

# Does education influence the value of older persons? Assessing socio-demographic determinants of older persons' value in Uganda

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## Abstract

Although older persons make substantial contribution to their communities, there is paucity of information on determinants of their value in Uganda. This study of 605 older persons from 4 rural districts and one urban centre examines socio-demographic determinants of the value of older persons in the country. The findings from a binary logistic regression indicate that older persons who were aged 60-69, educated to primary and above, owned land, with migrant children, with limb ill-health and lived in the Western, Northern and Kampala urban regions of the country were more likely to have high aggregate value than those who were aged 80+, uneducated, landless, with no migrant children, with no limb ill-health and lived in the Central region. It is recommended that later-life socioeconomic programmes be designed, learner access and retention in education system be increased and a special age fund be established for all.

**Key Words:** Value Aggregate value Determinants Older persons Uganda

## Introduction

The population of older persons in sub Saharan African countries is on the rise with projections indicating substantial numbers by 2050 (UNFPA & HAI, 2012). There is now growing research interest into the issues of this subgroup as is evidenced by studies on determinants of active ageing (Mapoma, 2014) and elder abuse (Bigala & Ayiga, 2014). In Uganda the absolute number of older persons aged 60 and above is estimated at 1,433,305 (UBOS, 2016) having risen from about 559,000 in 1969 and 1,101,000 in 2002 (UBOS, 2005). This trend similarly offers researchers opportunity for analysing the implications of population ageing on the social, economic and health landscape of the country.

Persons aged 60 and above make substantial contribution to their own households and communities, which underpins their importance in society (WHO, 2002). This value would seem to complement rather than compete with the role of other life-course population sub-groups, such as children, whose value is defined as the collection of good things which parents receive from having them (Espenshade, 1977) or the benefits individuals expect to receive from a child (Fawcett, 1985; Hoffman & Manis, 1979). Although older persons make contributions in various ways, most of the research focus in Uganda has been on later-life challenges

(Ntozi & Nakayiwa, 1999; Scholten et al., 2011; Seeley & Ekoru, 2010) rather than later-life value.

Consequently there is fairly more comprehensive information on challenges, such as effects of HIV/AIDS on households, than knowledge on the contributions of older persons to families and households.

In this paper, we examine the value of older persons by analysing the various forms in which they make contributions to households and communities. Specifically, we focus on engagement in income-generating activities, possession of indigenous knowledge, advice on behaviour norms, role played in social organisations, mediation in conflicts, propagation of cultural norms, dispensing local medicine and child caregiving. We analyse the diverse risk factors that predict high aggregate value among older persons. The study is premised on the understanding that older persons are not always dependent individuals; rather they are beneficial members of society whose contribution has not been methodically and systematically analysed in the country. Understanding the predictors of their value is central in making progress towards a society for all ages.

### Literature review and conceptual framework

Age is one of the variables that influence the value of older persons such as later life income-generation. The oldest old persons tend to be too frail to work, have difficulty getting to and from work or simply feel unsafe travelling to and from work places (WHO, 2007). Similarly, although labour force participation is relatively high in developing countries, older persons' employment opportunities and remuneration decline with age (Czaja, 2007). However this view is not universally held and some researchers (Barrientos, Gorman, & Heslop, 2003) posit that contrary to some perceptions, assumptions regarding a decline in the average productivity of workers with age have not been confirmed by empirical studies. They argue that although formal employment opportunities may decline with age, the incidence of self-employment may in fact rise.

Education is another determinant of the value of older persons especially engagement in income-generating activities. Well educated persons, particularly professionals, in selected Caribbean countries have been reported to have more income-earning opportunities in old age than their counterparts of lower education (Cloos et al., 2010). Education itself tends to vary by sex; with older women having lower levels of education than older men in many countries (UNFPA & HAI, 2012). This is largely because, in comparison with boys, the girls had lower opportunities to go to school and experienced higher dropout rates. Lower educational levels seriously limit the ability of older women to obtain information, access services or take part in socio-economic activities.

Migration of household members can indirectly influence later-life income generation. Having a migrant increases a household's income per capita by just over 10 percent (Du, Park & Wang, 2005). Older persons belonging to financially empowered households are more likely to engage in income-generating activities and thus experience less poverty than their less financially empowered counterparts. This fits into the theory of new economics of labour migration which makes a case for reduced risks and vulnerabilities through families and households that encourage emigration of their members (Massey et al., 1993). The narrative is that in circumstances where local economic activities fail to bring in adequate income, the household can rely on migrant remittances for support.

