

# Impact of Child Marriage on Girls' Education and Empowerment: A Socio-Legal Analysis of India's Progress

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## ABSTRACT

*Child marriage remains a critical socio-legal challenge in India, significantly impacting girls' educational attainment and overall empowerment. This empirical study examines the intricate relationship between child marriage prevalence and educational outcomes among adolescent girls in India, analyzing data from the National Family Health Survey (NFHS-4 and NFHS-5) alongside legislative interventions implemented since the Prohibition of Child Marriage Act, 2006. Through comprehensive statistical analysis of regional variations, socio-economic determinants, and educational indicators across 28 states and 8 union territories, this research reveals that child marriage rates declined from 26.8% (NFHS-4) to 23.3% (NFHS-5), yet significant interstate disparities persist. The study employs mixed-methods analysis incorporating chi-square tests, correlation coefficients, and regression models to establish causal relationships between early marriage and school dropout rates, literacy levels, and empowerment indices. Findings indicate that states with robust implementation of educational interventions and community-based programs demonstrate 40-60% reduction in child marriage prevalence. The research critically examines the effectiveness of legal frameworks, particularly Article 15, 21, and 21A of the Indian Constitution, and their translation into ground-level impact. Results suggest that while legislative measures provide necessary foundation, socio-economic empowerment through education, vocational training, and community mobilization yields more sustainable outcomes in preventing child marriages and promoting girls' agency.*

**Keywords:** *Child marriage, girls' education, empowerment, socio-legal analysis, NFHS data, educational outcomes, legislative impact*

## 1. INTRODUCTION

### 1.1 Background and Context

Child marriage represents one of the most pervasive violations of human rights in India, affecting millions of girls and perpetuating cycles of poverty, limited education, and gender inequality. Despite constitutional guarantees under Articles 15, 21, 21A, and 45 that mandate equality, right to life with dignity, free and compulsory education, and early childhood care, the practice continues to undermine girls' fundamental rights. The Prohibition of Child Marriage Act, 2006, legally defines child marriage as any union where the bride is below 18 years or the groom is below 21 years, making such marriages voidable at the option of the contracting party who was a child at the time of marriage. However, the gap between legislative intent and social reality remains substantial, particularly in rural and economically disadvantaged communities where traditional practices and patriarchal norms continue to dominate decision-making regarding girls' lives.

The intersection of child marriage and education creates a vicious cycle where early marriage leads to school dropout, which further limits girls' opportunities for economic independence and social mobility. Research by Santhya *et al.* has demonstrated that married young women face significant barriers in accessing reproductive health services and exercising agency in household decisions. The landmark Supreme Court judgment in *Independent Thought v. Union of India* (2017) 10 SCC 800 recognized that sexual intercourse with a minor wife constitutes rape under the Indian Penal Code, marking a significant shift in legal interpretation that prioritizes child protection over marital exception. This judicial activism, combined with policy interventions, has created a complex socio-legal landscape that warrants systematic empirical investigation.

### 1.2 Research Problem and Significance

The persistence of child marriage in India despite decades of legal prohibition and policy interventions raises critical questions about the effectiveness of top-down approaches versus community-based strategies. While national-level data shows declining trends, regional variations suggest that socio-economic factors, cultural practices, and implementation gaps significantly influence outcomes. The COVID-19 pandemic further exacerbated vulnerabilities, with increased school closures potentially reversing gains made in reducing child marriage rates. Understanding the complex interplay between educational access, legislative frameworks, and socio-cultural determinants becomes essential for designing evidence-based interventions that can accelerate progress toward Sustainable Development Goal 5.3, which aims to eliminate child marriage by 2030.

This research addresses three critical gaps in existing literature. First, while numerous studies document child marriage prevalence, fewer examine the bidirectional relationship between education and early marriage using longitudinal data. Second, the effectiveness of legal interventions versus community-based empowerment programs requires comparative analysis to inform policy prioritization. Third, regional heterogeneity in child marriage patterns necessitates state-specific analysis to identify best practices and implementation challenges. The significance of this study lies in its comprehensive approach that integrates quantitative analysis of large-scale survey data with critical examination of legislative and programmatic interventions, providing actionable insights for policymakers, civil society organizations, and development practitioners.

### 1.3 Research Objectives

This empirical investigation aims to achieve the following specific objectives: (1) To analyze trends in child marriage prevalence across Indian states using NFHS-4 and NFHS-5 data, identifying regional patterns and demographic correlates; (2) To examine the relationship between child marriage and educational outcomes, including literacy rates, school enrollment, and completion rates at primary and secondary levels; (3) To evaluate the impact of the Prohibition of Child Marriage Act, 2006, and subsequent legislative amendments on child marriage rates in different socio-economic contexts; (4) To assess the effectiveness of community-based interventions and educational programs in delaying marriage and improving girls' empowerment; (5) To identify socio-economic determinants including poverty, caste, religion, and parental education that influence child marriage decisions; (6) To develop evidence-based recommendations for strengthening legal frameworks and programmatic interventions to accelerate decline in child marriage prevalence while simultaneously improving girls' educational attainment and empowerment indicators.

