

Prevalence and correlates of disability among older Ugandans: Evidence from a national household survey

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Abstract

Background

Nationally representative evidence on the burden and determinants of disability among older people in sub-Saharan Africa generally, and Uganda in particular is limited.

Methods

This paper examined the prevalence and correlates of disability among older people in Uganda through secondary analysis of data based on a sample of 2,382 older persons from the Uganda National Household survey using univariate, bivariate and multivariate analyses. Frequency distributions, chi-square tests and logistic regressions were conducted.

Results

A third of the older population was disabled. Disability increased with advancement in age, rural residence, living alone, separated or divorced marital status, household poverty, households' dependence on remittances, possessing technical skills, ill-health and non-communicable diseases, but not with any gender.

Conclusions

Socio-economic vulnerability is associated with disability among older persons in Uganda. Non-communicable diseases are predisposing factors for disability. Interventions to improve health and functioning of older people need to focus on addressing social inequalities and on the prevention and management of NCDs in old age in Uganda.

Keywords

Disability, socio-economic vulnerability, older people, non-communicable diseases, Uganda

Introduction

Population ageing is a global phenomenon affecting both developed and developing countries. It has several implications on the population. First, it is accompanied by a rise in the percentage of older persons and an increase in the prevalence of NCDs - non-communicable diseases [1-3]. An increase in the prevalence of NCDs contributes to a double burden of diseases for older people in Africa who simultaneously suffer from tropical diseases as well [4]. The increasing prevalence of disability among older persons is increasingly becoming an important dimension for research in developing countries [5].

Disability is defined as “the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (personal and environmental factors)”. Interactions include impairments (affecting the body), activity limitations (affecting actions), and participation restrictions (affecting experience of life) [6]. It implies having “difficulties with activities of daily living (ADL), difficulties with instrumental activities of daily living (IADL), and mobility limitations” [1, 7]. Perhaps the Washington Group definition of disability is more encompassing: disability is defined as having at least a severe difficulty or being unable to perform on any key or core activities of daily living: sight, hearing, walking or climbing and remembering or concentrating [8, 9]. In this study, disability or being disabled was operationalized as having a lot of difficulty or being unable to perform and having some difficulty with at least two indicators of functioning or disability [8-10].

Broadly, disability affects health and wellbeing of older people. It impacts on physical functioning, leads to social exclusion and limits access to healthcare among older people [1, 11]. In addition, disability creates the need for both formal and informal care [5, 12, 13]. Globally, disability is estimated to affect over one billion according to WHO report on disability [14]. A multi-country study on the prevalence of disability in 54 countries using World Health survey data reported disability to be at 15% and higher in developing than developed countries[10]. In many countries, the prevalence of disability has been estimated at 10-13% though the rates vary depending on how it has been captured [8, 9]. The 2010 report on the global burden of disease for the first time induced calculations on the burden of disability indicating that disability is increasingly becoming an important dimension [15].

The prevalence of disabilities is estimated to be highest in sub-Saharan Africa [1]. The prevalence of disability among older people in sub-Saharan African countries has not been systematically investigated. Many of the studies have covered smaller communities. For instance, in Tanzania, a community based study estimated disability among older people at 6% [16]. However, the estimate was based on Hai area only. A study in north western Ethiopia on the general population reported disability at 4% [17]. But this covered about three towns in Ethiopia. The first national survey of persons with disabilities, probably in sub-Saharan Africa, was conducted in Kenya in 2007. The survey reported that 5% of Kenyans were disabled [18]. In addition, disability was linked with NCDs. Females were more affected with disability than males. However, it did not focus on older people only.

African context

In Uganda, there has been a steady growth in the number of older persons from 1.1 million in 2002 to 1.3 million in 2010 [19] and are expected to increase to 5.5 million by 2050 [20]. According to the 2011 Uganda Demographic and Health Survey (UDHS), the national prevalence of disability in Uganda was 19% [21]. Disability was reported to increase with

age. Nearly half (49%) of people aged 50-59 years and over two thirds (67%) of people aged 60 and above were disabled [21].

There is limited research on health and wellbeing of older people in Africa broadly and Uganda in particular. The available scientific evidence is based on either World Health Organization (WHO) Study on global AGEing and adult health (SAGE) [25-27] or longitudinal data from the IN-DEPTH network sites [25, 27].

