

Son Preference and prenatal sex-selection among the British Indian women: New evidence, and policy.

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Extended Abstract

Introduction

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 several 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 (Dubuc and Coleman 2007) and raised questions about the nature, motivations, intensity and policy implications of son preference in the UK Asian diaspora (Dubuc, 2014). Although the topic raised increasing media and policy attention, we lack reliable evidence on trends in sex-selection practice in the recent period in the UK, not to mention son preference itself. 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 primarily 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 (Dubuc, 2018 for an overview). 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. 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

The paper provides updated trends in SRB among the main British South Asian sub-populations in the UK. Changes in SRB are difficult to interpret in terms 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 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).

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 prevalence ratios and analyse trends in sex-selection. The dataset used comprises exhaustive Office of National Statistics birth registration data from the period 1969-2018. 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. Fertility estimates of Indian immigrant women in the UK by Dubuc (2012; 2016) are used in the calculation of sex-selection prevalence ratios

Results

Part 1- Sex ratio at birth

Figure 1 shows the sex ratio at birth from 1969-2018 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). For India-born mothers in England and Wales, a distortion of the SRB is still apparent, although less pronounced in the recent period, and persistently due to a distortion at third and higher births (Figure 3).

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).*

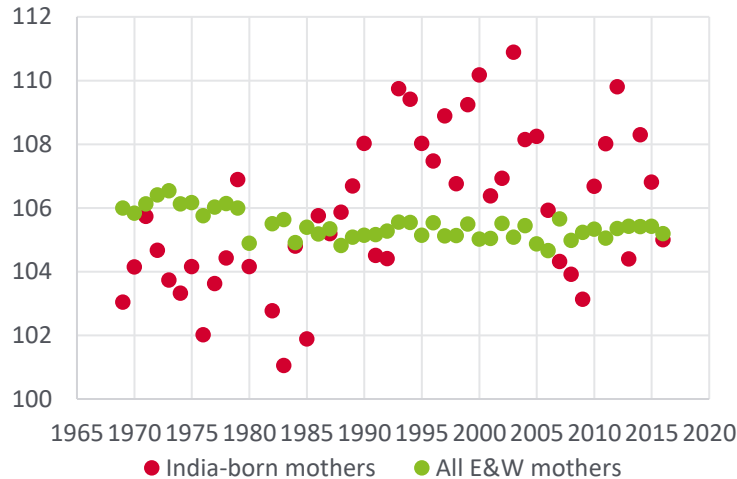


Figure 1. Overall sex ratio at birth in England and Wales and among India-born mothers, 1969-2018 (Currently showing 1969-2016, the figure will be updated)

Figure 2. Sex-ratio at birth among the three main British South Asian women’ groups, 1969-2018

Figure 3. Sex-ratio at birth and by birth order for India-born mothers, 1969-2018

Part 2 – Sex-selection propensity and PSS prevalence

To clarify the extend and 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. We 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 (2006-2018), and while higher parity births reduced (figure 4).

Figure 4. Changes in births by birth order, 1969-2018

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 needed clarity on the extent and trends in sex-selection and evidence for the recent period. Anti-abortion campaigners have used evidence 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, a number of feminists and activists (often with little apparent understanding of demographic/quantitative methods) have rejected quantitative evidence of sex-selection, reinforcing the polarisation of the debate initiated and shaped by anti-abortion activists. In such heated and polarised debate, a nuanced evidence-based discourse is a challenging task for a population scientist. In an attempt to do so, key results are:

- The new indicator of PSS propensity shows that prenatal sex-selection against female is a very marginal practice as a whole in the UK and it is also marginal within the British Indian community and *increasingly so*.
- Son preference has not vanished among British Asian communities (Kuang and Dubuc, 2019, PAA), however the results on PSS propensity suggest a weakening of son preference.
- Importantly, results provide evidence that a ban on sex-selective abortion is not necessary, at least in the UK context, to curb sex-selection practice. This is an important finding to answer the Parliamentary Act 2015 on the topic, and a result directly relevant to reflect on other contexts like the USA where sex-selection ban has occurred, and beyond. I recommend policy options supporting women's reproductive autonomy while encouraging the weakening of son preference, and gender preferences in childbearing altogether.

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