

District-level Study on Child Marriage in India

What do we know about the prevalence, trends and patterns?

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DISTRICT-LEVEL STUDY ON CHILD MARRIAGE IN INDIA

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This report has been prepared by the International Center for Research on Women, in association with UNICEF. The report provides an analysis of the prevalence of child marriage at the district level in India and some of its key drivers.

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The first stage of the project, involving the study of prevalence, trends and patterns, quantitative analyses of a few key drivers of child marriage, and identification of state and districts for in-depth analysis, was undertaken and the report prepared by Dr. Padmavathi Srinivasan, with contributions from Dr. Nizamuddin Khan, under the strategic guidance of Dr. Ravi Verma.

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ACRONYMS AND ABBREVIATIONS

AHS	Annual Health Survey
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centre
DLHS	District Level Household Survey
ICRW	International Center for Research on Women
NFHS	National Family Health Survey
OBC	Other Backward Class
OC	Other Caste
PHC	Primary Health Centre
SC	Scheduled Caste
SMAM	Singulate Mean Age at Marriage
SRS	Sample Registration System
ST	Scheduled Tribe
UNICEF	United Nations Children's Fund
VHNSC	Villages with Health, Nutrition and Sanitation Committee

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ABSTRACT

The present study analyzes the prevalence and some key drivers of child marriage at the district level in India, using government data sources. The practice of child marriage persists across the country, with many northern states having the highest percentage of women married before the legal age. Although there has been a significant decline in child marriage for females throughout the country, especially for girls below the age of 15 years, child marriage continues to affect almost a third of all girls in India. A significant percentage of Indian women continue to marry between the ages of 15 and 17 years. In some districts, the trends show higher percentages of a younger cohort of women (as opposed to an older cohort of women) who married before the age of 18 years. These districts need to be monitored carefully to ascertain whether the turnaround in the declining trend is long term, or merely a short-term deviation. Data from the District Level Household Survey (DLHS) from 2007-2008 and Census 2011 show that many indicators of social and economic development, including female status and levels of empowerment at the district level, are significantly associated with child marriage prevalence in districts. This indicates a strong need for improving the social and economic conditions in the immediate environment to bring about social change and put a stop to customs and practices that are detrimental to the health and wellbeing of women and children and harmful to society. Among individual characteristics, the level of education of females has the most profound impact on the age they marry, irrespective of household wealth, locality and other characteristics. Further, in the districts studied here, Other Backward Class (OBC) and Scheduled Caste (SC) women tend to have the lowest mean age at the time of marriage, irrespective of their level of education, locality and economic background.

INTRODUCTION

About 21 percent of India's population are between the ages of 10 and 19 years, of whom 47 percent are female.¹ A significant percentage of girls in this age group is either already married or will marry before they attain the legal age of marriage. Although the national statistics reflect high rates of child marriage in the country, there are large regional variations across the country (NFHS, 2007). Child marriage is defined as one where the girl is below the age of 18 years and the boy below the age of 21 years. By this definition, over 50 percent of Indian women are married off as children in northern states such as Bihar, Jharkhand and Rajasthan. At the other end of the spectrum, there are states such as Goa, Himachal Pradesh, Kerala, Manipur, and Jammu and Kashmir, where less than 20 percent of women are married before the age of 18 years. There are reasons to believe that, even within states, there are significant variations in the prevalence of child marriage. The district differences in the rate of child marriage are likely to exist because of the way the states and districts within them were created. People who share a common cultural, religious and linguistic heritage make up the state-land and the districts within it. Even in a state with an overall high rate of child marriage, it is likely that some districts would have low prevalence of child marriage due to distinct cultural, social or demographic characteristics that set these districts apart from the rest of the state.

The present study was undertaken by ICRW, with support from UNICEF, to systematically unearth these variations and to assess if there are patterns that can provide further insights into the prevention programmes at scale. The methodology used to examine the prevalence, trends and patterns of child marriage among currently married women at the district level across India involved analyses of various government data available in the public domain. Specialized mapping software was used to present the spatial distributions of outcomes and enable district-wise trends, patterns and anomalies to be detected easily.

Based on the analyses of data, we identified a few large states, and one or two districts within each state, with the highest and lowest prevalence of child marriage. We did a socioeconomic and demographic profiling of these districts, using various government data sources, to understand why the variations within a state exist, especially in the context of their socioeconomic and geopolitical settings.

Before diving into the discussions on the results from the quantitative analyses on the age of women/girls at the time of marriage, we present a brief overview of the marriage systems and patterns in India with respect to demographic, sociological and economic perspectives. The report is organized in six sections: (i) overview of marriage patterns in India; (ii) analyses on the prevalence, trends and patterns on child marriage at district level; (iii) drivers of child marriage in India; (iv) child marriage in select large states – Bihar, Gujarat Rajasthan, Telangana and West Bengal; (v) summary of key findings; and (vi) conclusion and direction for future research on child marriage.

¹ Census 2011, Office of Registrar General of India.

SECTION I: MARRIAGE IN INDIA

Marriage continues to be near universal in India (Das & Dey, 1998; Srinivasan & James, 2015), despite the evident decline in marriage rate in many parts of the world (Lesthaeghe, 2010) and concerns that all Asian societies will eventually follow the marital and fertility patterns found in western societies and in countries such as Japan (Cho & Retherford, 1976; Retherford, Ogawa & Matsukura, 2001). As it has been the case historically, the institution of marriage in India remains strong and popular, despite the very rapid levels of modernization in the country in the last two decades. Only 12.2 percent of Indian women remain unmarried at the end of the prime marrying years, broadly taken as 20-29 years, and 1.8 percent of Indian women remain unmarried by the time they reach the age of 35 years (see Table 1); after this age, a small percentage of women do go on to marry, but this figure is not very significant. This pattern is more or less the same across the different states, with minor deviations (see Annexure Table 1).

Typically, Indian women are married before the age of 25 years, with a tight clustering of marriage between 17 and 19 years (Desai & Andrist, 2010). The association between the timing of nuptials and fertility rate is copiously documented in the demographic literature. As child marriage leads to high fertility, the age at marriage of women has always been at the centre of research by demographers. In an analysis documenting the changes in the Singulate Mean Age at Marriage (SMAM)¹ for females in India, using Census data from 1961 to 2001 and the 2010 Sample Registration System (SRS), Srinivasan and James (2015) note an increase in SMAM from 16.8 years in 1961 to 22.2 years in 2010. Moreover, there were significant state differentials in the age at marriage for women and changes in the SMAM values across time: the SMAM in Kerala, which was 20.1 years in 1961, and the highest among Indian states at that time, saw an increase of only 2.6 years over a 50-year period. By contrast, in the less developed states of Bihar and Uttar Pradesh, the SMAM values in 1961 went up by 5.1 years and 6.2 years, respectively, to 21 years and 22 years. As the authors note, there has been a convergence of SMAM values of the less developed states towards the level in Kerala, with changes in the trends more marked in the less developed states and reaching a plateau in the more developed states.

Significant interstate variations emerged when the percentage of females remaining single by different age group from Census 2001 and 2011 were compared (see Table 1). However, the patterns across states are a trifle complex and difficult to decipher. For instance, in some states, such as Rajasthan, Bihar and Uttar Pradesh, where the levels of child marriage are quite high, the SMAM for women is also relatively high (Srinivasan & James, 2015).

In all the large states, an overwhelming percentage (ranging from 70 percent to 80 percent) of females aged 15-19 years are single; the percentage dips to 30-40 percent at ages 20-24 years, and slides further to 6-8 percent in the next higher age interval, 25-29 years (see Annexure Table 1). The pattern in Rajasthan of women remaining single, for example, which has relatively high levels of child marriage, is 2.1 percent of females in the age group 30-34 years, which is typically considered just past the prime marriage years, 1.0 percent at ages 35-39 years and, lastly, 0.6 percent at the end of the reproductive years, ages 50-54. Bihar, another state with relatively high levels of child marriage, also shows a similar pattern (2.8 percent, 1.2 percent and 0.7 percent, respectively). Uttar Pradesh, which is part of the northern belt and has relatively low levels of socioeconomic development and high rates of child marriage, has slightly higher percentages of women in the three age groups who are single (i.e., 4.6 percent, 2.0 percent and 1.1 percent). By complete contrast, the southern states of Kerala and Tamil Nadu, which have low levels of child marriage and higher levels of socioeconomic development, have higher percentages of females in the three age groups who are single (3.9 percent, 1.9 percent and 1.4 percent in Tamil Nadu; 5.0 percent, 3.5 percent and 3.3 percent in Kerala), indicating a tendency for females to postpone marriage to their late 20s and beyond in these two states, and, in the case of Kerala, a small but significant percentage deciding to forgo marriage altogether.

1 Singulate mean age at marriage (SMAM) indicates the number of years between 15 to 54 years spent as single, by males and females until they marry. It is a synthetic cohort value calculated from the proportions of males or females who are not married in the different age intervals. For details on the method of calculation and interpretation, please refer to Srinivasan (2011).

Table 1. Percentage of females remaining single in the different age groups in India and select large states, Bihar, Kerala, Tamil Nadu and Uttar Pradesh, 1961 – 2011

Year	Age group (years)							
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54
India								
1961	29.2	6.0	1.9	1.0	0.7	0.6	0.5	0.5
1971	43.7	9.5	2.3	1.0	0.8	0.6	0.5	0.5
1981	55.9	14.0	3.3	1.2	0.6	0.5	0.4	0.4
1991	64.3	17.0	4.2	1.8	0.9	1.0	0.7	0.8
2001	75.2	23.0	5.7	2.2	1.3	1.2	0.9	0.9
2011	80.1	30.4	8.8	3.3	1.8	1.4	1.2	1.2
Bihar								
1961	15.6	3.0	1.3	0.9	0.7	0.6	0.6	0.6
1971	23.1	3.6	1.0	0.5	0.4	0.3	0.3	0.3
1981	35.3	5.2	1.3	0.5	0.3	0.3	0.2	0.2
1991	44.2	7.1	1.6	0.9	0.4	0.7	0.5	0.8
2001	60.4	9.5	1.5	0.7	0.6	0.3	0.2	0.3
2011	83.1	36.3	10.3	2.8	1.2	0.8	0.6	0.7
Kerala								
1961	69.6	22.7	8.0	4.5	3.2	2.9	2.2	1.8
1971	81.0	32.7	9.3	5.3	3.7	3.5	3.1	2.9
1981	85.4	40.2	12.5	5.8	3.5	3.4	2.9	3.1
1991	88.5	43.4	13.9	6.2	3.9	3.7	3.0	3.2
2001	86.7	41.6	13.0	5.8	3.9	3.5	3.2	3.4
2011	87.3	41.6	11.9	5.0	3.5	3.1	3.0	3.3
Tamil Nadu								
1971	72.7	17.0	2.7	1.2	0.7	0.7	0.6	0.5
1981	76.8	22.9	4.8	1.7	0.8	0.7	0.5	0.4
1991	81.9	28.5	6.8	2.5	1.1	1.1	0.7	0.7
2001	84.3	34.8	8.4	3.0	1.6	1.5	1.1	1.1
2011	84.9	39.6	11.3	3.9	1.9	1.5	1.3	1.4
Uttar Pradesh								
1961	17.0	2.5	1.0	0.6	0.4	0.4	0.3	0.4
1971	26.6	3.8	1.1	0.6	0.7	0.4	0.3	0.3
1981	39.0	5.8	1.0	0.3	0.2	0.2	0.1	0.2
1991	53.0	8.1	1.5	0.7	0.3	0.7	0.6	0.6
2001	72.6	16.1	3.0	1.0	0.6	0.6	0.4	0.5
2011	88.0	47.5	14.9	4.6	2.0	1.4	1.0	1.1

The values are calculated from the Sample Registration System (SRS) 2010 data. Source: Srinivasan and James (2015).

It remains to be seen whether the marital timing for females, specifically in the states where the demographic transition is yet to be completed, will continue to see further postponement to late 20s and beyond; or whether the age at marriage for females in India will plateau at 21-22 years indefinitely.

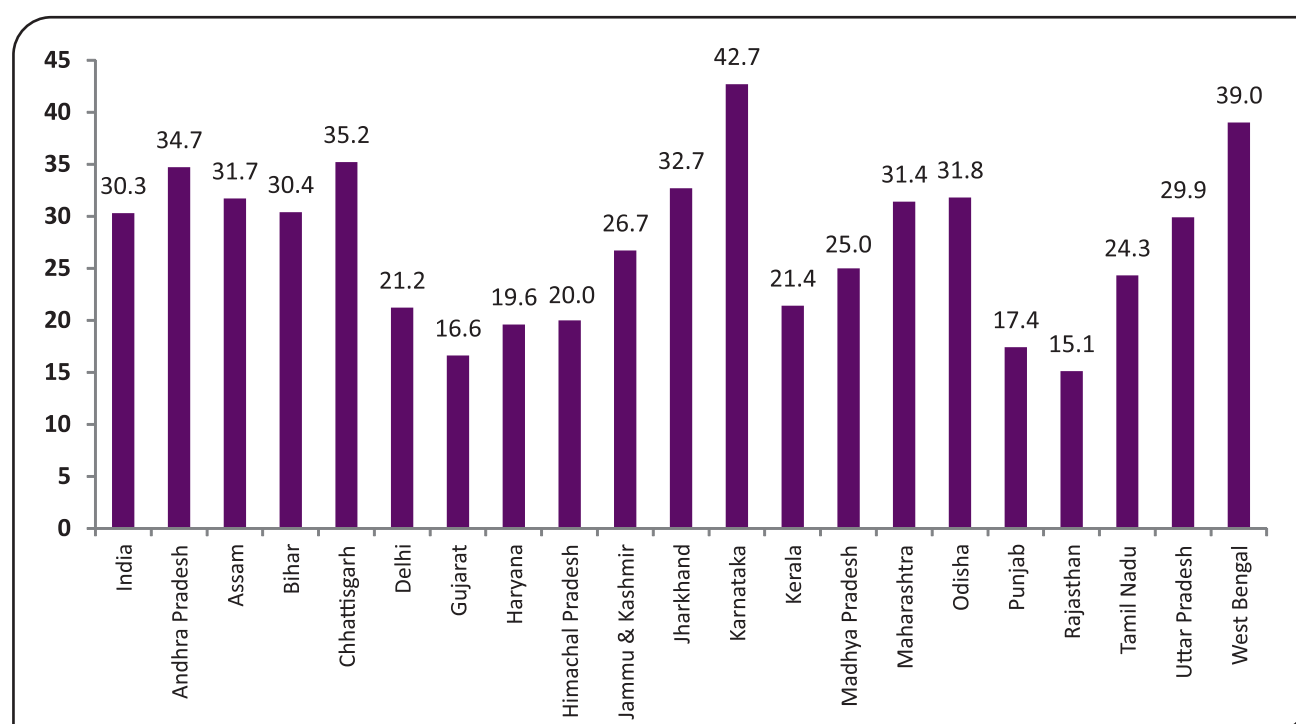
Child marriage followed immediately by childbirth continues to characterize the marriage and family systems in Indian society, although globalization, modernization and westernization are factors known to increase the age of marriage of females (Das & Dey, 1998) and delay the onset of motherhood, if not induce women to forgo the two roles altogether. Child marriage among females customarily leads to early pregnancy and motherhood, since nearly all births for women occur within marriage and the length of time between marriage and parenthood is

typically very small. Data from the Indian Census 2011² confirm this: around 30 percent of females ages 15-19 years who are ever married are already mothers (see Annexure Figure 1) and 10 percent have had at least two children (see Annexure Figure 2).

The District Level Household Survey (DLHS) 2007-2008 data provide a more accurate figure on the prevalence of adolescent motherhood, by age at marriage of the woman. Moreover, unlike in the Census data, it is possible to filter out females exactly below 18 for the analyses. Analyses of the DLHS data show that about 30 percent of currently married females under the age of 18 have experienced a live birth; this figure ranges from as high as 43 percent in Karnataka to as low as 15 percent in Rajasthan (see Figure 1).

However, the problems around using women in the age cohort of 20-24 as the sample are evident: not all women in this age group are likely to be married at the time of the survey, and those among this group who were married at 18 are just starting their childbearing. Therefore, in order to have a more accurate estimate of adolescent pregnancies and childbirth, we analysed childbirths among married women from an earlier age cohort, 25-29 years, most of whom are likely to be married when the survey was taken, and are either likely to have completed childbearing or near completion.

Figure 1. Percentage of currently married women aged 18 years and below who have ever given birth, for India and select large states, DLHS 2007-2008



The results from the analysis show that the mean live births among currently married women aged 25-29 years who married below 15 years is 3.4 children, as opposed to 2.9 children for those who married at age 15-17 years, and 1.9 children for those who married at 18 years and later (see Figure 2). That is, there is a difference of 1.5 mean births between women married below 15 years and those married at the age of 18 years or above. The regional variations in mean live births are also clear; the fertility rate, expressed here as mean live births, among women married below 15 years is highest in Jammu and Kashmir (3.8), followed by Bihar and Uttar Pradesh (each with 3.7), and Jharkhand and Chhattisgarh (each with 3.4). It is worth noting that, in all the states examined here, women who are married before the age of 15 have on average two live births more than women married after the legal age of marriage. The difference is found to be the most (by two live births on average) in the state of Jammu and Kashmir and least (slightly under one live birth on average) in Andhra Pradesh.

