Prenatal sex-selection among the British Indian women: new evidence and policy.

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(Extended abstract)

Introduction

Son preference is the valuation of sons over daughters and is often attributed to economic and social factors, religious precepts and cultural norms that favour male children. Prenatal sex-selection against females (PSS) is a modern expression of son preference and an unintended side effect of public health progress in prenatal diagnostics, in contexts where son preference prevails. Fetal sex-determination methods, and more recently sperm sorting and pre-implementation techniques, have made PSS possible. In addition to evidence in Asian countries, there has been evidence of pre-natal sex selection against females among the Asian diaspora in Western countries. (e.g. Dubuc and Coleman 2007; Abrevaya, 2009; Howell et al. 2018; Almond et al., 2013). In the UK, biased sex ratios at birth of India-born mothers over 1990 to 2005 provided indirect evidence of pre-natal sex selection against females and raised questions about the nature of son preference in the UK Asian diaspora (Dubuc and Coleman 2007). The gender selective abortion controversy in Britain gained increasing public attention since 2011, following a series of media investigations and coverage largely focusing on the British Asian communities (Dubuc ans Swift, 2019). Rapidly the public and political attention shifted to the lawfulness of sex-selective abortion in the UK. In November 2014, conservative pro-life MP Fiona Bruce tabled a bill (section 5 of the Serious Crime Bill) to ban sex-selective abortions, and supported by some British Asian organisations, triggering intense debates around legal reform of the Abortion Act. Many opponents to the bill raised particular concern on the associated risk of women's access to safe abortion services to be put into jeopardy, and potentially fueling ethnic profiling in practice (Unnithan and Dubuc, 2017). Ultimately, the Parliament rejected the bill and called for more research to clarify the evidence of prenatal sex-selection in the recent period (Serious Crime Act, 2015). Indeed, the lack of updated solid evidence of prenatal sex-selection was another important argument in the Parliamentary decision. As part of a multidisciplinary mix-methods project (*Son preference-UK*) investigating the dynamic of gender/son preference and policy implications in the UK, this paper focuses on the recent trends in sex-ratio at birth among mothers born in England and Wales, India, Pakistan and Bangladesh. The paper aims to clarify evidence of prenatal sex-selection against females, ie motivated by son preference, and inform policy.

Son preference may have different demographic manifestations. Gender-based fertility stopping behavior may be an important dimension of son preference in the UK, wherein parents stop childbearing only when they have the preferred number of sons (Basu and De Jong, 2010; Chaudhuri, 2012). Typically, when ideal family size becomes smaller, son preference can further be manifested in pre-natal sex selection, leading to biased sex ratios at birth (Das Gupta and Bhat, 1997; Guilmoto 2009; Bongaarts and Guilmoto, 2015). The stopping rule may be combined with prenatal sex-selection but not necessarily and gender-based stopping behaviours alone cannot influence the overall sex ratio at birth (Dubuc 2018). Therefore, we investigate recent trends in the sex ratio at birth among Asian subgroups in the UK, which indirectly reflects the use of pre-natal selection technologies.[1]

We provide updated trends in SRB among the main British South Asian sub-populations in the UK. Changes in SRB are difficult to interpret in term of trends in sex-selection due to the disproportional effect of fertility change at aggregated population levels (ie. in addition to the micro-level fertility squeeze effect), evidenced by Dubuc and Sivia (2018). Therefore, we produce novel measures of sex-selection propensity and prevalence to accurately analyse trends in sex-selection practices and shed light on son preference intensity leading to PSS in the UK. We discuss the social and policy implications of our results in the context of the UK debates on sex-selective abortion (Unnithan and Dubuc, 2017) and the complicated policy landscape (Hasset et al. 2018). In turn, we discuss the role of evidence in the policy debates and the challenges formulating contextualized evidence-based policy recommendations.

Data and Methods

Our analysis builds on the methodology employed by Dubuc and Coleman (2007) to calculate and analyse SRB and by Dubuc and Sivia (2018) to calculate propensity ratios and analyse trends in sex-selection. The dataset used comprises exhaustive Office of National Statistics birth registration data from the period 1969-2017. This dataset includes births by sex and by parity for all women in England and Wales and by country of birth of mothers for the main groups (UK, India, Pakistan and Bangladesh-born women) which we used to calculate sex ratio at birth by parity. We adapt fertility estimates of Indian immigrant women in the UK by Dubuc (2012; 2016) in the calculation of sex-selection propensity ratios developed by Dubuc and Sivia (2018).

[1] *In another paper we explore stopping behaviours by examining parity progression based on gender composition of existing children allowing a broader investigation of gender preferences focusing on all women in the UK as well as the major British Asian subgroups (Indian, Pakistani, Bangladeshi & Chinese).*

Results

Part 1- Sex ratio at birth

Figure 1 shows the sex ratio at birth from 1969-2017 of all women in England and Wales and women born in India. While the sex ratio at birth for all women in England and Wales has been relatively flat, the sex ratio at birth for women born in India shows a strong pattern of increase, especially in the 1990s, providing indirect evidence of prenatal sex selection. Since 2005, the sex-ratio at birth bias seems to have plateaued however, potentially showing the premise of a reversal.