Few studies investigating the prevalence and correlates of disabilities among older population in Uganda have focused on HIV contexts rather than the general population [25, 26, 28]. There is need to use nationally representative samples to investigate the prevalence and correlates of disability among older people in Uganda. Therefore, the objective of this paper was to investigate the prevalence and correlates of disabilities in the older population in Uganda, using a nationally representative sample from the 2010 Uganda National Household Survey (UNHS) data.

Factors associated with disabilities in older people

Gender has been associated with disability. Older women have been reported to be at a higher risk of disability than older men in several studies [3, 12, 16, 29]. A cohort study in Malawi indicated that older women were more likely to be disabled than older men [30]. Even among HIV infected populations in South Africa, older women were still at a higher risk of disabilities compared to older men [25]. Studies in middle income countries have also reported increased disability among older women [31, 32]. In developed countries like USA, older women were still disadvantaged in terms of the prevalence of disability [13]. World Health Survey data from 57 countries drawn from all income groups defined by the World Bank were analyzed. The final sample comprised 63,638 respondents aged 50 and older. Older women (40%) were significantly more disabled than older men (24%). The gender differentials in disability were due to the differences in the socio-economic gradient between men and women [33]. A study in China reported a similar pattern – where older women were more disabled than older men [34]. In Brazil, older women were at a high risk of reporting disability than older men [1]. A study in South Africa in the Agincourt site reported that older women were more likely to have a disability compared to older men [36]. However, some studies have found no relationship between gender and disabilities [35].

Advancement in age increases the risk of disability among older people [35], predicting a J-shape in the distribution [12]. That is to say, as age increases, the prevalence of disability also increases. This has been reported in Nigeria [29], Malaysia [31], Singapore [32], South Africa [36], India [37] and in Tanzania [16]. Even in developed countries, advancement in age has been reported to be associated with disability such as the USA [13] and Brazil [1].

Non-communicable diseases (NCDs) have been reported as the major underlying cause of disabilities especially diabetes, stroke, arthritis and heart disease [38]. NCDs elevate the risk of disabilities among the older population [35]. Studies have reported strong associations between NCDs (such as diabetes, arthritis and stroke) and disabilities among older population [29, 31, 32, 39]. Depressive symptoms and dementia have also been reported to be associated with functional limitations and physical disabilities [2, 31]. A study investigating the link between NCDs and disabilities also reported a strong relationship between stroke and disability [40]. A recent review of literature on diabetes and physical disability among adults found a very significant association between the two where diabetes increased the risk of physical disability [7].

Smoking has been associated with disability among older people [12]. Smoking tobacco has been reported as a risk factor for disability among older people [41]. However, some studies

have also reported no association between smoking and disability [3]. This is inconclusive and therefore requires further investigation in the Ugandan context.

Poverty or poor socio-economic status predisposes older people to the risk of disability [3], especially older women [42] for both developed and developing countries. In developed countries, poor socio-economic status is reported as a risk factor for disability for example in Netherlands [43]. In developing countries namely Brazil [1], Tanzania [44] and in Ghana [45], disability among older people was associated with poor socio-economic status.

Marital status has significant association with disability. The prevalence of disability has been reported to be lower among married older people than never marrieds and those who were divorced / separated or widowed [46]. In China, married older people were found to have better functional ability than unmarried ones [34]. In South Africa, older people who were single were more likely to report disability compared to those who were married [36]. The same finding was reported in India – where older people without a spouse were more likely to report disability than those with a spouse [37]. Older people who are divorced or separated were more likely to report disability in Uganda [28].

Residence has been associated with disability among older people. Rural residence has been found to reduce the risk of disabilities among older people [42]. However, in China, rural older people had increased odds of disabilities [34].

Living arrangements for older people have a bearing on their health status and the prevalence of disability. Older people who were living with children have better health and functioning than those living alone in China. Those who live with others are more likely to be supported emotionally and materially than those who live in isolation. This premise is based on the social support theory [46].

Education level of older people is also associated with disability [12]. Low schooling outcomes predispose older population especially women to disabilities [42]. Lack of education increased the likelihood of disability in Brazil [1]. However, some studies have found no relationship between education and disability [3].

