Patterns in disability and frailty in older adults: Evidence from SAGE
Introduction

- Globally the proportion of older population is increasing

- Older population is faced with chronic conditions that are often associated with disabilities and being frail

- There is a need to have scientific and reliable measures of disability and frailty and the risk factors to aid health surveillance and policy development

- SAGE, built on the work of WHS, aims to acquire information to address issues of Ageing and adult Health through a longitudinal study in six countries
Indicators that will be presented

- Frailty Index
- ADL – Activities of Daily Living
- WHODAS- WHO Disability Assessment Schedule

for subjects aged 50 years and over.
Frailty Index – 36 items

● Self-reported health (0=very good; 0.25=good, 0.5=Moderate, 0.75=Bad, 1=very bad)

● Self-reported conditions: Arthritis, Stroke, Angina, Diabetes, Copd, Asthma, Depression, Hypertension, Cataract (0=No, 1=Yes)

● Functional assessment: Sitting, Walk 100m, Stand up, Stand long time, Climb, Stop, Pick up, House responsibilities, Community activities, Extending arms, Concentration, Walk long time, Washing, Dressing, Work every day, Carrying, Moving, Eating, Getting up, Toilet, Transport, Getting out, Emotion (0=No difficulties; 0.25=Mild, 0.5=Moderate, 0.75=Severe, 1=Extreme/cannot)
Frialty Index – 36 items

- **BMI** (0=bmi >= 18.5; 1=bmi<18.5)

- **Grip strength (algorithm with sex, bmi and grip strength measure)** (0=No weakness, 1=weakness)

- **Rapid walk** (0=less than 2 seconds, 1=more than 2 seconds)
Frailty by country

The graph illustrates the mean frailty index by country over different age groups. The countries represented are China (green), India (red), Mexico (black), Russia (blue), South Africa (brown), and Ghana (orange). The x-axis represents age, ranging from 50 to 90 years, while the y-axis represents the mean frailty index, ranging from 0 to 0.5.
Frailty by sex
Frailty by educational status

Frailty index

Low Edu
High Edu
Frailty by marital status

- Never mar
- Married
- Separated
Frailty Index – classification

- **Index** = sum of “deficits” over the total score (based on the number of available items)

- **Classification**

  - \([0-0.2]\) = No frailty
  - \((0.2-0.4)\) = Mild frailty
  - \([0.4-1.0]\) = Frailty
Frailty Index Distribution by country
Frailty Index Distribution
by sex, marital status and education

[Bar chart showing frailty distribution by sex, marital status, and education levels.]

- Males
- Females
- Never married
- Married/cohabiting
- Separated/Widow
- Less primary
- Primary
- Secondary
- Higher

Legend:
- Frailty
- Mild
- No frailty
ADL – 6 items

● Functional assessment: Washing, Dressing, Moving, Eating, Getting up, Toilet (0=No difficulties; 1=Mild, 2=Moderate, 3=Severe, 4=Extreme/cannot)

● ADL score= sum of “deficits” over the total score (of the available items)

● Classification

  0=Independent
  (0-0.2]=Mild
  [0.2-0.4)=Moderate
  [0.4-1.0]=Severe/cannot
ADL Distribution by country

- China
- South A.
- Ghana
- Russia
- Mexico
- India
ADL Distribution
by sex, marital status and education
WHODAS - Items

- Interpersonal Activities (New friends, dealing with strangers)

- Cognition (Learning new tasks)

- Functioning assessment (Standing long, house responsibilities, community activities, concentration, walk long, washing, dressing, day to day work, emotion)
WHODAD by self reported health status

Mean WHODAS

- Healthy
- Not Healthy

Age (years)
WHODAS by country

- Mexico
- Ghana
- China
- India
- Russia
- South Africa

Mean WHO-DAS score vs. age

Age range: 50 to 90
WHODAS by sex

- Green line: Male
- Red line: Female

Mean WHODAS score over age:
- X-axis: Age (50 to 90)
- Y-axis: Mean WHODAS score

The graph shows a comparison of WHODAS scores by sex across different age groups, with females generally having higher scores than males.
WHODAS by sex and country
(female=red)

Mexico

Ghana

China

India

Russia

South Africa
Conclusions

- Disability and or frailty increases by age
- Cross country comparison indicates worse situation in India and better situation in China. The other 4 participating countries are in the middle, Ghana...
- Males are better off
- Urban better than rural
- Educated better than less educated
- Married population slightly better
Conclusions II

- These observations are yet to be put to vigorous statistical tests and standardization.

- However, findings are consistent with general perceptions and can be explained in terms of access to health services, economic empowerment, ageing, and prevalence of risk factors.

- SAGE has provided us with tools/indicators that can be used across countries to monitor health of older populations as well as the strategies being developed to address the issues of ageing.
I thank you for your attention