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Determinants of Active Ageing in Zambia

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This article investigated determinants of active ageing proposed by the WHO 2002 Active Ageing Framework using data from a developing country - Zambia. Up to date, there is little or no evidence of studies conducted to answer whether or not determinants proposed by the Active Ageing Framework of 2002 apply to developing countries like Zambia. This article set out to (1) explore which of the determinants of active ageing apply to Africa and Zambia in particular and (2) the influence of HIV/AIDS on active ageing in general. A non-experimental cross-sectional research design was used to collect data for this article. Snowball and purposive sampling was employed since there is no available sampling frame for the aged population. The article reveals that income accessibility (Economic Determinant), functional limitations (Health Determinants), low self-esteem and loneliness (Personal/Behavioural Determinants), low family and peer interactions (Social Determinants) and HIV/AIDS determine active ageing in Zambia. The article suggests focused research needed to clarify and specify the role of each determinant, as well as the interactions between determinants in the active ageing process. In fact, the framework proposes that for such studies, a life course approach is required so as to take advantage of transitions and 'window of opportunity' for enhancing health, participation and security at different stages. The article also recommends that policies on ageing should be structured to incorporate main determinants of active ageing to reflect the Zambian context.

Introduction

The World Health Organization (2002) conceptualised 'Active Ageing' as '*...the process of optimizing opportunities for health, participation, and security in order to enhance quality of life as people age...*'. The idea, dating as far back as 1990, was a concerted effort between WHO and several other government and non-governmental organizations to help explain linkages between activity, health, independence, and ageing well (Constana et al., 2012). Since this inception, several articles and papers have been written to highlight contextual as well as practical aspects of active ageing. In this process, it has been highlighted that scientific interests on the empirical dimension of active ageing has been scarce on the international level (Borsch-Span, 2013). This assumption is even more critical to Africa where ageing is still being perceived as a 'farfetched dream' and a problem of concern to western countries. However, notwithstanding this downplay of ageing in Africa, there clearly exists evidence to the contrary.

For example, Kalasa (2005) states that although Africa will remain relatively young for some time, old age dependency burden will increase by about 93% by 2050. In the same way, while the ratio of the population aged 60 years and above to the population aged 0-14 years was 0.169 in 1950 and 0.212 in 1995 (a change of 25%), the ratio will be 0.914 in the year 2050 (a change of 441% from 1950 and 331% from 1995). In essence, therefore, the 'window of hope' may not be as permanent as most people would like to think, and this signals the need for African countries to critically focus on elderly populations (Kidd, et al., 2009) and active ageing becomes an important input to this process. Quite frankly, the concept of 'active ageing' has not been measured to assume its importance and contribution to overall ageing in most parts of Africa (Leive, et al., 2008). Moreover, there is little evidence to indicate whether or not research has surfaced to confidently apply 'active ageing' with a focus on Africa and whether or not proposed determinants of active ageing could be applicable to most parts of Africa. In the same way, Africa is currently facing a huge challenge in the form of HIV/AIDS which consequently is affecting older people. The question therefore is: how can we locate HIV/AIDS within the Active Ageing Framework? And to what extent is AIDS a determinant of Active Ageing. Rephrasing

Constana et al. (2012), this paper explores Determinants of the WHO 2002 Active Ageing Framework that embraces positive outcomes of the ageing process using data from Zambia. We intended to understand determinants of active ageing using data from a developing country as well as introduce HIV/AIDS as one of the determinants of active ageing. This paper sets out to (1) explore which of the determinants of active ageing apply to Africa and Zambia in particular, and (2) the influence of HIV/AIDS on active ageing in general.

Methods

We conducted a non-experimental cross-sectional population-based survey of participants aged 60 years and older in communities and within the five homes for the aged namely: Matero, Kandiana, Maramba, Mitanda, and Chibolya located in Lusaka, Sesheke, Livingstone, Ndola, and Mufulira districts, respectively. The sample comprises both a rural and urban dimension, men and women proportions, respectively. Kandiana is predominately in a peri-urban rural setting of Western Province whereas Matero, Mitanda, and Chibolya are within the heart of the urban settings. Respondents in homes for the aged were included or excluded based on the ability to communicate, and conversely the very sick or incontinent were excluded.