Methods

Data

The study used the 2010 Uganda National Household Survey (UNHS) data. The UNHS used a two-stage stratified sampling. At the first stage, 712 enumeration areas were drawn using probability proportional to size. At the second stage, households were drawn using systematic sampling. A total of 6,800 households were interviewed in the survey [19]. Older people were selected from the sample using age. Those aged 50 years and older were selected for further analysis, forming a sample of 2,628 older people. This was because several studies using WHO and INDEPTH network data have defined older persons starting with age 50 for African contexts [37, 44, 47, 48].

Explanatory variables

The UNHS data covered individual and household characteristics - demographic and socio-economic characteristics, disability, health, and housing conditions. Demographic characteristics included: age, gender, marital status, living arrangement and place of residence. Socio-economic characteristics included: religion, household poverty status, marital status, education, living arrangement or household composition. Health related

information was collected on disability, self-reported NCDs and lifestyle or behaviour – smoking [19].

Age was recoded into four age categories: 50-59, 60-69, 70-79 and 80+. Marital status was recoded as, never married, married, separated or divorced and widowed. Religion was recoded into Anglican, Catholic, Pentecostal, Moslem and others. Place of residence was recoded as binary - rural - urban categories. Living arrangements was recoded into two categories: either living alone or with others. Smoking tobacco was included as a measure of behavioural factors. Self-reporting of the prevalence of diabetes, heart disease and high blood pressure measured the prevalence of NCDs as binary variable [19].

Outcome variable

Disability was measured by asking six questions on functional limitations on both activities of daily living (ADLs) and instrumental activities of daily living (IADLs). ADLs, which mainly focused on body impairments included: difficulties seeing, hearing, walking, and concentrating or remembering. IADLs, which relate to personal care, were measured using difficulties with washing or bathing, feeding, dressing, and toileting as shown below.

- a) Do you have difficulty seeing, even if he/she is wearing glasses?
- b) Do you have difficulty hearing, even if he/she is wearing a hearing aid?
- c) Do you have difficulty walking or climbing steps?
- d) Do you have difficulty remembering or concentrating?
- e) Do you have difficulty (with self-care such as) washing all over or dressing, feeding and toileting?
- f) Do you have difficulty communicating, (for example understanding others or others understanding him/her) because of a physical, mental or emotional health condition?

These six questions were originally recoded into five categories (1= No, no difficulty, 2 =Yes - some difficulty, 3 = Yes - a lot of difficulty, 4 = cannot perform at all and 8 = don't know). Among the older persons, there was only one don't know response on sight disability. A new binary variable for disability was generated to capture disability across the six questions. Disability was operationalized as having a lot of difficulty or failure to perform on any of the six questions. This is similar to a global study on prevalence of disability using World Health Survey data in 54 countries [10]. In addition, having some difficulty on at least two of the six questions was recoded as being disabled. This approach has been recommended in the World Bank working papers series [8, 9]. Some studies have operationalized disability as having some difficulty on any measure of disability [49].

Statistical analysis

Statistical analyses were done in STATA version 12. In the first place, descriptive statistics (frequency distributions) were analysed to describe the sample. Secondly, statistical tests of associations between socio-demographics and disability were performed using chi-square tests. The level of statistical significance was fixed at 95% confidence ($p=0.05$). Finally, binary logistic regression was done to predict the correlates of disability among older population in Uganda. This is because disability was recoded as a binary variable.

Results

Characteristics of older persons

Table 1 presents the descriptive characteristics of the sample. More than half (52%) were older women. The highest proportion (45%) of the respondents was aged 50-59 years. There was almost an even distribution of the respondents by region. A high proportion (91%) of the

older people resided in rural areas. Nine in ten (91%) of the older people were living with other people.

Nearly three quarters (70%) of the older people headed households. Close to three fifth (58%) of the older people were married, while more than two thirds (68%) had no education. The highest proportion (45%) was Catholics, followed by the Anglicans (35%).

More than three quarters (77%) were from non-poor households. The respondents were from households that majorly depended on farming (61%) and a sizeable proportion (22%) had learnt a technical skill or trade and three fifth (60%) of the older people's households owned a bicycle.

More than half (62%) were sick in the past 30 days preceding the survey. The prevalence of self-reported non-communicable diseases (NCDs) was such that two in ten (23%) of the older persons reported at least one NCD - diabetes, heart disease or blood pressure. Finally, a third (33%) of the older population was disabled (Table 1).