We didn't find any significant distortion of the SRB for Pakistan-born and Bangladesh-born women over the entire period of analysis (Figure 2). The distortion of the SRB among India-born mothers in England and Wales is persistently due to a distortion at third and higher births (Figure 3).

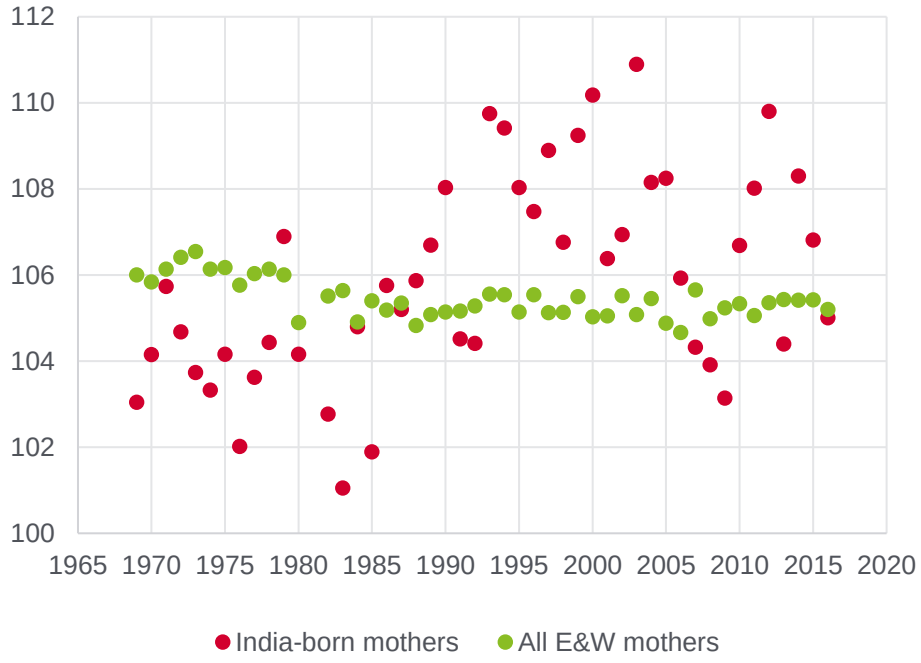

Figure 1. *Overall sex ratio at birth in England and Wales and among India-born mothers, 1969-2017*
(Currently showing 1969-2016, the figure will be updated)

[Figure 2. *Sex-ratio at birth among the three main British South Asian women' groups, 1969-2017]*

[Figure 3. *Sex-ratio at birth and by birth order for India-born mothers, 1969-2017]*

Is the recent trend in SRB due to an increase in fertility? Is sex-selection practice reducing among British India-born women? We turn to sex-selection propensity calculations to clarify these questions.

Part 2 – Sex-selection propensity and prevalence

To clarify trends in sex-selection practices associated with the SRB bias results, we calculate the propensity to sex-select among India-born women proposed by Dubuc and Sivia (2018).

We used fertility estimates of immigrant Indian women in the UK published by Dubuc, 2012 and 2016 and we calculated the proportion of India-born women using sex-selection that reconcile SRB results and above fertility levels. We consider two potential thresholds to estimate the 'unbiased' sex-ratio at birth and found that sex-selection remained confined to a maximum of less than 5% of India-born mothers at the peak period (1990-2005) and reduced in the most recent period (2006-2017).

[Figure 4. *Propensity to sex-select among India-born mothers, 1969-2017]*

Discussion

A bill to ban sex-selective abortion was strongly opposed in the British Parliament in 2015 to preserve the reproductive rights of all women. The Bill was ultimately rejected. The absence of solid evidence for the recent period was an important argument that led the House of Commons requesting further research on the issue (Serious Crime Act, 2015). Our results bring clarity on the extend and trends in sex-selection and provide needed evidence on the recent trends. However, communicating empirical evidence of PSS is always a challenge.

Pro-life campaigners have used evidences of sex-selection to campaign against abortion and seek more restriction on women's abortion rights in the UK(and with more success in the USA). In reaction and with the aim to protect women reproductive rights, some activists with little apparent understanding of demographic and quantitative methods have rejected quantitative evidence of sex-selection. This has contributed to the polarisation of the sex-selective abortion debate initiated and shaped by pro-life/anti-choice activists, both sides excelling in misrepresentations and distortion of the evidence. In such heated debate, a nuanced evidence-based discourse is a challenging task for (feminist) population scientists.

This paper shows that sex-selection is a very marginal practice and *increasingly so*, giving further ground for the rejection of a sex-selective abortion bill, if it was needed. However, son preference has not

vanished among British Asian communities (Kuang and Dubuc, 2018) and we recommend alternative policy options supporting women's reproductive autonomy while encouraging the weakening of son/gender preferences in childbearing.

The analyses are completed and the writing up of the full paper is in process.

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