Data Collection

An interviewer administered questionnaire was used to collect data on individual, socioeconomic, HIV and AIDS, behavioural, and health/functional indicators of active ageing. Men and women aged 60 years and older institutionalised (those found in old people's homes) as well as un-institutionalised aged people living in study areas were selected and interviewed.

Standardised procedures of purposive and snow-ball sampling were employed in identifying respondents for the study. Purposively, all residents in existing old people's homes were targeted for the study. In addition, samples of the aged living in communities were selected through snow-ball sampling (Goodman, 1961; Salganik and Heckathorn, 2004). The approach was useful, as the study population has no known sampling frame as well as taking into account the sensitivity associated with ageing in Zambia. Lusaka had the highest number of respondents (296), followed by Ndola (195), Sesheke (125), Mufulira (50), and Livingstone (24). In total, a sample of 690 men and women aged 60 years and older was surveyed.

Defining Old Aged

In the early 1970s, the Zambian government defined aged persons as generally any woman above age 40 and above or any man over 50 years (Zambia's Report for the 1982 World Assembly on Ageing, 1982). However, after setting the statutory age for retirement at age 55 for females and 60 years for males, and with similar requirements for admission to the homes for the aged, a new concept to determine old age was created (Kamwengo, 2004). Unfortunately, even up to now, there is no clear guide as to who qualifies to be classified as an 'old person'. Retirement age in Zambia is 55 years for both males and females; the discriminatory clause where females were required to retire earlier than males was eliminated from the statutory instruments.

The actual chronological age attainment for one to qualify to be 'old' still remains a debatable concept and varies with region and context. For example, the United Nations defines an old person as one who is 60 years and older; Zambia's Health Policy on the other hand states that for one to have free access to medical services, one has to be at least 65 years or older. Thus, the synchronisation and the meaning of chronological age attained to be classified as aged still lacks a universally acceptable threshold. However, this paper is situated within the UN definition of the aged, which states that 'any person aged 60 years or older is aged'.

Model for Determinants of Active Ageing

Determinants of active ageing were measured using proxy indicators including gender and residence. In this paper, residence was measured by either urban or rural areas (in Zambia, the plight of the aged and active ageing differences are reflected easily by one's residence), while gender was reflected or measured through one's sex. Behavioural and personal determinants were measured using indicators such as feeling hopeless, useless, unhappy, or lonely, and dignity and self-image, among others. Health and functional determinants were measured using the following indicators (say either 'yes' or 'no'): ability to squat, ability to walk freely, and ability to clean own house. Economic determinants were measured using indicators such as: having worked in the past 12 months, having opportunities for work, and having a steady flow of income. Indicators on social determinants included information on care takers, living arrangements, peer and family interactions, and receipt of any support. Finally, HIV/AIDS was included as a determinant, unique to Zambia and Southern Africa in general, but not reflected in the Active Ageing Framework (WHO, 2002). HIV/AIDS was measured using indicators such as: staying with dependents; staying with orphans; whether these were HIV/AIDS orphans; and whether they had lost children due to AIDS. These indicators were used to reflect the effect of HIV/AIDS on active ageing and were collapsed as 'Reports HIV/AIDS'.

In this model, as well as in the Active Ageing Framework, these determinants were or are treated as independent variables while active ageing (measured by participation, self-fulfilment, independence, and dignity) was measured as the dependent variable. Table 2 shows descriptive statistics of determinants of active ageing and indicators of active ageing.

Results

A total of 700 participants were surveyed; 10 were excluded from the analysis due to incomplete data (age, sex data), leaving 690 (284 males and 406 females) representing 98% response rate. The socio-demographic characteristics of the study population are shown in table 1. Table 1 shows that the sample contained more females than males; the mean age for the population was 72 years, with more respondents from the urban settings than rural areas. Majority of respondents were widowed with females exhibiting a higher percentage compared to males. Similarly, more males than females reported being married. In fact, this is a reflection of the norm in most African societies. Overall also, primary education attainment is more prominent (52%) compared to higher education (15.8%) and those reporting never having attended school (32%), respectively.