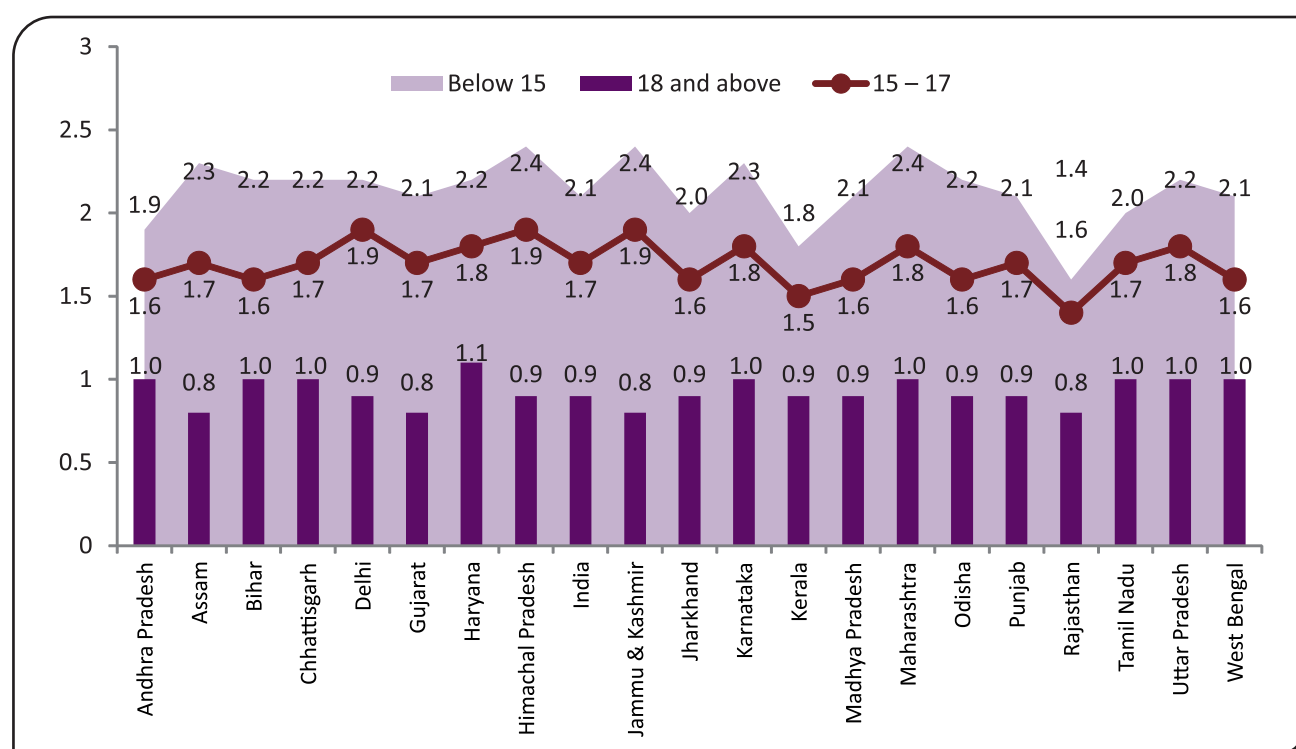
Despite an increase in the age at marriage of both females and males, a significant percentage of Indian females

² At the time of writing this report, only limited marital and fertility data from Census 2011 had been released in public domain.

and slightly lower percentage of males still marry before the legal age of marriage (NFHS, 2007). The low age at marriage in India, particularly among females, has been a focus of research in many demographic and sociological studies. From a cultural perspective, parents feel that it is important to marry off their son or daughter at an early age in order to fulfil certain religious obligations and duties, chief among them to ensure progeny to continue the family lineage and perform various religiously mandated rituals after the death of the parents and grandparents. Thus, the marrying off a daughter, as soon as she attains puberty, is seen as a religious rite of passage by parents and, thus, a non-negotiable obligation. In early societies, the high infant and child mortality and maternal mortality rates made it imperative for women to start childbearing at very young ages (Knodel, 1977; Kirk, 1996), to ensure that at least one or two children survived to adulthood. In the Indian context, the younger the age of the bride, the more likely she can guarantee her marital family's succession through many children.

However, with reductions in infant and child mortality rate, and higher chances of a child surviving to adulthood, the fertility rates began to fall rapidly, resulting in a successful demographic transition, similar to that experienced by western countries a few decades earlier (Lee, 2003). Moreover, the historical demography of the west shows that the rising educational and employment opportunities for females had adverse effects on marriage and fertility rates. The two combined to increase the opportunity costs of childbearing (Becker, 1960) to women and resulted in the conscious decision by many western women to postpone marriage and childbearing, if not forgo the two stages altogether, in pursuit of other more economically and emotionally viable interests. Rising educational and career aspirations are also seen to be at work in delaying marriage and motherhood in many developing countries, including India, although the extent to which these forces have been able to impact marriage and motherhood, or induce women to forgo both stages altogether for alternative paths, have not been empirically studied.

Figure 2. Mean live births among currently married women aged 25-29 years by age at marriage, for India and select large states



Data source: DLHS 2007-2008

Several factors are known to have profound influence on the timing of marriage of females in India. First is the female marriage squeeze, brought on by the surplus of young unmarried females in the marriage market because of the combination of several factors: declines in mortality, the low age at marriage of females, and cultural dictum that a bride be much younger than the groom. The larger pool of females in prime marrying years now compete for a smaller pool of older unmarried males, creating a shortage of available partners for females at the marriageable age (Rao, 1993) and delaying the age at marriage of females to some extent. Additionally, the female marriage squeeze is also likely to affect the age at marriage of males, as families of

potential brides vie with one another to entice suitable grooms through monetary and material enticements, thereby, inducing a boy to marry early when presented with an opportunity to obtain material gains quickly. An unintended consequence of the marriage squeeze is the inflation of dowries. Dowry continues to be an integral part of the Indian marriage system, and the practice, to date, has seen extensive proliferation throughout society, irrespective of religion and caste (Srinivasan & Lee, 2005). The practice of giving dowry can lead to an increase in the age at marriage for females, with poorer families postponing the marriage of their daughter until they are able to secure the amount for the dowry payment (Schlegel, 1993).

The second factor that has a profound influence on the timing of marriage of females in India is the strong cultural emphases on female modesty and chastity that induce parents to arrange a daughter's marriage at a very early age to avoid potential situations and incidences that inadvertently undermine these virtues and bring dishonour on the family. Moreover, with extensive proliferation of communication technologies in the country, children are likely to be exposed to movies and messages from an early age that are seen as eroding the fabric of culture, customs and traditional family life. Even though adolescent premarital sex is not as common in Indian society as it is in western societies (Santhya & Jejeebhoy, 2007), many Indian parents feel that if their daughter is not married early, there is the risk of her ending up in a self-initiated marriage, or engaging in premarital sex, which could lead to pregnancy and loss of family respectability. In societies where the chastity of a girl is highly desirable, especially in areas with high levels of sexual crimes against females, many parents feel compelled to marry off their daughter at an early age in order to ensure her physical safety and safeguard her chastity (Verma & Srinivasan, 2014).

The third factor relates to the cultural practice of arranged marriages and marrying within the same caste (Das et al., 2010). Critical decisions around when, who and how the boy or girl marries are made jointly by the immediate and extended family members (Bloch, Rai & Desai, 2004; Malhotra & Tsui, 1996). The selection of a bride or groom in the Indian arranged marriage system is typically from within the same caste. Such a practice has serious implications for the age at marriage of females, because it is the traditional and customary practice among many castes to marry off the daughter at puberty. Therefore, to a large extent, the cultural practices override educational and economic considerations.

Differences in levels of patriarchy, marriage system and kinship structure between northern and southern states have partly explained the regional differences in demographic behaviour and outcomes (Karve, 1990). Many researchers have built on the extensive work of Karve to explain why the pace of fertility decline was quicker in the south than north. Patriarchy is less rigid in the southern societies when compared to northern societies, and southern women in general enjoy greater levels of autonomy and freedom than do their northern counterparts on many different aspects of their life (Dyson & Moore, 1983; Mandelbaum, 1986; Jejeebhoy, 2001; Kazi & Sathar, 2001). Consequently, the marital behaviour of females, including the age when they first marry, was impacted more by the programmatic efforts in the south than in the north. Other demographers (e.g., Srinivasan, 1995) feel that in states such as Tamil Nadu, the strong political will and the relentless commitment and drive of successive governments to strengthen programmatic efforts have contributed immensely in bringing about significant changes in the marital and fertility behaviours in these societies.

Though parents may perceive a substantial economic benefit in marrying off their daughter at an early age (Verma & Srinivasan, 2014), the practice nonetheless takes a heavy toll on the girl. Girls married at very young ages are more likely to start childbearing at an age considered risky for the biological process of pregnancy and childbirth. Risks of maternal mortality and debility from pregnancy and delivery complications are markedly high for adolescent women. Adolescent women are also more likely to give birth to underweight babies, have repeated abortions and miscarriages and endure pregnancy and delivery complications than older women (Raj et al., 2009; Santhya et al., 2010). Moreover, when girls are married at an early age, they have had less time to mature physically and psychologically. Consequently, they are less likely to be prepared to deal with the challenges of married life, more likely to experience violence, sexual exploitation or domestic servitude by husbands and male in-laws and are less able to defend themselves against physical and mental abuse in the marital home. Additionally, as observed in other south Asian societies, women married at very young ages also face the heightened risks of their marriage breaking down and their husbands engaging in polygamous unions (Verma & Srinivasan, 2014).

It is sufficient to conclude that the institution of marriage remains a viable social and cultural force in Indian society, and, for reasons outlined above, adolescent marriage continues to be the norm for females in many parts of the country.

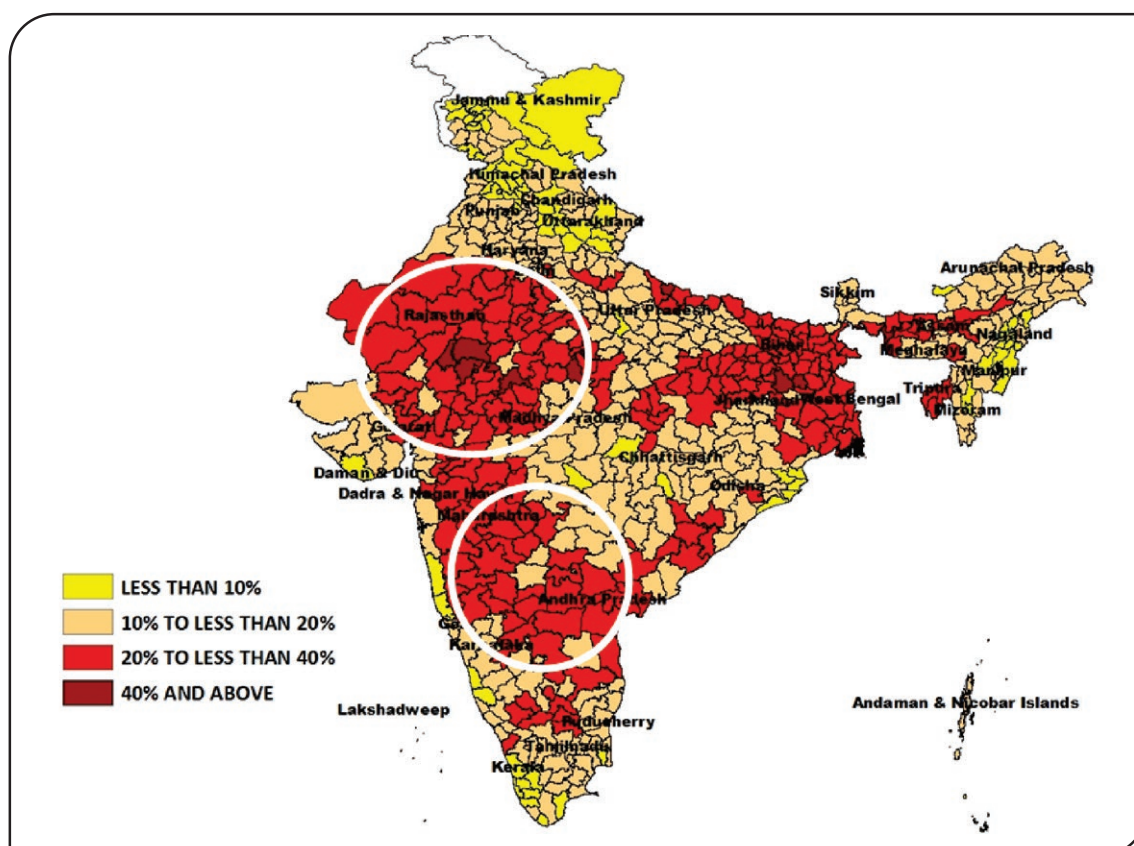
SECTION II: STUDY METHODOLOGY AND FINDINGS

At the time of this study, the main data for discerning the patterns and trends in child marriage at the district level come from the third round of the District Level Household Survey, conducted in 2007-2008, in 22 states, covering 694 districts. Though purely a demographic and health survey, DLHS 2007-2008 provides the most current and, to some extent, comprehensive data on the age at marriage and other socioeconomic and demographic characteristics of females and males at the state and district levels.

Data on marriage from other government sources such as Census 2011, Annual Health Survey (AHS) conducted in 2011-2012 in nine states, and the fourth round of DLHS, conducted in 2012-2013, supplemented the findings from the analyses of the DLHS 2007-2008 data. However, no direct comparisons of the marriage age of females between the third and fourth rounds of DLHS were possible, because, at the time of writing, the raw data from the fourth round were not available to the public.¹ Moreover, it was not possible to study the trends between 2011 and 2013 in the prevalence of child marriage in all the states uniformly in this study because the fourth round of the DLHS survey was not conducted in those nine states covered by AHS 2011-2012.

The study sample from DLHS 2007-2008 is currently married women aged 20-24. We chose this age cohort specifically because the age at marriage of women in this cohort is likely to reflect the more recent nuptiality patterns in the country. Moreover, because recall bias increases with the age of the respondent, the reported age at marriage of older women is likely to be inaccurate. Finally, among high and low prevalence districts, we selected only those with sufficiently large samples for in-depth analyses.

Figure 3. District-wise percentage of currently married women aged 20-24 years who married before the age of 18 years, DLHS 2007-2008



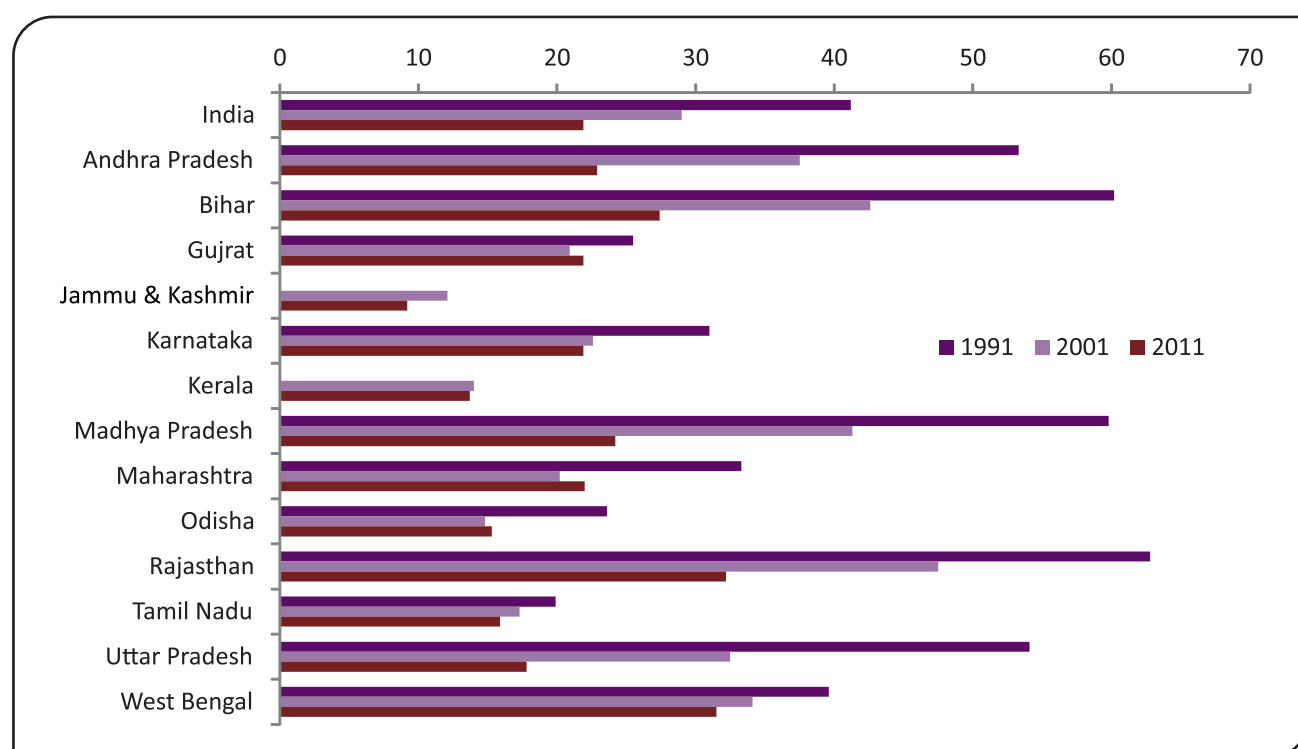
Even though there has been appreciable decline in the prevalence of child marriage in all the states in the

¹ At the time of writing this report, only district-wise fact sheets from the fourth round of DLHS for all the states had been made available to the public. Only state-wise percentages of currently married women aged 15-49 years in 17 states (eight large states) from the DLHS 2012-2013 fact sheets were available. DLHS 2012-2013 was not conducted in the nine states covered by the Annual Health Surveys.

last two or three decades, some states, such as Gujarat and West Bengal, have seen much slower reductions in child marriage prevalence, while others have experienced rapid declines (see Figures 4 and 5). Moreover, changes over time have not always been smooth and consistent in many states, and there are marked rural-urban differentials in trends in these states. The declines between 1991 and 2001 in the marriage rates among females aged 15-19 years, from Census data, were the steepest in both rural and urban areas, followed by a plateau in the trend between 2001 and 2011. In some states, the trends in marriage rate in this particular age group seem to have experienced an upturn, with the percentage of females aged 15-19 who were ever married coming in higher in 2011 than 2001. In other states, there is a stagnant trend between the last two Censuses.

Moreover, the increases seem to have occurred in urban rather than rural areas. For example, Maharashtra experienced a large decline in the marriage rate among females aged 15-19 by about 13 percentage points between 1991 and 2001; but the change was by only 2 percentage points between 2001 and 2011, and that, too, with an increase in rural areas. Gujarat makes a curious study, because though the overall decline between 1991 and 2001 was substantial, the trend turned sharply upward between 2001 and 2011, specifically in urban areas. The increases in many states, though seemingly small, need to be investigated, especially in light of the rapid social and economic development that many of these states, including Gujarat, have witnessed in the last two decades.