Possession of indigenous knowledge is another distinguishing feature of the value of older persons. Indigenous knowledge of medicinal plants has been propagated from generation to generation among inhabitants of the Iberian Peninsula (Akerreta, Calvo & Cavero, 2010). Some studies have shown that

formal education negatively influences possession of this knowledge (Giovannini, Reyes-García, Waldstein & Heinrich, 2011) since school attendance might imply less time to acquire the ecological knowledge. Other studies have indicated that possession and propagation of indigenous knowledge appears to be gradually waning in some areas partly due to the adoption of what is perceived to be a modern culture. As De Albuquerque et al., (2011) have observed, the accelerated processes of globalization and economic development have, in the recent years, threatened indigenous cultures such as traditional knowledge and practices.

Membership of social organisations is a further manifestation of the value of older persons. Gray (2009) identified several organisations in which older persons were active members while analysing the social capital of older people in Britain. These included political parties, trade unions, environmental groups, parents' groups, tenants' groups, religious organisations, voluntary service groups and social and sports clubs. Perren, Arber and Davidson (2003) reported similar social affiliation in a study conducted on men's organisational affiliations in later life. Half of older men aged 65 and over reported membership of an informal organization. Study findings also indicated involvement in civic groups, social clubs, religious groups, sports clubs and pensioners' groups.

Studies have established association between social participation and health (Bath & Deeg, 2005; Cloos et al., 2010; Gray, 2009; McMunn, Nazroo, Wahrendorf, Breeze & Zaninotto, 2009). Active involvement in social organisations can be an important component of successful ageing. As Adams, Leibbrandt and Moon (2011) observe, many older adults with active participation in social and leisure activities report positive wellbeing in later life. Social organisations can also be instrumental in offering support to persons during later life (Wellman, 1992).

Counselling is another value of older persons who sometimes guide youths along the path of expected societal standards. As Oppong (2006) observes, in the past older men and women were expected to advise, guide and support the young as they matured. Old age per se was not especially revered but rather the maturity and wisdom born of a lifetime's experience in raising new generations. Once in the elder category, a person was ideally considered to have wisdom and advisory skills and was consequently respected by the young. This role is still relevant in many Ugandan societies (MoGLSD, 2009) though it is gradually being undermined by social transformation. Advice and education are some of the roles played by older persons in post-civil war in northern Uganda (Erb, 2008). These persons are

reported to be advising grandchildren on matters of discipline, traditional activities, household duties, traditional marriage customs, land boundaries and domestic animal care.

Caregiving is another aspect of older persons' value. Orphans, other vulnerable children, the helpless, the needy and sometimes even fellow ageing individuals are some of the persons to whom older persons are caregivers (Schatz & Ogunmefun, 2007). Older people in Africa tend to be heads of households in which they play diverse caregiving roles (Oppong, 2006). For example in Uganda studies on household coping mechanisms in the context of the AIDS epidemic indicate that the burden of orphan care falls on the oldest members of the family, usually the grandparents (Ntozi & Nakayiwa, 1999). This resonates with similar studies which show that older persons provided care to patients with AIDS at the terminal stage of the illness (Ssengonzi, 2007). Demographic factors are some of the determinants of caregiving. For example, McMunn et al., (2009) observe that women are a little more likely than men to have cared for someone.

Understanding the prevalence and predictors of the value of older persons has raised the urgency of investigating this phenomenon. This is further justified considering that previous studies have not gone beyond the traditional demographic factors to incorporate variables such as shelter conditions and ownership of household assets into models that predict later-life value. The main objective of the paper is therefore to examine the forms of value of older persons and assess the predictors in Uganda where the extent of the phenomenon is not well studied and documented.

The conceptual framework operationalised in the study of the value of older persons is informed, in part, by the World Health Organisation framework on active ageing (WHO, 2002). WHO posits that active ageing depends on six broad determinants namely social, personal, physical, economic, behavioural and health-services factors. For example, while low level of education is associated with elevated rate of unemployment, high education level can help people develop the skills and confidence they need to adapt and stay independent, as they grow older (WHO, 2002).