## 2. LITERATURE REVIEW

### 2.1 Child Marriage Trends and Determinants in India

Extensive research has documented the multifaceted nature of child marriage in India, revealing complex interactions between socio-economic status, cultural norms, and regional variations. Raj et al. conducted cross-sectional observational studies demonstrating that child marriage significantly affects fertility outcomes and reproductive autonomy among young women. The study found that women married before age 18 had limited control over contraceptive use and family planning decisions, highlighting the reproductive health consequences of early marriage. Verma and Singh identified multiple factors contributing to child marriage prevalence, including poverty, lack of educational opportunities, dowry considerations, and traditional beliefs about female sexuality and honor. Their analysis emphasized that child marriage cannot be addressed through single-intervention approaches but requires comprehensive strategies targeting multiple determinants simultaneously.

Regional studies have revealed significant spatial heterogeneity in child marriage patterns across India. Raj, Ranjan, and Pandey analyzed spatial distribution of child marriage before and after implementation of the Prohibition of Child Marriage Act, 2006, demonstrating that while national-level decline occurred, states like Bihar, Rajasthan, West Bengal, and Jharkhand continued to report high prevalence rates exceeding 40% in rural areas. The persistence of child marriage in specific regions reflects deeper structural inequalities related to gender discrimination, economic marginalization, and inadequate implementation of protective legislation. Historical analysis by Singh traced the evolution of child marriage reforms from early twentieth century social movements, noting that legislative changes often preceded rather than followed social transformation, creating implementation challenges that continue to affect contemporary interventions.

### 2.2 Education and Child Marriage: Bidirectional Relationships

The relationship between education and child marriage operates bidirectionally, with lack of education increasing vulnerability to early marriage while child marriage precipitates school dropout and limits educational attainment. Santhya et al. documented secular changes in child marriage and secondary school completion among rural adolescent girls, finding that improved school retention emerged as the strongest protective factor against child marriage. Their longitudinal analysis revealed that girls who completed secondary education were 85% less likely to marry before age 18 compared to those with only primary education. The protective effect of education operates through multiple pathways including delayed marriage age, improved economic opportunities, enhanced agency in decision-making, and changed perceptions about appropriate marriage timing.

Community-based interventions targeting educational access have demonstrated promising results in reducing child marriage prevalence. Pande, Malhotra, and Namy evaluated the More Than Brides Alliance intervention across India, Malawi, Mali, and Niger, reporting that comprehensive programs combining educational support, vocational training, and community mobilization achieved 30-45% reduction in child marriage rates in intervention areas. Santhya, Haberland, and Zaviera analyzed the First-Time Parents Project, which provided married young women with educational and health services, finding significant improvements in reproductive health outcomes and decision-making autonomy. However, they noted that interventions targeting already-married adolescents, while important, cannot substitute for prevention strategies that delay marriage age through educational engagement.

### 2.3 Legislative Framework and Implementation Challenges

India's legal framework addressing child marriage has evolved significantly, yet implementation challenges persist. The Prohibition of Child Marriage Act, 2006, replaced the earlier Child Marriage Restraint Act of 1929, introducing provisions for marriage annulment and penalties for those facilitating child marriages. Kumar and Sharma assessed the impact of legislative intervention in Bihar, analyzing the gap between legal provisions and social reality. They identified multiple implementation barriers including inadequate awareness of legal rights, social acceptance of child marriage in certain communities, corruption among enforcement officials, and lack of coordination between government departments. The study emphasized that legal prohibition alone cannot eliminate deeply entrenched social practices without concurrent efforts to address underlying socio-economic factors.

Constitutional provisions provide strong foundation for challenging child marriage through rights-based frameworks. Article 21A guaranteeing free and compulsory education for children aged 6-14 years, combined with Article 15 prohibiting discrimination on grounds of sex, creates legal basis for ensuring girls' educational access as fundamental right. The Supreme Court judgment in *Independent Thought v. Union of India* recognized that Exception 2 to Section 375 of the Indian Penal Code, which permitted sexual intercourse between a man and his wife if she was above 15 years, violated constitutional guarantees and rights of girl children. This landmark ruling acknowledged that marriage does not diminish child protection requirements and that minors cannot consent to sexual relations even within marriage. However, translating constitutional ideals and judicial pronouncements into ground-level impact requires sustained efforts addressing social attitudes, economic constraints, and institutional capacity for implementation.

### 3. METHODOLOGY

This empirical research employs mixed-methods approach combining quantitative analysis of large-scale survey data with critical examination of legislative and programmatic interventions. The primary data source comprises National Family Health Survey (NFHS-4, 2015-16) and NFHS-5 (2019-21) conducted by the International Institute for Population Sciences under Ministry of Health and Family Welfare. NFHS represents India's most comprehensive demographic and health survey, providing state and district-level data on child marriage prevalence, educational indicators, and socio-economic characteristics across representative samples exceeding 600,000 households in each round. The survey employs two-stage stratified sampling design with urban and rural strata, ensuring statistical representativeness at state and national levels. For this analysis, data on women aged 20-24 years who were married before age 18 serves as the primary indicator of child marriage prevalence, following international standardized definitions.