Table 1: Description of sample of elderly Zambians (60 years and above)

	Total population	Males	Females
N	690	284	406
Mean Age	72.1	73.7	71
% Residence			
Urban	81.7	86.2	13.8
Rural	18.3	78.5	21.5
% Marital status			
Never	3.77	4.23	3.45
Married	35.8	56.34	21.43

Divorced/Separated	11.45	13.03	10.34
Widowed	48.99	26.41	64.78
% Education			
Never	32.17	18.66	41.63
Primary	52.03	55.63	49.51
Higher	15.8	25.7	8.87

According to the Active Ageing Framework, active ageing depends on a variety of influences or 'determinants' that surround individuals, families, and the nation (WHO 2002). These determinants are varied and are known to affect active ageing differently. Among the varied factors are; gender and residence, economic, health, social, physical environment and psychological or behavioural, as central to the active ageing framework. This study also endeavoured to situate the influence of HIV/AIDS in the active aging framework, particularly the lives of older people in Zambia. HIV/AIDS was included because of its influences on the lives of older people, particularly because they are expected to look after orphaned children if or when their parents die due to HIV/AIDS or indeed any other causes. This situation in most cases exacerbates poverty levels of already impoverished old people's households. We excluded the 'physical environment' determinant because the context in which it is used in developed countries is very different from what could be referred to as physical environment in an African setting. For example, the determinant in question proposes that for people to age actively, there is need to build structures which take into account their physical limitations (i.e. all buildings should have escalators and not just stairs). In the modified framework, we replaced culture with residence. This was so because issues of culture were not measured accurately and due to various differentials in understanding culture, the study was not structured to measure common acceptable applications for different areas sampled. Figure 1 and 2 are the original and modified 2002 WHO Active Ageing Framework, respectively.