### Data and methods

The paper uses primary data from a 2012-2015 national cross-sectional study that investigated determinants of the value and challenges of older persons in Uganda. This value of older men and women was operationalized by considering eight key indicators namely: engagement in income-generating activities, possession of indigenous knowledge, advice

on behaviour norms, role played in social organisations, mediation in conflicts, propagation of cultural norms, dispensing local medicine and child caregiving.

Stratification was used to select four districts from four strata that comprise the major national zones of the country namely Central, Eastern, Northern and Western regions. Mukono, Tororo, Lira and Kisoro districts respectively were randomly selected from the four regions. Kampala City was purposively selected as the fifth regional stratum to represent the urban sector.

One sub-county was randomly selected from each of the four rural districts, and one municipality was similarly randomly chosen from the Kampala urban region. The randomly selected sub counties were Nyakabande, Kisoko, Adekokwok and Goma from Kisoro, Tororo, Lira and Mukono districts respectively. Makindye municipality was the municipality randomly selected from Kampala urban area. Probability sampling approach was adopted to ensure ultimate national representativeness of results.

The *Kish method* of sample size determination (Kish, 1965) was used to select 605 persons aged 60 and above. Working with local parish leaders, a sampling frame of households having older persons in the selected parishes was compiled. The desired number of households was selected at random from this listing. Age 60 was the inclusion/exclusion criterion; this cut-off age being deemed appropriate due to its consistency with the UN and Government of Uganda definition of older persons (UNFPA & HAI, 2012; MoGLSD, 2009). Therefore any person aged 60 and above from the selected households was eligible for inclusion in the study while all those who proved to be below 60, were excluded.

A structured questionnaire was translated into local languages which are commonly spoken in the selected districts ahead of being used in the data collection exercise. Eligible interviewers were recruited, trained and subsequently assigned zones from which to collect data. Each respondent was informed that participation in the study was purely voluntary and interviews were only conducted with older persons who consented. Quality control measures such as on-spot field checks on the interview process were taken to improve completeness and consistency of responses.

Focus Group Discussions (FGDs) were conducted to collect qualitative data. Two FGDs per district were conducted; one for males and the other for females. The composition of FGD participants was stratified to reflect different characteristics. Selected older persons were according to three broad age categories (60-69, 70-79, 80<sup>+</sup>) and one other

category of retired civil servants. Two older persons were selected for each of the four categories implying that there were 8 older persons for each FGD.

The EPIDATA software was used to capture quantitative data which was subsequently analysed in STATA programme. Univariate analysis involved running frequencies and computing percent distributions of older persons by their socio-demographic characteristics as well as prevalence of value. Scaling technique was used to combine the eight indicators of value into a single variable, *aggregate value*, which was a mark of totality of older persons' social and economic contributions to their households and communities. The created variable enabled measurement of older persons' overall importance on a scale ranging from 0-8. Aggregate value was subsequently recoded and dichotomized into 'low aggregate value' ranging from 0-4 and 'high aggregate value' varying from 5-8. The recoded variable was then cross-tabulated with a number of independent variables to establish association in bivariate analysis.

Since *aggregate value*, the dependent variable, was dichotomous (*low aggregate value* or *high aggregate value*), the binary logistic regression model was used to predict high aggregate value at multivariate analysis level. This model is expressed as:

$$\text{logit } [p(X)] = \log \left[ \frac{p(X)}{1-p(X)} \right] = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots + \beta_x x_k$$

where:  $\alpha$  is the intercept and  $\beta_1, \beta_2, \beta_3, \dots$  are the regression coefficients of  $x_1, x_2, x_3$  respectively. The independent variables  $x_1 \dots x_k$  were age, sex, residence, education, marital status, child out-migration status, limb joint health status, radio set ownership, TV ownership, possession of mobile phone, ownership of any means of transport, land ownership, possession of domestic animals, social

protection status, type of fuel for cooking, material of shelter floor, material of shelter roof and material of shelter walls.

## Results

### *Response rate*

During the field data collection process, interviewers physically moved to older persons' homes where face-to-face interviews were conducted with each selected respondent. Owing to good rapport established between interviewers and community leaders on the one hand and older persons on the other, all eligible persons who were approached accepted to participate in the study. The universal acceptance compares with a similarly high 98 percent household response rate observed in the 2006 Uganda Demographic and Health Survey (UBOS, 2006). However, there were incidences where persons who responded to certain questions on value were slightly less than the sample size. Interview fatigue could have put off the few older persons who did not respond to some questions. This phenomenon was similarly observed in the 2006 National Demographic and Health Survey in which the individual interview completion rate was 93.1 percent (UBOS, 2006).