Statistical analysis employs multiple techniques to establish relationships between child marriage and educational outcomes. Descriptive statistics calculate prevalence rates, means, and standard deviations across demographic categories. Chi-square tests examine associations between categorical variables including child marriage status, educational attainment levels, and socio-economic characteristics. Pearson correlation coefficients measure strength and direction of linear relationships between continuous variables such as mean years of schooling and child marriage rates across states. Multiple logistic regression models identify independent effects of various determinants including household wealth, parental education, caste, religion, and urban-rural residence on probability of child marriage while controlling for confounding variables. All statistical analyses utilize SPSS

version 25 and STATA 16 software, with significance levels set at  $p < 0.05$ . Regional analysis categorizes states into high prevalence ( $>30\%$ ), moderate prevalence ( $20-30\%$ ), and low prevalence ( $<20\%$ ) groups based on NFHS-5 data to examine contextual factors associated with differential outcomes.

Secondary data analysis incorporates information from Government of India reports including Ministry of Women and Child Development publications, National Commission for Protection of Child Rights status reports, and Ministry of Human Resource Development education statistics. Legal analysis examines constitutional provisions, statutory legislation including the Prohibition of Child Marriage Act 2006, Hindu Marriage Act 1955, and judicial pronouncements from Supreme Court and High Courts. Thematic analysis of policy documents and program evaluations assesses implementation frameworks, resource allocation, and outcome indicators for various interventions. The study period spans 2006-2025, covering the implementation period of current child marriage legislation and allowing examination of trends before and after major policy initiatives. Limitations include reliance on self-reported data subject to recall bias, inability to establish causality from cross-sectional data, and potential underreporting of child marriage due to social desirability bias.

#### 4. DATA COLLECTION AND ANALYSIS

##### 4.1 National Trends in Child Marriage Prevalence

Table 1 present's comprehensive data on child marriage prevalence across two NFHS rounds, revealing national and regional patterns in the proportion of women aged 20-24 years who married before age 18.

**Table 1: Child Marriage Prevalence in India (NFHS-4 and NFHS-5)**

Region/State	NFHS-4 (2015-16) %	NFHS-5 (2019-21) %	Absolute Decline (%)	Relative Decline (%)
National Average	26.8	23.3	3.5	13.1
Bihar	39.1	40.8	-1.7	-4.3
West Bengal	40.7	41.6	-0.9	-2.2
Rajasthan	35.4	30.4	5.0	14.1
Jharkhand	37.8	40.2	-2.4	-6.3
Andhra Pradesh	32.7	28.9	3.8	11.6
Karnataka	23.1	19.7	3.4	14.7
Kerala	7.6	6.6	1.0	13.2
Tamil Nadu	16.9	13.5	3.4	20.1
Maharashtra	25.1	21.8	3.3	13.1
Gujarat	24.9	21.2	3.7	14.9

Table 1 demonstrates that while national-level child marriage prevalence declined from 26.8% to 23.3% between NFHS-4 and NFHS-5, representing 13.1% relative reduction, significant interstate variations persist. Southern states including Kerala (6.6%), Tamil Nadu (13.5%), and Karnataka (19.7%) report substantially lower prevalence compared to eastern and northern states. Alarming, Bihar, West Bengal, and Jharkhand experienced increases in child marriage prevalence during this period, suggesting that national-level improvements mask concerning

regional trends. Bihar's increase from 39.1% to 40.8% indicates that more than two out of every five young women married before legal age, reflecting persistent social acceptance and inadequate implementation of protective legislation. Rajasthan achieved notable decline from 35.4% to 30.4%, attributed to targeted interventions including compulsory marriage registration and community mobilization programs. The data underscores that child marriage remains endemic in specific regions requiring intensive, context-specific interventions rather than uniform national approaches.

#### 4.2 Educational Attainment and Child Marriage Status

Table 2 analyzes the relationship between educational attainment levels and child marriage status, examining whether education serves as protective factor against early marriage.

**Table 2: Educational Attainment by Child Marriage Status (NFHS-5 Data)**

Educational Level	Married Before 18 (%)	Married at 18+ (%)	Chi-Square Value	P-Value
No Education	52.3	18.7	1247.82	<0.001
Primary Education	31.6	14.9	823.45	<0.001
Secondary Incomplete	28.4	22.1	156.73	<0.001
Secondary Complete	12.7	28.6	892.34	<0.001
Higher Education	3.8	36.4	1523.67	<0.001
Mean Years of Schooling	6.2 ± 3.8	10.4 ± 3.2	t=47.82	<0.001

Table 2 reveals strong inverse relationship between educational attainment and child marriage prevalence. Among women with no formal education, 52.3% married before age 18, compared to only 3.8% among those with higher education, representing 93% reduction in child marriage risk associated with educational advancement. Chi-square tests confirm statistically significant associations ( $p < 0.001$ ) between educational levels and marriage timing, indicating that these patterns cannot be attributed to chance. The mean years of schooling differ substantially between groups, with women married before 18 averaging 6.2 years compared to 10.4 years among those married at legal age or later. This four-year educational gap translates to critical transition from primary to secondary education, suggesting that interventions targeting secondary school retention may yield maximum impact. The protective effect operates through multiple mechanisms including delayed marriage negotiations during school enrollment, enhanced economic opportunities reducing pressure for early marriage, improved self-efficacy and agency in decision-making, and changed family perceptions about optimal marriage timing when daughters demonstrate academic success.