Figure 1. Original WHO Active Ageing Framework

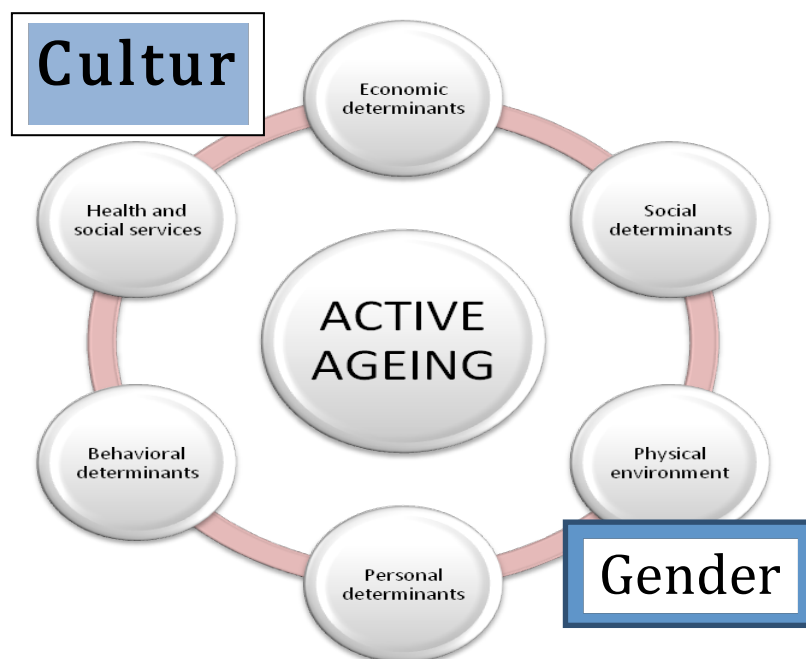
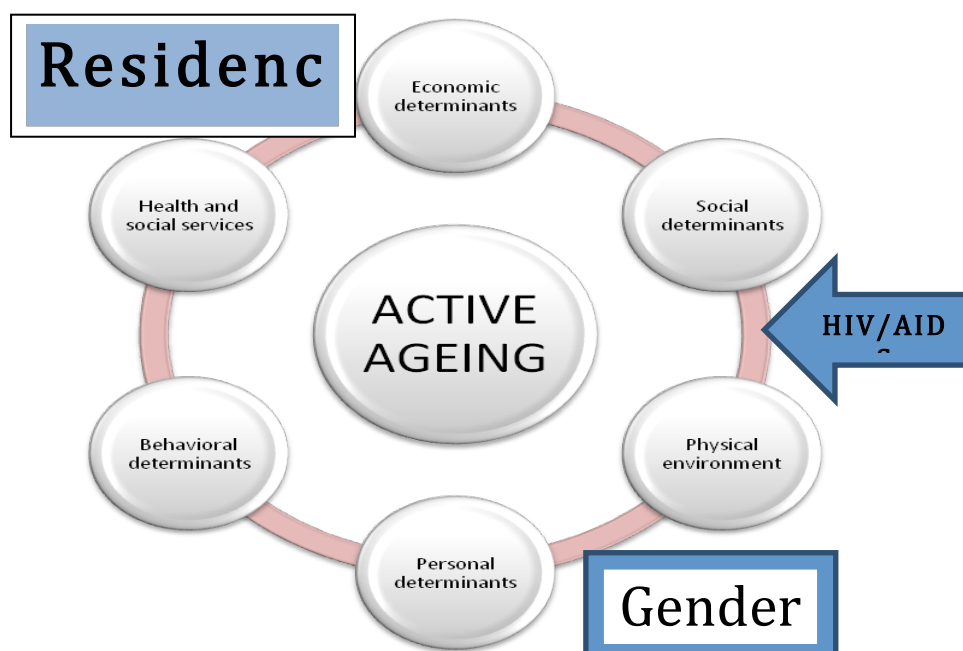


Figure 2. Modified WHO Active Ageing Framework with AIDS



It should also be borne in mind that Active Ageing is not a concept measurable using a single variable - it is complex. Using the definition of the concept itself, active ageing should include: independence, participation, self-fulfilment, dignity, and care. Out of these, four – independence, participation, self-fulfilment and dignity – were captured in the data collection process. Independence for example was measured by asking respondents to state whether they were free to make their own decisions without being coerced or forced; participation was also measured by asking respondents to state whether they were free and allowed to participate in community activities such as church gatherings, community meetings, etc. Any 'Yes' response to these questions meant that they were participating in community activities and therefore fulfilling partly the active ageing process requirements.

Table 2. Percent Distribution of Determinants of Active Ageing and Selected Indicators of Active Ageing

Determinants of Active Ageing	N	Selected Indicators of Active ageing			
		Participation	Self Fulfilment	Independence	Dignity
Sex					
Male	286	88.8	16.1	79.7	72.6
Female	409	91.9	5.3	72.1	67.5
Residence					
Urban	566	92.1	10.2	76.8	70.6
Rural	129	84.5	7.7	68.2	69.2
Personal/Behavioural					
<i>'Feels' Hopeless</i>	210	87.6	10.0	63.8	68.4
<i>Useless</i>	191	83.8	12.5	60.2	70.7
<i>Unhappy</i>	311	87.5	10.9	68.2	75
<i>Lonely</i>	364	86.8	11.5	70.8	73.3
Health/Functional					
<i>Ill past 12 months</i>	433	88.6	10.3	71.5	76.2
<i>Can squat</i>	487	93.0	8.8	85.2	83.1

<i>Walk freely</i>	522	91.9	9.3	81.6	79.7
<i>Clean house</i>	499	93.4	8.8	81.9	77.9
Economic					
<i>Work past 12 months</i>	86	91.8	2.3	86.1	71.4
<i>Opp/work/income gen</i>	176	93.7	5.6	87.5	76.4
<i>Monthly income</i>	158	96.2	2.5	91.7	60
Social					
<i>Has caretaker</i>	417	87.2	12.4	66.9	78.5
<i>Living with anyone</i>	523	90.2	0.2	77.4	50
<i>Interact with peers</i>	480	93.5	100.0	80.6	50
<i>Receives support</i>	176	85.8	100.0	64.2	52.1
HIV/AIDS					
<i>Reports HIV</i>	293	93.8	0.0	83.9	50

