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Why the firstborn is more likely to succeed in life

Physical height is an important economic variable reflecting health and human capital. Puzzlingly, however, differences in average height across developing countries are not well explained by differences in wealth. We cannot close the malnutrition gap without addressing the social norms and economic rationales that deprive girls and younger siblings of the resources they need

Why are Indian children so short? Over 40% of those five and under are stunted — meaning they are in the bottom 2-3% of the worldwide height distribution for healthy children of their age and sex — and this rate has improved only modestly since the 1990s. Childhood malnutrition causes stunting, blights lives; millions will be permanently affected by poor health and cognitive deficits.

The Asian enigma

You might assume that this is just about poverty, but here's where the story gets strange: The average baby born in India is more likely to be stunted than the average baby in sub-Saharan Africa — even though the baby's mother is more likely to survive the birth. That baby is also more likely to go on to [live longer and be richer](#) and more educated.

Many explanations have been offered up for this “Asian enigma.” Most recently, [research reported in the New York Times](#) has suggested that health problems associated with open defecation, which is more widespread in India than Africa, can cause children to [suffer from malnutrition even when they are well fed](#).

But this overlooks one key fact: firstborn Indian children are taller than first born African children.

The first- and second-born

Last year, we conducted a study that used demographic and health surveys for India and 25 sub-Saharan African countries to [compare heights by age](#) in a sample of more than 174,000 children under five. Like other researchers, we found an India-Africa height gap. Unlike other researchers, we examined how this varied by birth order within the family.

We found that the Asian enigma begins only with the second-born child, and becomes more pronounced for each subsequent baby. Among children born third or later, 48% are stunted in India versus 40% in Africa, while the rates for firstborn children are 35% in India versus 37% in Africa.

CHILDREN ARE 55 % IN INDIA VERSUS 57 % IN AFRICA.

Children from the same family are most likely subject to the same external factors, like exposure to pathogens from open defecation, so there must be something else going on. We believe that the explanation is India's deeply entrenched preference for firstborn sons.

Favouritism toward the firstborn

Mrs. Sima lives in a village in the Gwalior district of Madhya Pradesh, a state in central India. She was married at 14 and started having children at 15: a girl, then a boy, then a girl. She says that she ate more and took advantage of available healthcare during her first pregnancy to better bear the pain she expected in childbirth, but also for the good health of what she hoped would be her "future son." During her second pregnancy, she followed the same regimen, with the exception of a shorter rest period before giving birth. During her third pregnancy, she says that she was too busy to take iron supplements.

We presented her with a hypothetical emergency, in which she could save only one of her children. She told us she would save the boy because "the son is the lamp of the family."

This favouritism toward firstborn sons emerges before babies are even born; in fact, the India-Africa height gap is apparent at birth, and remains consistent through childhood. Families allocate inordinate resources — nutritious foods, iron supplements, tetanus shots and prenatal check-ups — to a pregnant woman as long as there is a possibility that she is carrying the family's firstborn son. Once a male heir is born, prenatal investments drop off.

Gender differences?

In interviews we conducted in Gwalior this year, mothers freely admitted favouring their sons. And while they cited many reasons for investing less in their later pregnancies, including familiarity with the birthing process and dwindling income, their accounts strongly support the patterns we see in our data.

Interestingly, compared to their African counterparts, girls born before the family's eldest son actually fare better than boys born after him, while girls born after the eldest son fare worst of all.

As these favoured sons grow up, they continue to receive a disproportionate amount of their families' resources. While firstborn Indian children receive, on average, one more essential childhood immunisation than their counterparts in Africa, this is not the case for their younger siblings. Our interviews with mothers in Gwalior also found that younger siblings are fed less balanced diets.

India's patrilineal traditions dictate that the eldest son care for his parents in old age and inherit property, while the dowries paid to marry off daughters can be expensive. The result is sex-selective abortion and an underinvestment in girls so common it has popularised a Hindi motto: "*beti to bojh hoti hai*," meaning, "a daughter is a burden." Recently, the cabinet minister Smriti Irani revealed that upon her birth, a friend of

her mother's quoted this maxim and urged her mother to kill her. It's not surprising that in 2011, among Indian children age six and under, there were 919 girls for every 1,000 boys.

The fight for gender equality

It is necessary and laudable to push for improving nutrition, advancing child and maternal health, and [ending open defecation in India](#). However, we cannot close the malnutrition gap without addressing the social norms and economic rationales that deprive girls and younger siblings of the resources they need.

The fight for gender equality is a crucial part of this. Many recent policy efforts in India have focused on improving girls' education; for these to have bite, they must be paired with efforts to equalise property ownership and job opportunities. A 2005 law granted daughters the right to inherit equally with their brothers, but enforcement is weak. And the participation of women in the labour force is actually declining in India today.

As long as this is the case, it will be hard to convince parents to invest in their children more equally. Parents will continue to lavish resources on their eldest sons if they see them as their only support in old age. But if we can improve the economic prospects for India's women, we may be able to reduce the malnutrition of their children.