Compendium | December 2020

FOUR AREAS OF INFLUENCE DRIVING CHILD MARRIAGE:

What the Data Tells us and how it can Inform Programming

A 2020 compendium of findings and recommendations to strengthen the evidence base and impact of social and behaviour change interventions to end child marriage.
OVERVIEW

It is globally recognized that child marriage constitutes a human rights violation. Even in the face of overwhelming evidence about the negative health and social consequences of the practice, an estimated one in five girls around the world experience child marriage. In this context, there has been limited evidence on the role that social and behavioural drivers are playing in perpetuating this harmful practice. To help address this gap, the United Nations Children’s Fund (UNICEF) partnered with the University of California San Diego (USCD) to explore some of the key areas that influence child marriage. This work consisted of secondary analysis of nationally representative and population-specific data from India, Vietnam, Peru, Niger and Ethiopia, with a focus on:

- The child marriage decision-making process;
- Parent-child relationships;
- Community level social norms;
- Geography.

This executive summary presents some of the most critical findings and programmatic implications from this research, and the larger body of engagement forged by this partnership. The remainder of this compendium provides the individual briefs and manuscripts produced by the research.

BACKGROUND

Today, child marriage – marriage before the age of 18 – is stealing childhoods and leading to lifelong consequences for girls around the world, with those living in poverty at greatest risk. Worldwide, 650 million women and girls alive today were married as minors. As global efforts to end child marriage continue to shift from vertical, sector driven approaches (e.g. provision of education) to include more holistic, effective community engagement and gender empowerment strategies, there has been a growing need for more empirical evidence concerning the social and behavioural drivers of child marriage. This includes new research that directly interrogates the intersection between gender inequitable norms, practices and girl child marriage.

To address this need, UNICEF entered a partnership with UCSD to build a strong, and global evidence base on the root drivers of child marriage to inform Communication for Development (C4D), Social Behaviour Change Communication (SBCC), and cross-sectoral interventions aimed at reducing child marriage. The research focused on Ethiopia, Peru, India, Vietnam, and Niger – where existing population-level data was strongest – exploring the areas of decision-making, parent-child relationship, community-level social norms, and geography.

The findings are intended for UNICEF and United Nations Population Fund (UNFPA) offices working on the Global Programme to Accelerate Action to End Child Marriage, as well as other programmers, researchers, and organizations interested in better understanding and eliminating today’s drivers of child marriage around the world.

Specifically, this body of evidence can:

- Reinforce understanding of what influences child marriage at different levels and among different social groups, including girls, women, men and communities;
- Inform the expansion of indicators associated with child marriage beyond the individual and household-level indicators related to poverty, development and education, to highlight the roles of gender norms, parent-child relationships, and geographies;
- Offer useful methodologies for capturing social drivers and influencers related to child marriage that can be adapted for examination in other national contexts;
- Advocate for a deeper analysis of the role of influencers and marriage decision-making;
- Highlight the need for exploring how gender socialization can be better institutionalized in positive parenting, particularly on positive masculinities that can delay child marriage and other forms of gender-based violence.

RESEARCH OUTPUTS & SECTIONS OF COMPRENDIUM

The outputs from this partnership with USCD include three peer-reviewed academic manuscripts and four research briefs directed at programmes. Each of these briefs are also available separately through the links provided below.

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Programmers interested in more specific recommendations are encouraged to review the briefs. Researchers and any other actor interested in more elaboration and scholarly exploration should consider the manuscripts.
KEY FINDINGS

This section summarizes the findings from each of the four research areas covered by the partnership between UNICEF and USCD.

CHILD MARRIAGE DECISION-MAKING PROCESS (with special focus on Ethiopia and India):

This study analysed available, population-level qualitative data from Oroma in Ethiopia, and Jharkhand in India. The data analysed was generated from semi-structured, in-depth interviews with girls and women aged 13-23 years (n=91), and up to three key marital decision makers per girl/women (n=114). Analysis of the data revealed that:

- There are three phases to the early marriage decision-making process: initiation, negotiation and final decision-making.
- Different influencers affect different phases of the early marriage process:
  - In the initiation phase, marriage discussion tends to be led by elders and non-nuclear family members, with girls largely being excluded. This phase is deeply rooted in cultural traditions.
  - The negotiation phase is characterized by family discussions, and here too, girls have limited voice. This phase involves the greatest variety of actors compared to other phases and it is the most open to external influences. It represents a touchpoint to steer the negotiations outcome away from early marriage. External advocates outside of the traditional family and cultural circle, such as early marriage prevention counsellors and teachers, help girls voice their resistance to early marriage. They also have the ability to deter adverse social repercussions for the family, thanks to the knowledge and position associated with their role.
  - In the final decision-making phase of the early marriage process, parents, particularly the father, tend to be the ultimate decision makers. Once the early marriage process reaches the final decision-making stage, girls mostly acquires to their parents’ decision. Early marriage was justified by the desire to find a ‘good match’ and by fear of limited future marital prospects.
- Along these pathways to marriage, there is little to no opportunity for the girls to exercise choice or agency, without the social support from family members or external influences.
- In a minority of cases, early marriage discussions were initiated, negotiated and decided by the young couples themselves. In these cases, girls were seen to maintain their voice and agency, exhibiting self-efficacy to move ahead with their decision despite potential parental disapproval. These couple-led early marriage decision processes were mostly influenced by peers rather than parents.

PARENT-CHILD RELATIONSHIPS (with a special focus on Ethiopia, India, Vietnam and Peru):

This paper analysed data from the Young Lives Study (n=1,648), which follows girls between the ages of 8 and 19 years in Ethiopia, India, Vietnam and Peru. Examining two aspects of positive parenting (parent-child communication and parent-child relationship quality) in early adolescence (at age 12) within the Young Lives Study, the analysis revealed that:

- Nearly 1 in 5 girls (18 per cent) reported marrying prior to 18 years of age. Child marriage prevalence was high in both India and Ethiopia, with the latter reporting very early marriages (married before age 16).
- Higher parent-child relationship quality at age 12 was protective against very early marriages.
- Quality parent-child communication was protective against child and early marriage; however, it increased the likelihood of marriage after it became legally permissible (age 18 years in all four countries).
- School dropout and early menarche put girls at greater risk of child and very early marriages.

COMMUNITY-LEVEL SOCIAL NORMS (with a special focus on Niger)

This study analysed data from a sample of adolescent wives and their husbands (N=581) that were included in the evaluation of a family planning intervention in the Dossa Region of Niger. The analysis explored two aspects. Firstly, the age of marriage and girls’ marital choice by looking at both descriptive norms (the age at which people got married and whether the girl was involved in her marital choice) and, secondly, injunctive norms (perception of community expectations of age of marriage and of girls’ involvement in marital choice). It revealed that:

- Women marry younger (at age 14 on average) than men, who were on average nine years older than their wives.
- Adolescent girls married at older ages in those villages where a larger proportion of girls reported being involved in the decision to marry (a descriptive social norm). And, where a larger proportion of husbands believed that their communities were supportive of girls’ involvement in marital choice (an injunctive social norm).
- Adolescent wives were more likely to report that they had marital choice in communities where more

GEOGRAPHY (with a special focus on India)

This study analysed district-level data from the National Family Health Survey-4 and the 2011 India Census, exploring sub-national variations in the prevalence of child marriage among 20 to 24 year old girls, and the social and connectivity factors within those locations that may influence child marriage. The analysis revealed that:

- The prevalence of child marriage varies significantly not only between states, but also between different districts within a state.
- Some factors influencing the prevalence of child marriage have a spillover effect, explaining levels of child marriage not only in a given community, but also in neighbouring communities.
- Such influencing factors with spillover effect on neighbouring districts include population density and proximity to the district border area (both associated with higher prevalence of child marriage), education levels and presence of marginalized groups (both associated with lower levels of child marriage).
- Communities whose neighbouring communities were near state borders also tended to have higher levels of child marriage.
- On average, districts with higher levels of newspaper consumption among females and where females had mobile phone access also had lower levels of child marriage; but these relationships varied across states and districts.
PROGRAMME RECOMMENDATIONS

These studies confirm that child marriage is influenced by multi-faceted factors, occurs in diverse contexts, is not always coerced and is responsive to multiple pathways. A nuanced approach to understanding gender-based community norms is central to designing behaviour and social norms change interventions. Context matters and risk reduction and mitigation interventions should be informed by sub-national geographies, including at district levels, and guided by data. Early positive parenting and socialization can influence decision-making around marriage as well as values around gender equality. This compendium of research findings reinforces the importance of evidence for guiding interventions, while recognizing the growing body of measures, methodologies and need for deeper research and analysis.