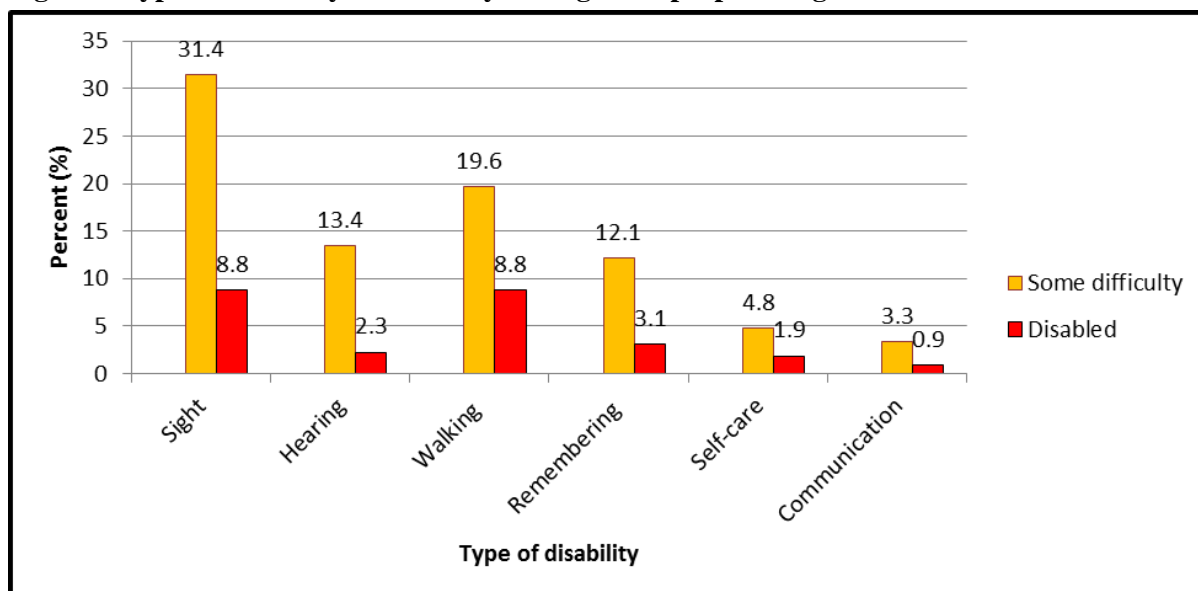
Figure 1 presents a detailed description of the nature and severity of disability among older people in Uganda. Sight problems were the leading form of disability - four in ten (40%) of the older people reported sight impairments. Walking or climbing difficulties were the second most (28%) reported challenge among older people. Hearing and concentrating or remembering difficulties had a similar percentage (15%). Self-care and communication challenges were less common (less than 7%) among the older population.

Table 1 Distribution of all older people by demographic, socio-economic and health characteristics in Uganda

Variables	Percent (%)	Frequency
Gender		
Female	52.3	1246
Male	47.7	1136
Age group		
50-59	44.7	1066
60-69	28.1	670
70-79	18.2	433
80+	9.0	213
Region		
Central	24.7	589
Eastern	30.6	728
Northern	19.7	470
Western	25.0	595
Place of residence		
Rural	90.8	2162
Urban	9.2	220
Living alone		
No	91.0	2167
Yes	9.0	215
Relationship to household head		
Head	69.9	1664
Spouse	19.2	458
Relative	10.9	260
Marital status		
Married monogamously	42.9	1022
Married polygamous	15.7	374
Divorced/separated	10.1	240

Widow/widower	31.2	744
Never married	0.1	2
Education level		
None	68.1	1621
Primary	24.8	589
Secondary +	7.1	169
Religion		
Catholic	45.2	1076
Anglican	35.5	846
Muslim	8.7	206
Pentecostal	6.9	164
SDA & others	3.8	90
Household poor		
No	77.2	1838
Yes	22.8	544
Household major source of earnings		
Farming	60.9	1451
Wages	26.7	637
Remittances	12.3	294
Learnt technical skill or trade		
No	78.0	1858
Yes	22.0	524
Household owns bicycle		
No	60.3	1436
Yes	39.7	946
Was sick / ill or injured during past 30 days		
No	38.0	904
Yes	62.0	1478
Self-reported NCDs		
No	1828	76.7
Yes	554	23.3
Persons with disability (PWDs)		
No	1600	67.2
Yes	782	32.8
Total	100.0	2382

Figure 1 Type and severity of disability among older people in Uganda



Association between disability and socio-economic and demographic factors

Table 2 presents the chi-square test results for measuring the association between disability and socio-demographics and health factors as well. Region ($p=0.14$), religion ($p=0.64$) and education ($p=0.24$) were not significantly associated with disability among older people.