Figure 4. Percentage of ever-married females in the age group 15-19 years in 1991, 2001 and 2011 in rural areas in India and select large states



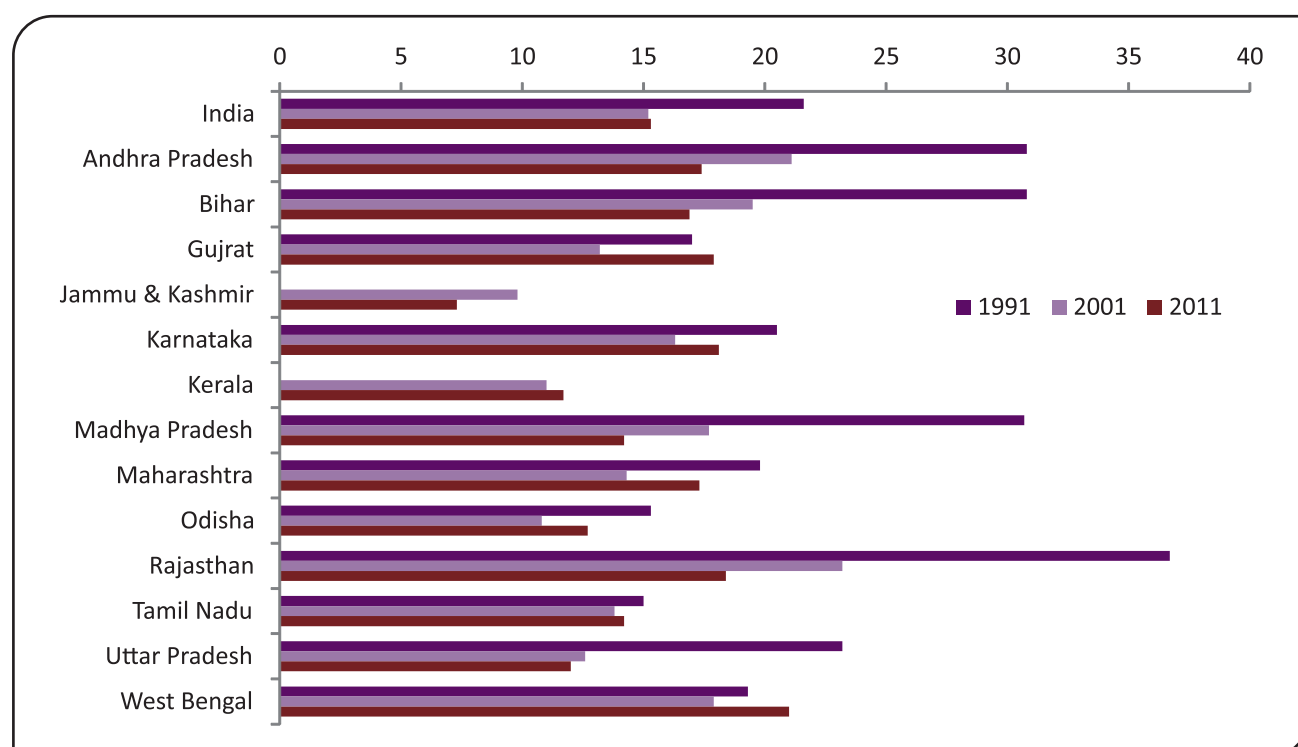
Source: Census data from 1991, 2001, and 2011.

i) Regional clusters of districts with high levels child marriage

Although the practice of child marriage exists in every part of the country without exception, there are two prominent clusters of districts with high levels of child marriage within the country. A large cluster is found in the north-central belt comprising Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar and Chhattisgarh, and a smaller one comprising southern parts of Andhra Pradesh, south-eastern Maharashtra and northern Karnataka. More than half the women in almost two-thirds of the districts in Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand and Rajasthan are married before the legal marriage age. The large numbers of districts with high levels of child marriage in and around the north-central belt is not all that surprising, given that many demographic studies have found that this belt, formed by Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh, has poor outcomes on demographic and health indicators (NFHS 2006-2007; Srinivasan, 1995). However, the smaller but significant cluster in the south needs further investigation. Although the southern states have moderate or low levels of

child marriage, there are one or two districts in each of these states with high levels of child marriage that are singularly responsible for inflating the state's overall figure.

Figure 5. Percentage of ever-married females in the age group 15-19 years in 1991, 2001 and 2011 in urban areas in India and select large states



Source: Census data from 1991, 2001, and 2011.

ii) Anomalies within each state

There are anomalies in the child marriage rate across districts within every state. Even in states that have high levels of child marriage and disproportionately more districts where over 50 percent of women married before the legal age of marriage, there are one or two districts that have either moderate (20-49 percent) or low (less than 20 percent) levels of child marriage (see Table 2).

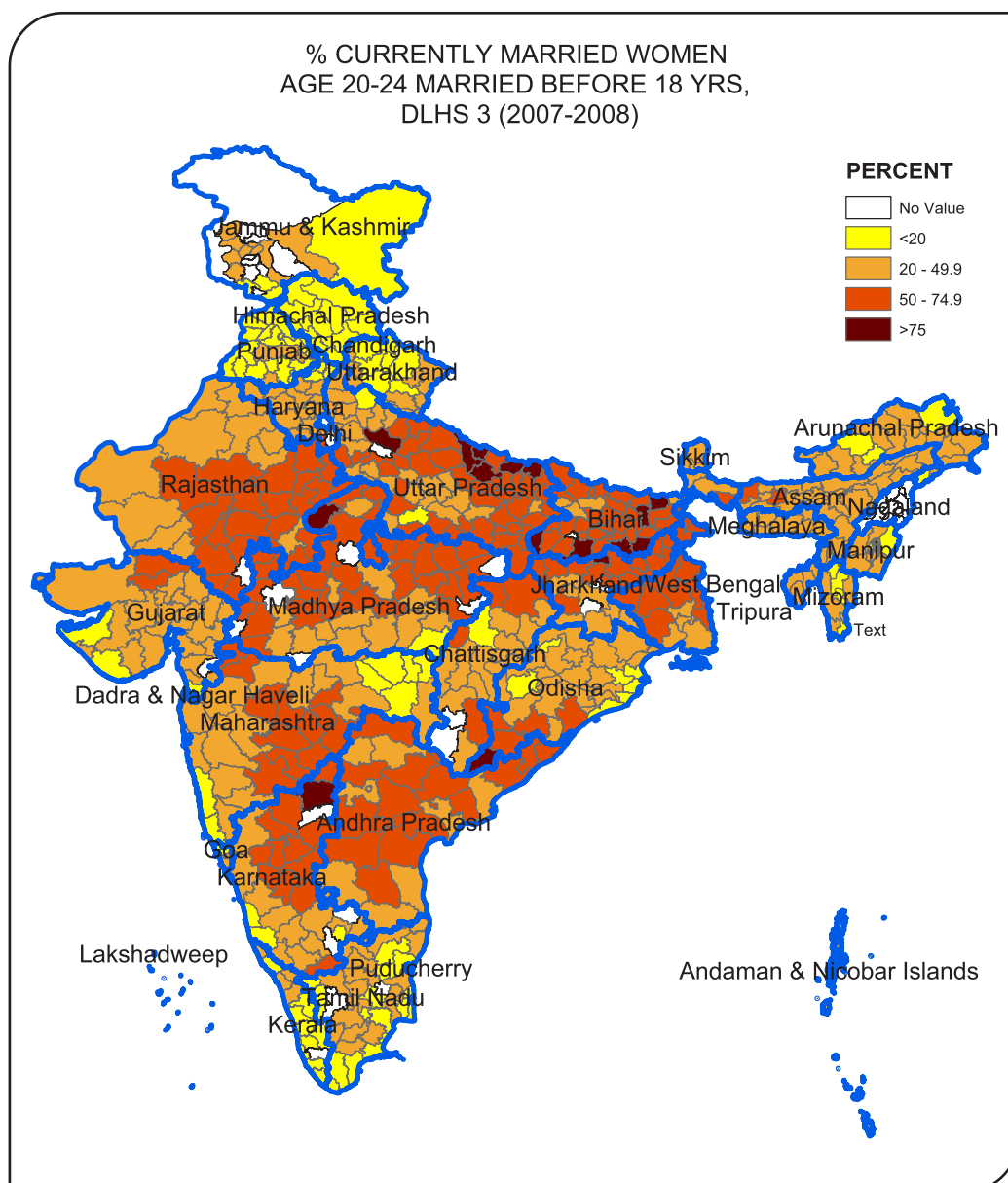
Table 2. Number of districts in select large states with percentage of currently married women aged 20-24 years who married before the age of 18 years, DLHS 2007-2008

State	Low (<20%)	Moderate (20%-50%)	High (>=50%)	Very high (>=70%)	Total districts
	N (%)	N (%)	N (%)	N (%)	N
Andhra Pradesh	0	4 (31%)	9 (69%)	0	13
Bihar	0	3 (8%)	34 (92%)	20 (54%)	37
Gujarat	2 (12%)	21 (80%)	2 (8%)	0	25
Karnataka	3 (11%)	11 (41%)	13 (48%)	3 (11%)	27
Madhya Pradesh	1 (2%)	15 (33%)	29 (64%)	4 (11%)	45
Maharashtra	8 (23%)	16 (46%)	11 (31%)	1 (3%)	35
Odisha	7 (23%)	18 (60%)	5 (17%)	2 (7%)	30
Rajasthan	0	11 (34%)	21 (66%)	5 (2%)	32
Tamil Nadu	14 (47%)	16 (53%)	0	0	30
Telangana	0	4 (40%)	6 (60%)	0	10
Uttar Pradesh	2 (3%)	24 (34%)	44 (63%)	12 (17%)	70
West Bengal	0	7 (37%)	12 (63%)	1 (5%)	19

In Bihar, 92 percent of districts have 50 percent or more of women aged 20-24 married before the age of 18, while 54 percent of districts have 70 percent or more. Yet, in the same state, the district of Siwan has only 39 percent of women married before the age of 18 years (see Annexure Table 2). Similarly, in the newly created state of Telangana, 60 percent of the districts have 50 percent or more women married before the age of 18 years (see Table 2); however, in the district of Hyderabad, only 21 percent of women were married before the legal age of marriage (see Annexure Table 2).

In Uttar Pradesh, the extremities are obvious, with 83 percent of women married before the age of 18 years in the district of Shravasti, and only 16 percent of women married before the age of 18 in the district of Bijnor. In Karnataka, which has overall moderate levels of child marriage, there is only one district (Gulbarga) with exceptionally high levels (about 77 percent of women married before the age of 18). In Madhya Pradesh, the difference between the highest and lowest prevalence districts is 63.8 percentage points. The difference between highest and lowest rates of child marriage is equally striking in the states of Maharashtra (68.9 percentage points), Karnataka (66 percentage points) and Odisha (66 percentage points), suggesting that there are significant regional differences in social, cultural and economic drivers operating within each state that impact the age at marriage for females differently (see Figure 6).

Figure 6. Percentage of currently married women aged 20-24 years who married before the age of 18 years, DLHS 2007-2008



iii) Prevalence of child marriage highest in border districts

There are 16 districts in the country where 75 percent or more currently married women aged 20-24 married before the age of 18 years. Among these districts, six are in the state of Bihar, six in Uttar Pradesh, and one each in Jharkhand, Karnataka, Madhya Pradesh and Odisha. Most of these districts lie along state borders (see Table 3). The district of Gulbarga in Karnataka, where 77 percent of women married before the age of 18, lies along the border between Andhra Pradesh and Karnataka. The district of Budaun in Uttar Pradesh, where around 80 percent of women married before the age of 18, lies on the state line between Uttar Pradesh and Bihar.

There are several plausible reasons for the high child marriage prevalence in the border districts. First, the border districts typically imbibe cultural and social customs and practices characteristic of the adjoining states. Although Karnataka has moderate levels of child marriage, the custom of marrying off girls at an early age remains pervasive throughout Andhra Pradesh. Second, there is an amalgamation of cultures and social practices in these districts since the populations in towns and villages along the border comprise people from both states. Third, one needs to consider the possibility that towns lying along the borders are convenient hubs for interstate trafficking of children and women for bonded labour, prostitution and forced marriage (Hindu, 2013). Due to real or perceived security risks to adolescent females, parents in these locations may feel compelled to marry their daughter off early to ensure her physical safety and protect her chastity. However, as these explanations are purely speculative, it is important that these districts be studied thoroughly, especially in the context of their geopolitical setting, to discern the extent of child marriage prevalence and its drivers.

Table 3. Border districts with high prevalence of child marriage

Districts	State	Women married before 18 years (%)
Jamui	Bihar	85.3
Gaya	Bihar	83.8
Shrawasti	Uttar Pradesh	82.6
Maharajganj	Uttar Pradesh	82.4
Banka	Bihar	81.9
Kaimur Bhabua	Bihar	81.0
Madhepura	Bihar	80.4
Budaun	Uttar Pradesh	79.5
Bahraich	Uttar Pradesh	79.0
Malkangiri	Odisha	78.1
Sheopur	Madhya Pradesh	77.4
Gulbarga	Karnataka	77.1
Araria	Bihar	77.0
Kodarma	Jharkhand	76.8
Siddharthnagar	Uttar Pradesh	75.6
Gonda	Uttar Pradesh	75.5

Data source: DLHS 2007-2008

iv) Declines in marriage of females aged 15-17 years still slow

Despite the widespread prevalence of child marriage, India has witnessed a considerable decline in child marriage practices in the last two decades, with most districts registering fewer child marriage cases among a younger cohort of women. Not surprisingly, the declines are particularly significant in states that had high levels of child marriage to start with. However, the decline in prevalence has not kept pace with increasing levels of urbanization, industrialization and modernization in the country, and the extensive proliferation of communication technologies in both rural and urban areas.

In states such as Gujarat, which has moderate levels of child marriage, the trend has remained more or less constant over the years and, contrary to expectations, the percentage of child marriage is slightly higher among a younger cohort of women in some districts. There are also a number of districts in the low prevalence states such as Kerala, Tamil Nadu and many north eastern states where levels of child marriage appear to be higher among the younger than older cohort of women. These pocket areas need to be studied carefully to get a sense of whether the increase in child marriage prevalence is significant and stable, and, if so, the reasons for the increase despite rapid modernization and increasing levels of socioeconomic development in these states.

In order to understand where the real decline in child marriage is, we examined the differences in the percentages of marriages below 15 years and between 15 and 17 years between two age cohorts, 30-34 years and 20-24 years. We found that a significant decline in child marriage across districts has occurred in marriages

of girls below 15 years of age (see Annexure Figure 3), whereas marriages just before the legal age of marriage (i.e., 15 to 17 years) have seen much slower declines. In many districts, there has been no appreciable change between the two age cohorts in child marriage prevalence; and, in a number of districts, particularly in the north-eastern and southern states, where the prevalence of child marriage is low, there has been substantial increase in the percentage of marriages that occur between 15 and 17 years among the younger age cohort. Therefore, the slow pace of decline in marriages below 18 years of age in many parts of India is attributable to under-15 marriages being postponed until the age of 15-17 years, instead of being pushed to a later age.

Data from the fourth round of DLHS conducted in 2012-2013² provide up-to-date figures on child marriage for the eight large states in India. Comparisons of these data with those from the previous round of survey, conducted in 2007-2008, reveal substantial declines in under-18 marriages among currently married women aged 15-49 years in all the major states.³ However, there are visible increases (by 5 percentage points at the most) in the percentage of child marriage in one or two districts in almost every large state covered by the fourth round of the DLHS. In states such as Tamil Nadu, the increases, though very small, are observed in several districts along the coastal line (see Annexure Figure 4). The upward trend in the districts needs to be monitored and evaluated over time to see whether the changes are stable and significant. Since marriage for most women in India continues to occur around the ages of 15-18 years, studies on marriage patterns and the cultural, social and economic drivers of age at marriage need to focus specifically on these years in the girl child's life.

2 At the time of writing this report, only the fact sheets for the eight large states had been made available to the public. Moreover, data were not collected in the nine large states covered by the Annual Health Surveys.

3 Data on the child marriage prevalence among currently married women aged 15-49 years in the DLHS 2012-2013 fact sheet was based only on those marriages that occurred during the reference period; hence, the prevalence is considerably lower than what is found among currently married women aged 20-24 years in DLHS 2007-2008. In order to ensure data comparability between the last two rounds of the survey, we used the DLHS 2007-2008 child marriage figures provided in the DLHS 2012-2013 fact sheet.

SECTION III: KEY DRIVERS OF CHILD MARRIAGE IN INDIA

i) District development and child marriage prevalence

Few studies have looked at the association between prevailing socioeconomic conditions and prevalence of child marriage in a district, although there have been a number of studies, based on very small samples, that have analysed the associations between individual characteristics and the age at marriage of females. From a programmatic perspective, it is crucial to know where to concentrate interventions, especially to bring down the overall levels of child marriage more rapidly. Moreover, the differences in district characteristics necessitate the adaptation of programmes to meet local challenges, instead of a blanket programme that assumes that all districts and communities are the same socio-culturally and economically, or have similar mix of problems.

In order to test the association between socioeconomic indicators and child marriage prevalence at the district level, we performed correlation analyses between basic district amenities and infrastructure from the village questionnaire and child marriage prevalence from the women's questionnaire for the 601 districts for which data were available from DLHS 2007-2008. We also included some basic data on sex ratio, female literacy rate, gender gap in literacy rate, and proportions of SC and Scheduled Tribe (ST) populations in the district from Census 2001 and 2011.

We formulated five hypotheses to describe the relationship between district indicators and prevalence of child marriage among females, based on our understanding of the drivers of child marriage from earlier works on child marriage. They are:

- Districts where the status of women is low will have higher prevalence of child marriage;
- Districts with high percentages of SC and ST populations, considered as marginalized, will have higher prevalence of child marriage;
- Districts where the educational facilities are weak or poor will have higher prevalence of child marriage;
- Districts with poorer basic infrastructure and amenities will have higher prevalence of child marriage; and
- Districts that have many remote and inaccessible villages, or very small-sized villages, will have higher levels of child marriage, primarily because these villages are less likely to receive consistent government aid and attention.

The variables included in the correlation analysis are classified broadly into five:

- women's socioeconomic status and empowerment (i.e., female literacy rate, sex ratio at age 0-6 years and gender gap in literacy rate from Census);
- educational facilities beyond primary school (i.e., percentage of villages in the district with middle school from DLHS 2007-2008);
- concentration of marginalized populations (i.e., percentage of SC and ST populations to total population from Census 2011);
- district infrastructure and amenities (i.e., percentage of villages with less than six hours of electricity, Primary Health Centre (PHC) and Anganwadi Centre (AWC) from DLHS 2007-2008); and
- accessibility and remoteness of villages in the district (i.e., percentage of villages connected by an all-weather road, located at least 20 km from nearest town, and/or having populations less than 500 from DLHS 2007-2008).