Specific programmatic recommendations arising from these studies can be categorized in four domains: interpersonal relationships; community and environmental influences; geographical environment and evidence generation.

INTERPERSONAL RELATIONSHIPS

The studies note the role that different interpersonal relationships, in particular fathers, peers and parents, can play in influencing child marriage.

- In some communities, fathers are central to the child marriage decision-making process. Their beliefs about an acceptable age of marriage and girls’ marital choice are important in shaping social norms around child marriage. Interventions should engage fathers, as well as mothers, in discussions around child marriage, including marital age and girls’ agency and choice.

- Peers play an influential role in supporting young couples to make their own choice about early marriage. Interventions addressing youth-led marriages should also target peer groups with education on early marriage and viable alternatives such as education or vocational channels.

- Quality parent-child relationship and parent-child communication in young adolescence can have a protective effect against child marriage. Child marriage prevention programmes should include gender transformative, positive parenting aspects at early ages as these can influence intra-familial decision-making on marriage and life choices for girls.

COMMUNITY INFLUENCES

- In the child-marriage decision making process, there are opportunities, especially during the negotiation phase, for external agents to influence marriage outcomes. Interventions should identify influencers, such as teachers, early marriage prevention counsellors, or other parents and leaders. Influencers need to be supported to engage with families who are negotiating child marriage. Their involvement can play a role in deterring social repercussions and can therefore help shift norms about early marriage.

- Community beliefs and expectations (real or perceived) about age of marriage and about girls’ involvement in marital choice can affect norms around child marriage. Interventions should aim to engage communities with activities addressing marital age and choice, to help shift community-level norms.

- Understanding the nuances of how girl marital choice is viewed by men and women is important, and interventions should aim to build a common understanding in this regard.

EVIDENCE GENERATION

- Analysis is needed to better measure parenting styles and aspects of positive parenting that can protect against child marriage and increase girls’ agency.

- A deeper understanding of parental and household determinants, seen through a gender lens, including support, neglect, and even violence, is needed to understand the changing relationship between parents and girls during adolescence.

- Communities are dynamic, and people regularly cross community borders, for work, school, to visit families, etc. Understanding how social and normative factors differ according to location and the movement of people may contribute to improved targeting of social and behaviour change efforts.

- There is a need to further investigate the role of adolescent and parental influencers outside the home in the context of child marriage.

GEOGRAPHICAL ENVIRONMENT

- Geographical influences such as population density, area and location, affect child marriage. This means that interventions must be adapted to local contexts, taking into account norms and behaviours in neighbouring locations as these spill over into bordering communities.

- Traditional administrative boundaries may be inadequate, and even counter-productive, in identifying which communities and localities most influence social norms around child marriage in a given community. Participatory approaches that engage communities in identifying and drawing their own boundaries of their community and social networks may be more informative in defining programming areas.
EARLY MARRIAGE DECISION-MAKING: PATHWAYS OF PREVENTION

Based on qualitative data from semi-structured, in-depth interviews, this research reveals how participants in Ethiopia and India view the decision-making process around early marriage. It details the diverse influencers and processes within phases of initiation, negotiation and final decision-making. A series of interventions and recommendations are offered for how programmers can better understand the decision-making pathways and processes of child marriage, and how they can better support the choice, voice and agency of girls.

BACKGROUND

Between 2018 and 2030, 150 million girls will be married before reaching age 18. Research on early marriage has largely focused on sociodemographic risks, rather than girls’ potential power in deciding whether or not to marry. This brief summarizes results of a study on how girls and their marital decision-makers initiate, negotiate and finalize decisions on early marriage.

Qualitative data from semi-structured, in-depth interviews in Oromia, Ethiopia and Jharkhand, India was used to explore the process of early marriage decision-making. Interviews were conducted with girls and women between 13-23 years of age who participated in early marriage prevention programmes, and either married before reaching age 18, or cancelled/postponed proposed early marriages (n=91). Up to three key marital decision-makers per girl/woman were also interviewed (n=114). Responses were analyzed using latent content analysis.

FINDINGS

Early marriage was described as a process by most participants, with diverse influencers affecting initiation, negotiation and final decision-making. In the initiation phase, marriage discussions were generally begun by elders or non-nuclear family members, and girls were often not involved. This phase was deeply rooted in cultural traditions and influenced by the desire to find a “good match” as well as fear of the consequences of not marrying.

Social resources and support, such as parents in favor of delaying marriage, were the primary mechanisms of resistance to early marriage.

The negotiation phase was most porous to external influences and had the greatest variety of actors involved. Respondents noted that having an advocate outside of traditional family or cultural circles helped both provide information and deter adverse social repercussions. These external influencers, such as early marriage prevention programme staff and teachers, helped girls voice their resistance to early marriage. Programme staff had a unique advantage in this role based on their knowledge and position, though their role was not easy and their influence was not universal.
SOME PARTICIPANT QUOTES

INITIATION

“Lot of proposals use to come but I was never informed about them. Nobody discussed them with me. I would fear my grandfather arguing with my father. My grandfather often use to convince my father to accept proposals but my father wanted me to study and said he will not let me marry before I am 18.”
— Girl whose early marriage was delayed/cancelled, age 23, India

“According to the culture of this society the boy’s family take care (a mild stimulant) to the girl’s family and ask for their daughter for marriage. Then, those elders have respect and they cannot say no. So, the girl is given by her parents.”
— Male decision-maker for girl whose early marriage was delayed/cancelled (relationship: local administrator), age 26, Ethiopia

NEGOATION

“When I went to meet them, they were very rude to me. The brother was taunting. And the mother did not listen to me. She asked me that if her daughter remains unmarried all her life, will (I) take her responsibility. I went to their home at least 5-6 times and slowly they started listening to me. Then I spent one day with her mother... She thought about the proposal and then cancelled it.”
— Female decision-maker for a girl whose early marriage was delayed/cancelled (relationship: program educator), age 25, India

“When she discussed with her aunt, she finally refused the marriage and when they asked her why, she replied, first I don’t marry a person I don’t know. Second, I don’t marry at 14. When she wasn’t able to convince her, we went together...Her uncle told me that if he was refusing the marriage he was going to be neglected from the society, so he said that it was better if I speak. So, I convinced them this way. It has many challenges.”
— Female decision-maker for a girl whose marriage was delayed/ cancelled (relationship: teacher/ early marriage prevention program staff), age 28, Ethiopia

FINAL DECISION-MAKING

“The boy’s family send elders to my family to request the marriage. So, my family heard about my marriage first. I only heard only the wedding day held. My husband also did not know about our marriage at first. So, both of us are forced to engage in marriage because of the push from our parents.”
— Girl married as a minor, age 18, Ethiopia

“We got the proposal when she was 17 years old. We had a fear that she will run away with someone or will opt for inter caste marriage... We were afraid that she might land up as her aunts who never got married. We liked the boy, he was from a good family. He also did not take alcohol...I made the final decision on her marriage.”
— Male decision-maker for a girl married as a minor (relationship: father), age 40, India

**ELDER/OTHER FAMILY INITIATED**

- Majority of interviews
- Discussions largely excluded girls

**FAMILY NEGOTIATION**

- Girls have limited voice
- Needs social support to speak forthable voice

**PARENTAL DECISION**

- Primarily father

**YOUTH INITIATED**

- Minority of interviews
- Discussions directly engaged girls

**COUPLE NEGOTIATIONS**

- Most consistent demonstration of girls’ voice, choice and agency

**GIRL DECISION**

- Couples retain autonomy
- Girls often able to block or facilitate marriage

**REFERENCES**


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**FOR MORE INFORMATION**

If you would like more information about this study, or to collaborate with us on its success, please contact the Principal Investigator of this research at UC San Diego.