### *Socio-demographic characteristics of respondents*

Table 1 displays distribution of respondents by socio-demographic characteristics. The table indicates that the proportion of older persons decreased with age. Almost two thirds of the older persons found in the sampled households were females (65%), leaving only 35 percent as males perhaps because of the higher female life expectancy relative to males. Four-fifth of the respondents were living in rural areas while the rest were staying in Kampala urban environment.

**Table 1** Distribution of respondents by selected socio-demographic characteristics

Characteristic	Number	Percent
<b>Age</b>		
60-69	264	43.6
70-79	208	34.4
80-89	101	16.7
90+	32	5.3
<b>Sex</b>		
Male	211	34.9
Female	394	65.1
<b>Residence</b>		
Urban	120	19.8
Rural	485	80.2

<b>Region</b>		
Western	120	19.8
Central	125	20.7
Eastern	114	18.8
Northern	126	20.8
Kampala	120	19.8
<b>Education level</b>		
No education	301	49.8
Primary	212	35.0
Secondary	61	10.1
Tertiary+	31	5.1
<b>Marital status</b>		
Never married	18	3.0
Married	266	44.1
Cohabiting	3	0.5
Widowed	249	41.1
Divorced	29	4.8
Separated	40	6.6
<b>Religion</b>		
Catholic	333	55.0
Anglican	205	33.9
Muslim	25	4.1
Pentecostal	26	4.3
Seventh Day Adventist	5	0.8
Others	11	1.8
<b>Living arrangement</b>		
Alone	92	15.2
Spouse	62	10.2
Spouse & kids	89	14.7
Grandchildren	137	22.6
Other	225	37.2
<b>Total</b>	<b>605</b>	<b>100.0</b>

Table 1 further indicates that 50 percent of the respondents did not have formal education. Just over one third (35%) attained primary level of education, 10 percent had secondary level of education while the proportion of those with tertiary and higher level of education was only 5 percent. Forty four percent of the respondents were married while slightly over two-fifth (41%) were widowed. Close to 3 percent of older persons interviewed belonged to the never-married category.

The largest proportion of respondents belonged to Catholic and Anglican religious affiliations (55% and 34% respectively). According to the table membership to other religions exists though in much smaller proportions. In comparison with living with a spouse (10%), a higher proportion (15%) of older persons were living alone. Over one-fifth of the older persons were living with grandchildren (23%).

### **The Value of older persons**

Table 2 shows the percentage of the reported value of older persons by eight socioeconomic indicators. Twenty seven percent of them were engaged in income-generating activities. This finding was corroborated by focus group informants as one of them had this to say:

Engagement in economic activities varies from elderly to elderly. Some older persons are active. Personally I have land that I rent out and get money, have a Friesian cow that I look after and obtain milk for sale and grow ample potatoes on a commercial basis. (Key Informant, Kisoro district).

Table 2 further indicates that almost a half of older persons (45%) possessed indigenous knowledge. Older persons cited several plant species that were being used to deal with basic health issues as one informant explained:

In this community we get medicines through using a variety of indigenous plants such as *osore* and *otikidiel* for healing wounds, *alwi*, *ochuloga*, *thuloliki* and *atiko* for the treatment of measles, *omenyidiegi* for managing brain sickness and *Nyamukesi* for raising appetite (FGD, Tororo district).

Four-fifth (81%) were playing advisory role on behaviour norms while just over one quarter of those who reported belonging to social organisations were in fact leaders in these organisations. Some key informants pointed out the diverse roles that older persons were playing. The roles ranged from leadership of educational and cultural institutions to membership of statutory bodies as one informant put it:

An older person is an education secretary in the Diocese of Lango. Others are on Board and Management Committees of schools and are members of Commissions in district local government. Some are opinion leaders while others

are traditional clergy and chiefs (Key informant, Lira district).

