.0	100.0	

4.1   Regression Results

The three regression models estimated based on the three poverty lines are presented in tables 8, 9 and 10. The same independent variables have been used in the three model and will be discussed concurrently. **Age** of the head of household was included in the model although the lowest among the sample of the elderly people was 60years old. The results of all the three regression model show a negative coefficient which imply that the older from 60 the head of household gets the lower the probability of being poor. Age was significant in the FLP regression (p-value 0.001) and the LBPL regression (P-value 0.000), however it age was not significant in the UBPL regression.

Table 8: Regression results with the Food Poverty Line as the dependent variable

Variables in the Equation						
	B	**S.E.**	**Wald**	**df**	**Sig.**	**Exp(B)**

Step 1[a]	Age of head	-.017	.005	10.519	1	.001***	.984
	Gender (Male)	-.375	.085	19.594	1	.000***	.687
	Race (White)			35.853	3	.000***	
	Race (Black)	1.969	.393	25.092	1	.000***	7.160
	Race (coloured)	1.550	.421	13.581	1	.000***	4.710
	Race (Asian/Indians)	.961	.588	2.667	1	.102	2.613
	Log HH Income	-1.313	.070	354.522	1	.000***	.269
	Constant	-.660	.544	1.472	1	.225	.517

*Dependent variable, Food poverty line *significant at 10% **significant at 5% *** significant at 1%*

Table 9: Regression results with the LBPL Line as the dependent variable

Variables in the Equation							
		B	**S.E.**	**Wald**	**df**	**Sig.**	**Exp(B)**
Step 1[a]	Age of head	-.015	.004	12.261	1	.000***	.985
	Gender (Male)	-.395	.072	30.403	1	.000***	.674
	Race (White)			79.664	3	.000***	
	Race (Black)	2.324	.332	49.068	1	.000***	10.218
	Race (coloured)	1.780	.354	25.317	1	.000***	5.933
	Race (Asian/Indians)	.535	.546	.961	1	.327	1.708
	Log HH Income	-1.012	.050	402.125	1	.000***	.364
	Constant	-.636	.461	1.902	1	.168	.530

*Dependent variable, Food poverty line *significant at 10% **significant at 5% *** significant at 1%*

Table 10: Regression results with UBPL as dependent variable

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Age of head	-.003	.004	.634	1	.426	.997
	Gender (Male)	-.429	.069	38.576	1	.000***	.651
	Race (White)			138.650	3	.000***	
	Race (Black)	1.888	.197	91.753	1	.000***	6.603
	Race (coloured)	1.208	.224	29.040	1	.000***	3.348

Race (Asian/Indians)	.475	.344	1.915	1	.166	1.609
Total Household Income	-1.184	.46	672.529	1	.000***	0.306
Constant	.081	.372	.047	1	.828	1.084

*Dependent variable, Food poverty line *significant at 10% **significant at 5% *** significant at 1%*

Gender was also another variable that was considered in the three regression models. The variable was coded as 1 for males and 0 for females. The results for all the three models have a negative coefficient meaning that male elderly heads of households have a lower probability of falling into poverty as compared to female headed households. This is in agreement with the literature (Schultz, 2002; Moletsane et al., 2010; Dunga, 2017) which shows that females are vulnerable to poverty and that there is still higher levels of inequality across societies based on gender. The coefficient for gender was significant for all the three models, with a P-value of 0.000 for all the three regression models.

Population group or race was also considered in the three models. The white category was used as the reference category. For all the three models, the coefficients for Black, coloured and Indian/Asian were positive compared to the white category, meaning that all the other three races had a higher probability of being poor compared to their white counterparts. The coefficients were also significant as indicated by the starts in the table. The higher the positive coefficient the higher the probability of being poor in that race compared to the white category. The Black category had the higher coefficient and the exponential value shows the odds of being poor and the odds for the black category were the highest (7.160 for the FPL, 10.218 for the LBPL and 6.603 for the UBPL). The last variable considered in the models was **household total income**. In order for the variable to make sense, it was changed into natural logs, the coefficient was negative as expected, indicating that the higher the household total income the lower the probability of the household falling into poverty. This makes sense as the poverty status itself was calculated based on the household incomes. The coefficient for household total income was also significant at 1% for all the three regression models.

5   Conclusions and recommendations

The aim of the study in question was to analyse elderly poverty in South Africa. Overall, the study found that the older the elderly are from 60 years, the lower the probabilities of being in poverty. In addition, gender seems to explain elderly poverty in South Africa were the findings of the study show that being a female is associated with greater likelihood of being poor. In terms of race, being white relative to other races lowers an elderly's chance of being poor. Blacks had the highest likelihood of being poor. Income significantly lowers the probability of being poor. Understanding old age poverty should be a basic piece of anti-poverty approaches, and academics and scholars have a basic task to carry out in adding to the proof base important to guide such policy interventions.

There is a need to extend social security inclusion which give a fundamental degree of security for more old people. Coverage may be inclusive of those in the low-income categories for

instance, females, blacks and domestic workers among others. This can assist with accumulating wealth and assets that can secure livelihoods in old age. In addition, the government needs to explore the possibility of transitioning retired persons back to the labour market. The longer the old people can keep on adding to the economic resources of the household, the lower their chances of remaining in poverty. Despite the fact that we acknowledge poverty as a multidimensional complex issue, data impediments limit this study to consider the elderly poor based on just the income measure. This is however a common problem in literature given the difficulty of data collection on other measures such as consumption. Further studies should utilise far reaching approaches to get more holistic picture of poverty among the old.

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