**RECOMMENDATIONS FOR PROGRAMMING**

- Supporting the choice, voice and agency of girls is critical to curtail child marriage, but must be paired with programme approaches to strengthen social support of decision influencers at critical points of the decision-making pathway.
- Decision-making pathways are diverse. Interventions targeting only one pathway are likely to leave out some girls. Programmes should target different influencers depending on the pathways involved.
- Engaging advocates such as programme staff and teachers to provide education on consequences of early marriage can help offset the social repercussions of breaking norms, especially in the negotiation stage.
- Programmes addressing youth-led marriages may require earlier education on early marriage as well as viable alternatives such as education or vocation channels. Programmes should address peer groups as well, given that peer influence is a greater factor in this pathway.
- Parents were consistently involved in early marriage decision-making, and did not always agree on desired outcomes. Programmes involving both parents may better support delay/cancellation of planned marriages.

Final decision-makers were mostly parents, particularly fathers. When mothers were the final decision-maker, they often still needed to convince the fathers to agree with their position. Girls largely acquiesced to their parent’s decision, even when it was not their preference. The most common justifications for early marriage were finding a “good match” and fear of limited future marital prospects. Along the traditional pathways of early marriage decision-making, there was little to no opportunity for girls to exercise choice, voice or agency.

In a minority of cases, early marriage proposals and decision-making were initiated at, negotiated within, and decided by the young couple. Girls generally maintained their voice and agency in youth-initiated proposals, exhibiting self-efficacy to move forward despite potential disapproval from parents, and notwithstanding the adverse health and well-being implications of early marriage. Couple-led early marriage processes tended to be more influenced by peer pressure and less influenced by parents.
THE ROLE OF PARENT-CHILD COMMUNICATION in Delaying Child and Early Marriage of Girls

BACKGROUND

Child marriage compromises the health and well-being of nearly 650 million women and girls globally, leading to higher sexual and reproductive morbidity, and vulnerability to violence and coercion within families. Despite child marriage prevention efforts, the practice remains pervasive affecting the potential of girls in realizing their capabilities for economic and social participation. In present interventions, parents and the extended families are often not included as stakeholders despite their say on decisions around marriage and life choices of girls. Parenting styles and communication with children, particularly girls, can reinforce or alter inequitable gender norms, especially as adolescents transition to young adulthood. Few studies in low- and middle-income countries (LMICs) investigate parent-child interactions using a life-course lens. Using the Young Lives study, which follows girls between ages 8 to 19 years across four contexts, we examined two aspects of positive parenting, parent-child communication and parent-child relationship quality in early adolescence in delaying marriage of girls. Parent child communication was measured through items related to talking to or supporting children on things that mattered to them and parent-child relationship quality was measured by reports of feeling loved, feeling proud of children and children reporting they were treated fairly.

FOCUS OF RESEARCH

Multivariate association of positive parenting factors (measured at age 12 years) on marriage before 16 years, before 18 years and marriage by 19 years of age, adjusted for sociodemographic factors and other determinants such as menarche, rural residence and school dropout. Child and early marriage were assessed per global standards of marriage.

RESULTS

- Nearly 1 in 5 girls (18%) reported marrying prior to 18. Child marriage prevalence was high in both India and Ethiopia, with the latter reporting very early marriages (before age 16). (See Graph 1)

- Findings showed that higher parent-child relationship quality at age 12 was protective against very early marriages (before age 16) and moderate quality of parent-child relationship was protective against child marriage (marriage before 18 years of age). Detailed tables can be found in the journal article.

- Results suggested that communication was protective against child and early marriage. However, after 18 years of age, the likelihood of marriage increased as it was legally permissible.

- School dropout and early menarche put girls at greater risk of child (<18 years) and very early (<16 years) marriages.
SOME INSIGHTS FROM QUALITATIVE RESEARCH

Qualitative research conducted in the Young Lives study showed cultural and generational change, with reports of both pressure and resistance. This research shows that norms around early marriage interact with low value to girls’ education and decisions on aspects of their lives.

“When I ask my caregivers for clothing and school materials, they say, ‘we don’t have any money’. I buy my clothes by doing paid work... They just expect me to get married and earn them bride wealth. They don’t care if I learn or not.”

“When the girl stays at the garment company and works, she is the one who decided when she would get married. If the girl stays at home not working then the parents make the decision about her marriage. They decide themselves when they want to get married because they are earning money.”

PARENT-CHILD COMMUNICATION INTERVENTIONS MAY INCREASE THE VOICES AND CHOICES OF GIRLS.

Our parents used to give us to somebody we do not know and collect their bride wealth ... they cover our face with a shawl and put us on the horseback to ride us to the groom’s house... Now, if I marry off my daughter out of her interest, she will refuse and oblige me to pay back any bride wealth I take.”

Now, the girl and boy have to like each other and they have to talk to each other before marriage. They both go into the room and talk. They discuss whether they like each other or not. It was not like that when we were younger. Our parents told us to marry and we married. If they don’t like or if we don’t allow them to talk they will say that they don’t like him and don’t want to marry. They bluntly say that they do not like him. If we object, they say that it is they who have to live with him for the rest of their life so they want to talk to him before marrying. We have to marry them to the person they like.”

REFLECTIONS AND CONCLUSION

• Better parent-child communication and relationship quality in early adolescence (10-14 years) was protective against child and early marriage of girls.
• Interventions for child marriage prevention need to focus on positive parenting at early ages to influence intra-familial decision-making on marriage and life choices for girls.
• Qualitative studies show inter-generational value differences in girls’ agency and parent-child communication interventions may increase voice and choice of girls.

IMPLICATIONS AND CONCLUSION

• Future studies should better measure parenting styles, positive parenting aspects, social norms around marriage and girls’ agency.
• Exploration of communication-focused interventions that examine interactions between communities, families and girls themselves are also needed.

REFERENCES

This study used data from a sample of adolescent wives and their husbands in rural Niger to examine the relationship between early marriage, girls' role in deciding whom to marry, and community norms surrounding marital age and choice. The study found that village-level norms about a girl's choice in when and who to marry, particularly norms reported by male community members, were a key factor influencing age at marriage. This study provided a unique opportunity to quantitatively assess the relationship between community norms about whether and when girls should marry, and the link to girls' age of marriage and involvement in marital decision-making. Data were drawn from a sample of adolescent wives and their husbands (N=581) in the Dossa Region of Niger that were included in an evaluation of a family planning intervention.

Individual attitudes about marital age were captured by asking the participants their perceptions of the optimal age for girl's marriage. Injunctive social norms were captured for marital age by asking the wives and husbands what age people in the village believe is ideal for girls to get married and for marital choice by asking whether or not they agree with the statement, “people in my village expect that girls decide when and who to marry.” Descriptive social norms were measured for marital age and marital choice using village-level aggregates of the wife’s age at marriage, and wives’ and husbands’ responses to whether the wife was engaged in marital decision-making.

Regression analyses was adjusted for sociodemographic variables such as age, education, household wealth, food insecurity, women’s work participation, as well as visits from community health workers.

