Consistent with the prediction that proximity to a legal abortion centre reduces the cost of abortion, the results show that a pregnancy is less likely to result in a live birth when it occurs closer to a legal abortion centre. But there is no evidence that improved access to abortion reduces neo-natal mortality. Similarly, improved access to abortion does not appear to increase parental investment in pre- and peri-natal care, such as the number and timing of pre-natal checks and assistance by trained staff at delivery.

Many countries facing high fertility and high child mortality, and where abortion reform may have the largest effects, are also characterised by a degree of son preference, so that gender-specific concerns arise with respect to abortion liberalisation. The main concern is that abortion liberalisation may increase sex-selective abortions.

Improved access to early abortions in a regulated environment may actually reduce sex selection

In Nepal, however, during the period covered by my data, legal abortion centres were only authorised to carry out first-trimester abortions, and there is evidence that this restriction was largely implemented in practice. Sex-detection technology that is reliable under 12 weeks of gestation is costly and not widely available in Nepal, so that access to these legal abortion centres is unlikely to increase the number of sex-selective abortions.

In fact, these first-trimester abortion centres may contribute to preventing sex selection if some women substitute early, gender-blind legal abortions for illegal ones taking place at a later gestational stage.

The results of my research do not support the hypothesis that legal abortion centres in Nepal have led to more sex-selective terminations. If anything, this study provides some suggestive evidence that improved access to early abortions in a regulated environment may actually reduce sex selection.

Christine Valente is a lecturer in economics at the University of Sheffield

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Discrimination begins in the womb: evidence of sex-selective pre-natal investment

Even if mothers who are expecting a girl decide to go through with their pregnancies, do they invest less in pre-natal healthcare? *Prashant Bharadwaj* looks at evidence from a number of Asian countries.

Sex-based discrimination has been studied extensively in the context of 'son preference' in South and South East Asia. Sex-selective abortions and differential care given to boys and girls after birth have resulted in an estimated 30 to 70 million 'missing' women in India and China alone. While economic growth might be expected to erode such discrimination, son preference (as evidenced by skewed sex ratios at birth and after) has been persistent despite high growth rates in these countries.

A number of studies have examined the role of sex-selective abortions and post-birth discrimination strategies, including differences in vaccination rates, allocation of household resources, breastfeeding behaviour and parental time allocation. One potential area of discrimination that has not been examined is whether parents invest less in pre-natal care when pregnant with a girl, while still carrying the girl to term.

Pre-natal discrimination may have sizeable consequences since care during pregnancy is an essential component of the overall health of the child. We know from previous research that in utero events and childhood endowments affect later life health, IQ and labour market outcomes. Maternal inputs during pregnancy can also affect important immediate outcomes, such as neo-natal survival and birth weight.

In India, attending pre-natal care is correlated with a 27% decrease in the probability of neo-natal mortality. Tetanus shots during pregnancy play a particularly important role in neo-natal survival: about 38% of child deaths (under five years) occur in the neo-natal stage; and neo-natal tetanus is the leading cause of neo-natal deaths, resulting in nearly 200,000 neo-natal deaths per year in South and South East Asia.

Our research examines the extent of sex-selective pre-natal care in a number of countries in South and South East Asia, particularly India. We find significant differences in the pre-natal healthcare

Women make different choices about pre-natal healthcare when they are pregnant with boys compared with when they are pregnant with girls

Pre-natal discrimination occurs largely among mothers who report having received an ultrasound during pregnancy

choices of women when they are pregnant with boys relative to when they are pregnant with girls.

In India, women are 1.1 percentage points more likely to attend pre-natal care when pregnant with a boy, and they receive a significantly greater number of tetanus shots. In northern India, where sex discrimination is known to be more prevalent, women are 4.6% more likely to seek pre-natal care and 3% more likely to receive tetanus shots if they are pregnant with a boy. In the same region, women are 16% more likely to deliver their baby in a non-home environment when pregnant with a boy.

As Figure 1 shows, we also find that women whose previous children were mainly girls tend to discriminate more when the current foetus is male. Moreover, for a subset of the Indian data, we find that pre-natal discrimination occurs largely among mothers who report having received an ultrasound during pregnancy.

We find similar evidence in other countries in South and South East Asia where sex discrimination has been documented. For example, in China, women pregnant with boys are nearly 6% more likely to seek pre-natal care. Mothers in Pakistan are 6% more likely to take iron supplements, and mothers in Bangladesh attend pre-natal care 7% more frequently when pregnant with a boy.

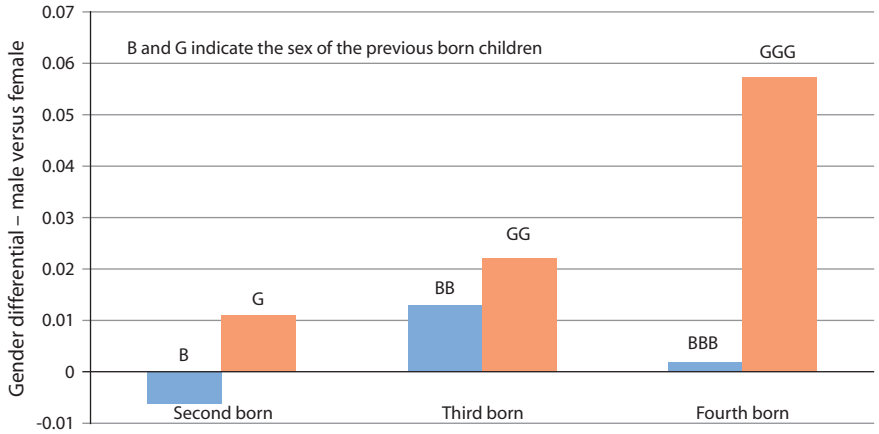
Apart from exploring a new parental avenue for gender discrimination, this research also brings a new perspective to the vast body of research on parental investment, which examines whether schooling or nutrition-based investments reinforce (or are affected by) the distribution of 'initial endowments'.

The notion of initial endowments is often related to birth weight or the residual of a human capital production function: we show that initial endowments (even within families) are subject to preferences over gender. Thus, beyond the usual concerns with endogenous endowment formation, such as maternal behaviour, genetic correlations etc., we suggest gender preferences as an additional channel for consideration when examining the impact of initial endowments on short- and long-term outcomes.

A common policy to address sex discrimination is to prohibit health professionals from revealing the sex of the foetus during ultrasound scans, as India did in the mid-1990s. Despite the legal efforts of the government, sex-selective abortions have risen in recent years in India and policy has tried to stamp it out. We argue that even if all policy efforts were diverted to reducing the incidence of sex-selective abortions, an unintended consequence could be a rise in differential investments in pre-natal care.

Our calculations suggest preferential treatment in one such investment – tetanus shots – can explain between 4% and 10.5% of the excess female neo-natal mortality. So if gender equality is a priority, policy must be concerned about the possibility of discriminatory pre-natal care leading to long-term differences in the outcomes for men and women.

Figure 1: Gender differential (male versus female pregnancy) in whether mother receives pre-natal care, by previous births



This article summarises 'Discrimination Begins in the Womb: Evidence of Sex-selective Pre-natal Investments' by Prashant Bharadwaj and Leah Wilson (available at: http://dss.ucsd.edu/~prbharadwaj/index/Papers.html)

Prashant Bharadwaj is an assistant professor at the University of California, San Diego