Childlessness: a further look at cohort estimates based on survey time-series data

M. Ní Bhrolcháin*, E. Beaujouan* and M. Murphy**

**Centre for Population Change, School of Social Sciences, University of Southampton, Southampton SO17 1BJ, UK*

***Department of Social Policy, London School of Economics, London WC2A 2AE, UK*

Extended abstract

The paper investigates in more detail Murphy's (2009) anomalous and surprising findings regarding the level of childlessness reported by female cohorts in successive rounds of the General Household Survey (GHS). Murphy shows that the proportion of women who declare no live births within the cohorts of 1935-39 to 1950-54 rises from either age 40-44 or 45-49 to age 55-59, when these cohorts are followed from year to year in GHS rounds 1986 to 2006. Clearly the proportions not having had a live birth should, within a cohort, be non-increasing, and one would expect it to flatten well before age 50, since first births to women aged 40+ are rare (Smallwood 2002). The rise with age in the implied proportions childless is very substantial in some cohorts —from 12.8% at 40-44 to 20.7% at age 55-59 among women born in 1950-54 (Murphy 2009, Table 2).

Murphy considered a range of potential explanations for the anomaly—migration, mortality, institutionalization, changing differential response rates, changing item non-response, change in sample design, change in question wording in 2004, and genuine forgetting by respondents—and found that none could account for the scale of the upward shift in proportions childless. He concluded reluctantly that the findings could be explained only by an increase in deliberate misreporting of births to the GHS. The mean family size among parous women was found to have been relatively stable, implying that the error in the data was attributable to errors in reports of childlessness rather than of the number of births *per se*. The inference was that women who had had children were, as they aged, increasingly reporting themselves as childless.

The present investigation extends Murphy's study by looking at household composition in conjunction with fertility history information in the GHS. We find sizeable discrepancies in recent years between the two types of data. In particular, in recent rounds of the GHS own children are found in the households of a substantial minority of women who are declared childless in the Family Information section of the questionnaire. In the paper we show:

a. that childlessness is over-reported in the GHS in recent years and that this appears to be due either to error or to respondent fatigue;
b. that it can be corrected for to some extent by using the information on own children in household, thus reducing the bias identified by Murphy; and

c. that the problem in the fertility histories dates primarily from GHS round 2000/1, when the GHS survey was reorganized, and particularly from 2003/4, when laptop self-completion was introduced for the Family Information section;

We also show that by adding undeclared own children in household to the original histories, the resulting revised fertility histories give period estimates of the total fertility rate that are in close agreement with national vital registration statistics, unlike those from the original fertility histories.

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