Table 2 shows that for almost all indicators of active ageing proposed identified primary determinants seem to have influences. For example, the respondent's sex influences how older people participate (88.8 and 91.2% for males and females, respectively) in communities; it also influences how independent (79.7 and 72.1% for males and females, respectively) they are as well as whether they live dignified lives or not (72.6 and 67.5% for males and females, respectively). Similarly, for almost all determinants of active ageing, self-fulfilment seems to be the least affected. Except for 'receiving support' (100%), and 'interacting with peers' (100%), other influences are less effective. Except for participation where females seem to report more (91.9%), males are more self-fulfilled (16.1%), more independent (79.7%), and more dignified (72.6%).

The rural-urban divide of residences of old people brings to perspective differentials in the concept of active ageing. Residents in urban areas appear to participate more in community activities (92.1 against 84.5%), are likely to be more self-fulfilled (10.2 against 7.7%), and more independent (76.8 against 68.2%) compared to their rural counterparts. However, in terms of dignity, older people in both rural and urban areas seem to enjoy relatively similar treatment (70.6 and 69.2%, respectively).

While it is clear that other determinants play important roles in explaining active ageing, there are few or exceptional variations amongst and between them. Behavioural and personal determinants also affect the way older people participate in community activities. Being unhappy and reporting loneliness, for example, is associated with the respondent's independence (68.2 and 70.8%, respectively) and dignity (75 and 73.3%, respectively). Health determinants also indicate associations with active ageing indicators relating to participation in community activities, independence, and dignity. About 88.6% of respondents stated that while they were ill in the past 12 months prior to the study, they were free to participate in affairs of society. Economic determinants, especially having a monthly income (from any source) is associated with active ageing indicators of participation (96.2%) and independence (91.7%). Similarly, social determinants appear to effect active ageing indicators differently. However, this association is more visible with participation in community activities and independence than with other indicators.

The influence of HIV/AIDS in the active ageing process cannot be ignored, particularly in the sub-Saharan Africa region. HIV/AIDS appear to affect participation activities (93.8%) more compared to other determinants. However, HIV/AIDS appear to have no clear influence on the active ageing indicator of self-fulfilment. In other words, one's report that they are affected by HIV/AIDS or are taking care of HIV/AIDS orphans does not suggest a clear influence on fulfilment.

Determinants of Active Ageing relative to Active Ageing Indicators

In order to measure the influence of each of the determinants on indicators of active ageing, a multiple regression model was used. All outcome and independent variables remained as they appear in descriptive Table 2. Details of these relationships are in Table 3.

Table 3 Determinants of Active Ageing relative to Active Ageing indicators

Determinants of Active Ageing	N	Selected Indicators of Active ageing			
		Participation	Self Fulfilment	Independence	Dignity
<i>Sex</i>	690	-0.0312	***0.1070	*0.0759	0.0497
<i>Residence</i>	690	**0.0755	0.0250	*0.0863	0.0794
Personal/Behavioral					
<i>'Feels' Hopeless</i>	210	*0.0762	-0.0664	-0.0101	-0.1470
<i>Useless</i>	191	*+-0.1305	*0.0793	**0.1727	0.0317
<i>Unhappy</i>	311	-0.0062	-0.0030	-0.0751	0.0481
<i>Lonely</i>	364	*-0.0601	0.0340	0.0048	-0.0566
Health/Functional					
<i>Ill past 12 months</i>	433	-0.0204	0.0077	0.0086	0.0382
<i>Can squat</i>	487	0.0392	-0.0326	***0.2559	0.1806
<i>Walk freely</i>	522	-0.0274	0.0161	0.0486	0.0384
<i>Clean house</i>	499	***0.1163	-0.0098	*+0.1246	0.0043
Economic					
<i>Work past 12 months</i>	86	-0.0186	-0.0530	0.0237	-0.0265
<i>Opp/work/income gen</i>	176	0.0172	-0.0082	*0.0860	0.0974
<i>Monthly income</i>	158	*0.0681	**0.0781	***0.1690	-0.2300
Social					
<i>Has caretaker</i>	417	***-0.0938	,-	***-0.2081	,-
<i>Living with anyone</i>	523	0.0358	,-	**0.1600	,-
<i>Interact with peers</i>	480	***0.1499	,-	***0.1732	,-
<i>Receives support</i>	176	-0.0325	,-	**0.1113	,-
HIV/AIDS					
<i>Reports HIV</i>	293	**0.0690	-0.0033	***0.1405	,-