Disability was significantly ($p<0.001$) higher (38%) among older women than older men (28%). The prevalence of disability consistently increased with advancement in age ($p<0.001$) from 21% for age 50-59, 32% for age 60-69, 49% for age 70-79 and 63% for age 80+. Rural older people had a higher prevalence (34%) of disability than rural ones (21%). Older people living alone (55%) were at a higher risk of disability compared to those living with people (31%). Divorced / separated (42%) and widowed (46%) older people reported disability more than those who were married (above 22%).

Older people from poor households had a higher prevalence (37%) of disability than those from non-poor households (32%). Disability was more among older people from households which depended on remittances (53%) than those which depended on farming (32%). Those who learnt a technical skill had higher prevalence (37% vs 32%) of disability. Household ownership of a bicycle significantly ($p=0.00$) reduced prevalence of disability.

Older people who were sick in the past 30 days were also at a higher risk (42%) of being disabled than those who were not sick (185%). Finally, NCDs were associated with disability. Older people with an NCD had a higher proportion (47%) reporting disability than those without (29%).

Table 2 Association between socio-economic, demographic, health factors and disability among older all older people in Uganda

Variables	Disability among older Ugandans		
	Yes (%)	Frequency	p-value
Gender			0.000
Female	37.6	1246	
Male	27.6	1136	
Age group			0.000
50-59	20.5	1066	
60-69	32.3	670	
70-79	49.1	433	
80+	63.1	213	
Region			0.140
Central	34.1	589	
Eastern	35.1	728	
Northern	28.5	470	
Western	32.3	595	
Place of residence			0.001
Rural	34.0	2162	
Urban	21.4	220	
Living alone			0.000
No	30.7	2167	

Yes	54.7	215	
Relationship to household head			0.009
Head	33.7	1664	
Spouse	26.8	458	
Relative	38.0	260	
Marital status			0.000
Monogamous	25.0	1022	
Polygamous	22.2	374	
D/Sep	42.4	240	
Widowed	45.8	746	
Religion			0.640
Catholic	31.6	1076	
Protestant	33.8	846	
Others	33.9	460	
Household poverty status			0.037
Non-poor	31.7	1838	
Poor	36.8	544	
Household major source of earnings			0.000
Farming	32.0	1451	
Wages	25.3	637	
Remittances	53.3	294	
Education level			0.204
None	32.7	1621	
Primary	34.8	589	
Secondary +	27.1	172	
Learnt a trade or technical skill			0.024
No	31.6	1858	
Yes	37.2	524	
Does any member of household own bicycle			0.000
No	36.9	1436	
Yes	26.6	946	
Sick or ill in the past 30 days			0.000
No	18.5	904	
Yes	41.6	1478	
Self-reported NCDs			0.000
No	28.7	1828	
Yes	46.6	554	
Total	32.8	2382	

Correlates of disability among older persons

Table 3 presents the results of the logistic regression of disability on socio-demographics and health characteristics. Disability was associated with advancement in age, rural residence, living alone, separated / divorced or widowed marital status, household poverty, and dependence on remittances, possessing a technical skill, sickness and self-reported NCDs.

Age of older people was significantly associated with disability. The risk of disability increased with advancement in age among the older population. Those aged 60-69 (OR=1.52; p=0.001); 70-79 (OR=2.63; p<0.001) and 80+ (OR=4.79; p<0.001) had increased odds of disability to those aged 50-59 years. Place of residence was associated with disability. Urban older people were less likely (OR=0.56; p=0.006) to be disabled compared to rural older people. This implies that disability was higher among rural older people than among urban older people.

Similarly, living arrangement was significantly related with disability. Older people who were living with people were less likely (OR=0.64; p=0.010) to be disabled compared to those living alone. Marital status was significantly related with disability. Older people who were divorced / separated (OR=1.94; p=0.002) and widowed (OR=1.77; p=0.001), were more likely to be disabled compared to those who were married monogamously.

