



## Research Questions

- To determine the chronic disease with the highest effect on functional, cognitive, psychological and social disabilities among the elderly in Ghana.

## BACKGROUND

- Chronic Non-communicable Diseases (NCDs) are the major cause of disability worldwide (WHO, 2012). The impact of NCDs is higher in SSA compared to the developed countries because infectious diseases are still current prominent diseases in the region and are projected to remain so for a long region (Miranda et al., 2008; Stucker et al., 2008; BeLue et al., 2009; Godfrey and Barker, 2000).
- In Ghana, there has been increase in the incidence of NCDs and they have effect on the different domains of life functions: functional, psychological, cognitive and social.
- Ageing, as it is known, comes with different forms of disabilities, hence, living with chronic diseases may intensify the disabilities among the elderly in Ghana.
- Even though it has been shown that NCDs have effect on disability, the extent of the disability has not been shown in Ghana. Also, the chronic disease with the highest on the different domains of disability is not known.
- The findings from this study will be important for prioritizing intervention for NCDs in Ghana.

## DATA AND METHODS

- We retrieved data from the Wave 1 of the World Health Organization (WHO) survey on global Ageing and Adult Health (SAGE) conducted between 2007 and 2008
- The sample size was limited to 4724 respondents aged 50 years and above. Robust regression were used to determine the effect of the chronic diseases on domains of disabilities, controlling for background characteristics of the elderly.
- The functional, cognitive, psychological and social disabilities were measured on a 5-point scale ranging from none (1), mild (2), moderate (3), severe (4), to extreme/cannot do (5).

### Functional measures

- Twenty-two questions were used to assess the functional ability of the respondents in the last 30 days prior to the survey. A higher score indicates a higher functional disability.
- Index score: 1- 110.**

### Cognitive Measure

- Focused on how much difficulty respondents had with concentrating/ remembering things and in learning a new task. Two questions were used in creating generating scores.
- Index score: 1 - 10**

### Mental measures

- Focused on how much difficulty respondents had with feeling sad, low or depressed and with worry or anxiety. Index was created using two questions, higher score indicates higher mental disability.
- Index score: 1-10**

### Social Measures

- Focused on how much difficulty elderly had with personal relationships, dealing with conflicts & tensions with others, making new friends/maintaining current friendships, and dealing with strangers.
- Index score: 1-20**

## RESULTS

### Socio-demographic characteristics and Chronic diseases

Socio-demographics	%	Chronic diseases	%
Mean Age	64.3 (SD=10.7)	Angina	3.3
Female	52.30%	Arthritis	13.1
Rural	59.20%	Diabetes	3.9
Currently married	56.80%	Hypertension	58.5
No education	55.20%	stroke	4.6
Christian	68.70%		
Currently working	69.00%		
<b>N= 4279</b>		<b>N= 4279</b>	

### Functional Disability

Chronic diseases	Model 1	Model 2
Angina	1.931 (1.280)	-0.488 (1.040)
Arthritis	5.365 (0.727)***	2.222 (0.595)***
Diabetes	2.065 (1.351)	1.394 (1.167)
Hypertension	1.286 (0.453)**	0.700 (0.386)
<b>Stroke</b>	<b>17.24 (1.550)***</b>	<b>13.11 (1.437)***</b>
<b>R-square</b>	<b>7.8%</b>	<b>34.2%</b>

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001, Std error in parenthesis

Note: Age, sex, marital status, education, religion and employment status were controlled for in model 2

### Cognitive Disability

Chronic diseases	Model 1	Model 2
Angina	0.740 (0.176)***	0.516 (0.166)**
Arthritis	0.107 (0.085)	-0.176 (0.078)*
Diabetes	0.0759 (0.145)	0.145 (0.130)
Hypertension	-0.123 (0.057)*	-0.148 (0.130)**
<b>Stroke</b>	<b>0.914 (0.142)***</b>	<b>0.706 (0.139)***</b>
<b>R-square</b>	<b>1.9%</b>	<b>16.6%</b>

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001, Std error in parenthesis

Note: Age, sex, marital status, education, religion and employment status were controlled for in model 2

### Mental Disability

Chronic diseases	Model 1	Model 2
Angina	0.277 (0.154)	0.207 (0.153)
Arthritis	0.768 (0.078)***	0.662 (0.078)***
Diabetes	-0.083 (0.142)	-0.023 (0.140)
Hypertension	-0.145 (0.053)**	-0.153 (0.053)**
<b>Stroke</b>	<b>0.923 (0.150)***</b>	<b>0.761 (0.149)***</b>
<b>R-square</b>	<b>3.9%</b>	<b>7.5%</b>

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001, Std error in parenthesis

Note: Age, sex, marital status, education, religion and employment status were controlled for in model 2

### Social Disability

Chronic diseases	Model 1	Model 2
Angina	1.282 (0.387)***	0.938 (0.368)*
Arthritis	0.279 (0.183)	-0.249 (0.177)
Diabetes	0.430 (0.322)	0.450 (0.319)
Hypertension	0.433 (0.114)***	0.643 (0.173)
<b>Stroke</b>	<b>1.389 (0.337)***</b>	<b>1.061 (0.470)*</b>
<b>R-square</b>	<b>1.7%</b>	<b>14.2%</b>

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001, Std error in parenthesis

Note: Age, sex, marital status, education, religion and employment status were controlled for in model 2

## Discussion and Conclusion

- The results show that stroke had the highest effect on functional, cognitive, mental and social disability, and the effect was highest on the functional domain.
- This confirms what has been shown that compared with other diseases, stroke is a major health problem that can cause multiple or concurrent disabilities in an individual (Lai et al., 2003). Also, the disabilities associated with stroke can influence all dimensions of life, including the simplest self-care tasks (Adamson et al, 2004).
- Studies have shown that a large proportion of stroke patients in Ghana died within 7 days of admission due to: lack of good follow-up plan after the stroke survivors are being discharged from the hospitals; lack of proper caregiving; high cost of stroke management; inadequate knowledge of the disease, and; psychosocial conditions of stroke survivors and family caregivers (Agyemang et al., 2012; Wiredu and Nyame, 2001; Sanuade and Agyemang, 2013). Despite this, stroke is not on the list of priority health interventions outlined by Ghana's Ministry of Health and stroke burden has been under-researched and under-funded.
- Therefore, there is need for studies in Ghana to focus on understanding the experiences of living with stroke with a view to ensuring stroke rehabilitation in Ghana. Also, there is need for appropriate policies to be put in place for prevention and management of stroke in the country.

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