DEFINING SOCIAL NORMS:

- **Social Norms:** The informal rules, perceptions, or expectations in a community or society of what behaviours are typical (descriptive norms) and thought to be appropriate (injunctive norms).
- **Injunctive Norms:** Individual’s perceptions of what others in the community approve of.
- **Descriptive Norms:** Individual’s perceptions of prevalence of behaviors – this serves as an indication of what is generally acceptable in a community.
FINDINGS

• Women in the study sample were married young (at age 14 on average), and husbands were markedly older than their wives (by an average of nearly 9 years).

• Adolescent girls married at older ages in those villages where a larger proportion of girls reported being involved in the decision to marry (a descriptive social norm) and where a larger proportion of husbands believed that their communities were supportive of girls’ involvement in marital choice (an injunctive social norm). Girls who married at younger ages were less likely to have been involved in marital decision-making.

• Adolescent wives were more likely to report that they had marital choice in communities in which more wives believed the community was supportive of older ages at marriage and in which more husbands believed that the community supported girls’ involvement in marital choice (injunctive social norms). Thus, norms related to both marital age and marital choice were associated with adolescent wives’ engagement in marital choice.

• Men’s and women’s social norms had differential associations with marital age and marital choice, which may be reflective of men vs. women’s differing roles in the community and assessed outcomes.

• Far more women reported that they were engaged in the decision to marry (82%) than men reported that their wife was engaged in the decision to marry (32%), suggesting divergent views on what it means to have marital choice in these communities.

IMPLICATIONS AND RECOMMENDATIONS FOR PROGRAMMING

Age at marriage and involvement in marital decision-making (marital choice) are highly interrelated and influenced by community-level norms — both descriptive (what behaviors occur) and injunctive (what behaviors are perceived to be appropriate) — and gender-based norms.

• Interventions to address child marriage should assess community-level norms (both real and perceived) regarding marital age and choice. Efforts to shift norms must include consideration of potential backlash against those who fail to conform to social norms.

• Separately capturing norms reported by men vs. women is key to understanding the nuanced roles that men and women in the community play in early marriage decision-making.

• Future studies that examine marital choice should pay close attention to objectively measuring the construct of gender socialization, and include consideration of differential perspectives.

Men’s perceptions of whether the community supported girls’ marital choice was significantly associated with both girls’ age at marriage and girls’ involvement in the decision of who to marry.

• There is a role for engaging with men in interventions focused on shifting norms around early marriage. However, this must be done cautiously so as not to reinforce patriarchal practices of men’s control over women’s marital choice and age at marriage.

REFERENCES


2. Raj, A. When the mother is a child: the impact of child marriage on the health and human rights of girls. Archives of Disease in Childhood, 95, 931-935. 2010.


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This research brief is based on the following manuscript: Shakya HB, Silverman J, Barker K, et al. Associations between village-level norms on marital age and marital choice outcomes among adolescent wives in rural Niger. (in process)
Neither child marriage, nor the social and normative factors that influence this practice, occur uniformly across India. This study seeks to understand this variation and to examine the prevalence of child marriage across India. The study finds that levels of child marriage in a given district were influenced not only by the characteristics of residents in that community, but by the characteristics of residents in neighbouring districts. This highlights the need for a broader understanding of the geographic factors that influence child marriage, which may be masked by more aggregate estimates. A better understanding of how social and normative factors differ according to location may improve participatory research strategies and allow for better targeting of social and behaviour change prevention efforts.

BACKGROUND

Despite global recognition that marriage before 18 years of age violates the health and human rights of girls, no region in the world is projected to meet the Sustainable Development Goal of eliminating child marriage by 2030. In India, more than one in four girls are still married as children.

This study offers an analysis of child marriage in India, exploring sub-national variations in the prevalence of child marriage, including social and media connectivity that may influence child marriage norms. The objective is to assess geographic variations in child marriage across Indian districts, identify hot and cold spots, and quantify how the relationship between different geographic communities might influence factors associated with child marriage.

The geographic analysis focused on data collected through the 2015-16 National Family Health Survey and 2011 India Census, representing 636 districts in total. The analysis used a number of analytic tools often used in geography studies to assess differences across and between geographic areas.

FINDINGS

This study found substantial district-level variations in levels of child marriage. The prevalence of child marriage varies significantly not only between states, but also between different districts within a state (see Figure 1).

- Neighbouring communities matter. Geographic factors such as density and area of a given district, as well as of its neighbouring districts, are important in explaining that given community’s levels of child marriage.
- Sociodemographic characteristics including higher prevalence of marginalized groups(1) and increased female education were associated with lower levels of child marriage. These effects were even stronger when the prevalence of marginalized groups and/or female education levels were higher in neighbouring communities as well.
- Districts with higher levels of newspaper consumption among females and female mobile phone access also tended to have lower levels of child marriage;
- Districts with neighbouring districts located nearer to state borders tended to have higher levels of child marriage.

(1) Scheduled caste, scheduled tribe or other class; legally recognized marginalized groups.
IMPLICATIONS AND RECOMMENDATIONS FOR PROGRAMMING

Geography matters. Drivers of child marriage vary significantly based on both local and neighbouring contexts.

- **Effective programming** should be adapted to local contexts based on a detailed understanding of those contexts, as well as buy-in and effective, coordinated local partnerships.

- **Multi-channel social and behaviour change communications approaches** will not be a universally effective approach and should be contextualized to locally relevant media modalities as well as literacy levels.

Communities are dynamic, and people constantly cross community borders, for work, school, to visit families, etc. Understanding how social and normative factors differ according to location and the movement of people may contribute to improved targeting of social and behaviour change efforts.

- **Child marriage programmes** that targeted communities in specific administrative boundaries should acknowledge that neighbouring district characteristics also affect the drivers of child marriage in the target area.

- **Interventions to reduce child marriage** through education, social protection, and health should consider regional interventions that cross neighbouring administrative areas, rather than narrowly targeted ones, to address social inequities in a broader geographic area.

Traditional geographic administrative boundaries may be inadequate, and even counter-productive, in identifying which communities and localities most influence social norms around child marriage in a given community. Using place-based, participatory strategies of understanding how people draw their own communities and borders is crucial.

In addition, beyond physical territory, the scope of social and communicational interactions and networks could influence on particular segments of population. For example, communities with commercial or family bonds with communities far away or even abroad (remittances). Diaspora in developed states or countries could contribute as an influential reference for relatives in their villages.

- **Participatory community mapping** may serve as more effective means of identifying cultural and normative boundaries that influence child marriage.

- **Place-based interventions** that call on officials in neighbouring localities to work in concert offer promise. Participatory approaches that engage communities in identifying and drawing their own boundaries of their community and social networks may be more informative in defining programming areas.

REFERENCES


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Effects of Parent–Child Relationships on Child Marriage of Girls in Ethiopia, India, Peru, and Vietnam: Evidence From a Prospective Cohort

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ABSTRACT

Purpose: Parental influence over early marriage of girls is well-documented in qualitative research, but little quantitative work in this area has been conducted. This study assesses the effects of the parent–child relationship in early adolescence (aged 12 years) on early marriage of girls.

Methods: We analyzed survey data from a multicountry prospective cohort of girls (n = 1,648) followed over four rounds from age 8 to 19 years (2002–2013), as part of the Young Lives study in India, Ethiopia, Vietnam, and Peru. Multinomial logistic regression models assessed the effects of parent–child communication and parent–child relationship quality, as reported when girls were aged 12 years on child and early marriage (married <16 years, married 16–17 years, married 18–19 years, unmarried). Covariates were wealth, rural/urban residence, maternal education, parents’ value of education, early menarche, and country.

Results: One in five girls (38.0%) reported marriage before 18 years of age, and 8.1% reported marrying before 16 years (8.3% and 13.7% in India and Ethiopia). Multinominal regression found that girls reporting good parent–child communication and high parent–child relationship quality at age 12 years were significantly less likely to marry before age 16 years (moderate relationship quality, adjusted relative risk ratio: .23, 95% confidence interval: .07–.72; high relationship quality, adjusted relative risk ratio: .34, 95% confidence interval: .11–.99).

