

# Teenage Marriage in Tamil Nadu: Evidence from NFHS

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**Abstract:** *The study examines the levels, trends and determinants of teenag marriage in Tamil Nadu using data from the National Family Health Survey rounds 4 and 5. The study analyses district level variations and applies logistic regression to identify key socioeconomic factors associated with marriage before age 18. Results show a substantial decline in the proportion of women marrying before age 18 across rural and urban areas, although rural areas continue to report higher prevalence. District level analysis reveals persistent spatial disparities, with certain districts exhibiting higher rates. Multivariate findings indicate that education and household wealth significantly reduce the likelihood of early marriage, while rural residence and specific social groups show higher risk. The findings highlight the importance of improving female education, reducing socioeconomic inequalities, and strengthening enforcement of legal provisions. The study contributes to policy efforts aimed at eliminating child marriage and promoting adolescent well-being.*

**Keywords:** Teenage Marriage, Child Marriage, Logistic Regression, NFHS5, Socio-economic Determinants, District-Level Analysis, Trends, Factors, Tamil Nadu, Place of Residence

## 1. Introduction

In the recent few decades, child rights have received widespread attention by many national and international organizations [1] and one major dimension in violation of children rights is early marriage [2]. Child marriages occur worldwide and are a cause for concern. Age at the time of marriage is a critical demographic indicator which can have far-reaching complications on fertility, education, health and economic development. Worldwide, an estimated 650 million girls and women alive today were married before their 18<sup>th</sup> birthday. Globally, total number of girls married in childhood is estimated at 12 million per year [3]. South Asia is the home to the largest number of child brides and India accounts for one-third of the global total [4]. One of the primary goals of marriage in developing nations is to produce children and hence early marriage is always linked to early pregnancy. Every year, an estimated 21 million girls aged 15 to 19 years become pregnant in low income regions and approximately 12 million of them give birth and 90 percent of adolescent births in low income countries are to girls who are already married or in a union [5].

In India, legislation of eliminating child marriages started in pre-independence period. The Child Marriage Restraint Act was passed in 1929, which prohibited the marriage of girls below 14 years. The Act was amended in 1978 to increase the minimum age to 18 years for females and 21 for men. The Prohibition of Child Marriage Act was passed in 2006 according to which child marriage is a punishable offence. Though it is illegal to marry before the age of 18 for girls and

despite the government's efforts to eliminate child marriages, the child marriages still occur. Proportion of child marriages varies across states and regions. Given the varied socioeconomic, cultural diversities in India, among the states and within states, the proportion of child marriage vary intra state as well. The need to delay the marriage age in India is part of the discourse among policy makers and researchers.

There is considerable decrease in the proportion of girls marry before the age of 18 between 1992-93 and 2019-21 in both urban and rural areas of Tamil Nadu [6]. However, significant percent of girls are still married before the age of 18 in the state. Data from the five rounds of NFHS indicates that percent of girls marrying before the age of 18 declined from 36 to 11 in urban areas and 55 to 16 in rural areas. National Family Health Survey in its fourth round onwards, provides data at the district level and sophistication to understand the levels and trends at the district level.

## 2. Literature

### 2.1 Consequences of Early Marriage

Girls who marry young become pregnant during adolescence, putting them at risk of complications in pregnancy and child birth which are the leading cause of death among adolescents in developing countries. Early marriage increases the reproductive span among young women, which increases the likelihood of early pregnancy, which in turn will affect the health of women and children. Further, evidences show that women who start childbearing at early ages tend to have

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repeated childbearing during short intervals and is a leading cause for maternal and child mortality. Women who marry at early age have low say on fertility decisions, contraceptive use, results in unwanted pregnancies, abortions and shorter birth intervals [7], [8]. Studies have also shown that women who are married young experienced more violence and behavioral control than other women [9]. Young women are at risk of poor birth outcomes such as premature birth, low birth weight and infant deaths [10], [11], [12]. It is also evident that teenagers are more prone to maternal deaths than adult women [13], [14]. Studies have shown that pregnancy and childbirth at early ages can have profound implications on maternal and infant morbidity and mortality [15]. Further, adolescents are at a disadvantage in terms of unplanned pregnancies due to lack of negotiating skills on using birth control methods and lack of knowledge on contraception [16]. More than half of these unintended pregnancies result in abortion which is not safe in low and middle income countries [17]. Studies have found that early marriage and early child bearing have significant impact on their nutritional status [18].