**Table 2 Level of the reported value of older persons by socioeconomic indicators**

Socio-economic value indicator	Per cent
<b>Engagement in income-generating activities (n=605)</b>	
Active in income-generating activities	27.1
Not active in income-generating activities	72.9
<b>Possession of ethno-science knowledge (n=604)</b>	
Have ethno-science knowledge	45.0
No ethno-science knowledge	55.0
<b>Advice on behaviour norms (n=600)</b>	
Offers advice on behaviour norms	81.3
No advice on behaviour norms	18.7
<b>Role in social organizations (n=306)*</b>	
Leader	26.5
Ordinary member	73.5
<b>Mediation in conflicts (n=597)</b>	
Ever consulted for conflict mediation	45.7
Never consulted for conflict mediation	54.3
<b>Propagation of cultural norms (n=287)**</b>	
Propagating cultural norms	80.1
Not propagating cultural norms	19.9
<b>Dispensing local medicine (n=591)</b>	
Dispenses local medicine	36.9
No dispensation of local medicine	63.1
<b>General childcare (n=603)</b>	
Caring for children	49.6
Not caring for children	50.4

\* Total of only older persons who reported belonging to social organizations.

\*\* Total of only older persons who reported possessing cultural information.

Eighty percent of the older persons who reported possessing cultural information were propagating and passing on this knowledge to younger people in their communities. Some older persons were propagating information pertaining to traditional and decent dressing. Older persons observed that western cultures were permeating traditional practices and influencing adoption of rather inappropriate dressing codes as one informant put it:

These days it is commonplace to come across girls dressed in skimpy skirts; a practice that is indicative of indecent dressing. As older persons, we try to tell and equip young people with information about traditionally appropriate dressing practices (FGD, Kampala district).

Some older persons further indicated that prevalence of non-traditional practices such as inter-clan marriages were on the rise, a situation that called for intervention as one participant put it:

Today, there are rising levels of ignorance about principles and practices of *amoko* (clans) and *imiryango* (families). Consequently, there are rising cases of intra-clan marriages; something unheard of in the past. As older people, we try to educate the younger people about clan matters (Women FGD, Kisoro district).

Although they were disseminating cultural norms, some older persons expressed frustrations in the course of playing this role. The current generation was said to be increasingly becoming intransigent as one older person put it:

The level of awareness and practice of *guterimpundu* (singing traditional folk songs) and *kwivuga* (traditional rapping and poetic song recital) is declining. It is very rare these days to find a teenager who can compose and sing a traditional folk song with finesse and elegance. There are aspects of the cultural environment such as *Kwivuga*, which are becoming less prevalent in our community. These are

gradually being replaced by western oriented digital audio and video music (FGD, Kisoro district).

Table 2 shows that 46 percent of the respondents had ever been consulted for conflict resolution. Figure 1 shows that 35 percent of older persons played a mediation role in matters pertaining to domestic violence, close to 3 out of 10 older persons (29%) were involved in resolving household squabbles while 17 percent attended to marital

issues. Equal proportion (8%) was involved in resolving conflicts related to land, delinquency, and drug abuse. These results indicate that older persons were playing a vital role in sorting out household and community problems.

