Risk factors in an ageing population: Evidence from SAGE

Nirmala Naidoo: Department of Health Statistics and Informatics, WHO
Rationale

- Modern risks (associated with chronic disease and accidents) with high impact on mortality and burden of disease even in low income countries specially in ageing population.

- Over time, major risks to health shift from traditional risks (associated with poverty) to modern risks (e.g. overweight and obesity).

- Modern and traditional risks may have different time trajectories in different populations (countries) depending on the context.

- As proximal cause, modifiable risk factor as target of public policy.

- The roots of risks factors as complex chain of determinants that varies across population and age categories.
# STEPS Risk Factors

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Core Items</th>
<th>Expanded Items</th>
<th>Optional Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioural</td>
<td>Basic demographic information, including age, sex, literacy, and highest level of education</td>
<td>Expanded demographic information including years at school, ethnicity, marital status, employment status, household income</td>
<td>Mental health, intentional and unintentional injury and violence and oral health.</td>
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<tr>
<td></td>
<td>Tobacco use</td>
<td>Smokeless tobacco use</td>
<td></td>
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<tr>
<td></td>
<td>Alcohol consumption</td>
<td>Past 7 days drinking</td>
<td></td>
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<tr>
<td></td>
<td>Fruit and vegetable consumption</td>
<td>Oil and fat consumption</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physical activity</td>
<td></td>
<td></td>
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<tr>
<td>Step 2</td>
<td>Weight and height</td>
<td>History of blood pressure, treatment for raised blood pressure</td>
<td>Objective measure of physical activity behaviour</td>
</tr>
<tr>
<td>Physical measurements</td>
<td>Waist circumference</td>
<td>History of diabetes, treatment for diabetes</td>
<td></td>
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<td></td>
<td>Blood pressure</td>
<td></td>
<td></td>
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<tr>
<td>Step 3</td>
<td>Fasting blood sugar</td>
<td>Hip circumference, Heart rate</td>
<td>Skin fold thickness, assessment of physical fitness</td>
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<tr>
<td>Biochemical measurements</td>
<td>Total cholesterol</td>
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<td></td>
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<tr>
<td></td>
<td>Fasting HDL-cholesterol and triglycerides</td>
<td>Oral glucose tolerance test, urine examination, salivary cotinine</td>
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</tbody>
</table>
SAGE: Risk Factors Methods

- National representative samples of 6 participating countries:
  - China, India, Russian Federation, South Africa, Ghana and Mexico.
  - Over sample of 50+ Population

- A selected set of risk factors indicators
  - Individual Questionnaire:
    - Physical activity (GPAQ), Tobacco, Alcohol and Fruit and Vegetables.
  - Physical examination:
    - Anthropometry (BMI and WC) and Blood pressure.

- Proportion of the population classified as high risk

Daily tobacco use
(Smoke and smokeless)

Prevalence of current daily tobacco use: SAGE (2009-2010)
Heavy alcohol consumption
(More 5 (♂) 4 (♀) drinks in at least 2 days per week)

Prevalence of heavy alcohol drinkers: SAGE (2009-2010)
Obesity (BMI ≥ 30 Kg/m²)

Prevalence obesity (measured) : SAGE (2009-2010)
Abdominal Obesity
(WC: ≥85cm for women and ≥95cm for men)

Prevalence abdominal obesity: SAGE (2009-2010)
Underweight
(BMI ≤ 18.5 Kg/m²)

Prevalence undernutrition (measured) : SAGE (2009-2010)
High blood pressure
(SBP ≥130 or DBP ≥85 among undiagnosed hypertension)

Prevalence of Prehypertension among undiagnosed hypertensive: SAGE (2009-2010)
Insufficient Fruit & Veg Consumption
(≤ 5 portion per day)

Prevalence of Insufficient fruit and vegetables consumption: SAGE (2009-2010)
Insufficient physical activity
(≤ 600 METs/week or ≤ 5 days Moderate PA/week)

Prevalence of Insufficient physical activity: SAGE (2009-2010)


Obesity time trends

Underweight Time Trends

Urban-Rural (Mexico)
Daily tobacco use – SAGE México

% Urban Rural

18 a 49 5,1 2,8
50 a 59 15,9 16,1
60 a 69 12,0 11,5
70 a 79 5,2
80 y más 4,3

Urban
Rural
Physical activity-SAGE-México

Urban

Rural

Porcentaje

18-49 50-59 60-69 70-79 80+

Insufficient      Moderate      High

Insufficient      Moderate      High
Conclusions

- Wide variation across country, gender and age categories.
- Countries in different stages of "risk transition"
- Old people behaves accordingly to the country estimates.
- High proportion of old people in the high risk categories for some risk factors:
  - HBP and insufficient fruit and vegetables in all countries
  - Tobacco and alcohol in some countries
  - Obesity and underweight in different countries.
- The health impact of these risks in the older population still unclear, at least for some of them.
- Differences across population might be explained by context differences, which can be explored with SAGE data.
Next steps

- Preliminary results, need to be confirmed after including sampling weights and standardized rates to compare across countries.

- Evaluate variables explaining variation across populations.

- Expand our evaluation:
  - "Traditional" risk factors.
  - Biomarker to come (HbA1c, CRP, and others)

- As a panel study, SAGE will allow us to evaluate the impact of this risk factors in mortality, disease incidence and wellbeing specifically during the ageing process.
Acknowledgments

- SAGE initiative coordination at WHO headquarters
  - Somnath Chatterji, Paul Kowal and Nirmala Naidoo.

- Colleagues from other SAGE participating countries.

- Colleagues in Mexico from INSP
  - Juan Pablo Gutierrez, Martin Romero, Aurora Franco and field work team
  - Rosalba Rojas, Laura Mendoza, Erika Mayorga and Martha Cruz

- SAGE participants.