## 2.2 Factors affecting Age at Marriage

Timing of marriage is shaped by several background characteristics. In many societies, cultural expectations decide the marriage age. Religion and caste appear to be important predictors of marriage age [6]. The association between educational level of women and age at marriage is well researched all over the world and it is found that education has strong impact on timing of marriage. Place of residence-urban/rural is a critical determinant of age at marriage, numerous studies have shown that women in rural areas are at higher risk of marrying early than women in urban areas [19]. Educated women and women belong to better socioeconomic background tend to delay marriages compared to other women [20], [21], [22], [23]. Further, economic independence can lead to late marriages and poverty may result in early marriages.

## 3. Problem Statement

To attain Sustainable Development Goal (SDG) target 5.3, it is crucial to reduce child marriages, which is a violation of human right. It is evident that child marriages continue to decline at the national level during the last three decades. However, there are substantial variations at the sub-national level [24]. In Tamil Nadu, though overall incidence of teenage marriage has declined significantly over a period of time, certain districts continue to report higher rates of teenage marriage. Therefore, the present study aims to understand the levels and trends in child marriage over a period of time at the district level in Tamil Nadu. It is also necessary to assess the contributing factors for the incidence of teenage marriage in the state of Tamil Nadu.

## 4. Methodology

Data for this study is taken from fourth and fifth rounds of National Family Health Survey (NFHS) for analyzing the

trends in the percent of women married before the age of 18. For further analysis, data from the fifth round is used. NFHS provides information on age of women at the time of marriage. The survey provides information on population, health and nutrition for India across districts of states and union territories. The main objective of the survey is to provide high quality data on health and family welfare as well as on data on emerging issues. NFHS data is useful in setting benchmarks and examining the progress of the health sector over a period of time. NFHS data helps to identify the need of new programs and needy groups.

In NFHS, information is collected through four types of questionnaires, namely, household questionnaire, woman's questionnaire, man's questionnaire, and biomarker questionnaire. In the household schedule, information was collected on all usual members of the household and visitors who stayed in the household the previous night on age, sex, marital status, schooling and relationship to head of the household, water, sanitation, and hygiene; health insurance coverage; disabilities; land ownership; number of deaths in the household in the three years preceding the survey; and the ownership and use of mosquito nets. The woman's questionnaire covered a wide variety of topics, including the woman's characteristics, marriage, fertility, contraception, children's immunizations and healthcare, nutrition, reproductive health, sexual behaviour, HIV/AIDS, women's empowerment, and domestic violence. The Man's Schedule covered the man's characteristics, marriage, his number of children, contraception, fertility preferences, nutrition, sexual behaviour, health issues, attitudes towards gender roles, and HIV/AIDS. The Biomarker Schedule covered measurements of height, weight, and haemoglobin levels for children; measurements of height, weight, waist and hip circumference, and haemoglobin levels for women age 15-49 years and men age 15-54 years; and blood pressure and random blood glucose levels for women and men age 15 years and over. Missing values of key variables were dropped and in some cases, pair wise deletion was adopted. In the regression analyses missing values were treated as separate category but not presented in the table. In NFHS, survey design effects are accounted by applying appropriate sample weights. Finally, the number of women included in the multivariate analysis is 8659 after treating for missing values in each variable. Other statistics such as loglikelihood and significant level are provided in table 4.

### 4.1 Explanatory Variables Used in the Analysis

Studies have found that rural women are at the disadvantageous side of marrying early as compared to urban women. In NFHS 5, the place of residence is categorized as rural and urban which is used as an independent variable in the analysis. It is also noted that religion and caste appears to be important predictors of age at marriage of women. Therefore religion (Categories: Hindu, Muslim, Christian and others) caste (Categories: SC/ST, Other Backward Caste and Others) are used as explanatory variables in the multivariate analysis. Literature also showed that educational level of women has

significant influence on the age of women at which they marry. Educational level of women is categorized as illiterates and primary, secondary and higher levels and is included in the analysis. Further, it is also evident that economic status of the household exerts significant impact on the age at marriage. In NFHS, wealth index is calculated as a proxy for economic status. Wealth index is a composite measure of a households' cumulative living standard and is categorized as poorest, poorer, middle, richer and richest. Current age of women (Categories: 15-19, 20-24 and 25-29) is also included as one of the background characteristics in the analysis.