We ran a bivariate correlation analysis to measure the strength and direction of relationship between the percentage of child marriage among currently married women aged 20-24 in the district and each indicator of district development described above for all 601 districts.

The matrix with Pearson product-moment correlation shows significant associations between the prevalence of child marriage and some key developmental indicators at the district level (see Table 4). Most of these associations are also in the hypothesized directions, though not all are significant. Districts that have favourable outcomes on women’s socioeconomic status and empowerment have predictably low prevalence of female child marriage. Among these, the strongest correlations are between child marriage prevalence and two variables, female literacy rate ($r=-.638$; $p=.000$) and gender gap in literacy rate ($r=.538$; $p=.000$). That is, the districts that have high levels of female literacy and a narrow gender gap in literacy rates have lower prevalence of female child marriage. Sex ratio at age 0-6 years from Census 2011 is not significantly correlated with the level of child marriage at the district level ($r=.083$; $p=.045$).

The percentages of marginalized populations, SC ($r=.077$; $p=.061$) and ST ($r=-.065$; $p=.115$), are not significantly correlated with the prevalence of female child marriage. However, there are significant correlations between percentages of these populations in the district and other dimensions of district development. For instance, higher sex ratios at age 0-6 are seen in the districts with lower percentage of SC population ($r=-.344$; $p=.000$) and districts with higher percentage of ST population ($r=.409$; $p=.000$). Moreover, the percentage of ST population in the district is significantly and negatively correlated with availability of basic amenities ($r=-.149$; $p=.000$) and infrastructure ($r=-.193$; $p=.000$), and positively correlated with the size of villages ($r=.579$; $p=.000$) in the district.

By contrast, the SC populations are less likely to be concentrated in districts that have more villages with less than six hours of electricity available per day ($r=.149$; $p=.000$), more small sized villages ($r=.579$; $p=.000$) and fewer villages connected by an all-weather road ($r=.209$; $p=.000$). In other words, SC populations are concentrated in relatively more developed districts than are ST populations.

Table 4. Correlation between child marriage prevalence and district socioeconomic indicators for 601 districts in India

	% child marriage ¹	Sex ratio (0-6 years)	Female literacy rate	Gender gap in literacy	% SC population	% ST population	% villages with middle school	% villages with electricity <= 6 hours daily	% villages with AWC	% villages with PHC	% villages with less than 500 population	% villages connected by all-weather roads
	1	2	3	4	5	6	7	8	9	10	11	12
1	1	.083*	-.638**	.538**	0	0	-.211**	.499**	-.213**	-.288**	-.140**	-.150**
2		1	.113**	-.181**	-.344**	.409**	-.170**	.126**	0	.111**	.324**	-.218**
3			1	-.775**	0	0	.190**	-.544**	.158**	.271**	0	.164**
4				1	.168**	-.106**	0	.352**	-.098*	-.251**	0	0
5					1	-.592**	0	-.149**	0	-.141**	-.296**	.209**
6						1	-.095*	.156**	0	0	.579**	-.193**
7							1	-.184**	.372**	.538**	-.249**	.187**
8								1	-.186**	-.160**	.139**	-.245**
9									1	.409**	-.230**	.234**
10										1	-.091*	.230**
11											1	-.255**
12												1

SC – scheduled caste; ST– scheduled tribe; AWC – anganwadi centre; PHC – primary health centre.
District indicators 1 through 4 and 12 are taken from Census 2001 and 2011, and 5 through 11 are from DLHS 2007-2008.
¹ Child marriage prevalence is based on currently married women, DLHS 2007-2008.
*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

The Pearson product-moment correlation coefficient between the change in gender gap in literacy rate between 2001 and 2011 and change in child marriage prevalence in women aged 30-34 years and 20-24 years (i.e., the change in child marriage prevalence over a 10-year period; $r=0.09$; $p=.05$) expressed in percentage points is significant though weak (see Table 5). That is, districts that have seen significant catching up of female literacy

rate with that of males in the last 10 years have seen appreciable declines in the prevalence of female child marriage.

We ran similar tests using data from the fourth round of DLHS, conducted in 2012-2013, because it offers the most current data on child marriage and has additional data on district infrastructure, amenities and socioeconomic conditions not available in the earlier rounds of DLHS (see Table 6).¹ The percentages of child marriage among females in the age group 15-49 years provided in the DLHS 2012-2013 fact sheets are based on marriages that

occurred during the reference period. Therefore, this prevalence rate is much lower than that calculated from all marriages among currently married women aged 15-49 years or aged 20-24 years that occurred so far. The Pearson correlation coefficients indicate that district developmental indicators and child marriage prevalence are in the anticipated directions, or at least seem intuitively correct. For instance, the greater the number of villages with health, nutrition and sanitation committee (VHNSC) ($r=-.145$; $p=.05$) and an improved source of drinking water ($r=.156$; $p=.05$) in the district, the lower the child marriage prevalence.

Other coefficients, however, need careful interpreting, mainly because the associations seem counterintuitive. For instance, there is significant negative correlation between percentage of married women who are illiterate and child marriage prevalence in the district ($r=-.278$; $p=.000$), and significant positive correlation between percentage of married women with 10 or more years of schooling and district child marriage prevalence ($r=.380$; $p=.000$). One would have expected the opposite in the direction of the relationship, with higher female educational attainment at the district level associated with lower levels of female child marriage. However, we argue that in poor and socially backward areas, as indicated by the large percentage of illiterate female population in the district, child labour is likely to be high and valued by poor families. As long as children contribute to the family income in any way, there is little reason or incentive for the parents to sacrifice the much-needed additional household income by marrying off their labour-able child.

On the other hand, in communities that are financially better off, as indicated by the large percentage of women with at least 10 years of schooling in the district, the practice of marrying off daughters at an early age is likely to be culture-driven, or for some non-economic purpose. Thus, although the logic may be highly unseemly, the data indirectly appear to suggest the possibility that child labour offers protection against very early marriage for females. Although young wives perform physical labour and services in the marital home, a benefit that clearly sustains the practice of child marriage in many families, the labour provided by the young bride to her in-laws is without monetary remuneration. This is unlike in poorer households, where economic deprivation and necessity requires every able-bodied family member, including children, to contribute to the household earnings through whatever means. However, this is pure conjecture, and only a thorough study in these districts can validate the findings and provide satisfactory explanations.

Table 5. Correlation between changes in child marriage prevalence and district socioeconomic indicators in India over a 10-year period

District socioeconomic indicators	Change in percentage points in child marriage between women aged 30-34 and women aged 20-24 ¹
Changes in gender gap in literacy between 2001 & 2011	.092* (591)
Changes in female literacy rate between 2001 & 2011	-.033 (591)
Changes in sex ratio between 2001 & 2011	-.078 (591)
Percent villages with less than 500 population	-.070 (552)
Percent village with electricity less than or equal to 6 hours daily	-.039 (586)
Percent village distance more than 20 km from nearest town	-.118** (584)
Percent village with availability of middle school	.036 (586)
Percent village with availability of AWC	.016 (586)
Percent village with availability of PHC	-.139** (586)
Percent village connected by all-weather road	.084* (586)
Note: Pearson product-moment correlation coefficient and sample size given in brackets. ¹ Child marriage prevalence is based on currently married women, DLHS 2007-2008. *Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).	

¹ At the time of writing this report, the International Institute for Population Sciences (IIPS), the nodal agency for conducting the DLHS survey, had made only the district fact sheets from some states available to the public.

Table 6. Correlation between percentage of currently married women married before 18 years of age and district indicators, DLHS 2012 - 2013 fact sheets

	% married women married before 18 years ¹	% villages with electricity	% villages with improved source of drinking water	% having access to improved toilet facility	% villages using clean fuel for cooking	% currently married women illiterate	% married women with 10+ years schooling	% villages having ASHA	% villages having Village Health, Nutrition and Sanitation Committee	% villages with Sub-Health Centre within 3 km	% villages with PHC within 10 km
	1	2	3	4	5	6	7	8	9	10	11
1	1	.097	-.156*	.257**	.031	-.278**	.380**	.112	-.145*	.054	.225**
2		1	.019	.245**	.555**	-.192**	.069	-.022	.234**	.027	.010
3			1	-.037	.117	.131	-.074	-.084	.002	-.155*	-.012
4				1	.310**	-.414**	.478**	.415**	-.145*	.126	.225**
5					1	-.208**	.263**	-.116	.076	-.056	.065
6						1	-.561**	-.098	-.158*	.087	-.327**
7							1	.139	.032	-.080	.320**
8								1	.270**	.085	-.193**
9									1	-.097	-.346**
10										1	.211**

ASHA – accredited social health activist; PHC – primary health centre.

District indicators 1 through 7 are taken from Census 2001 and 2011, and 5 through 11 are from DLHS 2007-2008.

¹ Child marriage prevalence is based on currently married women, DLHS 2007-2008.

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

ii) Individual characteristics and age at marriage for females

We examined the socioeconomic and demographic characteristics of females, such as place of residence, their educational attainment, the husband's educational attainment, household wealth status, and religion and caste, by their age at marriage. That is, we examined which individual factors exert significant influence on marital age. We included religion and the broad categories of caste of the woman as only measures of culture, in the absence of any other direct measure of culture.

Based on the findings from various studies, we expect the associations between marital timing and individual characteristics to be in certain hypothesized directions, as enumerated in this section.

- (i) Rural communities place greater emphasis on child marriage for females and motherhood, as they tend to have a more conventional outlook on gender roles and identities. Nonetheless, because of greater levels of poverty and economic vulnerability in rural areas, households practice child marriage among daughters as a necessary response to these harsh conditions. We therefore expect that women in rural areas will have married earlier than those in urban areas.
- (ii) It is known that girls with higher educational attainment or aspirations will tend to postpone marriage, in order to improve their chances for better economic livelihood and independence. Education also tends to expand the aspirations and goals of girls, making them less inclined to settle for child marriage and motherhood. We expect that women who have more years of schooling to have married later than those with fewer years of schooling, since education increases the opportunity costs of marriage and childbearing, by providing alternative options in life, and that every year spent in school will enable girls to postpone marriage by one year.
- (iii) In highly patriarchal societies, the husband's educational attainment is likely to matter as much as the wife's, if not more, in predicting the marital age of females. Men from lower socioeconomic strata are more likely to want much younger wives, who are generally more willing or moulded easily, to adhere to traditional female roles. We, therefore, postulate that women with husbands with fewer years of schooling will have married earlier than are those with husbands with more years of schooling.
- (iv) Poverty is a compelling motive for parents to solemnize the marriage of their daughters at an early age. Marrying off a daughter while she is still very young enables poor parents to minimize the financial burden of paying huge dowries, since young brides command smaller dowries than older brides do, and to eliminate future expenses from having an additional member living at home. Hence, we postulate that women from poorer households are more likely than those from wealthier households to marry at younger ages.
- (v) Some ethnic and religious communities tend to emphasize child marriage for females because of traditional customs. Certain castes and tribes marry off their daughters very young for cultural reasons. Having a puberty-aged daughter still living in the parents' home is seen as bringing dishonour on the family, since it suggests failure on the part of the parents to find a suitable boy and fulfil their parental responsibility and obligation (Parthasarathy, 1987). Moreover, education for a female in many communities is not likely to be valued as much as marriage and motherhood, and these cultures highly prize female chastity. Parents with an unmarried daughter who has attained puberty worry about possible situations that might bring dishonour on the family, such as a self-initiated marriage or premarital sex and pregnancy. Finally, in communities that have a deeply embedded culture of dowry, parents are likely to feel that marrying off their daughter at an early age will minimize the costs of marriage.

For the reasons cited above, we postulate that women from socioeconomically underprivileged communities, namely Scheduled Castes and Scheduled Tribes, are more likely than those from other castes to marry young.

Analytical models and method

We tested the hypotheses using data from DLHS 2007-2008. The target sample was currently married women aged 20-24. The outcome variable was the age at marriage of women, expressed in years. Place of residence was coded as a dummy to represent urban (reference= rural); educational attainment of women and their husbands expressed as years of schooling, and household wealth quintile going from the lowest to highest. Religion and caste were coded as dummies to represent Muslims, Christians, other religions, Hindu SC, ST and Hindu OBC. Other Castes (OCs) was treated as the reference group. The independent variables were entered block-wise

in the following order: place of residence, religion and caste, educational level of husbands, educational level of women, and lastly, household wealth quintile. The model describing the linear relationship between age at marriage and socioeconomic background of females is expressed as:

$$Y = a + b_1 * X_1 + b_2 * X_2 + \dots + b_p * X_p$$

Where, Y= dependent variable, age at marriage, X_1 to X_n are the 'n' independent variables, b_1 to b_n are the partial regression coefficients.

Results

Sample description

First, before proceeding with the multiple regression analyses, we examined the percentage of females married below 15 years, 15-17 years, and at 18 years and beyond by socioeconomic background (see Annexure Table 3). Among under-18 marriages, marriage between the ages of 15 and 17 years is more common in all socioeconomic categories than marriage below 15 years. However, there are notable variations in child marriage across socioeconomic categories; marriage between the ages of 15-17 years is slightly more common among STs (38 percent) and Muslims (30 percent) than among OCs (24 percent) and other religions (22 percent). By contrast, only 7 percent of women from OCs and 4 percent of women from other religions, as opposed to 18 percent SCs, 17 percent of OBCs, and 15 percent of STs married below the age of 15. Very early marriage is also more common in rural than urban areas, with 15 percent of rural women compared to 6 percent of urban women married before 15 years, as opposed to 52 percent of rural women, compared to about 71 percent of urban women, married at the age of 18 years or beyond.

Not surprisingly, there is a systematic drop in the percentage of child marriage among women as levels of schooling rise. About 25 percent of illiterate females are married before 15 years of age, while 40 percent are married between 15 and 17 years, as opposed to only 1 percent and 5 percent, respectively, of women with post-secondary education. The conspicuous turning point in marital timing seems to be middle schooling, when there is a considerable drop in marriages in females aged below 15 years and 15 to 17 years, and visible rise in marriage at or above legal age of marriage. However, the mean years of schooling is not that different across the three categories of age at marriage; 2.04 mean years for those married before 15 years, 3.84 for those married between 15 and 17 years, and 7.18 for those married at 18 years and beyond, which indicate low levels of education overall for the women in the sample. The association between husband's schooling and female age at marriage is less significant than the association between women's schooling and their age at marriage.

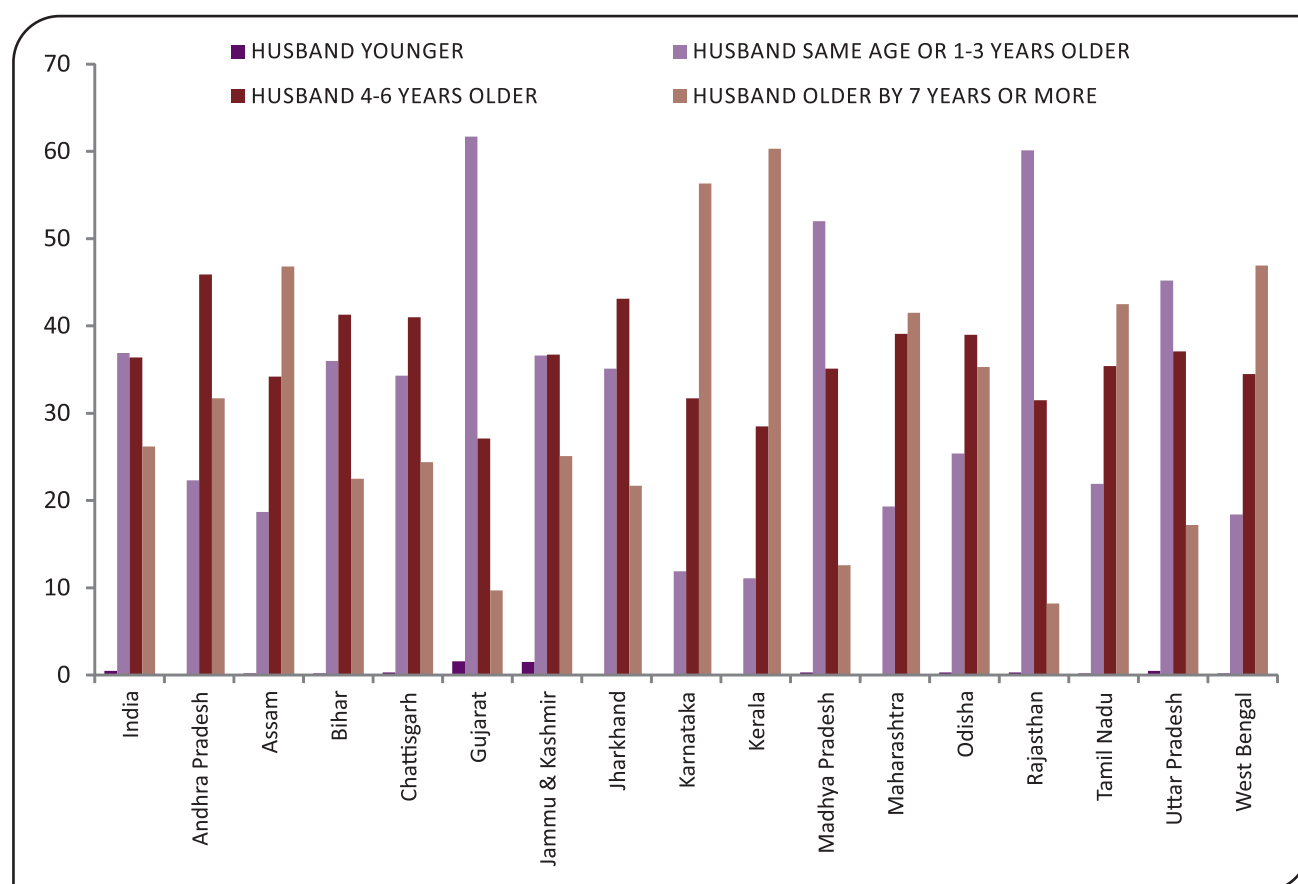
Between the poorest to the richest household wealth quintile, there is a systematic drop by 22 percentage points in under-15 marriage among females. Alternatively, as the wealth quintile increases from the poorest to richest, there is an increase of about 47 percentage points in marriage at the age of 18 years and beyond.