Household poverty status was a significant predictor of disability among older population in Uganda. Those from poor households had increased likelihood (OR=1.34; p=0.010) of being disabled compared to those from non-poor households. Household major source of earnings was associated with disability. Older people who depended on remittances had increased odds (OR=1.48; p=0.010) of disability compared to those who depended on farming. Learning a technical skill or trade was significantly associated with disability. Older people who learnt a technical skill had increased odds (OR=1.29; p=0.043) of disability compared to those who did not.

Finally, ill health during last 30 days and self-reported NCDs were associated with disability among older people. Those who were sick had increased odds (OR=2.49; p<0.001) of disability compared to those who had not been sick. Similarly, those who reported non-communicable diseases were more likely (OR=1.84; p<0.001) to report disability than those who did not report any NCDs.

Table 3 Results of logistic regression of disability on socio-economic, demographic and health-related factors among all older people in Uganda

Variables	Odds Ratio	Std. Errors	p-value	95% Confidence Interval	
Gender					
Male	1.082	0.172	0.618	0.793	1.478
Female	1.000				
Age group					
50-59	1.000				
60-69	1.520	0.192	0.001	1.186	1.948
70-79	2.628	0.373	0.000	1.990	3.471
80+	4.792	0.901	0.000	3.314	6.930
Residence					
Urban	0.561	0.118	0.006	0.371	0.846
Rural	1.000				
Living alone					
Yes	1.639	0.313	0.010	1.127	2.384
No	1.000				
Relationship to household head					
Head	1.000				
Spouse	1.388	0.277	0.101	0.938	2.054
Relative	0.939	0.166	0.722	0.665	1.327
Marital status					
Married monogamous	1.000				
Married polygamous	0.853	0.131	0.299	0.631	1.152
Divorced/separated	1.937	0.407	0.002	1.283	2.926
Widow/widower	1.773	0.311	0.001	1.256	2.502
Never married	9.976	11.948	0.055	0.953	104.446
Household poor					
Yes	1.359	0.162	0.010	1.075	1.716
No	1.000				
Household major source of earnings					
Farming	1.000				
Wages	0.803	0.111	0.113	0.612	1.053
Remittances	1.476	0.223	0.010	1.098	1.986
Learnt a technical skill or trade					
No	1.000				
Yes	1.286	0.160	0.043	1.007	1.641
Household owns a bicycle					
Yes	0.815	0.092	0.070	0.654	1.017
No	1.000				
Sick or ill in past 30 days					
Yes	2.490	0.295	0.000	1.974	3.140
No	1.000				
Self-reported NCDs					
Yes	1.844	0.241	0.000	1.427	2.383
No	1.000				
Constant	0.096	0.020	0.000	0.064	0.143

Weighted number of observations = 2382, Model p-value <0.001;

Link test: $\hat{\rho}$ <0.001 & $\hat{\rho}^2$ p=0.857;

Goodness of fit test: p-value =0.911

Discussion

The prevalence of disability (33%) is high among older population in Uganda. This is in agreement with findings of other studies that have reported that disability is higher among older population than the general population [10]. The prevalence of disability is comparable to Malaysia's, a middle income country, where disability was reported to be highest (25%) among those aged 60 and older [31] and findings of a multi-country study involving 57 countries where disability ranged from 24% (men) to 40% (women)[33].

As expected, disability among older people increased with advancement in age. The prevalence and risk of disability increased with increment in age. Advanced age is associated with co-morbidities or NCDs that elevate the risk of disability especially among older people for example in Nigeria [29], in the US [35], Malaysia [31] and Brazil [1]. In other African contexts, older people with advanced ages have been reported to be more disabled than younger older people in Kassena-Nankana district in Ghana [45], rural South Africa [36] and Tanzania [44].

Older persons in urban areas were at a lower risk of disability than those in rural areas. This could be attributed to rural-urban differences in socio-economic status and access to healthcare. This result contradicts the finding that rural older people were less likely to report disability in Brazil [1, 42]. Older people tend to migrate to rural areas when they have disability or health condition.

Older people who were living alone were more likely to be disabled. Living alone is an indicator of vulnerability and has been associated with disability among older people in Uganda [50]. Based on the social model of disability and intergenerational solidarity [9], older people living do not receive emotional and physical support especially from their adult children. In addition, they are less likely to have access to adequate healthcare during ill health [9].

Marital status was related with disability. Older people who were divorced / separated and widowed were more likely to be disabled than those who were married. Loneliness and depression are great challenges for older people whose spouses are dead or separated or divorced. Depression has been reported to increase the risk of disability among older people [2, 28, 35, 51]. Depression is either a result of presence of NCDs without emotional support or disability itself. Further investigations need to be done to ascertain the association between mental health and disability among older people in African settings.