**4.2. Dependent variable used in the analysis**

Women were categorized into two, namely, married on or before 18 years of age and married after 18 years of age. At first, analysis is carried out to understand the levels and trends of child marriages in Tamil Nadu and its districts using fourth and fifth rounds of the survey. Subsequently, association between socioeconomic factors and child marriages is analyzed. An attempt is also made to understand the factors contributing to the incidence of child marriage in Tamil Nadu. Multivariate logistic regression technique is used to understand the determinants of child marriage. The logistic regression results are presented in terms of odds ratios. Additionally, p values are provided to indicate the level of significance. P with  $p < 0.05$  is considered statistically significant. The analysis includes women in the age group below 30 in order to avoid the time effect.

**5. Results**

Table 1 presents the incidence of teenage childbearing in Tamil Nadu state across rural and urban areas for the five rounds of the National Family Health Surveys. Results brought out that percent of women married before the age of 18 is high in rural areas across surveys but has declined significantly over a period of time in Tamil Nadu state as a whole irrespective of place of residence. In urban areas of Tamil Nadu, the percentage has declined from 36 to 11 (25 points decline) between NFHS 1 and NFHS 5 whereas the percentage in rural areas has declined from 55 to 16 (39 points decline) during the same period. Therefore, it is necessary to understand the levels and trends in teenage marriages in the

districts in order to assess district level variations. Information at the district level is available in 4<sup>th</sup> and 5<sup>th</sup> rounds of NFHS and hence is used for further analysis.

**Table 1: Teenage Childbearing in Tamil Nadu over a period of Time by Place of Residence**

Tamil Nadu	NFHS-5	NFHS-4	NFHS-3	NFHS-2	NFHS-1
Urban	10.9	15.2	20.7	27.3	35.8
Rural	15.6	20.1	29.5	42.0	55.2

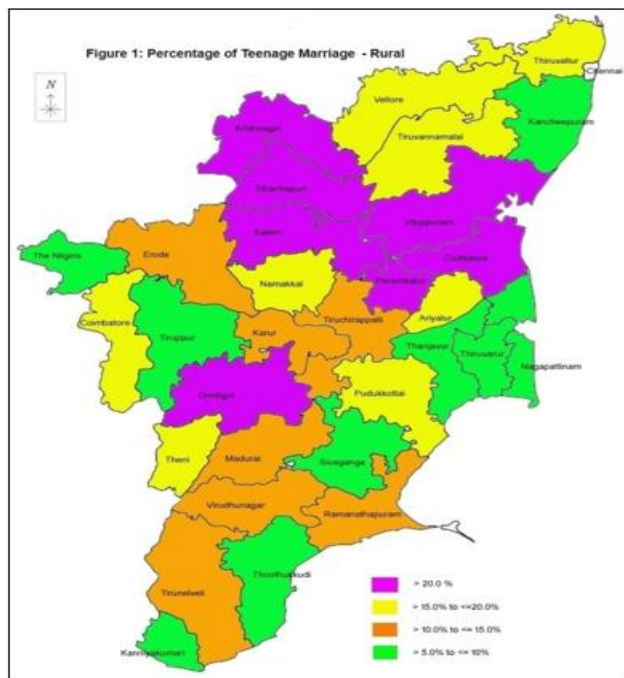
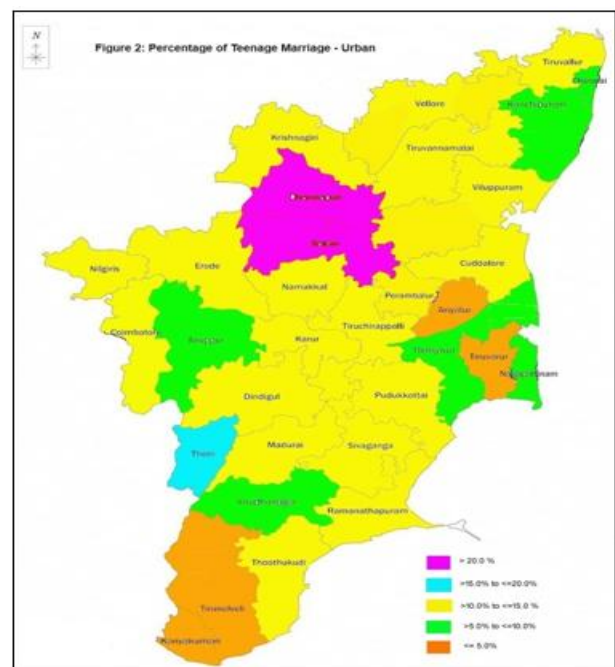
In table 2, an attempt is made to understand the percentage of women aged 18-29 married below the age of 18 in each district of Tamil Nadu for rural and urban areas for 4<sup>th</sup> and 5<sup>th</sup> rounds of NFHS. Levels of teenage marriage for districts of Tamil Nadu showed interesting findings. According to NFHS 5, three districts of Tamil Nadu in urban areas, namely, Thiruvavarur, Tirunelveli and Kanniyakumari, and no district in rural areas have less than five percent of women married below the age of 18. It is also found that none of the district in rural areas is in the range of 6-10 percent women marrying before the age of 18 whereas in urban areas, 6 districts are in the same range. In many of the districts in both rural and urban areas, percent of women in the age group 15-19 married before the age of 18 is between 11 and 15 percent. Further, seven districts and six districts are in the range of 16-20 and more than 21 percent respectively in rural areas marrying before the age of 18. Therefore, results clearly show that in most of the districts, higher percent of women are married during teenage in rural areas than urban areas. It is interesting to note that percent of women in the age group 18-29 married below the age of 18 has declined considerably between NFHS 4 and NFHS 5 in almost all the districts of Tamil Nadu irrespective of place of residence. Some districts show a reversal or increase in teenage marriage rates. Districts such as Perambalur and Ramanathapuram where percent of women married before the age of 18 has increased in urban areas, and Thanjavur and Kanniyakumari districts where it has increased in rural areas between 2015-16 to 2019-21. To make the results more visible, an attempt has been made to map the districts of Tamil Nadu according to the percentage of women married before age 18 for urban and rural areas, and are presented in figure 1 and figure 2.