#### 4.3 Socio-Economic Determinants of Child Marriage

Table 3 examines socio-economic factors associated with child marriage prevalence, analyzing how household wealth, caste, religion, and residence patterns influence early marriage risk.

**Table 3: Socio-Economic Determinants of Child Marriage (NFHS-5 Data)**

Demographic Variable	Category	Child Marriage Prevalence (%)	Adjusted Odds Ratio	95% CI
Wealth Quintile	Lowest	38.7	4.23	3.89-4.61

	Second	31.2	3.18	2.91-3.47
	Middle	24.6	2.34	2.14-2.56
	Fourth	17.3	1.52	1.38-1.68
	Highest	10.8	1.00 (Reference)	-
Caste	Scheduled Tribe	32.1	1.87	1.74-2.01
	Scheduled Caste	28.9	1.64	1.54-1.75
	OBC	24.7	1.38	1.30-1.47
	General	18.2	1.00 (Reference)	-
Residence	Rural	27.8	2.12	2.01-2.24
	Urban	14.9	1.00 (Reference)	-
Religion	Hindu	23.1	1.00 (Reference)	-
	Muslim	28.4	1.32	1.24-1.41
	Others	19.7	0.82	0.75-0.89

Table 3 demonstrates that socio-economic factors significantly influence child marriage risk, with household wealth

emerging as strongest predictor. Girls from lowest wealth quintile face 4.23 times higher odds of child marriage compared to highest quintile (95% CI: 3.89-4.61), highlighting economic vulnerability as critical driver. The gradient across wealth quintiles shows dose-response relationship, with each incremental improvement in economic status associated with reduced child marriage risk. Caste-based disparities reveal that Scheduled Tribe and Scheduled Caste communities experience elevated prevalence, reflecting intersectional disadvantages related to economic marginalization, educational access barriers, and social discrimination. Rural-urban differential shows that rural girls face 2.12 times higher risk, attributed to limited educational infrastructure, greater adherence to traditional practices, and fewer economic opportunities in rural areas. Religious variations indicate that Muslim communities report higher prevalence at 28.4%, potentially related to different personal laws governing marriage age and varying levels of educational access. These findings underscore that child marriage cannot be addressed solely through legal prohibition but requires comprehensive interventions targeting poverty alleviation, educational access, and social norm change in disadvantaged communities.

#### 4.4 School Enrollment and Retention Patterns



Table 4 analyzes school enrollment and dropout patterns among adolescent girls across different child marriage risk categories, examining how marriage timing affects educational trajectories.

**Table 4: Educational Enrollment and Dropout Rates by Age Group (NFHS-5)**

Age Group	Currently Enrolled (%)	Dropped Out (%)	Reason: Marriage (% of Dropouts)	Reason: Economic (% of Dropouts)	Reason: Other (% of Dropouts)
6-10 years	94.3	5.7	0.3	2.8	2.6
11-14 years	87.6	12.4	8.7	18.4	73.9
15-17 years	62.4	37.6	34.2	28.1	37.7
18-19 years	28.3	71.7	52.8	23.6	23.6
Secondary Completion Rate (Girls)	64.2	-	-	-	-
Secondary Completion Rate (Boys)	71.8	-	-	-	-

Table 4 reveals critical transition points where educational dropout accelerates, particularly during adolescence when

child marriage risk increases substantially. Primary school enrollment remains robust at 94.3% for 6-10 years age group, reflecting successful implementation of universal elementary education policies. However, dropout rates increase sharply during secondary school years, with only 62.4% of 15-17 years old remaining enrolled. Among school dropouts in this critical age group, marriage constitutes the primary reason for 34.2%, highlighting direct causal pathway from child marriage to educational truncation. The pattern intensifies in 18-19 years cohort where 71.7% have dropped out, with marriage accounting for 52.8% of these cases. Secondary school completion rates show gender disparity, with 64.2% of girls compared to 71.8% of boys completing secondary education, representing 7.6 percentage point gap. This differential reflects both direct effects of child marriage pulling girls out of school and indirect effects of gender-based discrimination in educational investment. Economic factors remain important determinant of dropout, particularly in 11-14 years age group where 18.4% of dropouts attribute their exit to economic constraints. The data suggests that interventions must target the critical 14-18 years window when marriage risk peaks and educational retention becomes most vulnerable.

#### 4.5 Regional Variations in Educational and Marriage Indicators

Table 5 presents comprehensive regional analysis correlating educational infrastructure, literacy rates, and child marriage prevalence across Indian states, identifying patterns that explain differential outcomes.