**Figure 1 Percentages of older persons by types of conflicts received for resolution**

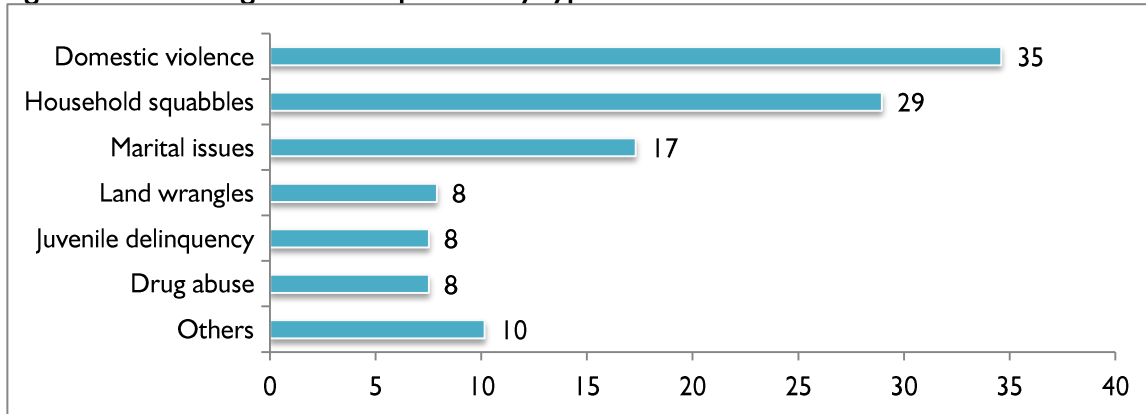
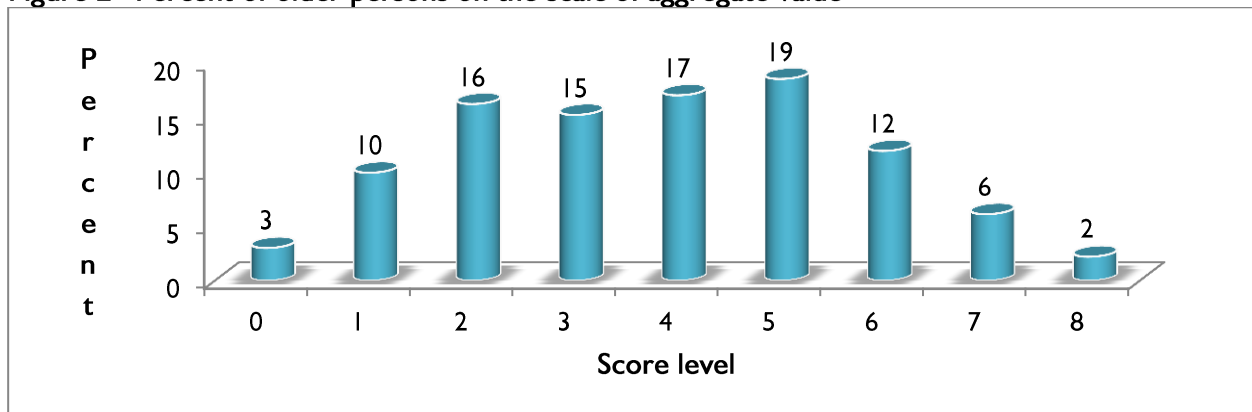


Table 2 also indicates that 37 percent of the respondents were dispensing local medicine. Half of the older persons (50%) were caring for children.

Figure 2 shows the distribution of respondents by score level on the 0-8 aggregate value scale. Two percent (2%) obtained maximum score of 8 and constitute older persons who may be regarded as having the 'highest value' in terms of the eight indicators. Overall, just over three fifth (61%)

scored between 0-4 on the scale and can be categorised as having 'low aggregate value' while slightly under two-fifth (39%) scored between 5-8 on the scale and can be classified as having 'high aggregate value'.

**Figure 2 Percent of older persons on the scale of aggregate value**



**Predictors of high aggregate value**

Table 3 presents results of logistic regression analysis of factors predicting high aggregate value. Age, education, land ownership, limb joint health and region were the significant predictors

of high aggregate value. Older persons aged 60-69 were more likely to have high aggregate value than their counterparts aged 80 and above (OR=1.9; p=0.013).

Table 3 Logistic regression analysis of predictors of high aggregate value

Variable	Coefficients	Odds Ratio	Std. Err.	p
<b>Age</b>				
60-69	0.637	1.890	0.485	<b>0.013</b>
70-79	0.354	1.425	0.375	0.178
80+*		1.000		
<b>Sex</b>				
Male	0.368	1.445	0.339	0.117
Female*		1.00		
<b>Education</b>				
No education*		1.000		
Primary	0.562	1.754	0.400	<b>0.014</b>
Secondary+	0.852	2.344	0.820	<b>0.015</b>
<b>Marital status</b>				
Married	-0.092	0.912	0.305	0.783
widowed	0.400	1.492	0.471	0.205
Divorced/separated*		1.000		
<b>Radio set ownership</b>				
Radio	-0.151	0.860	0.187	0.489
No radio*		1.000		
<b>TV set ownership</b>				
Owens TV	-0.460	0.631	0.201	0.149
No TV*		1.000		
<b>Mobile phone ownership</b>				
Mobile phone	0.226	1.253	0.311	0.363
No mobile phone*		1.000		
<b>Ownership of any means of transport</b>				
Owens any means of transport	0.222	1.249	0.345	0.420
No means of transport*		1.000		
<b>Land ownership</b>				
Owens land	0.681	1.975	0.463	<b>0.004</b>
No land		1.000		
<b>Ownership of domestic animals</b>				
Owens domestic animals	0.375	1.455	0.284	0.055
No domestic animals*		1.000		
<b>Child outmigration status</b>				
Has out migrated children	0.565	1.759	0.336	<b>0.003</b>
No out migrated children*		1.000		
<b>Social protection status</b>				
Receives pension	0.503	1.654	0.693	0.230
No pension received*		1.000		
<b>Limb joint health status</b>				
Has joint pain/swelling/stiffness	0.441	1.555	0.308	<b>0.026</b>
No joint pain/swelling/stiffness*		1.000		
<b>Region</b>				
Central*		1.000		
Western	0.981	2.667	0.954	<b>0.006</b>
Eastern	0.641	1.898	0.702	0.083
Northern	0.873	2.393	0.823	<b>0.011</b>
Kampala	0.965	2.625	0.815	<b>0.002</b>