The distribution of female age at marriage by region reveals a distinct pattern. Very early marriage is more common in the east (Bihar, West Bengal, Jharkhand and Odisha) and central (Chhattisgarh and Madhya Pradesh) regions, with 18 percent of women in the east and 16 percent in the central region married before the age of 15. By contrast, only 6 percent of women in the north-east and 10 percent of women in the south (Andhra Pradesh, Kerala, Tamil Nadu and Karnataka) married before the age of 15. About 31 percent to 37 percent of women in the west (Maharashtra, Gujarat and Rajasthan), east and central regions, compared to 27 percent in the north-east and south, married between 15 and 17 years. Marriage at 18 years and beyond was most common in the north-east (67 percent) and south (64 percent), and least, by comparison, in the central (51 percent) and eastern (44 percent) regions (see Annexure Table 3).

As an illustration, the age gap in marriage is at least four years for about 63 percent of the currently married women aged 20-24, and specifically, 26 percent of women were younger to their husbands by more than six years (see Figure 7). The large age gap, of more than six years, between couples appears common in the southern states: 60 percent of the sample of women in Kerala, 56 percent in Karnataka and 43 percent in Tamil Nadu. By contrast, the age gap in marriage is mostly 0-3 years in the northern parts of the country (i.e., 62 percent in Gujarat; 60 percent in Rajasthan; 52 percent in Madhya Pradesh; and 45 percent in Uttar Pradesh). The exception is Assam in the north-east, where 47 percent of women have husbands who are at least seven years older. A minuscule proportion in all the states analysed comprises women with younger husbands.

Next, we examined the outcomes from the regression analysis to see how some of these parameters and the mean age at marriage of this sample of women are related. The regression coefficients reported in the main text are standardized, while those presented in the Tables in the annexures are unstandardized.

Figure 7. Percentage of currently married women aged 20-24 years by age gap in marriage, for India and select large states



Data source: DLHS 2007-2008

Results from multiple regression analysis

The final model (see Model V: Annexure Table 4), with all the independent variables included, in the regression analysis is statistically significant ($R^2_{adj} = .25$, $F(29026, 6) = 4955$, $p = .000$) and explains about 25 percent variation in the age at marriage of women. The standardized coefficients (not shown in the Table) indicate that, among the socioeconomic characteristics, schooling has the strongest effect on the age at marriage ($\beta = .371$, $p = .000$); higher levels of schooling significantly increases the age at marriage of females. The impact of husband's schooling, on the other hand, is insignificant ($\beta = .003$, $p = .226$). The effect of household wealth on the age at marriage is not only significant ($\beta = .131$, $p = .000$) and positive, after taking into consideration the effects of female schooling and place of residence, but also the strongest, next to female schooling, in predicting the age at marriage. Not surprisingly, urban women have a higher mean age at marriage than do rural women ($\beta = .041$, $p = .000$). Among cultural variables, Christian women and women from other faiths have a significantly higher mean age at marriage than Muslim and Hindu women. OBCs and SCs have a significantly lower mean age at marriage than women from other categories, whereas STs have significantly higher mean age at marriage than OCs. Finally, SCs have significantly lower mean age at marriage than STs.

SECTION IV: CHILD MARRIAGE IN BIHAR, RAJASTHAN, WEST BENGAL, GUJARAT AND TELANGANA

It is critical to study the demographic and socioeconomic conditions in the districts within a state, where the prevalence of child marriage is either very high or very low, to understand the reasons for the inter-district anomalies. This helps inform the development of appropriate programmes that address child marriage in the context of the prevailing conditions in the high prevalence districts. Despite being located in the same administrative boundary, the high and low prevalence districts are likely to differ on a number of socioeconomic, cultural and geopolitical characteristics, as well as on the quality and coverage of public health, educational and administrative services, which also impact the age at marriage of females differently.

We selected five large states and two districts within each state for a more detailed study on the socioeconomic conditions in the district. The criteria for including a state in the study were that (i) more than 50 percent of districts in the state have high or moderate levels of child marriage, and (ii) the state shows either positive deviance or negative deviance in child marriage trends over time. Based on the above criteria, we identified Bihar and Rajasthan from north and north-central India, West Bengal in the east, Gujarat in the west, and the newly formed state of Telangana in the south for inclusion in the study.

Both Rajasthan and Bihar have high and sustained levels of child marriage among females, and continue to rank in the top 10 states with the highest percentage of child marriage in India in the last 15 years. West Bengal has a relatively high percentage of child marriage, despite the significant increase in female literacy levels and narrowing gender gap in literacy rates. It also has a sizeable and sustained inflow of undocumented migrants from the neighbouring country, Bangladesh, and settlements in pocket areas, creating additional layers of cultural and religious complexities when assessing the child marriage situation in the state. Gujarat was selected because it represents a unique case of a state with high levels of social and economic development, but where child marriage prevalence has seen an increase, albeit a small one, over time. Telangana is a newly created state, carved out from the 10 districts in Andhra Pradesh bordering Maharashtra, and with relatively high levels of child marriage in all the districts, with exception of Hyderabad. Within the select states, we identified two districts, one with highest prevalence and one with lowest prevalence of child marriage. We also ensured that the selected district had a sufficient sample of currently married women aged 20-24 to enable in-depth statistical analyses where required.

Basic demographic and socioeconomic information on the study districts, compiled from Census 2011 and DLHS 2007-2008 household and village questionnaires, shows that there have been significant declines in child marriage among the younger cohort of women in the low prevalence districts (see Annexure Table 2). That is, fewer women in the age group 20-24 years reported being married before the age of 18 years. One exception, however, is the district of Jamui in Bihar, where there appears to have been very little change in child marriage prevalence over time. Among all the high prevalence districts in the five states, with exception of Mahabubnagar in Telangana, there have been either no significant changes, or only marginal changes in the percentages of women who married before the age of 18 years between women in the age group 30-34 years and those in the age group 20-24 years.

As we had done in the all-India sample, we conducted a series of regression analyses to determine how the socioeconomic and demographic factors at the individual level were related to age at marriage of females in each of the five states. We created clusters of high prevalence and low prevalence districts in every state from contiguous areas and with comparable prevalence of child marriage because the sample of currently married women aged 20-24 years in many districts was too small to perform regression analyses. Each cluster was analysed separately. We also considered the possibility of a state having more than one high prevalence or low prevalence cluster. In some states, we restricted the analyses to a single district because there were no adjacent districts with similar child marriage prevalence to form a contiguous cluster. Finally, in districts where the overall sample was too small, we restricted the analysis to examining the percentages of women who married below 15 years of age, at 15-17 years, and at 18 years and beyond by socioeconomic background. The outcomes for each state are discussed under the state sub-section.

Bihar

Child marriage is highly prevalent in Bihar, with 68 percent of currently married women aged 20-24 years who married below the age of 18. However, the state has seen significant reductions in the prevalence of child marriage in the last two decades, although the changes have not been rapid or large enough to bring down the overall prevalence rate. Data from Census 2001 and 2011 show that the rural areas have seen much sharper declines (by 15 percentage points decline) in marriages among 15-19 year olds than urban areas where the change is of 2.6 percentage points between 2001 and 2011 (see Annexure Figure 3). On the other hand, marriage in females between the ages of 15 and 17 years has seen an increase by nearly 6 percentage points in the intervening years. Within the state, about 92 percent of the districts have 50 percent or more women in the sample married before the age of 18 years (see Table 2), while about 54 percent of districts have 70 percent or more of women married before 18 years. The district percentages of currently married women aged 20-24 years who married before the age of 18 range from 85 percent in Jamui in the south of Bihar to 39 percent in Siwan in the west of the state (see Annexure Table 2).

We could identify two prominent clusters of very high prevalence districts and one cluster of low prevalence districts in the state. Among the high prevalence clusters, one comprises the districts of Banka, Jamui, Gaya and Nawada, located in the south along the Jharkhand-Bihar state border, and the other in the east comprising the districts of Madhepur, Saharsa and Araria. The cluster of districts with the lowest child marriage prevalence in the state is found in the west, close to the state border between Bihar and Uttar Pradesh, and comprising the districts of Siwan, Saran and Muzaffarpur (see Annexure Figure 5).

In both high and low prevalence clusters, the effects of schooling of females on age at marriage is both significant and positive (see Table 7), whereas a husband's schooling is significant and positive only in the low prevalence cluster. Household wealth is significant only in high prevalence cluster 1 but it is not significant in either the high or low prevalence cluster when all the other variables are in the model. The mean age at marriage is significantly higher for those living in urban areas, as opposed to rural areas, in both high prevalence clusters, whereas location does not have significant impact on the age at marriage in the low prevalence cluster.

Among cultural variables, Muslims have a significantly higher mean age at marriage than do OCs in one high prevalence cluster, comprising Jamui, Gaya and Nawada, whereas the difference between the two groups is not significant in the low prevalence cluster with the districts of Siwan, Saran and Muzaffarpur, and the second high prevalence cluster comprising Madhepur, Saharsa and Araria. Hindu SCs and OBCs have lower mean age at marriage than OCs in both high and low prevalence clusters. The difference in mean age at marriage between STs and OCs is significant only in the high prevalence cluster comprising Madhepur, Saharsa and Araria. We are unable to analyse the mean age at marriage of these groups in the remaining two clusters because of insufficient samples of STs.

Table 7. Multiple regression analysis to determine the impact of socioeconomic characteristics on age at marriage of currently married women aged 20-24 years in two high and one low child marriage prevalence clusters in Bihar

Socioeconomic and demographic variables		High prevalence cluster 1 ^a (Madhepur, Sahasra, Araria)		High prevalence cluster 2 ^b (Jamui, Gaya, Nawada)		Low prevalence cluster ^c (Saran, Muzaffarpur, Siwan)	
		b (standard error)	p-value	b (standard error)	p-value	b (standard error)	p-value
	(Constant)	13.196 (.546)	.000	16.422 (.539)	.000	16.519 (.452)	.000
Locality ^{RA}	Urban	1.457 (.457)	.002	1.105 (.446)	.030	.554 (.407)	.175
Religion and caste ^{RB}	Muslim	1.905 (.562)	.001	-.751 (.481)	.093	-.329 (.349)	.346
	Hindu SC	-1.175 (.413)	.005	-1.629 (.383)	.001	-1.206 (.353)	.001
	ST	1.472 (.651)	.024	^d			
	OBC	-1.573 (.358)	.000	-1.860 (.507)	.000	-.904 (.266)	.001
Education - woman	Years of schooling	.222 (.034)	.000	.214 (.034)	.000	.117 (.027)	.000
Education -husband	Years of schooling	.073 (.039)	.061	-.051 (.038)	.186	.087 (.035)	.013
Household wealth	Quintile	.446 (.147)	.002	.217 (.139)	.119	.079 (.113)	.487
Adjusted R squared, F (DF1,DF2)		.363, 40.280 (8.543)	.000	.238, 19.632 (7,412)	.000	.194, 15.919 (7,428)	.000
Reference category: RA - Rural; RB - Other Caste. ^a N=552. ^b N=420. ^c N=436. ^d Omitted category because of insufficient sample. Regression coefficients are unstandardized.							

Rajasthan

Overall, nearly 58 percent of currently married women aged 20-24 in the state married before the age of 18, about 22 percent married before 15 years and 36 percent married between the ages of 15 and 17 years. Rajasthan ranks number one in the country with the highest prevalence of child marriage, based on the more current data from the Annual Health Survey, 2011-2012. However, Census data show that there were substantial declines in late adolescent marriages between 2001 and 2011 (see Annexure Figure 3), in both rural (by 15.3 percentage points between 2001 and 2011) and urban (by 4.8 percentage points between 2001 and 2011) areas.

The district social development indicators show that the district of Sawai Madhopur, which has high child marriage prevalence, has a low sex ratio (0-6 years) of 871 girls to 1,000 boys, whereas the district of Ganganagar, where prevalence of child marriage is relatively low, has a sex ratio of 983 (see Annexure Table 2). Again, while the sex ratio in Sawai Madhopur has fallen since 2001, there have been significant improvements in Ganganagar, when it was only 850, and below critical level, in 2001. The district of Sawai Madhopur, where 73 percent of married women aged 20-24 years were married before the age of 18, has around 42 percent of ST and SC populations (21.3 percent are SCs and 21.4 percent are STs), whereas the state percentages, based on Census 2011, are only 17.8 percent and 13.5 percent, respectively. This district is also home to the Sehariya tribe, which is the most socioeconomically backward in the state.

Against this demographic backdrop, we detected a large, prominent cluster of contiguous districts – Dausa, Sawai Madhopur, Tonk, Chittaurgarh, Bundi, Jhalwar, Bhilwara, Bharatpur, Karauli, Udaipur and Baran – where about 25 percent or more currently married women were married before the age of 18 years (see Annexure Figure 6), and a small cluster of moderate prevalence districts, Ganganagar (15 percent) and Hamumangarh (20 percent). The outcomes from a multiple regression analysis estimating which individual socioeconomic factors contribute most in explaining the variation in the age at marriage are similar to the outcomes for the other

states, with marginal differences between low and high prevalence clusters. Living in urban areas, as opposed to rural, is significantly associated with higher mean age at marriage in the high prevalence cluster.

In the two districts in the low prevalence cluster, the woman's place of residence has no bearing on her age at marriage (see Table 8). The standardized coefficients (not shown in the Table) of female schooling are significant and positive in both high ($\beta=.262$, $p=.000$) and low prevalence clusters ($\beta=.185$, $p=.017$). The coefficient for male schooling ($\beta=.218$, $p=.002$), on the other hand, is significant and positive in only the low prevalence cluster in the state and, interestingly, among all the clusters and states studied here. Household wealth is significantly and positively ($\beta=.092$, $p=.000$) related to female age at marriage in the high prevalence district, but not so in the low prevalence district ($\beta=-.106$, $p=.138$).

Among religion and caste in the low prevalence cluster, women from other religions (i.e., Sikhs) have significantly higher mean age at marriage than do OCs ($\beta=.119$, $p=.019$); no significant differences in mean age at marriage emerge between Hindu SC ($\beta=-.023$, $p=.802$) and OBC ($\beta=-.143$, $p=.145$), compared to OC. In the high prevalence cluster, by contrast, Muslim ($\beta=-.051$, $p=.037$), SC ($\beta=-.100$, $p=.000$), ST ($\beta=-.120$, $p=.000$), and OBC ($\beta=-.191$, $p=.000$) have significantly lower mean age at marriage than OC.

Table 8. Multiple regression analysis to determine impact of socioeconomic characteristics on age at marriage in high and low child marriage prevalence clusters in Rajasthan

Socioeconomic and demographic variables		High prevalence cluster ^a (Bharatpur, Karauli, Sawai Madhopur, Dausa, Tonk, Bundi, Bhilwara, Baran, Udaipur, Chittaurgarh, Jhalawar)		Low prevalence cluster ^b (Ganganagar, Hamumangarh)	
		b (standard error)	p-value	b (standard error)	p-value
	(Constant)	14.909 (0.332)	.000	17.701 (.695)	.000
Locality ^{RA}	Urban	1.020 (0.228)	.000	-.227 (.315)	.472
Religion and caste ^{RB}	Muslim	-0.715 (0.343)	.037	^c	
	Other religion (Sikh)			1.114 (.472)	.019
	Hindu SC	-.975 (.277)	.000	-.112 (.448)	.802
	ST	-1.015 (.264)	.000	^c	
	OBC	-1.405 (0.236)	.000	-.587 (.401)	.145
Education woman	Years of schooling	0.222 (0.022)	.000	.085 (.035)	.017
Education husband	Years of schooling	-0.005 (0.024)	.831	.118 (.038)	.002
Household wealth	Quintile	.256 (.074)	.000	-.241 (.162)	.138

Reference category: RA - Rural; RB - Other Caste. ^aN=2107. ^bN=274. ^cOmitted category because of insufficient sample. Regression coefficients are unstandardized.

West Bengal

Despite improvements in socioeconomic conditions, such as increasing female literacy rate and sex ratio, and narrowing gender gap in literacy rate, 55 percent of currently married women aged 20-24 in West Bengal married before 18 years; 41 percent married between 15 and 17 years; and 14 percent married before 15 years. The state is also home to a large percentage of marginalized populations from the SC and ST groups. Adding to the socio-demographic complexity is a large, constant inflow of immigrant populations from the neighbouring country of Bangladesh, which may have a significant impact on the status of women and consequently their marriage timing. When comparing with the districts in the other states, Murshidabad and Haora in West Bengal have the highest concentration of non-Hindu populations (64 percent and 33 percent, respectively). Not only does the state have large inter-district variations in child marriage prevalence, but also in many of the socioeconomic and developmental indicators (see Annexure Table 2).

The district of Murshidabad in West Bengal is a paradox. The prevalence of child marriage is very high (71 percent) despite being better on the other development indicators. The female literacy level is 63 percent, there is a narrow gender gap in the literacy rate (7 percent), a relatively high sex ratio, and a relatively low proportion of the marginalized SC and ST populations (see Annexure Table 2). However, there is acute marginalization of rural workers reported in the state, resulting in high levels of outmigration of marginalized workers, both males and females, as young as 12 years old, to other states to work as labourers and domestic workers.

Another common route of outmigration to other states for young girls is through marriage. The relatively high prevalence of child marriage in Murshidabad should be investigated in the light of poverty and outmigration, and the heightened vulnerability of young girls living in these conditions. The district of Haora in West Bengal also has a much higher prevalence of child marriage, despite higher levels of female literacy (79 percent), higher sex ratio, lower gender gap in literacy rates (8 percent), and lower SC and ST populations than districts with comparable socioeconomic indicators in other states.