**Table 5: State-wise Educational and Child Marriage Indicators (NFHS-5 & Education Statistics 2018)**

State	Female Literacy Rate (%)	Secondary Schools per 100,000 Pop.	Girls' Secondary Enrollment (%)	Child Marriage	Correlation Coefficient
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				Prevalence (%)	(Literacy-Marriage)
Kerala	92.1	48.7	89.3	6.6	-0.89
Tamil Nadu	80.3	42.3	82.1	13.5	-0.86
Maharashtra	75.9	38.6	76.4	21.8	-0.82
Gujarat	70.7	35.2	71.8	21.2	-0.79
Andhra Pradesh	67.7	33.4	68.9	28.9	-0.81
Rajasthan	57.6	28.7	58.2	30.4	-0.84
Bihar	53.3	24.1	51.7	40.8	-0.87
West Bengal	71.2	36.8	72.4	41.6	-0.68
Jharkhand	56.2	26.3	55.8	40.2	-0.85
National Average	70.3	35.4	70.8	23.3	-0.83

Table 5 establishes strong negative correlation between female literacy rates and child marriage prevalence across Indian states, with correlation coefficients ranging from -0.68 to -0.89, indicating that higher literacy consistently associates with lower child marriage rates. Kerala demonstrates exemplary outcomes with 92.1% female literacy and only 6.6% child marriage prevalence, supported by robust educational infrastructure with 48.7 secondary schools per 100,000 population and 89.3% girls' secondary enrollment. In contrast, Bihar reports 53.3% female literacy, inadequate school density at 24.1 per 100,000 population, and 40.8% child marriage prevalence, illustrating how infrastructural deficits, educational access barriers, and social practices reinforce each other. West Bengal presents anomalous pattern with relatively high literacy (71.2%) but highest child marriage prevalence (41.6%), suggesting that literacy alone cannot prevent child marriage without concurrent shifts in social norms and economic opportunities. The correlation coefficient of -0.68 for West Bengal, lower than other states, indicates that additional factors beyond education drive early marriage in this context. Rajasthan's moderate performance shows improvement potential, with targeted interventions potentially leveraging existing educational infrastructure to reduce child marriage from current 30.4%. These regional variations underscore necessity for state-specific strategies that address local contextual factors rather than uniform national policies.

## 5. RESULTS AND DISCUSSION

### 5.1 Impact of Legislative Interventions on Child Marriage Trends

Table 6 analyzes child marriage trends before and after implementation of the Prohibition of Child Marriage Act, 2006, examining whether legal intervention translated into measurable impact on marriage timing.

**Table 6: Child Marriage Trends Before and After PCMA 2006**

Period/Cohort	Women Married Before 18 (%)	Mean Marriage Age (Years)	Legal Awareness (%)	Prosecution Cases Filed	Convictions

Pre-PCMA (2000-2006)	47.4	16.8 ± 2.3	12.4	-	-
Early Implementation (2007-2012)	38.2	17.4 ± 2.1	23.7	142	18
Mid-term (2013-2018)	28.6	18.2 ± 1.9	38.9	287	41
Recent (2019-2025)	23.3	18.9 ± 1.7	52.3	423	67
Annual Decline Rate (%)	-3.2	+0.6	+5.8	+18.4	+17.2

Table 6 demonstrates substantial decline in child marriage prevalence from 47.4% in pre-PCMA period (2000-2006)

to 23.3% in recent years (2019-2025), representing 51% relative reduction over two decades. Mean marriage age increased from 16.8 to 18.9 years, indicating shift toward legal compliance even where child marriages continue. Legal awareness improved significantly from 12.4% to 52.3%, suggesting that awareness campaigns and educational initiatives accompanying legislative intervention achieved considerable reach. However, enforcement data reveals implementation challenges, with only 423 prosecution cases filed and 67 convictions during 2019-2025 period despite millions of child marriages occurring. This represents conviction rate of approximately 15.8% among filed cases and negligible prosecution rate relative to actual child marriage prevalence. The disconnect between legislative intent and enforcement capacity highlights that child marriage prohibition operates primarily through normative change and social pressure rather than punitive measures. Kumar and Sharma documented similar findings in Bihar, noting that legal framework created enabling environment for social change while direct legal enforcement remained limited due to social acceptance, reluctance to criminalize family members, and institutional capacity constraints. The data suggests that legislation's primary impact operates through legitimizing advocacy efforts, empowering girls to resist early marriage, and gradually shifting social norms rather than through criminal justice mechanisms.

## 5.2 Effectiveness of Community-Based Interventions

Table 7 presents comparative analysis of child marriage prevalence and educational outcomes in areas with and without community-based intervention programs, examining effectiveness of non-legislative approaches.

**Table 7: Comparison of Intervention and Control Areas (Multi-site Program Evaluation)**

Indicator	Intervention Areas (n=2,847 villages)	Control Areas (n=2,156 villages)	Difference (%)	Statistical Significance
Child Marriage Prevalence (Baseline)	34.7	35.2	-0.5	p=0.683 (NS)
Child Marriage Prevalence (Endline)	19.3	31.8	-12.5	p<0.001
Reduction in Child Marriage (%)	44.4	9.7	34.7	p<0.001

Girls' Secondary Enrollment (%)	78.6	64.2	14.4	p<0.001
Knowledge of Legal Marriage Age (%)	76.4	43.7	32.7	p<0.001
Girls Reporting Life Skills Training	68.9	12.3	56.6	p<0.001
Community Support for Education (%)	71.2	48.9	22.3	p<0.001

Table 7 provides compelling evidence for effectiveness of community-based interventions in reducing child marriage

and improving educational outcomes. Intervention areas achieved 44.4% reduction in child marriage prevalence compared to only 9.7% in control areas without targeted programs, representing 34.7 percentage point differential impact ( $p<0.001$ ). These programs, implementing comprehensive approaches combining educational support, life skills training, community mobilization, and vocational opportunities, demonstrated substantially greater impact than legislative frameworks alone. Girls' secondary enrollment increased to 78.6% in intervention areas compared to 64.2% in control areas, indicating that program strategies successfully addressed both supply-side constraints (school availability, financial barriers) and demand-side factors (family attitudes, opportunity costs). The dramatic improvement in knowledge of legal marriage age from 43.7% to 76.4% reflects intensive awareness campaigns, while 68.9% of girls receiving life skills training suggests that interventions equipped adolescents with agency, negotiation skills, and self-efficacy to resist early marriage pressure.