*** $P < 0.0001$

* $P < 0.05$

** $P < 0.01$

*+ $P < 0.001$

Opp/work/income gen = opportunity for work or income generating activity

Associations in the table show that gender influences active ageing indicators of independence ($p < 0.05$) and self-fulfilment ($p < 0.0001$). However, there is no association between one's sex and active ageing indicators of participation and dignity. On the other hand, residence has no bearing on older people's dignity and self-fulfilment, but is statistically associated with both participation ($p < 0.01$) and independence ($p < 0.05$).

Personal/behavioural determinants of active ageing are associated to active ageing indicators of participation, self-fulfilment and independence. In this example, almost all measures of personal/behavioural determinants are associated with the active ageing indicator of participation (hopeless ($p < 0.05$); useless ($p < 0.001$); lonely ($p < 0.05$)) except for 'being unhappy'. Similarly, the relationship between the personal/behavioural determinant indicator of 'feeling useless' is significant with both the active ageing indicators of self-fulfilment ($p < 0.05$) and independence ($p < 0.01$). Given these results, it is clear that the main problem in

as far as older people are concerned is low self-esteem. Low self-esteem inhibits old people's full participation in several activities taking place at community or society level.

The active ageing framework proposes that health and functional abilities have substantial effects on ageing in general. Results in Table 3 show that there is no significant association between the respondent's report of being 'ill in last 12 months prior to the study' and any other indicator of active ageing. This finding is at variance with the propositions in the active ageing framework, where health is a key determinant. However, this may mean that ill health may only affect active ageing if and when it is experienced over a long period of time. Ability to 'clean the house' is related to the active ageing indicator of 'participation' ($p < 0.0001$) and independence ($p < 0.001$); while 'being able to squat' is only significant with the active ageing indicator of 'independence' ($p < 0.0001$). This shows that while health indeed affects the ageing process, this relationship can best be measured by a life course approach and is more factual when it relates to actual physical activity where older people have to perform more physical abilities, rather than reports of being ill for example. As a result, while it could be argued that health is a significant challenge in old age, the effect it has on the actual active ageing process is minimal except where one has lifelong health challenges.

Economic determinants are also said to have a bearing on the active ageing process. However, the economic determinant indicator measured by proxy of whether or not someone 'worked in the last 12 months prior to the study' is not statistically significant on active ageing indicators. The working in this respect refers to any work done by the elderly and is paid for irrespective of the duration of the work done. The economic determinant indicator of 'having opportunities for work or income generating activities' has no bearing on almost all active ageing indicators except that of independence ($p < 0.05$). The main economic (determinant) indicator influencing participation, self-fulfilment and independence is 'monthly income'. Monthly income refers to income/money received either from work done, retirement, or any other source. In fact, respondents' report of having a steady 'monthly income' affects their participation ($p < 0.05$), self-fulfilment ($p < 0.01$) and also their independence ($p < 0.0001$).

