



DATA FOR DEVELOPMENT

India Human Development Survey Forum | July 2025

A monthly update of socio-economic developments in India by the IHDS research community.

Sex ratio and Fertility Preferences in India: A Longitudinal Analysis

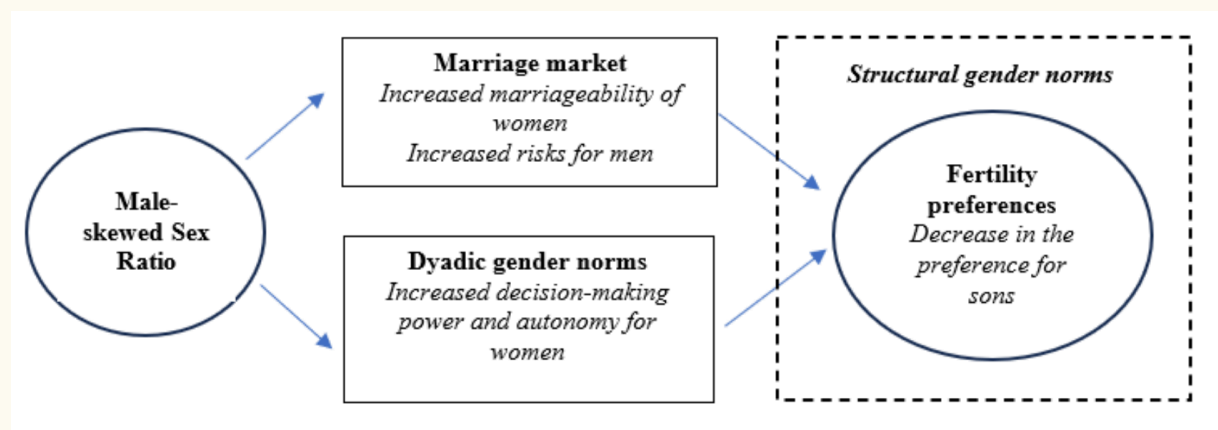
Pierre Levasseur, Matthieu Clément & Suneha Seetahul



Birth control policies and entrenched patriarchal norms have contributed to a highly imbalanced male/female ratio in India. While the impact of son preference on the sex ratio is largely studied, the consequences of a male-skewed sex ratio on women's fertility preferences remain underexplored. Merging different longitudinal datasets (Indian Census and IHDS), this article provides an original empirical analysis of the effect of district-level sex ratios on women's fertility preferences and the nested pathways of this relationship. Sex ratio is calculated dividing the

number of men over the number of women per rural and urban districts. Individual and time fixed-effects regressions show that district-level surplus of men negatively affects women's desired number of sons. The investigation of potential pathways shows that a higher district male/female ratio may make gender norms and the marriage market more favorable to women. We conclude that this self-corrective process which shapes the relationship between sex ratio and son preference in contexts of entrenched patriarchal norms, hinders gender equality.

Figure 1: Potential pathways of the impact of district-level male-skewed sex ratio on women's fertility preferences



[Read More](#)

About the Authors



Pierre Levasseur

Pierre Levasseur is a Research Fellow at the French National Research Institute for Agriculture, Food, and Environment (INRAE), specialized in food and nutrition economics. His work focuses primarily on the socioeconomic and environmental issues related to emerging food-based public health concerns, such as obesity and inappropriate consumption patterns. Conducting research both in high-income countries and the global South, his analytical approach is empirical and combines the depth of field studies with the generalization power of quantitative analysis methods.



Matthieu Clément

Matthieu Clément is full professor in development economics at Bordeaux School of Economics (University of Bordeaux, CNRS & INRAE). His research lies in the fields of development economics, development studies and applied microeconomics with privileged topics such as inequality and social stratification, health and nutrition, and crime and violence. His works primarily focus on Asia (China, India and, Vietnam) and Latin America (Argentina, Brazil, Colombia, and Mexico). From a methodological perspective, his research combines quantitative and qualitative approaches.



Suneha Seetahul

Dr. Suneha Seetahul is a Senior Research Fellow at the Australian Centre for Gender Equality and Inclusion at Work at the University of Sydney. As an applied microeconomist and development economist, her research examines the intersection of gender, labour markets, health, and social protection, with particular focus on how institutions and social norms shape access to decent work and human development outcomes. Her methodological approach draws from diverse quantitative techniques, including quasi-experimental econometrics, machine learning, and exploratory analysis.