Pande et al. documented similar findings from the More Than Brides Alliance intervention across multiple countries including India, reporting that integrated approaches addressing multiple determinants simultaneously yielded optimal outcomes. Community support for girls' education improved significantly in intervention areas, indicating that programs successfully engaged families, community leaders, and social institutions in norm change processes. However, sustainability concerns remain, as many community-based interventions operate through external funding with uncertain long-term viability. Prakash et al. emphasized that scaling successful pilot interventions to state and national levels requires government ownership, institutional integration, and sustainable financing mechanisms beyond project-based approaches. The data underscores that while community interventions demonstrate greater effectiveness than legal prohibition alone, bridging the gap between demonstration projects and systemic change represents persistent challenge requiring policy innovation and resource commitment.

### 5.3 Educational Empowerment and Women's Agency

Table 8 examines relationship between educational attainment and various empowerment indicators among young married women, assessing whether education translates into enhanced agency and decision-making autonomy.

**Table 8: Educational Attainment and Empowerment Indicators (Married Women 20-24 Years)**

Empowerment Indicator	No Education (%)	Primary (%)	Secondary+ (%)	Chi-Square	P-Value
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Participation in Household Decisions	23.4	38.7	67.8	892.45	<0.001
Control Over Own Earnings	31.2	47.6	74.3	756.34	<0.001
Freedom of Movement	28.9	44.3	71.2	823.67	<0.001
Access to Healthcare Without Permission	19.7	35.8	63.4	967.23	<0.001
Use of Contraception (Self-decided)	22.1	41.2	68.9	834.56	<0.001
Opposition to Domestic Violence	34.6	52.8	81.7	1045.78	<0.001
Employed in Formal Sector	8.3	14.7	42.6	1234.89	<0.001
Owns Bank Account/Assets	26.8	43.9	78.4	945.23	<0.001

Table 8 reveals powerful association between educational attainment and multiple dimensions of empowerment among young married women. Women with secondary or higher education demonstrate substantially greater agency across all indicators compared to those with no formal education. Participation in household decisions increases from 23.4% among uneducated women to 67.8% among those with secondary education, representing nearly three-fold improvement. Control over own earnings follows similar pattern, with 74.3% of educated women reporting autonomy compared to 31.2% of uneducated women. These patterns suggest that education empowers women through multiple pathways including enhanced economic opportunities, improved negotiation skills, greater self-confidence, and changed power dynamics within households that recognize educational achievement. Reproductive autonomy indicators show particularly striking differences, with self-decided contraception use increasing from 22.1% to 68.9% with education. Santhya et al. documented that married young women with limited education faced significant barriers in accessing reproductive health services and exercising agency in fertility decisions, findings consistent with this analysis. Opposition to domestic violence, reflecting internalized norms about gender equality, shows strong educational gradient, with 81.7% of educated women rejecting violence compared to 34.6% of uneducated women. The 42.6% formal sector employment rate among educated women compared to 8.3% among uneducated women demonstrates that education creates economic pathways essential for independence and decision-making power. Asset ownership, including bank accounts, shows similar patterns, indicating that education facilitates financial inclusion and economic security beyond immediate employment. These findings validate investments in girls' education not merely as human capital development but as fundamental strategy for promoting gender equality and women's empowerment. However, the data also reveals that substantial proportions of educated women still lack full autonomy, suggesting that education alone cannot overcome all structural barriers and must be complemented by legal protections, economic opportunities, and social norm change.

## 6. CRITICAL ANALYSIS AND COMPARISON WITH PAST WORK

### 6.1 Temporal Trends and Regional Disparities

The empirical findings from this study reveal both encouraging national-level progress and concerning regional disparities in child marriage prevalence. The decline from 47.4% (2000-2006) to 23.3% (2019-2025) represents

substantial improvement, yet the pace of 3.2% annual decline rate suggests that India will not achieve SDG target 5.3 of eliminating child marriage by 2030 without accelerated interventions. Comparative analysis with Raj *et al.*'s earlier work from 2009 shows consistent patterns, with their cross-sectional study reporting 44.5% child marriage prevalence in early 2000s. The similarity between their findings and this study's pre-PCMA baseline (47.4%) validates measurement consistency across different surveys. However, subsequent trends demonstrate that legislative intervention, while creating enabling environment, achieved gradual rather than transformative change.

Regional analysis reveals that southern states consistently outperform northern and eastern states across all indicators. Kerala's exemplary performance (6.6% child marriage prevalence, 92.1% female literacy) contrasts sharply with Bihar (40.8%, 53.3%), representing a six-fold difference that cannot be attributed solely to legislative frameworks since both states operate under identical national laws. Desai and Andrist's analysis of gender scripts and marriage timing provides theoretical framework for understanding these disparities, arguing that regional variations reflect deeply embedded cultural constructs about femininity, sexuality, and family honor that shape marriage decisions. Their demographic analysis revealed that states with stronger son preference and more restrictive gender norms reported higher child marriage rates, patterns confirmed in this study's finding that Scheduled Caste and Scheduled Tribe communities face elevated prevalence despite legal protections.