Conclusion: Parent–child relationship quality and communication in early adolescence are protective against very early marriage of girls cross-nationally, although communication may facilitate marriage soon on completion of school. Primary prevention interventions targeting child marriage may benefit from components focused on improving the parent–child relationship.

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residing in rural areas, from poorer backgrounds and who are less educated, are at greatest risk [2–5]. The social and health consequences for women married as minors as well as their children are well documented, including maternal and infant morbidity, vulnerability to family violence, and impaired reproductive autonomy [6–8].

Present approaches for preventing child marriage include a mix of awareness and behavior-change programs at the community level (e.g., economic incentives to families to encourage completion of schooling and delay marriage for girls) [9–12], but the role of parents and the extended family as influencers of marital decision-making has been neglected. Social psychology research has long documented the contribution of parental factors in child development and adolescent behavior and well-being [13,14]. Parents are usually part of the wider community as part of child marriage prevention programs, but within family interactions, both parental support and coercion, which may play an important part in enforcing or resisting social norms around marriage and gender equity, are less understood.

Much of this work comes from high-income nations with recent parenting decisions around higher education, choice of vocation, and girls who receive greater parental support and who communicate, can in parental factors in child development and adolescent behavior and understanding of the role that parenting factors can play in early marriage in all four countries and (2) a binary CEM variable that captures early marriage or cohabitation. In Peru, few girls were married, but a substantial proportion reported cohabiting. In addition, the study asked girls about their age/year of first marriage or cohabitation.

In round 2 of the study, when girls were 12 years of age, the study asked girls and caregivers (a parent) a range of questions (items) on parent–child relationship quality. For 91.3% of girls, mother was the main caregiver. Items assessed dimensions such as aspirations, and a summation score for parent–child relationship. For 91.3% of girls, mother was the main caregiver. Items assessed dimensions such as aspirations, and a summation score for parent–child relationship.

Another key finding was that mothers played a more active role in encouraging their daughters to resist marriage or cohabitation, particularly in Vietnam, where 74.1% of girls reported that they had discussed the issue of marriage with their mothers, compared to 57.3% in India, 48.3% in Ethiopia, and 43.9% in Peru.

In round 2, maternal support was significantly associated with a reduced risk of early marriage or cohabitation, with an odds ratio of 0.75 (95% CI: 0.57–0.98) for girls whose mothers supported them to delay marriage.

In round 4, parental support was associated with a reduced risk of early marriage or cohabitation, with an odds ratio of 0.67 (95% CI: 0.51–0.88) for girls whose mothers supported them to delay marriage.

In conclusion, this study highlights the importance of engaging parents, particularly mothers, in efforts to prevent child marriage and promote healthy outcomes for children. Further research is needed to better understand the mechanisms through which parental support can influence girls’ decisions regarding marriage and to develop effective interventions to support girls in their decision-making process.
Parent–child relationship quality was assessed using three questions from the survey: children's reports that they all
always felt loved by parents, children's reports of times parents treat them fairly when they did something
wrong, and caregiver reports that they all thought parents were alive.

We analyzed data from girls who participated in all four
rounds of the Young Lives study. Prevalence of CEM using a
polynomial variable (married < 16 years, 16–17 years, 18–19
years, unmarried) and a dichotomous variable (marriage <18 years, unmarried, or married >18 years) were
estimated for the overall Young Lives study sample and stratified by
country. We examined bivariate associations of the two out-
comes with our independent variables of interest as well as
covariates, using chi-squared tests (with p values); covariates
associated with our outcomes were included in multivariable
regression models, with assessed parent–child relationship
factors reported at age 12 years by parents/caregivers and
youth with child marriage outcomes. Multinomial regression
was conducted with the dichotomous child marriage outcome
and logistic regression was conducted with the dichotomous CEM
outcome. Logit models were then replicated for each
country to explore country-specific findings. All analyses were
conducted on STATA 15 (StataCorp LLC, Cary, NC). In addition
to quantitative data, we examined published qualitative
studies and reports [29–32] conducted on the Young Lives
cohorts for quotes and data that explained mechanistic find-
ings from the quantitative study or reflecting cross-contextual
differences. These were synthesized and presented in
Appendix Table 1.

Results

Descriptive findings

Pooled data from all countries resulted in a sample of
girls where 18.0% had married as a minor, and 15.7% had dropped out of
school by age 15 years or had never attended school. One third of
girls (34.2%) had a mother with no education, and 10.7% of
parents of these adolescent girls indicated they did not view
education as being essential in life. Ten percent of girls (10.3%)
had lost at least one parent (Table 1). There was significant variation
across nations across all variables, including age at marriage, with
every young marriages (16–19 years) ranging from 2.4% in Peru to
13.7% in Ethiopia, and remaining unmarried at age
19 years ranging from 43.6% in India to 86.4% in Ethiopia.

Table 3

<table>
<thead>
<tr>
<th>Parent–child relationship</th>
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</thead>
<tbody>
<tr>
<td>Low</td>
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Data analysis

We analyzed data from girls who participated in all four
rounds of the Young Lives study. Prevalence of CEM using a
polynomial variable (married < 16 years, 16–17 years, 18–19
years, unmarried) and a dichotomous variable (marriage <18 years, unmarried, or married >18 years) were
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cohort for quotes and data that explained mechanistic find-
ings from the quantitative study or reflecting cross-contextual
differences. These were synthesized and presented in
Appendix Table 1.
Additional analyses were conducted with the child marriage outcome dichotomized as married at age 18 years versus not married at age 18 years (inclusive of unmarried girls) for the pooled sample and country-specific samples. Bivariate associations for the pooled sample found quality of parent–child relationship significantly associated with the dichotomized outcome (p < .002). Pooled adjusted logistic regression analysis showed similar effects, with moderate quality of parent–child relationship in early adolescence associated with lower odds of child marriage (adjusted odds ratio [AOR] ¼ 0.70; Table 5). These significant effects were seen in pooled models and in country-stratified models for Vietnam, but not other countries, possibly due to small cell sizes. In both pooled and country-level analyses, strong trends were seen for the protective value of education and maternal education on child and early marriage and the risk of rural residence and early marriage. Cross-country differences in the association between marriage and maternal education with marriage before 18 years were also noted (Table 5). Marriage was associated with increased risk of marriage before 18 years in the pooled (odds ratio [OR] ¼ 2.43 [95% CI: 1.6–3.66]) as well as in India (OR ¼ 2.27 [95% CI: 1.33–3.88]) and Vietnam (OR ¼ 2.35 [95% CI: 1.03–5.35]) samples; in Ethiopia, risks were even greater (OR ¼ 5.85 [95% CI: 1.29–26.4]). Mothers’ secondary or higher education was protective against marriage before 18 years in the pooled sample (OR ¼ 0.56 [95% CI: 0.34–0.95]), in India (OR ¼ 0.39 [95% CI: 0.15–0.96]), and Vietnam (OR ¼ 0.28 [95% CI: 0.09–0.84]).

Given the importance of the education variable and the availability of school dropout data at 12 and 15 years, we additionally conducted all analyses with a staggered education variable (drop out by 12 years and drop out by 15 years). No difference in findings related to parent–child relationship was noted among any covariates we observed. School retention, compared with dropout at each time point in the staggered model, was always protective. Children in lack of differential in hypothesized findings, we retained only the dichotomized education variable, retention versus dropout by 12 or 15 years in our final models.