Unwanted fertility and impacts on self-rated health of women in India

Esha Chatterjee and Johny K D

This is the first study in India to move beyond women’s sexual and reproductive health, instead examining the consequences of having an unwanted birth on women’s general health. We use nationally representative longitudinal data from the two waves of the India Human Development Survey (2005 and 2012) for 3,776 currently married, non-pregnant women aged 18–40 at baseline who were interviewed in both waves. Results from multivariate linear and logistic regression show that mothers having an unwanted birth between the two time periods were likely to report worse self-rated health in 2012 and more likely to experience a deterioration in health between the two waves compared with those who had a wanted birth, after accounting for other maternal and household characteristics. Results are robust to models accounting for propensity weighting.



Table 1: Predicted values for self-rated health in 2012 and predicted probabilities of health deteriorating between 2005 and 2012 for women with wanted and unwanted births in India, with and without using the IPW estimator

| | Wanted birth | Unwanted birth | p-value |
|---------------------------|--------------|----------------|---------|
| Without IPW | | | |
| Self-rated health in 2012 | 1.97 | 2.12 | 0.000 |
| Health worsened 2005–12 | 0.25 | 0.28 | 0.017 |
| With IPW | | | |
| Self-rated health in 2012 | 1.91 | 2.12 | 0.000 |
| Health worsened 2005–12 | 0.21 | 0.26 | 0.014 |

[Read More](#)

About the Authors



Esha Chatterjee

Esha Chatterjee is an Assistant Professor in the Department of Humanities and Social Sciences at the Indian Institute of Technology Kanpur. She holds a PhD in Sociology (University of Maryland College Park, 2020). Her primary research interests are in the fields of demography and gender, work, and family. Her work has been published in peer-reviewed journals such as Population and Development Review, Journal of Ethnic and Migration Studies, Population Studies, Demographic Research, and PLoS One.



Johny K D

Johny K D is a PhD Student at Indian Institute of Technology, Kanpur, India. His doctoral work explores issues such as the slums, slum rehabilitation scheme, housing, employment, health, precarity and urban planning. He has also worked with the Ministry of Social Justice and Empowerment, Gol and the Institute of Economic Growth.



Publications List

Recent Publications using IHDS Data

Bhar, S. (2025). The Usability of Asset Index as an Indicator of Household Permanent income in India: Comparison with Total Expenditure and Income Data. *Journal of Quantitative Methods*, 9(1). [Link](#)

Deschenes, O., Madhok, R., Mobarak, A. M., & Noack, F. (2025). Internal Migration and the Spatial Reorganization of Agriculture. *Ideas for India*. [Link](#)

Jain, A. (2025). Evaluating the Role of Household and Individual Characteristics on Female Labor Force Participation: Case of MGNREGA. Master's Thesis. Northern Illinois University, Department of Statistics and Actuarial Science. Available at ProQuest Dissertations & Theses. (31934403). [Link](#)

Poddar, P., Rotondi, V., & Kashyap, R. (2025). Access to technology and foundational math proficiency among students: empirical evidence from India. *Humanities and Social Sciences Communications*, 12, 1015. [Link](#)

Rasul, G., & Nepal, A. K. (2025). Geographic patterns and dimensions of poverty in the Indian Himalayan region. (CelPress) Heliyon, 11(12), e43567. [Link](#)

Sarkar, B. (2025). An Assessment of the Impact of Temporary Migration on Household Adaptive Capacity to Climate Variability (e.g., Drought) in Rural India. Rural and Regional Development, 3(3),10010. [Link](#)

IHDS in News

Khambete, A. K. (2025). When the heat rises, water runs out: How climate shocks are deepening water poverty in India. India Water Portal. 12 July 2025. [Link](#)

About IHDS

The India Human Development Survey (IHDS) began as a nationally representative, multi topic survey of 41,554 households in 1,503 villages and 971 urban neighborhoods across India. The first round of interviews were completed in 2004-05; Data is publicly available via ICPSR. The second round re-interviewed most of these households in 2011-12 (N=42,152) and data for the same is available via ICPSR. Fieldwork for IHDS 3 was undertaken in 2022-24 and data is currently being cleaned and processed.

IHDS 3 has been jointly conducted by researchers from the University of Maryland, the National Council of Applied Economic Research, Indiana University and University of Michigan.

IHDS Principal Investigators

Sonalde Desai

Distinguished
University Professor
Emerita, UMD
Director, NCAER-NDIC

Feinian Chen

Professor, JHU

Amaresh Dubey

Senior Consultant,
NCAER

Keera Allendorf

Associate Professor,
IU

Sharan Sharma

Assistant Research
Professor, UMD

Contact Us



Copyright © 2025, India Human Development Survey. All rights reserved.

Our mailing address is:

3104 Parren J. Mitchell Art Sociology Bldg.
University of Maryland, College Park, MD 20738
ihdsinfo@gmail.com

Thank you for your support.