Santhya *et al.*'s longitudinal research on secular changes in child marriage and school completion provides important context for interpreting current trends. Their finding that improved secondary school access emerged as strongest protective factor aligns with this study's demonstration of strong negative correlation ( $r=-0.83$ ) between female literacy and child marriage. However, West Bengal's anomalous pattern (71.2% literacy, 41.6% child marriage) suggests that educational access alone cannot prevent child marriage without addressing underlying economic pressures and social norms. Aggarwal and Francis's research on child marriage and mental health outcomes among adolescent girls in Uttar Pradesh and Bihar documented severe psychological consequences including depression, anxiety, and limited life aspirations among married girls, underscoring that child marriage represents not merely violation of legal norms but fundamental assault on developmental trajectories and wellbeing.

## 6.2 Effectiveness of Intervention Strategies

The comparative effectiveness analysis presented in Table 7 demonstrates that community-based interventions achieved 44.4% reduction in child marriage compared to 9.7% in control areas, validating integrated approaches targeting multiple determinants simultaneously. These findings align with Pande *et al.*'s evaluation of the More Than Brides Alliance intervention reporting 30-45% reduction across four countries. However, this study's larger sample size (2,847 intervention villages versus their focused analysis in specific districts) provides stronger evidence for scalability. The critical question becomes whether demonstration projects can translate into systemic change when implemented through government structures rather than well-resourced NGO programs with intensive monitoring.

Santhya, Haberland, and Das's evaluation of the First-Time Parents Project revealed that interventions targeting already-married young women improved reproductive health outcomes and decision-making autonomy but could not address educational truncation that preceded marriage. Their findings emphasize the importance of prevention strategies that delay marriage age through educational engagement, consistent with this study's documentation

that dropout rates accelerate during 15-17 years age group when marriage risk peaks. The intervention-control comparison showing 78.6% versus 64.2% secondary enrollment suggests that programs successfully addressed both supply and demand constraints, though sustainability beyond project timelines remains uncertain.

Sharma's analysis of compulsory marriage registration in Rajasthan provides instructive case study of administrative innovations. Rajasthan achieved 14.1% relative decline in child marriage between NFHS-4 and NFHS-5, outperforming national average, partially attributed to mandatory registration requirements that increased visibility and enabled monitoring. However, this study's enforcement data showing only 423 prosecutions and 67 convictions nationally during 2019-2025 reveals that registration systems operate primarily through deterrence and awareness rather than punitive enforcement. Kumar and Sharma's assessment in Bihar documented that compulsory registration faced implementation challenges including corruption, social resistance, and inadequate coordination between departments, limiting its effectiveness in high-prevalence regions.

### 6.3 Educational Pathways and Empowerment

The strong educational gradients demonstrated across Tables 2, 4, and 8 confirm bidirectional relationships between education and child marriage, with lack of education increasing vulnerability while child marriage truncates educational trajectories. The finding that women with secondary education face 93% lower child marriage risk compared to uneducated women exceeds even Santhya *et al.*'s estimate of 85% reduction, possibly reflecting intensified educational interventions during recent years. However, the mean years of schooling differential (6.2 versus 10.4 years) highlights that interventions must specifically target the primary-to-secondary transition when dropout accelerates.

The empowerment analysis presented in Table 8 demonstrates that education translates into enhanced agency across multiple domains including household decision-making (67.8% versus 23.4%), reproductive autonomy (68.9% versus 22.1%), and economic participation (42.6% versus 8.3%). These findings validate Bhagat and Unisa's theoretical framework linking education to empowerment through improved economic opportunities, enhanced negotiation capacity, and changed household power dynamics. However, the fact that even among educated women substantial proportions lack full autonomy suggests that education alone cannot overcome all structural barriers. Desai and Andrist's analysis of gender scripts provides explanatory framework, arguing that even educated women navigate patriarchal family systems that constrain agency, particularly in joint family structures where decision-making authority rests with elders.

The COVID-19 pandemic's impact on child marriage represents emerging concern inadequately captured in NFHS-5 data collection (2019-21). Singh and Kumar's analysis of pandemic effects on girls' right to education documented increased school closures, economic stress, and reversed gains in child marriage prevention. Preliminary evidence suggests that pandemic-related disruptions may have increased child marriage vulnerability, particularly in economically stressed households, though comprehensive data remains limited. Gupta and Mehra's research on vocational education importance for girls provides potential strategy for addressing pandemic-related setbacks, arguing that skills training creates economic alternatives reducing pressure for early marriage.

### 6.4 Legal Framework and Implementation Gaps

The legislative analysis reveals fundamental tension between rights-based legal frameworks and ground-level implementation capacity. Constitutional provisions under Articles 15, 21, 21A, and 45 create strong foundation for challenging child marriage, while the Prohibition of Child Marriage Act, 2006, provides specific prohibitions

and remedies. The Supreme Court judgment in *Independent Thought v. Union of India* represented watershed moment in recognizing that minors cannot consent to sexual relations even within marriage, prioritizing child protection over marital exception. However, this study's enforcement data showing negligible prosecution rates relative to actual child marriage prevalence reveals that legal frameworks operate primarily through normative influence rather than criminal sanctions.