**Table 2: Percent of Women Married before Age 18 among women in the age group 18-29 for Districts of Tamil Nadu (2005-06 to 2019-21)**

Districts	Married below Age 18 and current age respondent (18-29) (NFHS-5)		Married below Age 18 and current age respondent (18-29) (NFHS-4)	
	Urban	Rural	Urban	Rural
Thiruvallur	11.5	16.0	9.6	25.9
Chennai	6.0	0.0	16.8	0.0
Kancheepuram	9.2	5.5	15.0	16.6
Vellore	10.3	18.3	14.8	17.4
Tiruvannamalai	11.7	15.5	17.7	27.5
Viluppuram	11.5	21.2	19.2	25.2
Salem	22.4	21.8	20.8	22.4
Namakkal	12.3	16.1	16.8	17.1
Erode	14.3	12.3	22.8	23.6

The Nilgiris	12.5	9.7	20.8	19.1
Dindigul	14.5	24.0	18.5	25.9
Karur	11.1	14.5	13.6	20.6
Tiruchirappalli	10.9	14.6	13.1	14.9
Perambalur	14.3	21.8	15.4	22.9
Ariyalur	0.0	16.5	15.4	19.0
Cuddalore	10.9	20.4	13.8	19.8
Nagapattinam	6.8	9.0	10.0	11.5
Thiruvarur	0.0	8.3	8.3	9.2
Thanjavur	8.3	5.1	11.7	11.6
Pudukkottai	11.1	17.6	12.0	10.2
Sivaganga	12.3	9.0	12.0	16.0
Madurai	11.4	12.0	21.0	23.6
Theni	19.4	18.6	28.2	23.9
Virudhunagar	9.0	14.0	10.2	23.3
Ramanathapuram	11.5	14.9	9.8	19.3
Thoothukkudi	10.8	7.3	9.7	14.1
Tirunelveli	5.0	12.2	6.6	7.1
Kanniyakumari	3.1	6.7	3.2	4.3
Dharmapuri	22.5	24.1	24.6	32.6
Krishnagiri	14.7	26.9	16.2	34.8
Coimbatore	13.7	18.2	14.8	18.5
Tiruppur	9.1	9.4	17.1	14.7
Total	10.9	15.6	15.2	20.1

Figure 1 and 2 show that some of the districts (Krishnagiri, Dharmapuri, Salem, Villupuram, Cuddalore, Perambalur and Dindigul) have high burden of teenage marriages in rural areas of Tamil Nadu and in urban areas, two districts i.e., Salem and Dharmapuri have high incidence of teenage marriages i.e., more than one-fifth of women in the age group 18-29 were married before the age of 18. It should also be noted that there is no district of Tamil Nadu which has less than 5 percent teenage marriages as far as the rural areas are concerned. In the case of urban areas, Ariyalur, Tiruvarur, Tirunelveli and Kanniyakumari districts have lowest percentage of teenage marriages.



