Gender gap in self-reported health measures

Ties Boerma, Emese Verdese, Ahmad Hosseinpooor, Somnath Chatterji
World Health Organization
Background

• Life expectancy gender gap: five years in favour of women (2000)

• Surveys in high income countries: women consistently report poorer health status
Possible causes for gender gap in self-reported health

• Biological factors
  – Higher prevalence of disease: incidence among women, lower case fatality (survivor bias), lower cure rate
  – Reproductive health consequences
  – Differences in mental health conditions as underlying cause for reporting

• Socio-behavioural factors: leading to higher prevalence of diseases
  – Different risk behaviour patterns: smoking, alcohol, etc.
  – Lower utilization or poorer treatment of women by health services
  – Gender inequality in society

• Reporting bias
  – Psychosocial factors
  – Higher health service utilization (greater awareness)
Data: World Health Survey 2002-2004

- 59 surveys: mean sample size 4,000 respondents 18+ years (range 1,000-20,000):
  - sub-Saharan Africa (17 countries)
  - high income countries in Europe (9)
  - middle income countries in Eastern Europe (9)
  - Latin America (6)
  - South Asia (6)
  - Other (12)

- Questions to identify poor health
  - IRT health score based on 8 domains: mobility, self care, sleep, affect, cognition, vision, pain, interpersonal activities
  - Self rated health: "bad" or "very bad"
  - Activity limitations in the last 30 days: "severe" or "extreme"
  - Chronic conditions: algorithm based diagnosis for angina, arthritis, asthma, depression and disease report of diabetes
Country scores on self-reported health measures*, by sex, 59 WHS surveys, 2002-04

*Age standardized
Female excess reporting is common in all countries

- Poor IRT health score: 58/59 (Norway)

- Poor self-rated health: 52/59 (Estonia, Finland, Hungary, Latvia, Norway and Ireland)

- Severe+ activity limitations: 46/51 (Hungary, Latvia, Comoros, Ghana and Namibia)
Proportion of women and men with poor health scores, WHS

- SRH Women: (very) bad
- SRH Men, (very) bad
- IRT health score, women
- IRT health score, men
Gender gap by age: female excess fraction over males for 3 indicators, 59 WHS surveys

- Domain health score
- Poor self-rated health
- Difficulties with activities
Gender gap (female excess) for 3 SRH indicators, by regional group, WHS
Female excess fraction by domain, overall and for 3 regions

- All
- Sub-Saharan Africa
- Europe, high income
- South Asia
Diagnoses based on algorithm by age and sex, WHS

Angina prevalence based algorithm, WHS

Arthritis prevalence based algorithm, WHS
Diagnoses based on algorithm by age and sex, WHS

Diabetes self reported prevalence based, WHS

Asthma prevalence based algorithm, WHS
Diagnoses based on algorithm by age and sex, WHS

Depression prevalence based algorithm, WHS

- Women
- Men
Female excess fraction by diagnoses, overall and for 3 regions

Angina
Arthritis
Asthma
Depression
Diabetes*

Overall
Sub-Saharan Africa
Europe, high income
South Asia
Factors affecting the size of the gender gap (multivariate regression, stepwise estimation, <.1, B (p-value)) (59 WHS)

<table>
<thead>
<tr>
<th>Health score</th>
<th>Self rated health</th>
<th>Limitations</th>
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</thead>
<tbody>
<tr>
<td>Depression gap</td>
<td>.015 (.000)</td>
<td>.028 (.000)</td>
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<tr>
<td>Arthritis gap</td>
<td></td>
<td>.050 (.007)</td>
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<tr>
<td>Islamic country</td>
<td>.051 (.061)</td>
<td></td>
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<tr>
<td>High income Europe</td>
<td>-.068 (.015)</td>
<td>-.353 (.002)</td>
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<tr>
<td>Eastern Europe</td>
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<td>-.324 (.005)</td>
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<tr>
<td>Sub-Saharan Africa</td>
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<td>Employment gap</td>
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No association with the gender gap in SRH:
- Fertility level in the society
- Gender inequality index
- Life expectancy gap
- Education gap

No association with the gender gap in SRH:
- Gaps in algorithm-based prevalence of angina, asthma
- Smoking gap
- Alcohol use gap
Conclusions

• Large and consistent gender gap in reporting of health problems in virtually all countries and regional country groups (3 self-rated health indicators, 8 functional domains, prevalence of 3 interview-based diagnoses)

• No evidence of survivor bias (widening with ageing); life expectancy gap no association

• Reduction of the gender gap after reproductive period, but no association with country levels of fertility;

• Determinants of the SRH gap:
  – Socio-behavioural factors: no association with alcohol smoking risk factors, societal factors, such as gender gaps education or gender inequality: limited associations, in some models, with employment gap, religion
  – Biological factors: depression as underlying factor, arthritis
  – Regional patterns: high income Europe smaller gender gap, somewhat larger in South Asia and Latin America

• Domain based IRT health score more "stable" than single SRH/activity limitation questions and provides more insights; (8 or 16 questions)