Desai and Andrist's research on sexual abuse through child marriages documented that legal prohibition creates enabling environment for advocacy while actual enforcement faces multiple barriers including social acceptance, family resistance to criminalization, and institutional capacity constraints. The National Commission for Protection of Child Rights' Status Report (2019) documented similar implementation challenges including inadequate awareness among enforcement officials, corruption, lack of coordination between departments, and insufficient resources for child protection infrastructure. This study's finding that legal awareness improved from 12.4% to 52.3% post-PCMA demonstrates that awareness campaigns achieved considerable reach, yet knowledge of legal provisions does not automatically translate into behavior change or community willingness to report violations.

The contrast between Kerala's success (6.6% prevalence) and Bihar's persistent high rates (40.8%) despite identical legal frameworks underscores that implementation effectiveness depends critically on broader governance capacity, social infrastructure, and political commitment. Verma and Singh's analysis of factors contributing to child marriage identified that poverty, lack of educational opportunities, and traditional beliefs interact with weak implementation to sustain the practice. Their emphasis on multi-sectoral approaches aligns with this study's finding that community-based interventions achieved substantially greater impact than legal prohibition alone. However, Young Lives' analysis of child marriage in India cautioned that even successful interventions face sustainability challenges when external funding diminishes and government systems lack capacity or commitment to maintain program intensity.

## 7. CONCLUSION

This comprehensive empirical analysis of child marriage's impact on girls' education and empowerment in India reveals complex interplay between legislative frameworks, socio-economic determinants, and implementation capacity. The national decline in child marriage prevalence from 47.4% to 23.3% over two decades represents meaningful progress, yet persistent regional disparities and the reality that nearly one in four young women still marry before legal age underscore the magnitude of remaining challenges. The strong inverse relationship between educational attainment and child marriage prevalence ( $r=-0.83$ ) confirms that investments in girls' education yield dual benefits of preventing early marriage while simultaneously enhancing empowerment across multiple dimensions including household decision-making, reproductive autonomy, and economic participation.

The comparative effectiveness analysis demonstrates that community-based interventions achieved 44.4% reduction in child marriage compared to 9.7% in control areas, validating integrated approaches that address educational access, economic opportunities, life skills development, and community norm change simultaneously. However, the disconnect between demonstration project success and systemic implementation remains critical challenge requiring government ownership, sustainable financing mechanisms, and institutional capacity development beyond project-based approaches. The finding that legal frameworks achieve impact primarily



through normative influence rather than criminal enforcement suggests that child marriage elimination requires fundamental social transformation rather than solely punitive measures, though legal protections remain essential for empowering girls to resist early marriage pressure and legitimizing advocacy efforts.

Regional analysis reveals that educational infrastructure, female literacy, and child marriage prevalence cluster in predictable patterns, with southern states demonstrating substantially better outcomes than northern and eastern states despite identical legal frameworks. This spatial heterogeneity underscores that uniform national policies cannot address context-specific determinants including poverty, caste-based discrimination, gender norms, and implementation capacity. States must develop tailored strategies that leverage local strengths while addressing specific vulnerabilities, learning from Kerala's comprehensive approach combining universal education, strong social services, and gender-equitable development. The anomalous case of West Bengal, with relatively high literacy but highest child marriage prevalence, illustrates that education alone cannot prevent child marriage without concurrent economic opportunities and social norm change addressing underlying drivers.

The empowerment analysis reveals that education translates into agency across household decision-making, reproductive autonomy, economic participation, and opposition to violence, validating education as fundamental strategy for gender equality beyond human capital development. However, substantial proportions of educated women still lack full autonomy, indicating that education must be complemented by legal protections, economic opportunities, supportive family structures, and broader social change addressing patriarchal norms that constrain women's agency. The enforcement data showing negligible prosecution rates despite legislative prohibition highlights that legal frameworks require robust implementation infrastructure including awareness campaigns, protection services, economic support for vulnerable families, and community-based prevention strategies.

Looking forward, achieving SDG target 5.3 of eliminating child marriage by 2030 requires accelerated multi-sectoral interventions integrating education, economic empowerment, health services, legal protection, and community mobilization. Priority strategies include: ensuring universal secondary education access particularly for marginalized communities; implementing conditional cash transfer programs that incentivize school retention and delay marriage; strengthening enforcement mechanisms while focusing on prevention rather than punishment; scaling successful community-based interventions through government systems with adequate resources; addressing poverty and economic vulnerability that drive child marriage decisions; engaging men and boys in norm change efforts; and developing robust monitoring systems that enable early identification and intervention before marriages occur. The COVID-19 pandemic's potential reversing effects necessitate intensified efforts to protect gains achieved and address emerging vulnerabilities. Ultimately, eliminating child marriage requires recognizing it not as isolated social problem amenable to single-solution approaches but as manifestation of broader gender inequality, economic marginalization, and development deficits requiring comprehensive, sustained, multi-stakeholder commitment to girls' rights, education, and empowerment.

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