Household poverty status was associated with increased risk of disability among older population in Uganda. According to working papers by World Bank, it has been argued that poverty and deprivation predisposes people to the risk of disability and worsens people's participation in education and employment [8, 9]. Indeed, it is reported that one out of ten (10%) people in developing countries is disabled and that one out of five (20%) poor people in developing countries are disabled [8]. Low socio-economic status especially among older women has been reported to worsen the risk of disability [33].

Dependence on remittances as a major source of household earnings was associated with disability. Older people who depended on remittances had increased odds of disability compared to those who depended on farming. Being dependent on remittances implies higher likelihood of disability compared to dependence on farming. Disability calls for significant dependence; the need for care and support from adult children or relatives [52, 53].

Possession of a technical skill was positively associated with disability. Older people who had technical skills had increased odds of disability compared to those who did not. This could be due to the persons with disabilities (PWDs) being given training in vocational or

technical skills in order to improve their source of livelihood. In such a case, PWDs are more likely to possess a technical skill than those who are not. However, from the data, it is difficult to tell whether technical skills were learnt before or after the onset of disability.

Furthermore, older people who were sick in the past 30 days were more likely to be disabled. The probable reason is that they are find difficulties when it comes to accessing healthcare and therefore, more likely to be sick. Similarly, the existence of non-communicable diseases strongly predicted disability among older people. Those who had NCDs were more likely to report disability. At bivariate level, NCDs increased the prevalence of disability from 29% to 47%. Actually, two out of ten (23%) older people reported an NCD (diabetes, heart disease, and high blood pressure or hyper tension). Diabetes has been reported to increase the risk of disability among older people [2, 7, 39, 56]. Heart diseases have been reported to elevate the risk of disability [12, 35, 38]. Hypertension is strongly associated with disability among older people [2, 12, 28].

Although gender was significant at bivariate level, it became insignificant at multivariate analysis. This is in agreement with some studies [35] but contrary findings of several studies elsewhere where gender (being female) has been reported as a significant predictor of disability [3, 10, 25, 28, 29, 33].

Conclusions and recommendations

In conclusion, disability was associated with advancement in age, rural residence, living alone, separated / divorced or widowed marital status, household poverty, and dependence on remittances, possessing a technical skill, sickness and self-reported NCDs, but not with gender. Therefore, socio-economic vulnerabilities in disability status exist among older people in Uganda.

First, as a matter of urgency, there is need for interventions to improve health and functioning of older people by focusing health programmes on the prevention and management of non-communicable diseases (NCDs) in Uganda. Prevention and management of NCDs gives a benefit of lessening the risk of disability in old age. Second, there is need to address socio-economic inequalities and poverty among older people in Uganda. The SAGE programme of social cash transfers should be rolled out to the entire country in order to promote social protection and improve wellbeing of older people in Uganda.

Practically, the government should provide food, shelter, water and other essentials of life to older people. Special attention should be given to those who are living alone since they lack support from family and household members and are more vulnerable compared to other older people who live with people. Finally, in terms of research, there is need for specialized surveys on older people – to cover the broad spectrum of ageing and related issues such as poverty, health, living arrangements and intergenerational support in Uganda. At best, longitudinal studies would be ideal. This could help to capture better estimates of NCDs and disability among the older population for planning and policy purposes by the line ministries such as the Ministry of Gender, Labour and Social Development and the Ministry of Health.

Limitations of data

Self-reported prevalence of NCDs and disability is most likely to be lower than the actual prevalence of either condition, among older people in Uganda. This paper utilized secondary data where indicators of disability were self-reported.

Cross sectional nature of the data is also limiting. Ascertaining causality between NCDs and disability is not direct. It is difficult to tell whether disability occurred earlier or after the onset of NCDs among older people. In addition, it was also difficult to distinguish disabilities

from birth and those which were a result of occupational hazards or a result of advancement in age, though it was clear that increment in age led to a significant increase in the prevalence of disability among older people.

Despite these limitations, the paper contributes to the knowledge gap about the prevalence and predictors of disability among older people in Uganda – an area which still needs further investigation using both social research and longitudinal data using a life course approach.

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Conflict of interest

There is no conflict of interest declared.

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