Besides the forgoing, Table 3 also shows an association between social indicators of determinants of active ageing and active ageing indicators. Self-fulfilment and dignity are not statistically associated with the social determinants proposed in the active ageing framework. However, all, except for two of the measured indicators of social determinants of active ageing (living with anyone and receiving support) seem to affect active ageing indicators of participation and independence. Participation is affected by whether or not a respondent has a caretaker ($p < 0.0001$) and whether or not a respondent interacts with peers ($p < 0.0001$). In the same way, the active ageing indicator of independence is related to all social determinants of active ageing with 'having a caretaker' ($p < 0.01$), and 'receiving support' ($p < 0.0001$) being negatively related.

Lastly but not least, our study looked also at the effect HIV/AIDS is having on active ageing. This situation is not proposed through the active ageing framework but thought through to have effects on the active ageing process. Table 3 shows that HIV/AIDS is related to the active ageing indicator of participation ($p < 0.01$) and independence ($p < 0.0001$). However, HIV/AIDS has no bearing on one's self-fulfilment and dignity. This means that old people's report of HIV/AIDS affects how they participate in community activities as well as their independence. What this shows is that older people who could be keeping orphans, for example, are not as independent to be able to do what they want and whenever they want because they have to take care and look after orphans. This is a serious and daunting challenge affecting older people in Zambia and other African countries where the HIV/AIDS pandemic is highly pronounced and generalised.

In summary, Table 3 suggests that active ageing is a function of most of the determinants proposed in the active ageing framework or model. Even with the presence of HIV/AIDS, the relationship with indicators of determinants of active ageing and indicators of active ageing itself is quite strong.

Discussions above are not conclusive. As a result, for the paper to accurately establish which of the determinants of active ageing are more significant, and also to establish 'pathways' affecting active ageing significantly, we generated a composite variable compressing all indicators of active ageing into a variable called 'Active Ageing'.

The input variables for all or most of the indicators of active ageing were generated by 'Yes' and 'No' responses. For example, for us to investigate whether any respondent was 'participating' in community activities, we asked them to confirm (yes) or disapprove (no) whether they were given chances to participate in community activities such as going to church; being given positions of authority; being considered to heard community groupings, etc. Any 'Yes' response to such a statement meant that a respondent was participating while a 'No' outcome meant the opposite. This process was followed through for other indicators of active ageing - self-fulfilment, independence, and dignity. In order to finally come up with the outcome variable of 'Active Ageing', all 'Yes' responses to the preceding conditions or questions meant a respondent was enjoying active ageing while 'No' responses meant the opposite. This process provided a demonstration of determinants of active ageing and pathways with influences on active ageing relating to Zambia. Table 4 shows multiple regression results of indicators (or pathways) of determinants of active ageing and active ageing as a single outcome variable.

Table 4 Determinants of Active Ageing in Zambia – Single Outcome

Determinants of Active Ageing	N	Active Ageing (sig value)	β (exp)	R Squared
<i>sex</i>	690	-0.0070	-0.0173	
<i>Residence</i>	690	***0.0923	0.1796	0.0320
Personal/Behavioural				
<i>'Feels' Hopeless</i>	210	*0.0517	0.1189	
<i>Useless</i>	191	***0.0965	-0.2156	0.0389
<i>Unhappy</i>	311	-0.0307	-0.0765	
<i>Lonely</i>	364	-0.0137	-0.0343	
Health/Functional				
<i>Ill past 12 months</i>	433	-0.0194	-0.0474	
<i>Can squat</i>	487	*0.0438	0.1005	0.0415
<i>Walk freely</i>	522	-0.0054	-0.0116	
<i>Clean house</i>	499	**0.0564	0.1263	
Economic				
<i>Work past 12 months</i>	86	-0.0156	-0.0257	
<i>Opp/work/income gen</i>	176	0.0199	0.0432	0.0109
<i>Monthly income</i>	158	*0.0402	0.0843	
Social				
<i>Has caretaker</i>	417	** -0.0614	-0.1409	
<i>Living with anyone</i>	523	0.0413	0.0615	
<i>Interact with peers</i>	480	*+0.0754	0.1359	0.0499

