

Factors Associated with Decline in Child Marriage in India: Findings from a District-Level Analysis

Research Brief

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Background

India has the largest number of child brides in the world. At the same time, recent data show notable progress in reducing child marriage. The 2011 census report revealed that the proportion of girls aged 15–19 who were ever married had declined from 25 percent to 20 percent and the proportion of women married before age 18 among women who were married in the five years prior to the census had declined, from 32 percent to 17 percent between 2001 and 2011 (Office of the Registrar General and Census Commissioner, 2001; 2011). The National Family Health Survey findings also show that the proportion of 20- to 24-year-old women who were married before age 18 declined from 47 percent to 27 percent between the 2005–06 and the 2015–16 surveys (IIPS and Macro International, 2007; IIPS and ICF, 2017). There are also huge inter- and intra-state variations in the prevalence of child marriage in India. With 8 percent and 42 percent of 20- to 24-year-old women married before age 18, Kerala and Bihar states recorded the lowest and highest prevalence of child marriage, respectively, among the states of India in 2015–2016. Similarly, district-level prevalence ranged from 0 in Ernakulam, Kerala to 68 percent in Shrawasti, Uttar Pradesh.

A better understanding of the factors that might have contributed to the decline in child marriage in the recent past could provide useful programmatic leads to hasten the process of preventing child marriage in India. Most studies on drivers of child marriage in India have focused on exploring the association between child marriage and individual level characteristics. Only a few studies have explored the influence of macro level factors on the prevalence of child marriage (Srinivasan et al., 2015; Desai and Andrist, 2010; Dommaraju, 2009).

Drawing on district-level data from national censuses conducted in 2001 and 2011 and other data, this research brief describes the temporal and spatial variation in the prevalence of child marriage and extends the limited evidence on the role of macro level factors in the recent decline in child marriage in India.

Findings

The prevalence of child marriage, as measured by the percentage of women married before age 18 among those who had married in the five years preceding the census, declined by half between 2001 and 2011 in India.

Eight states—Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh—recorded a decline in child marriage in the range of two-fifths to almost three-fifths.

One sixth of districts recorded a decline in child marriage by a quarter to two-fifths.

Most of the decline in child marriage between 2001 and 2011 was explained by improvements in female education and reduction in poverty and average household size.

The study

Our analysis drew primarily on district-level data from the Indian censuses of 2001 and 2011. We created a panel data set linking 2001 and 2011 districts. There were 593 districts in the 2001 census, and this number increased to 640 districts in the 2011 census. We used 2001 districts as the base. For districts partitioned between 2001 and 2011, we compared district boundaries across 2001 and 2011 censuses using the 2011 *District Census Handbook*. We calculated the 2011 values of the outcome and explanatory variables by taking the weighted average of bifurcated districts, using the 2001 population of the bifurcated parts as weights.¹ The panel data set thus created has data for 593 districts. We also used district level data from the National Crimes Records Bureau of the Ministry of Home Affairs for 2001 and 2011 (NCRB, 2017) and regional estimates of poverty and inequality (Chauhan et al., 2016).

¹ This methodology is used previously by several researchers, see for example, Dommaraju, 2009; Murthi, Srinivasan and Subramanian, 2001.

We used the percentage of women who were married before age 18 among those who were married in the five years prior to the census to measure the prevalence of child marriage in the district.² We used the fixed effects model for panel data to identify the association between the prevalence of early marriage and explanatory variables.³ The explanatory variables included in the regression analysis were female education, female labor force participation, household size, female-headed households, marriage squeeze, urbanization, economic progress as measured by village electrification, the poverty head-count ratio and atrocities against women and girls (see table 1 for 2001 and 2011 levels of these indicators).

We recognize that changing norms about marriage is likely to be an important factor; however, we cannot capture its effect because of the absence of data. We applied regression-based decomposition method to estimate the contribution of the explanatory variables to the decline in the prevalence of child marriage between 2001 and 2011.

District-wise temporal variation in the prevalence of child marriage

The pace of decline in child marriage between 2001 and 2011 varied across states and districts. The prevalence of child marriage declined by 2 percentage points in Goa to 30 percentage points in Bihar. Notable declines were observed in eight states—Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh—wherein child marriage declined by two-fifths to almost three-fifths, from 31–53 percent in 2001 to 15–32 percent in 2011.

National and state averages mask considerable differences across districts within states. At one extreme, one in six districts recorded no noticeable decline⁴ in child marriage between 2001 and 2011 (100 districts). As expected, these districts were predominantly from such low prevalent⁵ states as Himachal Pradesh (9)[#], Kerala (8)[#], and Punjab (10)[#], and states with medium level of prevalence—Gujarat (14)[#], Maharashtra (7)[#], Manipur (7)[#], Meghalaya (5)[#], Mizoram (7)[#] and Tamil Nadu (7)[#]. At the other extreme, another one in six districts recorded

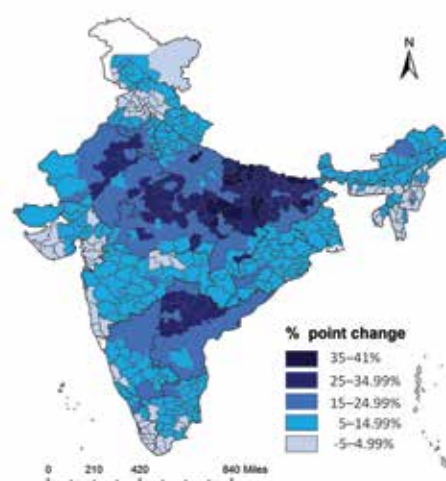
declines in the range of 25 to 41 percentage points (104 districts); these districts were largely from such high prevalent states as Andhra Pradesh (7)[#], Bihar (33)[#], Jharkhand (6)[#], Madhya Pradesh (20)[#], Rajasthan (7)[#] and Uttar Pradesh (27)[#].