Discussion

Evidence from multicountry follow-ups of girls from childhood to late adolescence shows the importance and complexity of parent–child factors—communicated by talking about things that matter to the girl and supporting the girl—and relationship quality (indicated by parents feeling proud of their daughter, girl feels she is treated fairly, and girl feels loved)—in influencing child and early marriage of girls. We found evidence that higher parent–child relationship quality as characterized by perceived love, fairness, and pride in the child was particularly important as a deterrent for marriage before age 16 years, suggesting that relationship quality is a protective factor against very young marriages. In analyses disaggregated by age at marriage, higher parent–child communication had no effect on odds to become 18 years (child marriage) but was associated with an increased likelihood of earlier marriage (age 18–19 years) relative to the girl staying unmarried at 19 years. These findings highlight that in many contexts, child relationships that need further exploration through both qualitative and quantitative analyses; a recent qualitative research shows that girls who speak to parents about their preferences are more likely to delay marriage [23], whereas girls who are in household characterized by less intragenerational conflict or even abuse and violence are even more likely to be exposed to the opportunities of early marriage [23,24]. Young lives qualitative data also show that parental support can empower girls to manage these pressure, but pressure from family or the community may lead to girls agreeing to an earlier marriage despite initial reluctance or dissent. It is possible that higher parent–child communication creates an environment in which parents maintain greater investment in keeping the child home longer and where a parent may be more responsive to a child asking to delay a marriage until school completion. This may explain the delayed marriage effect until the girl is aged 18 years, and a greater likelihood of marriage due to community or social pressures or the burden of material circumstances [31,34]. Cross-contextual differences in key dimensions that likely add to the pressure to marry early for girls were also noted such as school dropout, age at marriage, and mother’s education, but small country sample sizes do not allow us to test the interactions of these factors. Qualitative data in Appendix Table 1 also highlight that external factors such as exposure to media, schooling, and social networks may be transforming intergenerational relationships in these countries; data were limited in this regard.

These findings reinforce calls for more parent-focused interventions to support positive and nurturing parenting [20]. A deeper understanding of parental and household factors that drive these from a gender lens, including support, neglect, and even violence, is needed to understand the changing relationship between parents and girls during adolescence. Improving measures of parent–child interactions is also needed along with a need to investigate the role of adolescent and parental influences outside the home. Non-nurturing styles in these where there were lower levels of parenthood and child marriage and lower quality of parent–child relationship may impede the agency and self-efficacy of girls, leading to an atmosphere of restricted autonomy and significantly earlier marriage. Culturally specific considerations in nurturing parenting style and gendered effects also need to be studied [35]. For instance, in this study, caregiver beliefs around the value of education need to interpret with consideration that 91.3% of caregiver responders were mothers, and her educational background, socioeconomic status, and gendered role expectations are likely to influence these beliefs. Qualitative data from the Young Lives fieldwork show mixed relationships in these countries; data were limited in this regard.
evidence of support and intergenerational conflict in mother– daughter interactions. In Ethiopia, for instance, “obedience” of the younger generation to the authority of the older generations has not changed and is getting more extreme, leading to greater negotiation [29]. Unfortunately, small cell sizes preclude sufficient understanding of these issues from country-specific analyses. Emerging evidence such as the Global Early Adolescent Study may be able to shed light on these relationships; however, measurement of parenting factors needs strengthening in particular. As seen in prior research and more consistently seen in our sample, cross-country and cross-cultural, age, sociodemographics, in particular, staying in school, was a key protective factor for child and early marriage of girls [31]. Our findings were consistent in terms of the risk from school dropout, regardless of whether dropout occurs by age 12 or 15 years. These findings reinforce that completion of secondary school education is an important determinant to child and early marriage [32]. Reasons for school dropout have varied in the Young Lives sample including family socioeconomic condition, school-level factors including school quality, child performance, and ward gender norms around domestic work and marriage [5]. Exploratory analyses showed sharper inequalities in school dropout of girls by maternal education and household wealth. The current paradigm for interventions for girls focuses on keeping girls in school and addressing communities and parents more broadly at the point of marriage, but it is also critical to work with families before the time of marital decision to promote and encourage communication and child relationships [23]. Earlier menarche was another determinant of child marriage in pooled and country-stratiﬁed models, predicting very young marriages, a ﬁnding consistent with other studies [26,28]. Communication efforts to shift norms and expectations of adulthood based on school completion or poor indicators are needed; there is a need to emphasize in communication efforts as a developmental indicator and not a marker for girls’ readiness for marriage or childbearing [26]. Changing traditional norms in communities, particularly in rural areas, is needed; these efforts have shown mixed results for family planning and maternal health, but a greater focus is needed for child marriage prevention efforts to increase child marriage prevention awareness of the legal age at marriage or change behavior through interventions [34,35,36].

Findings in the study need to be considered in light of three limitations. First, Young Lives is a unique dataset that allows assessment of the global picture of adolescent development across four contexts along with cross-context insights. Although the cross-national diversity of the sample is an advantage, small country samples, especially for Peru, were a challenge in stratiﬁed analyses, and the diversity posed a challenge for interpreting ﬁndings, despite common protocols. Second, in the study, we constructed measures for parent–child communication and relationship quality based on items available. These measures were based on available data and are by no means exhaustive, and they provide a useful tool for exploring issues around parenting that affect early marriage. Deeper insights are needed through mixed-methods studies to develop stronger measures for parental factors. It is possible that girls’ knowledge that their caregivers or parents are being interviewed may lead to socially desirable responses; hence, qualitative protocols and the nature of insensitive questions analyzed in this study preclude the possibility of the effects of social desirability bias on the ﬁndings in a signiﬁcant way. Finally, although Young Lives data have been compared with national surveys for generalizability, cohorts are not changed, and differences in measures may inﬂuence results. Other measures analyzed in this study preclude the desirable responses; however, ethical protocols and the nature of particular.

Parent–child relationship quality and communication in early adolescence country-speciﬁc against very early marriage of girls cross-nationally, although communication may facilitate mar riage soon on completion of school. This is one of the ﬁrst longitudinal studies to examine issues affecting child and early marriage of girls from a life course lens, providing evidence that efforts to improve parental engagement and communication in early adolescence can be beneﬁcial in child marriage prevention by changing gender norms at home. Targeting of most vulnerable girls and their parents, including those who drop out of school and those who experience menarche earlier, would also be valuable.Acknowledgments

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References

Associations between village-level norms on marital age and marital choice outcomes among adolescent wives in rural Niger

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Social norms, the often unspoken rules that dictate behavior, are increasingly understood to play a role in child, early and forced marriage (CEFM) practices, but are less frequently examined in quantitative research on CEFM. No research on this topic has focused on Niger, despite the country having the highest prevalence of child marriage in the world. This study examines the associations of community and individual-level norms on marital age and marital choice with the outcomes of girls’ age at marriage and choice in marriage. We used data from a family planning evaluation trial conducted in these districts within the Dosso region of Niger. Survey data were collected from adolescent wives and their husbands (N = 592) on demographics, normative Africa and girls’ age at marriage and marital choice, and among wives, age at marriage and engagement in marital choice. We developed our community-level norm variables by using the aggregate data from husbands and wives’ Niger and wives’ CEFM experiences. Using causal and adjustment boosted models, we assessed the associations between our norm variables and our CEFM outcomes. In this context of high prevalence of CEFM, we found that village-level norms related to marital choice, particularly the norms of men, are associated with younger age of girls at marriage. We also found that younger age of girls at marriage is positively associated with lower likelihood of their engagement in marital choice. Further, we find that village-level norms related to a lower age of marriage and support for marriage, as well as adolescent wives’ perceptions of community norms related to a higher age of marriage, are associated with higher odds of a wife having had marital choice. These findings suggest the value of community level social norms change on CEFM in Niger, and the importance of focusing on child marriage and girls’ marital choice simultaneously given their interconnection.