(\* = Reference category)

In comparison with the older persons without formal education, those having primary and secondary or higher level of education were more likely to have high aggregate value (OR=1.8; p=0.014 and OR=2.3; p=0.015 respectively). The older persons who owned land were more likely to have high aggregate value than their counterparts who did not

have any land (OR=2.0; p=0.004). Those who had out-migrated children were more likely to have high aggregate value than their counterparts without migrant children (OR=1.8; p=0.003).

Interestingly, older persons who had joint pain/swelling/stiffness were more likely to have high aggregate value than their counterparts without such



health challenge (OR=1.6;  $p=0.026$ ). Lastly, the broad region in which older persons resided also predicted high aggregate value. In comparison with the Central region of Uganda, older persons living in Western, Northern and Kampala regions were more likely to have high aggregate value (OR=2.7;  $p=0.006$ , OR=2.4;  $p=0.011$  and OR=2.6;  $p=0.002$  respectively).

### Discussion

The rising number of potentially active older persons in sub-Saharan African countries such as Uganda is suggestive of the need to re-align focus on the benefits associated with increasing longevity. Our study has indicated that some older persons are engaged in income generation, possess indigenous knowledge, offer counselling and are leaders in social organisations. Others are arbiters in conflicts, propagate cultural norms, dispense local medicine and offer general childcare.

Overall, a prevalence of 'high aggregate value' that is close to 39 percent on the scale of aggregate value is impressive considering that the subjects were of advanced age. This offers credence to the position that older persons contribute to development contrary to some opinions held by certain sections of society.

The disparity in high aggregate value between young older persons and oldest old persons could be attributed to better physical and health state and, consequently, more engagement in socioeconomic activities among the young older persons. Decline in socioeconomic participation as age increases is expected as biological changes that naturally accompany the ageing process translate into gradual decline in physiological functions and abilities. Decline in proportion of older persons engaged in income-generating activities has also been established in Tanzania (Spitzer, Rwegoshora & Mabeyo, 2009). Other studies have shown decrease in productivity with age (Czaja, 2007) and decline of formal employment as age increases (Barrientos et al., 2003).

The finding of significant influence of education on the value of older persons can be explained in terms of the role education plays in equipping older people with skills and resources that assist in adjusting to life at and after age 60. Education can be a major stabilising factor in adjusting to life challenges in retirement. Some studies have indicated that most retirees who assessed their life satisfaction as high were retirees with tertiary education (Amaike, 2014). Our findings on the significant influence of education on the value of older persons also resonate with results of a study carried out in selected Caribbean countries in which professional workers such as

former teachers, nurses and consultants had more income-earning opportunities in old age than their counterparts of lower education (Cloos et al., 2010). Similar results have been found in other studies (Davey, 2002; Hayward & Grady, 1990). Higher level of education can help older persons develop skills and confidence they need to adapt and stay independent as they grow older. On the contrary, low level of education is associated with higher rates of unemployment (WHO, 2002).

The influence of possession of the land resource on older persons' high aggregate value can be related to the socioeconomic and cultural value of the resource. Older persons who possessed land may have used it to engage in small business activities which contributed to their high aggregate value. Similarly, land may have presented older persons with the opportunity to interact with land-based flora and fauna and thus gradually acquired ecological knowledge. Conversely, the landless could have had less exposure to organisms in their environment; which limited their internalisation of indigenous knowledge. Studies elsewhere have indicated existence of intimate relationships between local understanding of land and indigenous knowledge (Dudgeon & Berkes, 2003).