Table 9. Multiple regression analysis to determine impact of socioeconomic characteristics on age at marriage in high and low child marriage prevalence clusters in West Bengal

Socioeconomic and demographic variables		High prevalence cluster ^a (Murshidabad, Maldah, Nadia, Bhirbum)		Low prevalence cluster 1 ^b (Hugli, Kolkata, Haora)		Low prevalence cluster 2 ^c (Darjeeling)	
		b (standard error)	p-value	b (standard error)	p-value	b (standard error)	p-value
	(Constant)	15.011 (.372)	.000	16.100 (.446)	.000	16.424 (.830)	.000
Locality ^{RA}	Urban	1.053 (.294)	.000	-.035 (.273)	.898	-.419 (.463)	.367
Religion and caste ^{RB}	Muslim	-.046 (.265)	.863	.143 (.348)	.681		
	Other religions					1.125 (.589)	.058
	Hindu SC	-.382 (.297)	.200	-.499 (.320)	.120	.242 (.547)	.659
	ST	.363 (.464)	.435	^d		^e	
	OBC	.019 (.351)	.957	-.056 (.385)	.884	.539 (.580)	.355
Education woman	Years of schooling	.218 (.033)	.000	.178 (.039)	.000	.133 (.062)	.033
Education husband	Years of schooling	.050 (.032)	.119	.021 (.045)	.641	-.015 (.074)	.839
Household wealth	Quintile	.029 (.096)	.760	.273 (.121)	.025	.232 (.199)	.245
Adjusted R square, F (DF1,DF2), p-value		.190, 18.004 (8.571)	.000	.194, 11.755 (7.306)	.000	.068, 2.522 (7.140)	.018
Reference category: RA - Rural; RB - Other Caste. ^a N=580. ^b N=314. ^c N=148. ^d Omitted category because of insufficient sample. Regression coefficients are unstandardized.							

Among the 19 districts studied here,¹ two clusters were identified: one cluster of high child marriage prevalence (31 to 36 percent women married before age 18), comprising Murshidabad, Maldah, Nadia and Bhirbum, and one cluster with relatively low child marriage prevalence (15-24 percent women married before age 19), in the central part, comprising Hugli, Kolkata and Haora. Darjeeling, another area with moderate levels of child marriage (17 percent prevalence), was analysed separately, given its distance from other low prevalence districts (see Annexure Figure 7). The standardized regression coefficients in the final model from the regression analysis show female educational attainment to be significantly associated with the age at marriage, controlling for other factors, in both high ($\beta=.338$, $p=.000$) and low prevalence clusters ($\beta=.302$, $p=.000$; $\beta=.225$, $p=.033$). Urban residence, as opposed to rural residence, is significantly associated with higher mean age at marriage in the high prevalence cluster ($\beta=.144$, $p=.000$), whereas in both low prevalence areas, locality does not make much of a difference in predicting the age at marriage. With increasing household wealth, there is a significant rise in the mean age at marriage only in the low prevalence cluster of Hugli, Kolkata and Haora ($\beta=.155$, $p=.025$).

1 The 20th district of Alpurduar was created in 2014.

Cultural variables such as religion and caste, and husband's schooling have no significant effect on the mean age at marriage in either high or low prevalence clusters. The unstandardized coefficients are presented in Table 9.

Gujarat

Gujarat has seen significant growth in industrialization and modernization, and vast improvements in its socioeconomic conditions in the last 10-15 years. Yet, the state continues to experience moderately high levels of under-18 marriage among females (35 percent of women aged 20-24 years married before reaching the age of 18) and substantial percentage of marriages (28 percent) among females occur between the ages of 15 and 17 years. The prevalence of child marriage across the 26 districts² in the state varied from 60 percent in Banas Kantha in the north, bordering Rajasthan, to 15 percent in Jamnagar in the west coast (DLHS 2007-2008). In the last 15 years, there have been very slow declines in child marriage prevalence among females (see Annexure Figure 3), and in one or two districts, there seems to have been an increase in the percentage of marriage below 18 years among the younger cohort of women (e.g., an increase of 5 percent in Vadodara).

Census 2011 puts the overall female literacy rate in the state at 79 percent; this figure ranges from as low as 59 percent in the district of Dahod in the east bordering Madhya Pradesh to as high as 85 percent in the district of Surat in the east coast. Yet, despite the high female literacy rate in districts such as Surat, a significant percentage of women continue to be married before the age of 18 years (i.e., DLHS data show that 20 percent of currently married women aged 20-24 years in Surat married before the age of 18).

Two clusters of districts with relatively high child marriage prevalence are easily identifiable in the state: the first comprises the districts of Banas Kantha and Patan in the north, and the second comprises Dohad, Kheda and Vadodara in the east and east-central. A small cluster of low child marriage prevalence is found in the western part of the state, and comprises the districts of Jamnagar, Porbander and Junagadh, and the district of Navsari in the south (see Annexure Figure 8).

Table 10. Multiple regression analysis to determine the impact of socioeconomic characteristics on age at marriage in high and low child marriage prevalence clusters in Gujarat

Socioeconomic and demographic variables		High prevalence cluster 1 ^a (Banaskantha, Patan)		High prevalence cluster 2 ^b (Dohad, Kheda, Vadodara)		Low prevalence cluster 1 ^c (Jamnagar, Porbandar, Junagarh)	
		b (standard error)	p-value	b (standard error)	p-value	b (standard error)	p-value
	(Constant)	14.732 (.928)	.000	16.006 (.584)	.000	17.113 (.749)	.000
Locality ^{RA}	Urban	.344 (.578)	.552	.973 (.263)	.000	.176 (.218)	.420
Religion and caste ^{RB}	Muslim	1.902 (.894)	.034	.488 (.439)	.268	-.470 (.359)	.192
	Hindu SC	.860 (.629)	.173	-.011 (.462)	.980	-.508 (.349)	.147
	ST			.214 (.371)	.565	^d	
	OBC	-.099 (.552)	.858	-.177 (.340)	.604	-.084 (.263)	.751
Education – woman	Years of schooling	.170 (.055)	.002	.142 (.027)	.000	.127 (.032)	.000
Education – husband	Years of schooling	-.028 (.071)	.699	.077 (.036)	.036	.019 (.039)	.631
Household wealth	Quintile	.316 (.224)	.161	-.026 (.115)	.820	.260 (.180)	.149
Adjusted R- square, F (DF1,DF2), p-value		.131, 6.733 (7,258)	.000	.151, 10.576 (8,422)	.000	.106, 6.727 (7, 330)	.000
Reference category: RA - Rural; RB - Other Caste. ^a N=266. ^b N=431. ^c N=338. ^d SC and ST categories combined. Regression coefficients are unstandardized.							

2 Seven more districts were created in 2013.

The standardized regression coefficients from the multiple regression analysis to determine the effects of socioeconomic status on age at marriage for females show that female schooling has a positive and significant association with age at marriage in high and low prevalence districts. Urban residence and husband's educational attainment have positive effects on the age at marriage only in the high prevalence districts in the eastern part of the state (Dohad, Kheda and Vadodara). The unstandardized coefficients for the three clusters are presented in Table 10.

Telangana

The state of Telangana was created in 2014, with 10 districts carved out from the state of Andhra Pradesh. The state has a high prevalence of child marriage, with almost 50 percent of currently married women aged 20-24 years in the DLHS data reporting that they were married before the age of 18. The DLHS 2007-2008 data further show that in half of the districts in the state, over 50 percent of women were married before the age of 18 years, with two districts, Nalgonda and Mahabubnagar, having prevalence rates of 62 percent and 61 percent, respectively. The variations in child marriage prevalence across districts are considerable; the district of Nalgonda has 62 percent prevalence rate whereas, at the other end, Hyderabad has a prevalence rate of only 20 percent.

Data from Census (see Annexure Table 2) show that the sex ratio in Telangana state experienced a significant drop between 2001 and 2011, with the biggest decline, from 952 in 2001 to 925 in 2011, registering in Mahabubnagar district, which has one of the highest prevalence of child marriage in the state. However, even in the district of Hyderabad, which has the lowest level of child marriage in the state, the sex ratio saw a significant drop, from 943 in 2001 to 914 in 2011. The individual characteristics that have the strongest impact on the age at marriage in the high prevalence cluster, comprising Adilabad, Nizamabad, Karimnagar, Medak, Warangal, Khammam (see Annexure Figure 9), were assessed using a linear regression model (see Table 11). The standardized regression coefficients show that female schooling continues to have the strongest effect on the age at marriage ($\beta=.338$, $p=.000$), even after controlling for the effects of other individual characteristics such as locality, household wealth, husband's schooling and religion and caste. Among socio-cultural variables, Muslim, Hindu SC, ST and OBC women have significantly lower mean age at marriage than OC women ($\beta_{\text{Muslim}}=-.137$, $p=.002$; $\beta_{\text{SC}}=-.229$, $p=.000$; $\beta_{\text{ST}}=-.140$, $p=.000$; $\beta_{\text{OBC}}=-.205$, $p=.001$).

Table 11. Multiple regression analysis to determine the impact of socioeconomic characteristics on age at marriage in a high child marriage prevalence cluster in Telangana

Socioeconomic and demographic variables		High prevalence cluster ^a (Adilabad, Nizamabad, Karimnagar, Medak, Warangal, Khammam)	
		b (standard error)	p-value
	Intercept	16.688 (.459)	.000
Locality^{RA}	Urban	.154 (.205)	.452
Religion and caste^{RB}	Muslim	-1.168 (.376)	.002
	Christian	-.631 (.456)	.167
	Hindu SC	-1.201 (.309)	.000
	ST	-1.219 (.398)	.002
	OBC	-.955 (.289)	.001
Education – woman	Years of schooling	.170 (.021)	.000
Education – husband	Years of schooling	.057 (.028)	.043
Household wealth	Quintile	.010 (.101)	.921
Adjusted R- square, F(DF1,DF2), p-value		.190, 21.521 (9,777)	.000
Reference category: RA - Rural; RB - Other Caste. ^a N=787. Regression coefficients are unstandardized.			

SECTION V: SUMMARY OF KEY FINDINGS

The present study explored the inter-district variations in the prevalence of child marriage in India, precisely to understand the trends and patterns in prevalence and identify the positive and negative deviances among districts. These are important for the purpose of bringing about effective reductions in the overall state child marriage figures, through creative programmes addressing problems specific to those districts with high child marriage prevalence, as well as to glean lessons from those districts within the same state that have fewer child marriages.

The study has unearthed a number of important findings, which are presented in this section.

- (i) The prevalence of child marriage is undoubtedly declining in all the states in India. However, the decline is not uniform, and the pace of decline in some states not as rapid as it should be for the unprecedented levels of economic development and modernization witnessed in these states in the last 10 to 15 years. One of the reasons for the slow pace of change might be due to cultural influences overriding economic and modernization considerations in many parts of the country.
- (ii) The largest drop in the prevalence in child marriage has been in the under-15 marriages, while marriages in the age group 15-17 years continue to occur quite commonly in a number of states in the northern region, notably Rajasthan, Bihar, Madhya Pradesh, Maharashtra, West Bengal, and, to a lesser extent, in Karnataka and Andhra Pradesh in the southern region.
- (iii) Although child marriage is still common in many parts of the country, it, nonetheless, constitutes only a small proportion of all marriages in India. Moreover, the age at marriage of Indian women has risen steadily over the years in every state, including those where the prevalence of child marriage is quite significant, such as Uttar Pradesh, Bihar and Rajasthan. The significant prevalence of child marriage existing concurrently with the rising mean age at marriage for females is because the marital timing for females is likely to follow a bi-modal pattern. That is, there is likely to be a small but significant percentage of women who marry young, partly because of cultural reasons and partly because of socioeconomic circumstances, and the bulk of women, who, induced by increasing levels of modernization, socioeconomic development and educational and work opportunities, postpone marriage to later ages.

The group of young girls who become brides also become mothers soon after and end up with higher fertility than women who marry later, primarily because they start their childbearing years at an earlier age, but also because of cultural factors that manipulate both their marital and fertility behaviours. There is a need, therefore, to identify those communities that are at risk for child marriage, and devise culture-specific strategies and programmes to facilitate changes in the marriage and fertility behaviours prevalent in these communities.

- (iv) The trends on the prevalence of child marriage reveal the existence of pocket areas resilient to changes in the practice of child marriage. These areas are largely concentrated in the north and central parts of the country, comprising Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh and West Bengal and, to some extent, in the southern parts of Andhra Pradesh, south-eastern Maharashtra and northern Karnataka. A close examination of the structural drivers of child marriage suggests that deeply entrenched patriarchal values and relatively low value placed on girls in these areas sustain the practice. Evidence shows that some of the effects of the socio-cultural variables, such as religion and caste, on the age at marriage can be explained away by conditions of poverty and material deprivation. It is equally apparent though that culture continues to exert a strong influence on marriage practices in India, despite rising income levels and increasing female status and educational and employment opportunities.
- (v) Individual socioeconomic characteristics, such as place of residence, education, household wealth, and religion and caste are important in determining the marriage age of females. As the present study establishes, there is greater tendency towards child marriage among rural women, irrespective of educational and wealth differences between rural and urban women, which suggests that marriage practices in rural areas

are influenced strongly by traditional values. Similarly, the differences in the mean age of marriage by religion and caste, though slight, are strongly suggestive of cultural influences on marital behaviour. The mean age at marriage is significantly lower for OBCs and SCs than for OCs, and in some areas, Muslims have lower mean age at marriage than OCs. However, there is a need for qualitative and quantitative studies at the district and lower levels, given the paucity of studies on child marriage that provide satisfactory explanations for the ethnic differences.

- (vi) While education is the strongest determinant of the age at marriage for females, the effect of middle schooling, within the levels of schooling, is more pronounced than that of secondary and higher schooling. Thus, the point in an adolescent girl's life when she is at most risk for early marriage, or the critical transition point, is likely to be around middle school years. If a girl manages to stay in school to complete middle school, there is a strong possibility that she will stay on to complete her entire schooling and study beyond, and effectively postpone marriage until or after the age of 18 years. Primary schooling, on the other hand, does not seem to have a similar marriage-postponement effect and, in this respect, is likely to be no different from illiteracy and having less than one year of schooling in its impact on female age at marriage.
- (vii) The effect of husband's schooling on wife's age at marriage, taking into account the possible effects of other socioeconomic characteristics of the woman, is quite weak, though significant in a few of the study districts. The impact of husband's schooling may be direct or mediated through wife's schooling and his age at marriage. The correlation between husband's schooling and wife's schooling in the study, though not high, is significant, and the effect of husband's schooling on the wife's age at marriage disappears once her schooling is taken into account. This suggests that the effect of husband's schooling on wife's age at marriage is mostly, if not entirely, through the effect of wife's schooling on her age at marriage. That is, better educated men typically marry better educated women, who tend to postpone marriage to their 20s and beyond. There is also the possibility that the more years a man spends in formal education before marriage, the older his age at the time of marriage and, assuming that he marries someone closer to his own age, older the age of his bride.
- (viii) There is sufficient evidence to suggest that the child marriage prevalence rate is coupled to district development. Districts with better amenities, infrastructure and economic conditions, and higher female status have lower levels of child marriage, suggesting that macroeconomic conditions and social practices fortify each other. However, given the cross-sectional nature of the study and availability of limited data, one can do no more than speculate on the causal direction and the nature of the relationship between the two. Child marriage is likely to prevail in localities where the macro-conditions, as indicated by levels of poverty and availability of basic amenities, infrastructure and education, to name a few, are harsh. Such conditions prompt families and individuals to make decisions that may have seemingly short-term benefits for the family but, in the long term, undermine the wellbeing of the individual. Moreover, even those individuals or families who are better off but live in socioeconomically marginalized communities are likely to be influenced by the dominant customs and social practices. That is, the wider community characteristics are likely to exert strong influence on the way individuals behave.

On the other hand, there may be antecedent factors that both impede infrastructural and economic development in the community and sustain customs and practices detrimental to social progress and growth. For instance, lackadaisical government policies and poor governance, and/or inability to meet the needs of communities in certain geographic locations can inhibit social and economic progress in these communities and promote practices that are harmful to individuals and society.

SECTION VI: CONCLUSION AND FUTURE RESEARCH DIRECTION

There is a large percentage of females in the age group 15-19 years at risk for child marriage and motherhood, given India's young age structure. It is therefore imperative from social, economic, health and development perspectives that child marriage and early childbirth receive greater research and policy priority. The present study has attempted to foster a better understanding of the issues on child marriage from a purely quantitative approach. However, as in any research, there are inherent limitations in the study and these limitations need to be weighed in the process of setting the agenda for future research on child marriage in India and many other countries.

- (i) The positive effects of schooling on the age at marriage of girls in this study echo the findings from earlier studies on marriage in India (e.g., Desai & Andrist, 2010). The positive correlation between female schooling and age at marriage, however, does not imply causation; nor does it suggest that schooling stalls marriage for females until they reach the age of 18 years. As pointed out by Desai and Andrist (2010), it is likely that girls who make a conscious decision to not marry at that point in time continue their education as an alternative to staying at home. The effect of education, though significant in our study, does not necessarily suggest that schooling in itself is a strong deterrent of child marriage and childbearing; nor are we able to decipher the long-term effects of education on life choices of young girls. However, what we can infer is that girls who continue studying beyond primary and middle schooling are less likely to marry very young; but, what happens beyond the age of 18 years, when it is legally permissible for them to marry, is not obvious from cross-sectional studies such as this. To understand the long-term implications of schooling on marital and fertility behaviours will require longitudinal studies that track girls' behaviours from childhood to adulthood.
- (ii) Although the impact of schooling on the age at marriage of females is significant in our study and in the expected direction, it is by no means strong. This is surprising given the enormous importance attached to education as a potent behaviour-changing agent. One possible explanation is that the number of years spent in school is just one dimension of education and thus plays limited role in explaining attitudinal and behavioural changes. As noted in past studies (i.e., Muralidharan, 2013), the quality of education, including teachers and educational materials, and not merely the presence of school, basic infrastructure, amenities and availability of teachers, is the key factor for discerning successful child outcomes in the long run. The extent to which education enables girls to postpone marriage and motherhood indefinitely, or at least until they feel emotionally and physically ready to take on the challenges of marital and parental roles, can be gleaned only from studies that use multiple dimensions of educational competence and skill training.
- (iii) It has been pointed out in past studies that parents' education, particularly that of the mother, is most critical for child development (Schultz, 2001). The intergenerational transmission of attitudes and practices, from parents to children to grandchildren, on family formation, including when and whom to marry, are well documented in a number of studies in western countries (e.g., Axinn & Thornton, 1992; Anderton et al., 1987). Unfortunately, in this study, as in most studies on child marriage in India, parental education and other characteristics were not included in the analyses for want of data. In none of the rounds in DLHS were data on the educational backgrounds and marital histories of parents and grandparents collected to be able to discern the intergenerational influences.
- (iv) This research, and, consequently, our understanding of the prevalence, trends and drivers of child marriage, mostly uses data from DLHS and to some extent from Census. Although DLHS is a rich repository of data at the state and district levels, it is exclusively a demographic and health survey, with comprehensive focus on fertility, mortality, reproductive health, and infant and child health issues, and confined to females in their reproductive years. It, therefore, provides very limited data on drivers, causes and consequences of child marriage, at the individual, family and community levels. Given the marked differences in the rate of child marriage between districts within the same state, it is imperative that factors at macro- and micro-level contributing to the anomalies be understood. Such details are to be obtained only through a dedicated, comprehensive nationwide survey, along the lines of DLHS and the National Family Health

Survey, on child marriage, with several rounds of data collection. Such surveys will not only help identify the drivers and consequences of child marriage, it will enable the effective monitoring and evaluation of trends in prevalence over time.