<i>Receives support</i>	176	-0.0303	-0.0641	
HIV/AIDS				
<i>Reports HIV</i>	293	**0.0496	0.1151	0.0132
<i>***P< 0.0001</i>	<i>*P<0.05</i>	<i>**P<0.01</i>	<i>*+P<0.001</i>	
<i>Opp/work/income gen</i>	<i>= opportunity for work and income generating</i>			

Table 4 shows that gender does not influence active ageing, even if it does influence some individual indicators of active ageing (Table 3). This finding defies propositions given in the Active Ageing Framework where gender is an overarching variable influencing active ageing in general. Residence, however influences active ageing ($p<0.0001$). It should also be noted that even after controlling gender against residence and vice versa, the relationships between gender and active ageing on one side and residence and active ageing on the other, remained the same – gender does not influence active ageing while residence does. To some extent, this revelation marries well with the Active Ageing Framework assumption stating the uncertainty with which one can predict or point out direct causation of anyone determinant on active ageing (Active Ageing Framework, 2002, p. 19). To be certain on this front, the framework proposes studies of a life course approach to take advantage of transitions and ‘window of opportunity’ for enhancing health, participation and security at different stages (Active Ageing Framework, 2002, p. 19-20).

Results in Table 4 also show that amongst personal/behavioural determinants of active ageing, only feelings of ‘hopelessness’ ($p<0.05$) and ‘uselessness’ ($p<0.0001$) explain variations on the outcome variable of active ageing. Actually, this model predicts that feeling useless is negatively related to active ageing (Beta=-215). Other indicators of personal/behavioural determinants of active ageing have no bearing on active ageing in general.

In the same way, health and some functional disabilities do not affect active ageing. However, ability to squat ($p<0.05$) and clean the house ($p<0.01$) affect older people substantially. In terms of economic determinants, the model suggests that only ‘having a steady monthly income’ ($p<0.05$) affects active ageing. Other economic determinants have no bearing on active ageing.

This model also suggests that the major social (determinants) contributors to active ageing, are ‘having a caretaker’ ($p<0.01$) and ‘interacting with peers’ ($p<0.001$). Others, such as ‘living with other adult children’ and ‘receiving any form of support’ do not affect active ageing. In the same way, the presence of HIV/AIDS, is associated with active ageing ($p<0.01$). Even after controlling for other determinants, the relationship between HIV/AIDS and active ageing remained significant.

Discussion

This paper set out to investigate factors associated with active ageing in Zambia. Using data derived from extensive investigation of determinants of active ageing, we employed both the bivariate and multivariate models to locate determinants of active ageing. In the Zambian context, personal/behavioural factors are associated with active ageing particularly relating to ‘feeling hopeless and useless’, health/functional factors are associated to the ability ‘to squat and cleaning one’s house’, whereas economic factors (access monthly income, paid work, etc.) were associated with active ageing. Similarly, social factors relating to ‘having a caretaker and interacting with friends or peers’ increases the probability of ageing actively. These results corroborate as well with the WHO framework on active ageing.

What is clearly different in these findings is that unlike the active ageing framework, the study has situated HIV/AIDS within the active ageing framework and confirms that in the Zambian

context and also in countries with a generalised HIV/AIDS pandemic, active ageing will for a long time be affected by HIV/AIDS. Suffice to say the influence of HIV/AIDS on active ageing is far-reaching, particularly that most of the old people not only suffer neglect, poverty, insecure housing in their old age, they are also left with the responsibility of taking care of orphaned children, which in most cases exacerbates the already dire situation.

Conclusion

The plight of old people should be re-looked at in order to ensure active ageing. Government effort should be geared towards eliminating location or regional disparities (rural/urban) in the ageing process. Health systems need to be re-aligned to prepare and accommodate challenges of the aged as the health or functional challenges among the aged are often inevitable.

The study has demonstrated the need to strengthen the weakening family ties and structure in an effort to curtail social factors that have arisen mainly due to the modernisation of the extended family system to a nuclear family system. However, this factor is not categorical in the active ageing framework. In order to measure active ageing with utmost acceptable precision, long term studies which will show exactly how and at what point each of these determinants affect ageing should be encouraged.

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