Where have all the children gone?
Increasing reports of childlessness in a large-scale continuous household survey
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Why have children?
• personal development and fulfilment
• pleasure
• inheritance
• intergenerational exchange
• gatekeeper to, for example, grandchildren
• care of the elderly (in a cross-national European survey, 49 per cent of family carers of cared-for older people were children compared with 22 per cent who were spouses/partners)

Data
• 1986 to 2006 General Household Survey fertility histories women aged up to 59 (to 49 formerly)
Synthetic cohort approaches
• information obtained from different individuals (as usual)
• the internal consistency of reports of the same events by members of the same cohorts at different time points in the same survey may be assessed

GHS Fertility Section
• Women asked: ‘Have you ever had a baby - even one who only lived for a short time?’ (‘had’ replaced by ‘given birth to’ from 2004)
• if ‘yes’, then asked ‘How many children have you given birth to, including any who are not living here and any who may have died since birth?’

Repeated cohort measurements
• comparisons possible of reports by women of the same cohort but at different time periods
• information on the proportion of childless women born in a year such as 1946 is available from 18 rounds of the survey between 1986 and 2005 as their age increases from 40 to 59.

Response rates and sample sizes in selected years

<table>
<thead>
<tr>
<th>Year</th>
<th>Response rate (%)</th>
<th>Sample size of women</th>
<th>Item non-response rate for childlessness (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>84</td>
<td>1836</td>
<td>4.7</td>
</tr>
<tr>
<td>1986</td>
<td>84</td>
<td>2914</td>
<td>4.1</td>
</tr>
<tr>
<td>1991</td>
<td>84</td>
<td>3058</td>
<td>3.2</td>
</tr>
<tr>
<td>1996</td>
<td>76</td>
<td>2808</td>
<td>4.7</td>
</tr>
<tr>
<td>2001</td>
<td>72</td>
<td>2877</td>
<td>4.0</td>
</tr>
<tr>
<td>2006</td>
<td>76</td>
<td>3299</td>
<td>8.6</td>
</tr>
</tbody>
</table>
Proportion childless and mean fertility of parous women
by selected age-groups and birth cohort, GHS, 1981-2006

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Age-group</th>
<th>Childless (%)</th>
<th>Children per parous woman</th>
<th>Total number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>45-4</td>
<td>10.4</td>
<td>2.68</td>
<td>585</td>
</tr>
<tr>
<td></td>
<td>55-9</td>
<td>12.9</td>
<td>2.71</td>
<td>3712</td>
</tr>
<tr>
<td>1945-9</td>
<td>45-4</td>
<td>8.5</td>
<td>2.97</td>
<td>3825</td>
</tr>
<tr>
<td></td>
<td>55-9</td>
<td>15.7</td>
<td>2.82</td>
<td>1060</td>
</tr>
<tr>
<td>1950-4</td>
<td>45-4</td>
<td>11.2</td>
<td>2.38</td>
<td>4446</td>
</tr>
<tr>
<td></td>
<td>55-9</td>
<td>17.9</td>
<td>2.35</td>
<td>3221</td>
</tr>
<tr>
<td>1955-9</td>
<td>45-4</td>
<td>12.8</td>
<td>2.33</td>
<td>3544</td>
</tr>
<tr>
<td></td>
<td>55-9</td>
<td>20.7</td>
<td>2.27</td>
<td>421</td>
</tr>
</tbody>
</table>

Blue values are official estimates of cohort percent childless; red are own analyses.

Estimated proportion of women childless by age-group with 95% confidence intervals

Results

• the anomalous fertility results are due to an increasing propensity of older women to report themselves as childless as they age
• the discrepancy increases over time

Comparability of estimates over time

• To maximise comparability, as far as practicable, samples drawn from the same cohort at different time points
• The cohort here is women with the same birth year AND resident in the GB private household sector.