- (v) In estimating the trends in the prevalence of child marriage, we have used cross-sectional data and calculated the difference, measured in percentage points, in the prevalence of child marriage between women aged 20-24 years and those aged 30-34 years. There is inherent bias in this method of trend analysis, because not every woman in the age group 20-24 years was married at the time of the survey and many of these women will marry at a later date. By contrast, an overwhelming majority of older women aged 30-34 years were already married at the time of the survey. While this has no relevance when estimating the prevalence of child marriage among women in a specific age group, comparisons of the prevalence rate between two age cohorts may lead one to conclude that the younger age cohort has a higher prevalence rate than the older age cohort, while in reality, this might not be the case.
- (vi) The current approach in dealing with issues at the district or lower levels is to channelize initiatives and interventions through the respective state administrative channels, as districts within a state come under the respective state jurisdiction. However, as this study makes clear, there are distinct contiguous clusters of high prevalence districts that are culturally congruent but transcend state boundaries. Therefore, an innovative and alternative approach to end child marriage is to make solutions cluster-centric rather than state-centric.
- (vii) Border districts need special attention, given the higher concentration of child marriage in these localities. However, they are likely to be ignored by the state administrations on both sides because of their unique location. Moreover, the social, political and economic situations in one state are likely to spill over to the border districts in the neighbouring states. In addition, the steady flow of migrants, temporary and permanent, bringing with them the attitudes, cultures, customs and social practices from their state of origin, presents additional challenges to restrain harmful social practices swiftly and effectively.
- (viii) In a number of studies on child marriage, parents cite concerns over physical safety of girls and increasing crimes against women in society as reasons why they desire to marry off their daughter at an early age. However, data on crimes against women and physical safety, gender roles, responsibilities and attitudes at the district and lower levels are either sparse or unavailable, making it difficult to pinpoint those factors that uniquely contribute in keeping the practice of child marriage alive. These justifications for child marriage are potentially unverifiable since comprehensive data on crimes against women and measures on physical safety and security are not available.
- (ix) The Census and all nationally representative surveys in India rely on self-reported data on the age at marriage. Given that very small percentages of marriages in India are registered, child marriage prevalence rates can be discerned, at present, only from self-reports on the age at marriage. Aside from the possibility of the respondent reporting the age at marriage wrongly because of ignorance over her birth details, there is the strong possibility that she and her family might conceal the age at marriage because it was an underage marriage and they are aware of the legal implications of child marriage. The reported age at marriage will most likely be higher than the actual age at marriage, given the pervasive knowledge on the legal age of marriage throughout the country. The average age at marriage at the national, state and district levels is, thus, likely to be overestimated and the prevalence of child marriage underestimated. Due to this problem, it may be necessary to ascertain the age at marriage through other means, and it further underlines the importance of implementing the compulsory registration of marriage.

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ANNEXURES

Annexure Tables

Annexure Table 1. Percentage of females remaining single in the different age groups in India and select large states, Census 2011

Age group (years)	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54
India	80.1	30.4	8.8	3.3	1.8	1.4	1.2	1.2
Andhra Pradesh	79.0	28.1	7.0	2.6	1.4	1.1	0.8	0.9
Bihar	83.1	36.3	10.3	2.8	1.2	0.8	0.6	0.7
Gujarat	79.7	30.9	8.0	2.9	1.7	1.3	1.1	1.1
Karnataka	79.5	33.2	10.2	4.1	2.2	1.8	1.5	1.5
Kerala	87.3	41.6	11.9	5.0	3.5	3.1	3.0	3.3
Madhya Pradesh	78.6	24.4	6.0	1.9	1.0	0.7	0.6	0.6
Maharashtra	80.1	31.3	9.8	3.8	2.2	1.8	1.5	1.5
Odisha	85.1	39.1	13.0	5.3	3.1	2.4	1.8	1.5
Rajasthan	81.6	34.3	8.5	2.1	1.0	0.7	0.6	0.6
Tamil Nadu	84.9	39.6	11.3	3.9	1.9	1.5	1.3	1.4
Uttar Pradesh	88.0	47.5	14.9	4.6	2.0	1.4	1.0	1.1
West Bengal	71.6	23.6	8.7	4.3	2.8	2.4	2.1	2.2

Annexure Table 2. District characteristics in districts with highest and lowest child marriage prevalence in select large states

Indicators	High child marriage prevalence districts					Low child marriage prevalence districts				
	Bihar	Rajasthan	West Bengal	Telangana	Gujarat	Bihar	Rajasthan	West Bengal	Telangana	Gujarat
Currently married women aged 20-24 years married before age 18	85.3	73.3	70.8	61.0	54.2	39.4	29.7	34.8	21.0	16.9
Percentage point change in child marriage in past 10 years*	0.6	5.2	0.3	15.9	-0.2	25.1	25	12.8	21.4	15.6
Census 2011										
Population (in million)	1.76	1.34	7.1	4.05	1.34	3.33	1.5	4.85	3.94	2.16
Household size	5.7	5.2	4.5	4.7	5.0	6.2	5.0	4.6	4.6	5.0
Sex ratio (0-6 years population)	956	871	968	925	890	940	983	962	914	904
Scheduled caste/tribe (SC/ST) (%)	21.7	42.3	13.9	26.5	10.2	14.2	37.3	15.1	7.5	9.2
Female literacy (%)	47.3	47.5	63.1	44.7	61.0	58.7	59.7	79.4	79.3	65.3
Gender gap in literacy (%)	23.9	34.0	6.8	20.5	21.9	21.5	18.8	7.6	7.7	16.2
Census 2001										
Population (in million)	1.40	1.12	5.87	3.51	1.18	2.71	1.79	4.27	3.83	1.90
Household size	6.0	6.3	5.1	5.1	5.3	7.1	5.9	5.1	5.5	5.4
Sex ratio (0-6 years population)	963	902	972	952	865	934	850	956	943	898
Scheduled caste/tribe (SC/ST) (%)	22.2	41.6	13.3	25.0	11.0	11.9	34.5	15.9	8.9	8.7
Female literacy (%)	26.3	35.2	47.6	31.9	46.3	36.9	52.4	70.1	73.5	56.2
Gender gap in literacy (%)	30.7	40.6	13.1	24.7	27.3	30.4	23.1	13.1	10.2	20.1
DLHS-3, 2007-2008										
Religion										
Hindu	90.0	89.5	36.2	89.2	88.3	82.7	77.9	67.2	76.1	86.3
Non-Hindu	10.0	10.5	63.8	10.8	11.7	17.3	22.1	32.8	23.9	13.7
Caste										
SC/ST	27.9	41.7	13.8	35.8	12.9	15.1	36.7	14.5	16.9	13.2
Illiterate	74.5	74.1	41.1	71.9	55.3	55.3	49.4	23.8	25.6	40.2
Up to middle (Class 1-8)	18.4	18.3	46.0	14.2	30.0	26.5	34.1	52.5	20.0	37.0
Secondary plus (Class 9+)	7.1	7.7	12.9	13.9	14.6	18.2	16.5	23.7	54.4	22.8

Indicators	High child marriage prevalence districts					Low child marriage prevalence districts				
	Bihar	Rajasthan	West Bengal	Telangana	Gujarat	Bihar	Rajasthan	West Bengal	Telangana	Gujarat
Girls currently attending school	Jamui	Sawai Madhopur	Mushir-dabad	Mahbub-nagar	Patan	Siwan	Ganganagar	Haora	Hyderabad	Jam-nagar
	63.2	60.4	81.2	72.6	70.1	82.9	83.6	81.2	92.7	66.9
	14.9	17.5	16.9	14.5	15.9	29.2	33.0	20.8	31.0	11.5
Wealth index	46.6	44.7	55.7	51.1	47.9	63.6	66.4	57.0	64.9	42.6
	81.0	53.1	57.5	25.2	15.5	47.2	14.5	19.8	0.4	4.6
	11.2	19.9	19.9	40.4	27.8	29.4	23.7	20.6	2.1	13.7
Village population size	7.8	27.0	22.6	34.4	56.7	23.4	61.9	59.5	97.5	81.7
	43.5	32.5	20.5	13.3	10.0	17.0	78.4	4.0	Urban	42.9
	28.3	35.0	31.8	42.2	45.0	31.9	16.2	20.0	Urban	28.6
Electricity in village	28.3	32.5	47.7	44.4	45.0	51.1	5.4	76.0	Urban	28.6
	95.7	57.5	36.4	4.4	0.0	100.0	32.4	60.0	Urban	7.1
	4.3	42.5	63.6	95.6	100.0	0.0	67.6	40.0	Urban	92.9
Nearest town from village	23.9	20.0	11.4	13.3	15.0	46.8	16.2	36.0	Urban	3.6
	30.4	42.5	25.0	17.8	27.5	19.1	24.3	12.0	Urban	0.0
	23.9	20.0	36.4	40.0	42.5	10.6	35.1	32.0	Urban	46.4
Availability of middle school in village (%)	21.7	17.5	27.3	28.9	15.0	23.4	24.3	20.0	Urban	50.0
	30.4	77.5	25.0	62.2	80.0	38.3	54.1	12.0	Urban	75.0
	76.1	95.0	95.5	97.8	97.5	95.7	86.5	100.0	Urban	92.9
Availability of health centre (SC/PHC) in village (%)	23.9	50.0	43.2	48.9	40.0	21.3	24.3	64.0	Urban	28.6
	69.6	90.0	90.9	80.0	95.0	68.1	89.2	96.0	Urban	78.6
	*Difference in the percentage married before 18 years between currently married women aged 30-34 and women aged 20-24 years, DLHS 2007-08									

Annexure Table 3. Percentage of currently married women aged 20-24 years in India by age at marriage and demographic and socioeconomic background

Demographic and socioeconomic characteristics of women		Married before 15 years (%)	Married 15-17 years (%)	Married at 18 years and above (%)	Total (n)
Religion and caste	Muslim	9.0	30.4	60.6	22211
	Other religions	3.9	22.0	74.0	16038
	Hindu SC	17.5	32.2	50.3	31505
	ST	14.9	38.2	46.9	20356
	OBC	16.5	31.1	52.4	63726
	OC	7.0	23.6	69.5	30299
Type of locality	Rural	15.4	32.6	52.0	136365
	Urban	6.3	23.1	70.6	51115
Highest education level of woman	Illiterate	25.3	40.0	34.7	63805
	Primary	13.9	36.1	50.0	29142
	Middle	6.7	28.6	64.7	50053
	Secondary	1.9	15.6	82.5	34160
	Higher secondary and above	1.1	4.7	94.2	10270
Highest education level of husband	Illiterate	24.3	39.8	35.9	34508
	Primary	16.4	36.5	47.1	27285
	Middle	12.0	31.1	56.9	55786
	Secondary	7.7	24.1	68.3	49547
	Higher secondary and above	4.0	15.4	80.6	19639
Wealth index quintile	Poorest	24.8	40.6	34.6	28820
	Poor	20.8	37.7	41.5	34262
	Middle	14.0	33.7	52.3	38511
	Rich	7.8	27.1	65.1	44453
	Richest	2.6	16.0	81.4	41401
Region	North-east	6.0	27.3	66.7	17599
	Central	15.5	33.8	50.7	20454
	South	9.8	26.6	63.6	28360
	West	12.8	31.4	55.8	33028
	East	18.2	37.4	44.3	35974
	North	12.5	25.3	62.3	52064

Sample =187,497 currently married women aged 20-24 years, DLHS 2007-2008.

Annexure Table 4. Multiple regression analysis examining the impact of socioeconomic characteristics on age at marriage of females in India

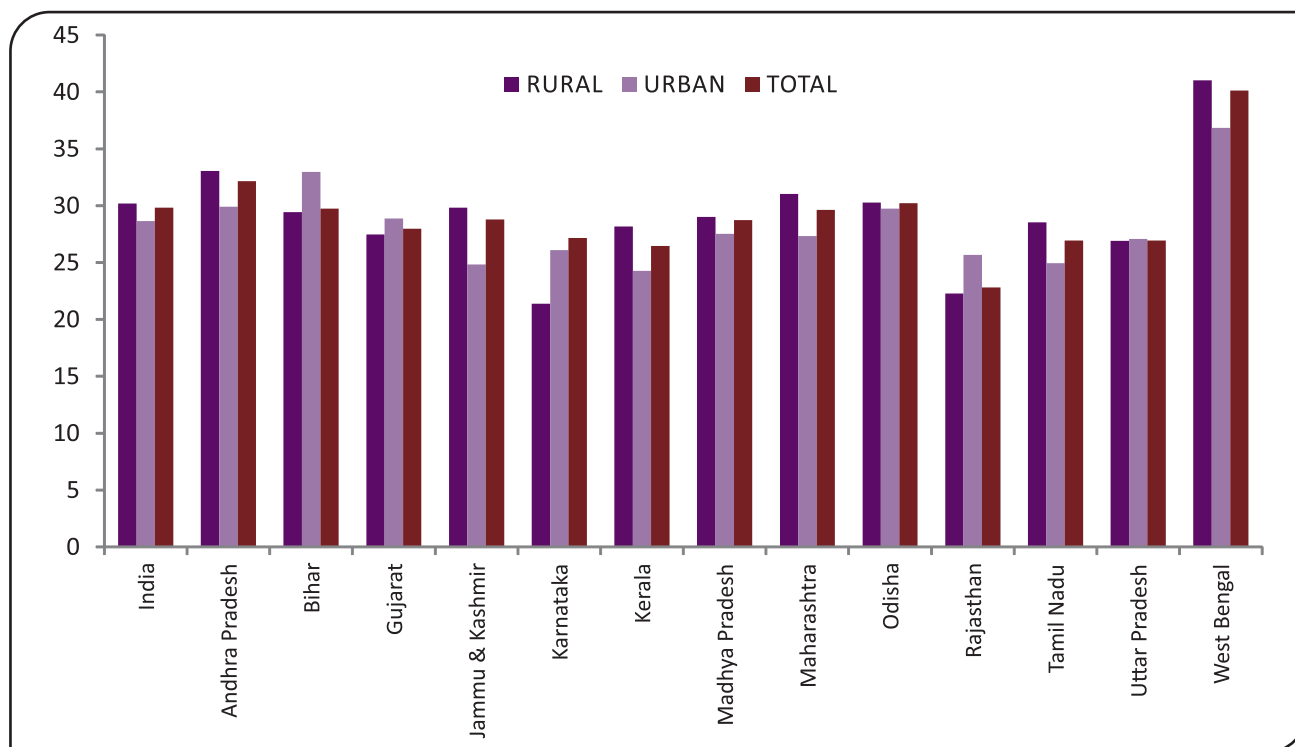
Socioeconomic variables		I		II		III		IV		V	
		b (Std. error)	p-value	b (Std. error)	p-value	b (Std. error)	p-value	b (Std. error)	p-value	b (Std. error)	p-value
	(Constant)	17.493 (.008)	.000	18.127 (.017)	.000	16.164 (.019)	.000	16.011 (.024)	.000	15.395 (.028)	.000
Locality ^{RA}	Urban	1.166 (.015)	.000	1.142 (.015)	.000	.509 (.014)	.000	.504 (.014)	.000	.253 (.015)	.000
Religion and caste ^{RB}	Muslim			-.606 (.026)	.000	.111 (.024)	.000	.138 (.024)	.000	.131 (.024)	.000
	Christian			.466 (.037)	.000	.791 (.034)	.000	.821 (.034)	.000	.947 (.034)	.000
	Other religions			0.788 (.035)	.000	.967 (.031)	.000	.986 (.032)	.000	.962 (.031)	.000
	Hindu SC			-1.063 (.023)	.000	-.304 (.022)	.000	-.286 (.022)	.000	-.163 (.022)	.000
	ST			-.928 (.028)	.000	-.070 (.026)	.007	-.048 (.026)	.064	.177 (.026)	.000
	OBC			-1.020 (.020)	.000	-.485 (.018)	.000	-.475 (.018)	.000	-.405 (.018)	.000
Education – woman	Years of schooling					.256 (.001)	.000	.248 (.002)	.000	.223 (.002)	.000
Education – husband	Years of schooling							.021 (.002)	.000	.003 (.002)	.226
Household wealth	Quintile									.278 (.006)	.000
R-square change, p-value		.036	.000	.041	.000	.159	.000	.000	.000	.009	.000

Reference category: RA - Rural; RB - Other Caste. Regression coefficients are unstandardized.