In Uganda, and perhaps some other African societies, assets such as land and domestic animals confer status upon the owner who is more likely to be respected than the less propertied counterpart. Consequently, the propertied class are more likely to be approached as arbiters in local disputes. It is therefore probable that ownership of domestic animals may have indirectly contributed to playing roles such as conflict mediation and leadership of social organisations, which in turn raised the aggregate value of relevant older persons. Links between household resources and civic involvement have been established in other studies where, for example, access to a car was associated with increased likelihood of being involved in civic activities (Perren, Arber & Davidson, 2004).

The finding that high aggregate value is more likely among older parents whose children had out-migrated is surprising, at first thought, considering that migration is sometimes associated with negative consequences at origin (United Nations Population Fund, 2008). In our study, the link between child out-migration and high aggregate value could be associated with returns on child out-migration. It is probable that successful child out-migrants remitted some of their earnings which their parents invested in small businesses or spent on basic services, which in turn raised older persons' socioeconomic standing in the community. As UBOS (2008) observes, remittances supplement household income and are

an alternative source of finance for other economic activities. This is particularly critical in rural areas where the dominance of subsistence economy limits people's capacity to afford basic necessities. Cash-strapped older persons consequently tend to rely on remittances from successful family out-migrants. Other studies have shown that out-migration of children can have positive effects on places of origin (Alexis, 2006).

The greater likelihood of high aggregate value among persons with limb joint pain, swelling and stiffness is intriguing considering that limb difficulties would ordinarily be expected to work against socioeconomic activity. This finding could probably be associated with the tendency for persons with such difficulties to be more easily accessed at home than their healthier and more agile counterparts. Older persons with limb difficulties would thus be in a better position to play other domestically-based roles such as child caregiving, conflict resolution, dispensing local medicine and propagating cultural values. The childcare given, cultural information propagated and indigenous knowledge possessed, albeit from an indisposed position, may have contributed to higher score on the scale of aggregate value. This may confirm the common adage that disability is not inability (WHO, 2011).

Variation in high aggregate value by the region of the country in which older persons resided may be linked to regional disparities on indicators such as prevalence of indigenous knowledge, engagement in income-generation and advice on behaviour norms. Greater involvement in economic and social activities could explain the higher proportions in Kampala, Western and Northern regions in comparison with Central and Eastern regions. Regional disparities in socioeconomic activities have similarly been observed in national household surveys (UBOS, 2010).

### Conclusion and recommendations

Older persons play various social and economic roles which are indicative of their value at household and community level. The value is empirically evident in form of engagement in economic activity, possession of indigenous knowledge, behavioural advice, propagating cultural norms, leadership of social organisations, conflict resolution, dispensing local medicine and childcare giving.

This study concludes that education significantly influences the value of older persons with persons of primary and higher level of education having higher aggregate value than their counterparts with lower educational qualifications. It is further concluded that being young older person, owning land, having child out-migrants and residing in Western, Northern and Kampala regions predicts high aggregate value.

In the light of findings, stakeholders should consider putting in place arrangements in which older persons are offered opportunities of improving their life skills through later-life educational advancement. Furthermore, the Ministry of Education, Science, Technology and Sports is urged to increase learner access and retention rates in the national education system. This could translate into a higher proportion of educated persons who ultimately attain advanced age and, hence, experience active ageing. The long term effect of this could be enhanced value in later-life.

The lower likelihood of high aggregate value among the oldest old and landless older persons calls for design of programmes that support later-life participation in social and economic activities. One strategy of realising such programmes would be establishment of a special old age fund that would supplement the current donor-supported Social Assistance Grant for Empowerment.

The greater likelihood of high aggregate value in Kampala, Northern and Western regions may call for initiation of programmes that support initiatives of older persons' roles in the regions. This may involve enabling older persons to have increased access to land and media assets which in themselves have proved to be significant determinants of high aggregate value.

### Limitations

One limitation of this study is that binary data was collected on each of the indicators of value. For each indicator, richer results could have been produced if a given question looked at a whole range of possible responses on a continuum from, say, 1 to 5. Another limitation is that the study focused on just eight indicators of value, which are not necessarily the only ways in which older persons make contributions to their households and communities. Consideration for other aspects such as later life tax contributions, bequests to charity and neighbourhood watching could have widened the spectrum of value. This points to the need for conducting studies having greater depth and breadth on the subject of value of older persons in Uganda.

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