### 5.1 Background characteristics and teenage marriages

In the Indian society, marriage is nearly universal and despite the modernization, the institution of marriage is still strong. It is evident from the literature that background characteristics of women influence to a greater extent on the timing of marriage. Therefore, in this section, an attempt is made to understand the relationship between background characteristics and age at marriage of women. Place in which the women reside is an important indicator which affect the incidence of child marriages. In the earlier section too highlights the similar finding that incidence of child marriages is higher in rural areas than urban areas. It is surprising to note that even in a

state like Tamil Nadu which is at a better position in terms of socioeconomic and demographic indicators, about 11 percent of women are married before the age of 18 in urban areas and it is even higher in rural areas, which is 16 percent. Therefore, it is necessary to study the rural-urban differentials in the incidence of teenage marriages. Impact of education on teenage marriages is well studied. On the other hand, education may be affected due to early marriages. It is found that illiterate women and women who had education up to primary level tend to marry before attaining the age of 18 than women who had secondary level education. Poor economic status is an important dimension that is associated with early marriages among girls. Marriages for women in India are associated with dowry and hence women from poorer families are married at early ages. Girls are thought as burden in economically disadvantaged families and to reduce the burden, they are married off at early ages often. Results also clearly brought out that increase in wealth status of the household decreased the incidence of child marriages. Factors such as religion and caste tend to have association with age of marriage as marriage is always surrounded by cultural factors and in India; marriages are usually decided by the family members and relatives. Percent of women marrying before age 18 is higher among women belong to Islam and scheduled tribes as compared to their counterparts. Respondents' age has positive association with the incidence of teenage marriages. Women in the age group 25-29 have higher tendency to marry before age 18, followed by women in the age group 20-24 as compared to women in the age group 15-19.

**5.2 Logistic Regression Results of Incidence of Teenage Marriage**

From the previous section, it is evident that background factors of women have association with the incidence of teenage marriages. However, these are gross associations. In order to understand the net influence of individual factors on the incidence of women marrying before age 18, logistic regression analysis is used. Logistic regression is a statistical method used to see the effect of explanatory variables on the dependent variable when the dependent variable is binary in nature. In the present analysis, whether women married before the age 18 or not. Logistic regression analysis helps to separate the independent effect of particular variable while controlling for others, it estimates the odds ratios, indicating how much more or less likely early marriage happens by their background factors and also tests the significance of how strongly or weakly the background characteristics are related with teenage marriages.

Results showed that Christian women (OR-0.41, p<0.001) have lower odds and women belonging to OBC (Other Backward Castes; OR-1.23, p<0.001) have higher odds to marry before the age of 18 as compared to Hindu women and women belong to scheduled caste. Rural women are at higher risk of marrying before the age of 18 than their urban counterparts but the effect is statistically insignificant. Increase in educational level of women and household wealth index decreased the likelihood of marrying before the legal

minimum age at marriage. Women who have secondary (OR-0.58, p<0.01) and higher (OR-0.04, p<0.001) levels of education are less likely to marry early than other women. Age of women at the time of survey appears to be a significant predictor for the incidence of child marriage. It indicates that women in the older age cohort had higher likelihood of marrying before age 18 (age group 20-24: OR-1.69, p<0.001 and age group 25-29: OR-1.59, p<0.001).

**Table 3: Percent of Women married before Age 18 among Women aged 18-29 by their Background Characteristics**

Social- Economic Factors	Percent of Teenage Childbearing
	Married below Age 18 and current age respondent (18-29)
<b>Religion</b>	
Hindu	13.7
Muslim	17.6
Christian	4.3
<b>Caste</b>	
Schedule caste	13.6
Schedule tribe	20.7
OBC	13.2
Others	8.0
<b>Type of place of residence</b>	
Urban	10.9
Rural	15.6
<b>Age at Marriage</b>	
Age <18	13.3
Age >=18	86.7
<b>Women's Educational level</b>	
No education	39.1
Primary	34.8
Secondary	25.0
Higher	2.0
<b>Wealth Index</b>	
Poorest	22.4
Poorer	18.4
Middle	17.2
Richer	12.7
Richest	6.6
<b>Respondents Age</b>	
15 to 19	9.8
20 to 24	12.7
25 to 29	15.2