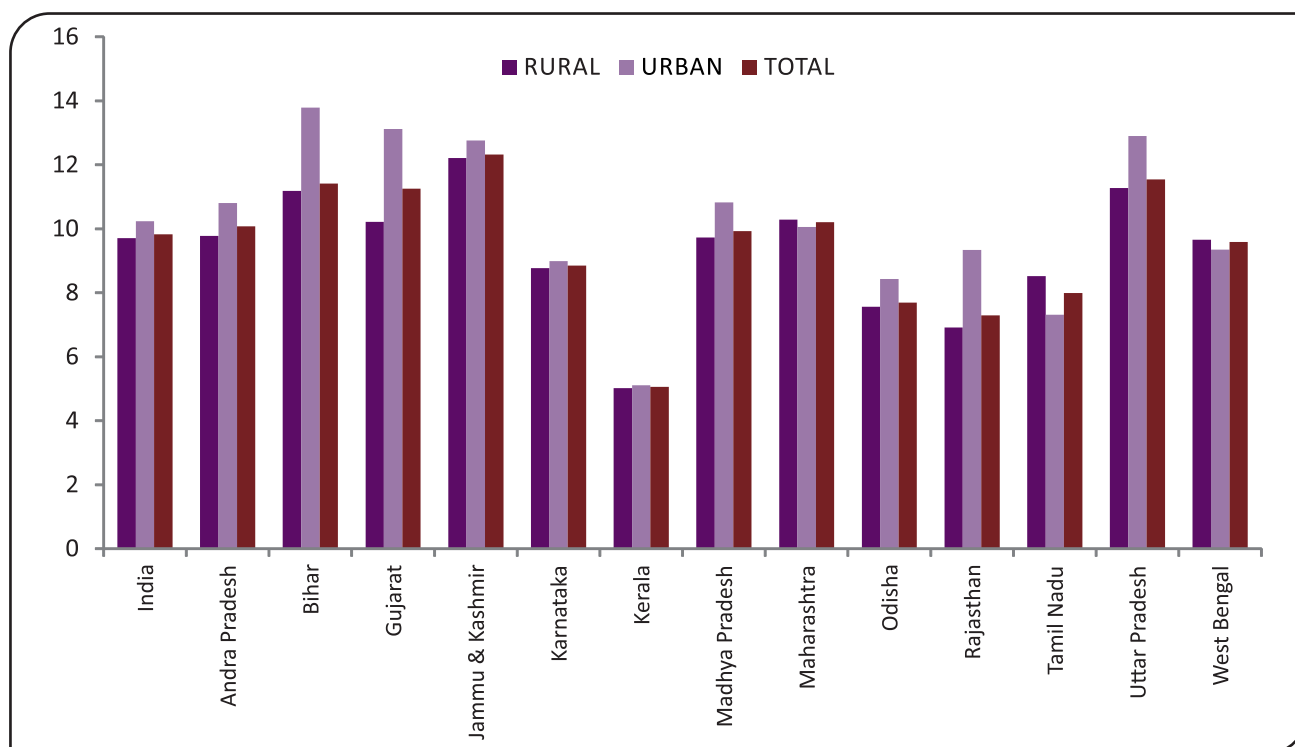
Data source: DLHS 2007-2008

Annexure Figures

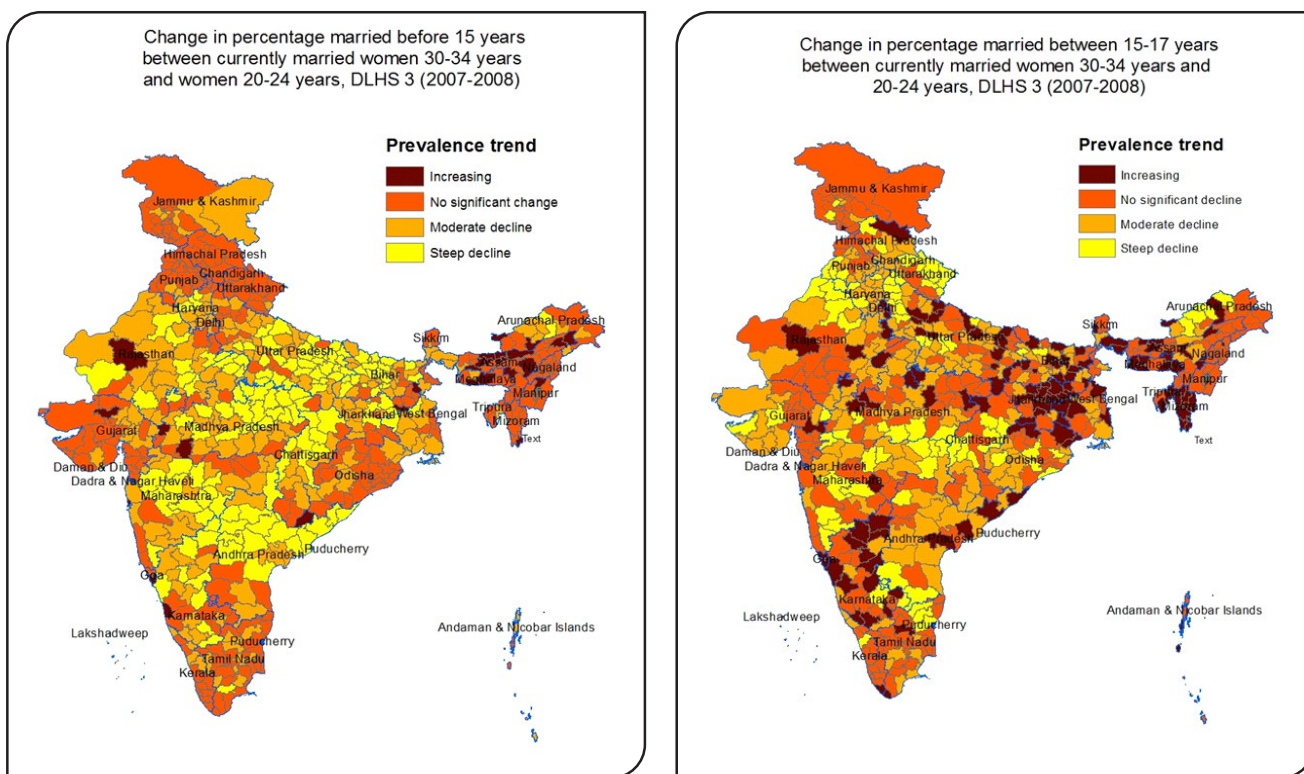
Annexure Figure 1. Percentage of ever-married females aged 15-19 years with children, for India and select large states, Census 2011



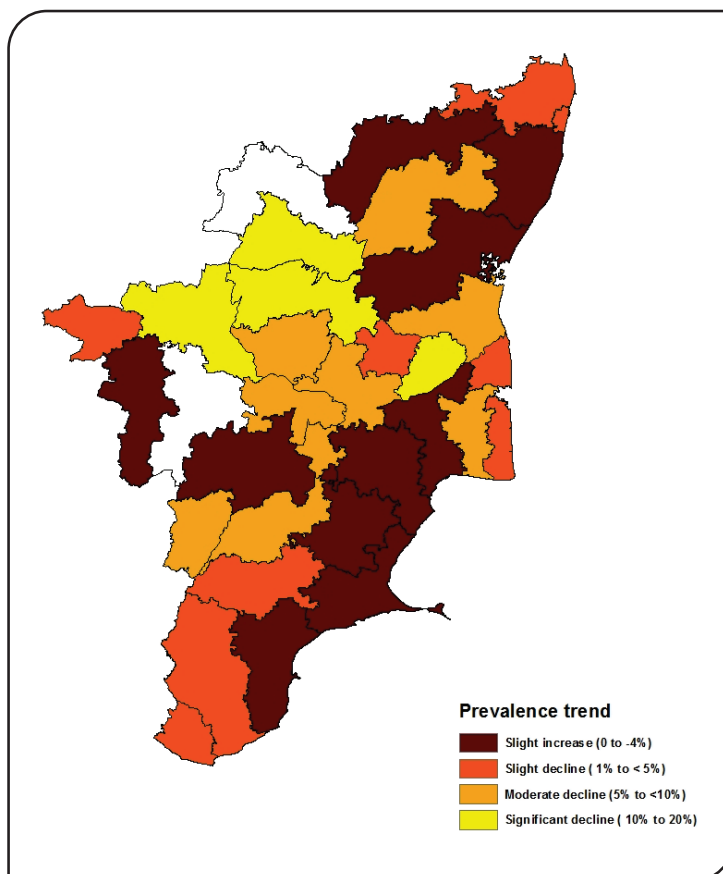
Annexure Figure 2. Percentage of ever-married females aged 15-19 years with two or more children, for India and select large states, Census 2011



Annexure Figure 3. Change in percentage between currently married women aged 30-34 years and women aged 20-24 years who married before age 15 years and between 15-17 years, DLHS 2007-2008

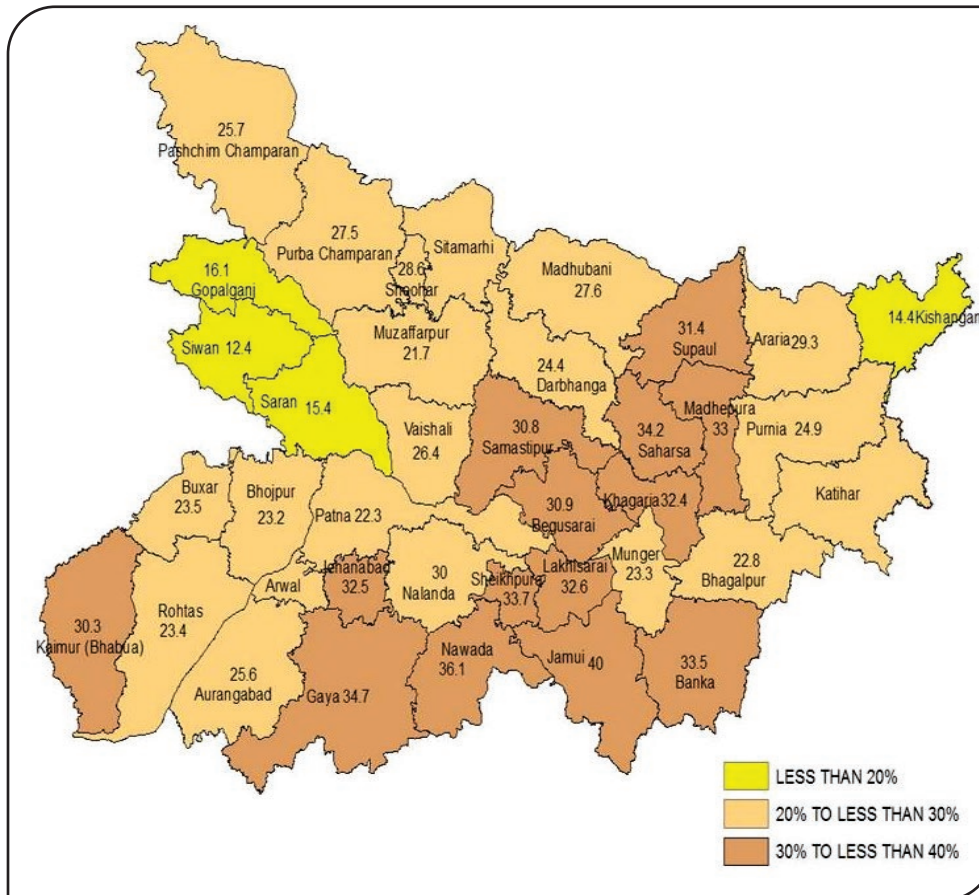


Annexure Figure 4. Difference in percentage of child marriage among currently married women aged 15-49 years between 2007-2008 and 2012-2013 in Tamil Nadu

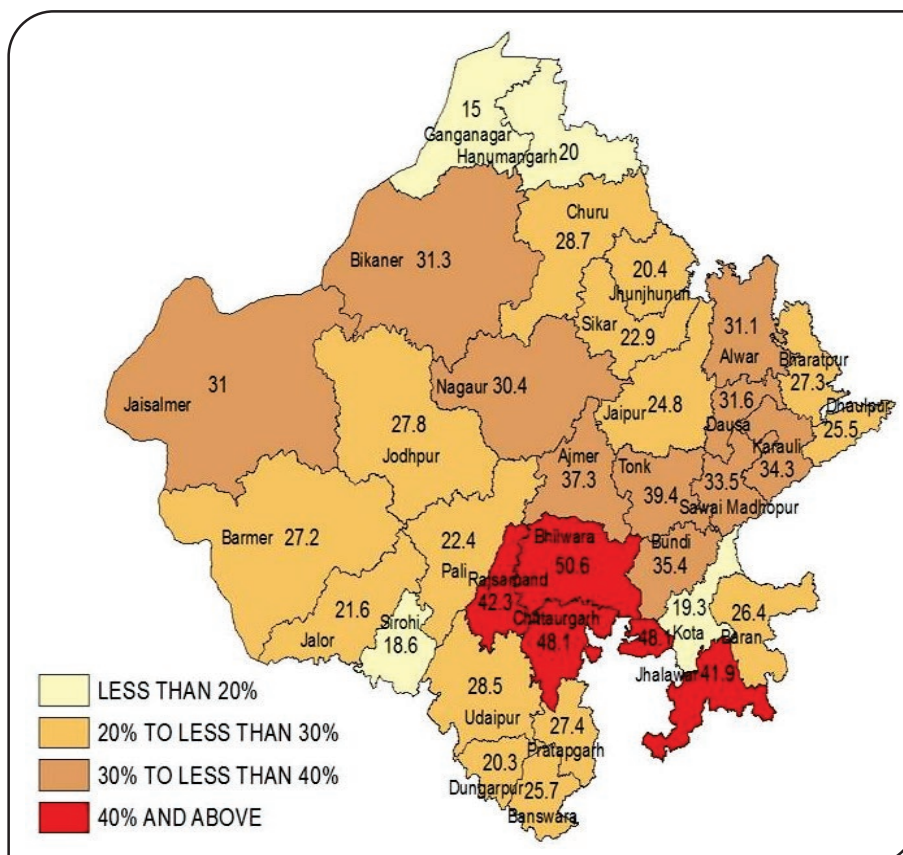


Data Source: DLHS 2007-2008 and DLHS 2012-2013

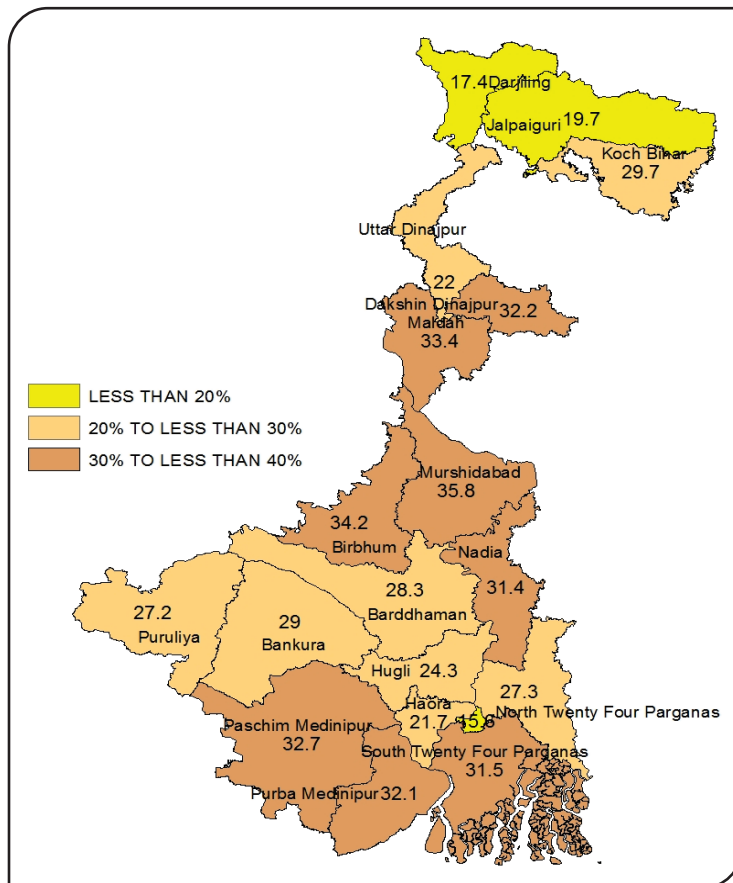
Annexure Figure 5. Percentage of ever-married women in the age group 15-19 years, Bihar, Census 2011



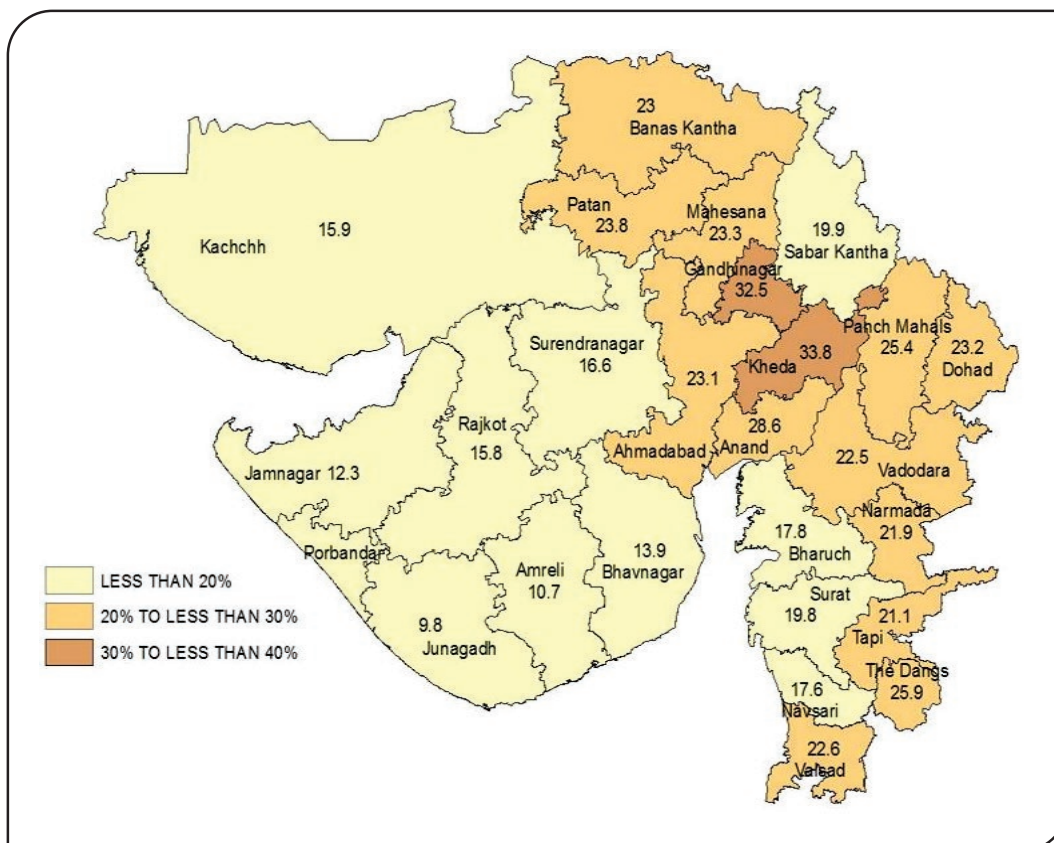
Annexure Figure 6. Percentage of ever-married women in the age group 15-19 years, Rajasthan, Census 2011



Annexure Figure 7. Percentage of ever-married women in the age group 15-19 years, West Bengal, Census 2011



Annexure Figure 8. Percentage of ever-married women in the age group 15-19 years, Gujarat, Census 2011



Annexure Figure 9. Percentage of ever-married women in the age group 15-19 years, Telangana, Census 2011