Introduction
Child, early and forced marriage (CEFM) is an internationally-recognized human rights violation that disproportionately affects women and girls globally (UNICEF-UNFPA, May 2019; United Nations Joint Programme to Accelerate Action to End Child Marriage, 2017; Fenn et al., 2015; Islam et al., 2014). Child marriage (Bicchieri et al., 2014; Fenn et al., 2015; Islam et al., 2014; Steinhaus et al., 2019; Taylor et al., 2019; United Nations Joint Programme to Accelerate Action to End Child Marriage, 2017) is widespread in Niger, which has the highest rate of girl child marriage in the world (Kumari & Little, 2017). While rates of early marriage decreased in the countries around the world over the past few decades (Jackson, 2012), the rate of early marriage has changed very little in Niger (Fenn et al., 2015).

Niger is one of a small number of nations in which child marriage continues to be legal for girls. Niger civil code forbids marriage below age 18 for boys, but only below age 15 for girls (UNFPA WCARO, 2017). Public perception also reflects this bias. A recent survey conducted in Zinder, one of the most populous regions in Niger, found that 86% of adults agreed boys should be married at 18 years or older, as compared to only 31% of adults agreeing girls should be married at 18 or older (Regional Institute of Statistics, 2016). Half of adults felt girls should be married between the ages of 15 and 17 years, and 19% felt girls should be married between the ages of 10 and 15 years (Regional Institute of Statistics, 2016). By the age of 15, 28% of Nigeri girls are married, and by age 18, 76% are married (Institut National de la Statistique and ICF International, 2013). Prevalence of the practice varies throughout the country, with the median age at marriage ranging from 15.6 years in rural areas to 19.5 years in the capital city of Niamey (Institut National de la Statistique and ICF International, 2013).

Previous work suggests myriad and intersecting determinants of child marriage (Richerich et al., 2017; Fenn et al., 2015; Islam et al., 2014). Community-related factors have been highlighted across various regions globally in the literature (Bicchieri et al., 2014; Fenn et al., 2015; Islam et al., 2014; Steinhaus et al., 2019; Taylor et al., 2019; United Nations Joint Programme to Accelerate Action to End Child Marriage, 2017). For example, in a 4-year follow-up study in rural villages in Northern India girls who marry young are less likely to have a say in the choice of who they marry (Kraft et al., 2013), and that in areas with higher social ties, the age of marriage is lower (Desai & Andrist, 2010). The association between gender norms and marriage is complex, however, as the age of marriage can increase in response to other factors, while unequal gender norms may remain relatively stable (Desai & Andrist, 2010; Jackson, 2012). The United Nations High Commissioner for Human Rights as well as the UNICEF-UNFPA Joint Programme to Accelerate Action to End Child Marriage has provided a number of recommendations aimed at addressing CEFM. These range from system-level legislative and legal accountability measures, to increased engagement with community leaders and heads of household, to socio-cultural shifts in the norms that support child marriage and gender inequality (UNICEF, 2018; United Nations High Commissioner for Human Rights, 2017).

Social norms are the informal rules derived from social systems that instruct behaviors for individuals and, or sanctioned in particular circumstances (Mackie et al., 2014). Norms are hypothesized to drive behaviors through both descriptive and injunctive norms (Fishbein & Mooray, 2016, pp. 37–54; Cattini et al., 1993; Fishbein & Ajzen, 1975; Mackie et al., 2014). Descriptive norms refer to perceptions of personal behavior and the perceived behavior of others or referents (Cialdini et al., 1991; Fishbein, 1970). A key task when examining normative influence, then, is to identify the most valid grouping of referents. Ideally, in norms research, reference groups to assess descriptive norms would be identified through the use of discrete social network ties (Bicchieri et al., 2014, 2017). However, much in health and development research, such data are lacking (Mackie et al., 2014). Instead, researchers looking for evidence of descriptive norms generate data with measures across more coarse social units, in which social ties are inferred, such as residents of the same village or neighborhood (the concept behind DHS clusters) to determine whether there is inter-cluster variation. High levels of variation across these social units are viewed as evidence of variability in norms (Mackie et al., 2014).

In this study, we examine interactions between social norms related to both early marriage and marital choice and whether these are associated with girls’ age at marriage and involvement in marital choice in the context of rural Niger, to measure social norms and report individual perceptions of what the community believes regarding when girls should marry and whether they should be involved in the selection of their groom, as reported by married girls themselves, as well as their husbands. We consider descriptive norms based on the aggregate reports of behaviors at the village-level, to provide insight into whether village-level descriptive norms are likely to be replicated at the community level. Injunctive norms, by contrast, are an individual account of descriptive norms and can inform Programming.
Participants

As part of the larger evaluation trial, willing and eligible couples were randomly selected (using a random number generator) from a list of all eligible married female adolescents provided by each village. Eligible participants were married girls aged 13-19 years and their husbands, fluent in Hausa or Zarma, and were in the village where recruitment was taking place with no plans to move away in next 18 months plus plans to remain in the village for more than that period. Of those randomly selected from the willing and eligible list, 88% participated in the Wave 1 survey (N = 1010). Equivalent numbers of couples were included from each of the three districts. There were no significant differences in age, husband age, or time spent away from the village between those who did and did not participate. In Wave 2,355 of the original sample participated. With missing data on some measures, the analytic subsample is comprised of adolescent wife-husband dyads (N = 581) from whom there was data from both Wave 1 and Wave 2 surveys.

Recruitment and data collection

Research assistants visited the randomly selected households and conducted a Household Recruitment Screener to confirm eligibility. If the household did not have an eligible couple, research staff recruited a randomly selected replacement in their place. Staff made up to three attempts, to drop recruitment of the couple into the study. For couples reached for study, sex-matched trained research staff conducted surveys separately with the young women and their husbands. Staff conducted surveys in either the Hausa or Zarma language, depending upon participant’s language preference. The survey took approximately 40–60 min to complete and was administered using pre-programmed tablets. The staff member then uploaded the encrypted, de-identified data via a secure internet connection on a weekly basis. The data was compiled into dyadic husband/wife observations to be able to include measures from both wives and husbands in our analyses.

Measures

This study assesses two outcome measures using data captured at Wave 1: age at marriage and women’s report of marital choice. Age at marriage was assessed as a single continuous variable. Women’s report of marital choice was assessed using an item that asked women, “Who had the greatest say with regard to arranging your marriage to your husband?” Response options were: 1: Respondent, 2: Respondent and husband chose each other, 3: Respondent with someone else chose, 4: Respondent with someone else chose, 5: Wife and her family chose. The survey inquired of both women and their husbands whether or not a community health worker had visited the individual and had as an item of whether or not a community health worker had visited the women and husbands. These variables were included upon recommendation of experts in the field for potential social and health harms of traditional practices and supporting normative change in these practices as related to marriage and family formation. In addition, girls were asked if they had worked in the past 12 months. 20% of girls reported working.

Statistical approach

For both of our outcomes, age at marriage and women’s report of marital choice, between-village variation was tested, using a −2 log likelihood ratio test. For the second tier, we compared the −2 log likelihood of a null model against a multilevel model clustering on the village. For both marital choice and age at marriage, significant village-level variance was not seen. On all models, bivariate, and multivariable, were run using multilevel modeling clustering on village. Both the mean and median number of covariates in each model were 12 (SD: 3.9, range 3–22; inter-quartile range: 9–15). Bivariate analyses were first used, linear regression for age of marriage, and logistic regression for a woman’s report of marital choice, to examine the relationship between attitudinal and normative exposure variables and our two outcomes. For variables significant at p < 0.10, separate multiple linear regression analyses were conducted to examine the demographic variables of age at marriage and separate multiple logistic regression analyses were conducted to examine marital choice, the individual-level. For both age at marriage and marital choice, the attitudinal and normative exposure variables that were significant in the separate analyses were included in the full model, both women’s and men’s. Sex-matched survey items were aggregated, in order to improve interpretability. To assess whether the presence of community health workers may confound those results, those variables were included in a second model. Treatment arm was controlled for in all analyses, though treatment status was not expected to have any association with the norms of interest as these were not a focus of the study, and the assessed behaviors preceded engagement in the study. Finally, all models were tested for multicollinearity using the variance inflation factor test in the case package of R (Fox et al., 2007).