Table 1: The situation in 2001 and 2011

Indicators	2001	2011
% women married before age 18 among those who married in the five years preceding the census ¹	29.9	15.7
% women aged 15–24 who had completed 8 years or more of schooling ¹	41.7	58.8
% women aged 15–24 engaged in economic activities ¹	34.3	28.3
Average household size ¹	5.4	5.0
% female-headed households ¹	10.4	11.2
Marriage squeeze (ratio of unmarried men aged 20–24 to unmarried women aged 15–19 (per 1,000) ¹	836.7	873.4
% urban ¹	23.7	27.2
% villages electrified ¹	81.0	90.6
Poverty headcount ratio ²	37.5	23.9
Number of crimes against women per 100,000 females ³	26.5	35.0

Source: ¹ Office of the Registrar General and Census Commissioner, 2001; 2011; ² Chauhan et al., 2016; ³ NCRB, 2017.

Temporal variation in the pace of decline in child marriage between 2001 and 2011, by districts



² The percentage of 20- to 24-year-old women married before age 18, although a more rigorous and universally accepted measure of child marriage, cannot be measured from the census data.

³ All these indicators were measured at the district level.

⁴ Percentage point difference in the range of +/- 5 between the 2001 and 2011 censuses.

⁵ Prevalence of 10 percent or less of women married before age 18 among those who married in the five years preceding the census is considered as low prevalence, 11–25 percent as medium level of prevalence and more than 25 percent as high prevalence for the analysis in this brief; the prevalence data from 2001 were used for this categorization.

[#] Values in the parentheses refer to number of districts.

Factors contributing to decline in child marriage

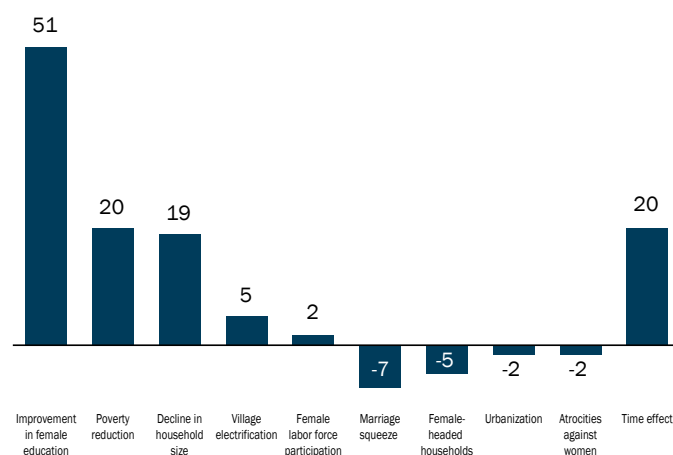
The regression results show that female education and economic development, as measured by village electrification, were inversely associated with the district-level prevalence of child marriage (table 2). On the other hand, household size, female-headed households, marriage squeeze and poverty were directly correlated with prevalence of child marriage.

Table 2: Factors associated with the prevalence of child marriage

Indicators	Beta coefficient
% women aged 15–24 who had completed 8 years or more of schooling	-0.42***
% females engaged in economic activities	0.05
Average household size	5.78***
% female-headed households	0.86***
Marriage squeeze (ratio of unmarried men aged 20–24 to unmarried women aged 15–19 per 1,000)	0.03***
% urban	0.09
% villages electrified	-0.07**
Poverty headcount ratio	0.21***
Number of crimes against women and girls per 100,000 females	0.03
Time effect	-2.83*

Results from the regression-based decomposition exercise show that improvements in female education made the largest contribution in reducing child marriage between 2001 and 2011 (51 percent of the decline, figure 1). Reduction in poverty and household size made the second-largest contribution, reducing the prevalence of child marriage by 20 percent and 19 percent, respectively. In contrast, factors such as the narrowing of the marriage squeeze, increase in female-headed households, urbanization and the increase in reported violence against women and girls, resulted in increasing the child marriage, although marginally.

Figure 1: Factors contributing to the decline in child marriage: The regression-based decomposition results



Recommendations

- The important contribution of improvements in educational attainment to delaying marriage highlights that the pace of change in delaying marriage may be accelerated by greater and more diversified investments in education. Many models exist, for example, conditional and unconditional cash transfer programs, remedial education programs, teacher-incentive programs and information and communications technology-based instruction to encourage school completion and improve learning outcomes. Investments are required to adapt, re-evaluate and scale up some of these models and to target the most marginalized of households.
- The findings also emphasize that child marriage prevention activities must focus on districts characterized by high levels of poverty and large household size.
- The findings that violence against women and girls have contributed to marginally increasing child marriage suggest that child marriage prevention programs must pay attention to preventing crimes against women and girls and alleviating women's and girls' concerns about lack of safety in their communities.

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