**Table 4: Logistic Regression Analysis of Incidence of Teenage Marriage among Women Age 18-29, 2019-21**

	B	Exp (B)
<b>Religion</b>		
Hindu		1.000
Muslim	0.067	1.069
Christian	-0.884	0.413***
<b>Caste</b>		
Schedule caste		1.000
Schedule tribe	0.291	1.338
OBC	0.208	1.232***
Others	-0.207	0.813
<b>Type of place of residence</b>		
Urban		1.000
Rural	0.063	1.065
<b>Women's Educational level</b>		
No education		1.000

Primary	-0.128	0.880
Secondary	-0.534	0.586**
Higher	-3.303	0.037***
<b>Wealth Index</b>		
Poorest		<b>1.000</b>
Poorer	-0.158	0.854
Middle	-0.082	0.921
Richer	-0.149	0.862
Richest	-0.356	0.701**
<b>Respondents Age</b>		
15 to 19		<b>1.000</b>
20 to 24	0.522	1.685***
25 to 29	0.462	1.587***
Number of Women	8659	
-2 loglikelihood	9253.922	
Chi-square Value	2153.096	
Significance Level	0.001	

## 6. Discussion

The analysis of data from NFHS-4 and NFHS-5 clearly indicate a significant decline in the percent of women married before the age of 18 across Tamil Nadu. This trend is consistent in both urban and rural areas, suggesting the effectiveness of program interventions, increased awareness and improvements in individual factors such as educational level and economic condition. The decline in percent of women married before age 18 among women aged 18-29 indicates steady progress and change in attitude towards early marriage. Three districts of Tamil Nadu in urban areas, namely, Thiruvarur, Tirunelveli and Kanniyakumari, and one district in rural areas, namely, Kancheepuram have less than five percent of women married below the age of 18, indicating that still a significant percent of women marrying below the age of 18 in both rural and urban areas. It is also found that none of the district in rural areas is in the range of 6-10 percent women marrying before the age of 18 whereas in urban areas, 6 districts are in the same range. This finding suggests that women in urban areas benefit from better access to education, media, and enforcement of legal norms, while rural areas continue to grapple with structural and cultural barriers.

In many of the districts in both rural and urban areas, percent of women in the age group 15-19 married before the age of 18 is between 11 and 15 percent. There are few districts in the range of 16-20 and more than 21 percent respectively in rural areas marrying before the age of 18. These findings underscore the need for targeted interventions. It is also interesting to note that percent of women in the age group 18-29 married below the age of 18 has declined considerably between NFHS 4 and NFHS 5 in almost all the districts of Tamil Nadu irrespective of place of residence.

Multivariate results showed that Christian women and women belonging to OBC (Other Backward Castes) have lower odds to marry before the age of 18 as compared to Hindu women and women belong to scheduled caste, which indicates the critical role of cultural norms and community practices in deciding the timing of marriage. Rural women are at higher

risk of marrying before the age of 18 than their urban counterparts. The finding stresses the need for addressing area specific barriers such as poverty, education, cultural beliefs and women's agency. Higher educational attainment and better household wealth status have significantly strong impact in terms of reduced likelihood of marrying before the legal minimum age at marriage. These findings align with the studies across the world and elucidate the empowerment of women to make informed life choices and delay marriages. It is interesting to note that women belong to older cohort in the survey has higher risk of marrying early indicating the improvements among women in the younger generation and are benefitting from the policy and social changes.

## 7. Conclusions and Recommendations

The study demonstrates a clear decline in teenage marriage in Tamil Nadu over time, yet notable district level urban and rural disparities persist. Socioeconomic factors such as education and household wealth play a vital role delaying marriage, while cultural and structural factors continue to influence marriage patterns. These findings emphasizes the need for target interventions, expansion of secondary and higher education for girls, and stronger enforcement of existing legal frameworks. Addressing these factors in an integrated manner is essential for achieving sustained reductions in child marriage and advancing public health and development outcomes.

## 8. The way forward

The findings underscore the importance of strengthening rural education systems, especially secondary and higher education for girls, enhancing the economic opportunities to reduce the financial burden of parents, and interventions that engage community leaders and religious institutions to create awareness at the community level. The incidence of teenage marriages also varies across districts of Tamil Nadu. Hence, there is a need to effectively handle the issue of early marriages with the strict implementation of the laws. Further, it is also necessary to educate people on the consequences of early marriages among girls and repercussions on health and development of the society.

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