The balancing equation

• Changes between two time points in the study population are due to only three types of events to these women in the intervening period:
  – deaths
  – international migration
  – moves between the community and communal sectors
• (internal movements from childless to parous)
The role of differential response

The difference in reported proportions childless with changing age could arise from a differential response of childless and parous women in the Survey over time

Look at magnitude of effects likely direction of effects

Migration as a possible confounder

<table>
<thead>
<tr>
<th>Place of birth</th>
<th>Age-group</th>
<th>Proportion childless</th>
<th>Fertility of parous women</th>
<th>Total sample size</th>
<th>Item non-response rate for childlessness</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>40-4</td>
<td>11.1</td>
<td>2.33</td>
<td>4031</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>45-5</td>
<td>11.4</td>
<td>2.32</td>
<td>3645</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>50-4</td>
<td>15.1</td>
<td>2.35</td>
<td>2358</td>
<td>4.3</td>
</tr>
<tr>
<td></td>
<td>55-5</td>
<td>17.7</td>
<td>2.33</td>
<td>3179</td>
<td>5.0</td>
</tr>
<tr>
<td>Abroad</td>
<td>40-4</td>
<td>13.1</td>
<td>2.75</td>
<td>382</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>45-5</td>
<td>10.3</td>
<td>2.68</td>
<td>332</td>
<td>12.7</td>
</tr>
<tr>
<td></td>
<td>50-4</td>
<td>16.7</td>
<td>2.67</td>
<td>187</td>
<td>13.4</td>
</tr>
<tr>
<td></td>
<td>55-5</td>
<td>21.4</td>
<td>2.66</td>
<td>240</td>
<td>16.3</td>
</tr>
</tbody>
</table>

Migration as a possible confounder

- Emigration rates are small (0.24% p.a. for UK women 45-69 per annum (includes many returning immigrants)
- MIGRATION IS NOT THE EXPLANATION

Mortality as a possible confounder

- about 5% of women born in 1945 in England and Wales died between ages 40 and 60
- if all these deaths of women occurred to parous women, the initial figure of 11 per cent would increase only trivially to 11.6%
- under-reporting of dead (adult) children not a factor
- MORTALITY IS NOT THE EXPLANATION

Institutionalisation as a possible confounder

- proportion of women in institutions at age 40 in the 2001 Census of England and Wales was 0.35% & 0.45% at age 60 (institutionalisation is more likely among childless than parous women, but effect trivial)
- INSTITUTIONALISATION IS NOT THE EXPLANATION

Changes in Survey organisation over time

- the sampling basis
- the introduction of computer assisted interviewing
- some telephone interviewing
- small financial incentives for respondents
- some restructuring of content
- BUT
- "all changes were designed to ensure no loss in utility for analysis of surveys across different years" (Uren 2006)
Survey response

- If the 'true' proportion of childlessness was 10\% and the survey response rate was 75\% as found for those born in the mid-1940s, the theoretically maximum possible value of reported childlessness due to differential non-response would be 13.3\% (IF AND ONLY IF the response rate for childless women was 100\%)

- DIFFERENTIAL UNDER-REPORTING OF PAROUS COMPARED WITH CHILDLESS OLDER WOMEN AS THEY MOVE THROUGH LATER WORKING AGES IS NOT THE EXPLANATION

Differentials

- The same patterns are found within different education-level and marital status groups so e.g. not due to 'air-brushing out' out-of-wedlock children

The conventional view

“When large-scale surveys first began collecting retrospective demographic information, such as marriage and birth histories, many demographers expressed doubt about the quality of these data. However, studies showed that in many contexts women reported births and marriages with a high level of accuracy.”

(Hayford and Morgan, *Demography* 2008:129)

Why is studying childlessness unimportant?

“This focus appears motivated more by issues in survey methodology than by general issues in demographic research … It is unlikely a paper focusing on this narrow topic will be of interest to a broad range of demographic researchers.”

– Reviewer for journal *Demography*

Summary: why increasing reported childlessness?

- Other possible reasons considered for increased reported childlessness around age 50
  - adoption etc
  - ‘disrupted marriage’ effect
  - major problems with sample selection
- None seems adequate (even in combination)
- Therefore conscious concealment of adult children acknowledged 10 to 20 years earlier?
  - estrangement
  - boredom?

Some implications

- Fertility histories obtained from women aged 50 and over are increasingly important for research and policy purposes and include half of the population in the developed world.
- If childbearing at such ages is poorly reported, how well answered are more complicated, more detailed, and possibly less important life history events such as full work, health or partnership histories?
Some implications (contd)

- EITHER
  - Fertility is deliberately poorly reported from women aged 50 and over in Britain (and possibly elsewhere?)
- OR
  - The benefits of childbearing for old-age benefits are less than assumed because the effective availability of children is less than expected

Reference