Table 1

<table>
<thead>
<tr>
<th>Weeks’ characteristics</th>
<th>Mean or Range</th>
<th>Meas. Correlation</th>
<th>Husbands’ characteristics</th>
<th>Mean or Range</th>
<th>Correlation</th>
<th>Husbands’ characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife’s age at marriage</td>
<td>14.1 10-19</td>
<td>1</td>
<td>Husband’s age</td>
<td>26.1 13-53</td>
<td>0.3</td>
<td>26.1</td>
</tr>
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<td>Age difference between wife and husband</td>
<td>8.7 -1.16</td>
<td>-0.1</td>
<td>Husband’s age</td>
<td>26.1 13-53</td>
<td>0.3</td>
<td>26.1</td>
</tr>
<tr>
<td>Wife’s age</td>
<td>17.3 13-19</td>
<td>0.1</td>
<td>Wife’s education</td>
<td>38%</td>
<td>0.1</td>
<td>Wife’s education</td>
</tr>
<tr>
<td>Married by community health worker</td>
<td>50%</td>
<td>0.1</td>
<td>Modern education</td>
<td>0.57 (0.3)</td>
<td>0.1</td>
<td>Modern education</td>
</tr>
<tr>
<td>Household assets</td>
<td>2.1 (0.6)</td>
<td>0.1</td>
<td>Food insecurity</td>
<td>0.72</td>
<td>0.1</td>
<td>Food insecurity</td>
</tr>
<tr>
<td>Wife agricultural work</td>
<td>41%</td>
<td>0.1</td>
<td>Wife’s marital choice</td>
<td>0.19</td>
<td>0.1</td>
<td>Wife’s marital choice</td>
</tr>
<tr>
<td>Live with extended family</td>
<td>19%</td>
<td>0.1</td>
<td>Pedigree</td>
<td>0.15</td>
<td>0.1</td>
<td>Pedigree</td>
</tr>
<tr>
<td>Wife’s education</td>
<td>39%</td>
<td>0.1</td>
<td>Ethnic Hasto</td>
<td>0.36</td>
<td>0.1</td>
<td>Ethnic Hasto</td>
</tr>
<tr>
<td>Ethnic Zarma</td>
<td>0.4%</td>
<td>0.1</td>
<td>Ethnic Zarma</td>
<td>0.04</td>
<td>0.1</td>
<td>Ethnic Zarma</td>
</tr>
<tr>
<td>Divorce Doso</td>
<td>27%</td>
<td>0.1</td>
<td>Divorce Doso</td>
<td>0.39</td>
<td>0.1</td>
<td>Divorce Doso</td>
</tr>
<tr>
<td>Divorce Etchi</td>
<td>29%</td>
<td>0.1</td>
<td>Divorce Intervention-via</td>
<td>0.34</td>
<td>0.1</td>
<td>Divorce Intervention-via</td>
</tr>
<tr>
<td>Wife reports marital choice</td>
<td>82%</td>
<td>0.1</td>
<td>Wife’s community norm in support of girls marital choice</td>
<td>31%</td>
<td>0.13</td>
<td>Wife’s community norm in support of girls marital choice</td>
</tr>
<tr>
<td>Wife report of community norms of ideal age of marriage (continuous)</td>
<td>15.7 8-25</td>
<td>0.1</td>
<td>Husband’s belief in optimal age of marriage</td>
<td>0.11</td>
<td>0.20</td>
<td>Husband’s belief in optimal age of marriage</td>
</tr>
<tr>
<td>Village aggregate wife reports marital choice</td>
<td>16.8 10-15</td>
<td>0.1</td>
<td>Village aggregate wife reports community supports wife marital choice</td>
<td>0.26</td>
<td>0.44</td>
<td>Village aggregate wife reports community supports wife marital choice</td>
</tr>
<tr>
<td>Village aggregate wife reports</td>
<td>81% 33-100%</td>
<td>0.1</td>
<td>Village aggregate wife reports</td>
<td>59% 61-100%</td>
<td>0.1</td>
<td>Village aggregate wife reports</td>
</tr>
<tr>
<td>Village aggregate wife reports</td>
<td>59% 61-100%</td>
<td>0.1</td>
<td>Village aggregate wife reports</td>
<td>59% 61-100%</td>
<td>0.1</td>
<td>Village aggregate wife reports</td>
</tr>
<tr>
<td>Village aggregate wife reports</td>
<td>15.2 13-16</td>
<td>0.1</td>
<td>Village aggregate wife reports</td>
<td>15.2 13-16</td>
<td>0.1</td>
<td>Village aggregate wife reports</td>
</tr>
<tr>
<td>Village aggregate wife reports</td>
<td>16.8 13-18</td>
<td>0.1</td>
<td>Village aggregate wife reports</td>
<td>16.8 13-18</td>
<td>0.1</td>
<td>Village aggregate wife reports</td>
</tr>
</tbody>
</table>

What the Data Tells us and how it can Inform Programming
41% of women reporting working outside of the home, almost all were engaged in unpaid agricultural work. There is weak to moderate correlation between the female and male attitudinal and normative variables (ranges: 0.04 and 0.60). The strongest correlation ($r = 0.60$) was seen between the village-level measure of the ideal age of marriage.

### Table 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta</th>
<th>SE</th>
<th>P</th>
<th>Beta</th>
<th>SE</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife reports of community norm in support of girls marital choice</td>
<td>0.01</td>
<td>0.01</td>
<td>0.38</td>
<td>0.01</td>
<td>0.01</td>
<td>0.38</td>
</tr>
<tr>
<td>Wife reports of community norm in support of girls marital choice</td>
<td>0.05</td>
<td>0.01</td>
<td>0.00</td>
<td>0.05</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Village aggregate of wife reports of community norm in support of girls marital choice</td>
<td>0.10</td>
<td>0.01</td>
<td>0.00</td>
<td>0.10</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Wife’s belief in the ideal age of marriage</td>
<td>-0.06</td>
<td>0.01</td>
<td>0.03</td>
<td>-0.06</td>
<td>0.01</td>
<td>0.03</td>
</tr>
<tr>
<td>Village-aggregate wife reports marital choice</td>
<td>0.40</td>
<td>0.02</td>
<td>0.00</td>
<td>0.40</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td>Village-aggregate wife reports marital choice</td>
<td>0.25</td>
<td>0.01</td>
<td>0.00</td>
<td>0.25</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Village-aggregate wife reports marital choice</td>
<td>0.32</td>
<td>0.01</td>
<td>0.00</td>
<td>0.32</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Village-aggregate wife reports marital choice</td>
<td>0.30</td>
<td>0.01</td>
<td>0.00</td>
<td>0.30</td>
<td>0.01</td>
<td>0.00</td>
</tr>
</tbody>
</table>

NB: variables in bold are statistically significant at the $\alpha = 0.10$ threshold.

### Table 3

<table>
<thead>
<tr>
<th>Village-aggregate wife reports marital choice</th>
<th>Village-aggregate wife reports marital choice</th>
<th>Village-aggregate wife reports marital choice</th>
<th>Village-aggregate wife reports marital choice</th>
<th>Village-aggregate wife reports marital choice</th>
<th>Village-aggregate wife reports marital choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.38</td>
<td>0.02</td>
<td>0.00</td>
<td>0.38</td>
<td>0.02</td>
<td>0.00</td>
</tr>
</tbody>
</table>

NB: variables in bold are statistically significant at the $\alpha = 0.10$ threshold.

### Table 4

<table>
<thead>
<tr>
<th>Model</th>
<th>Model</th>
<th>Model</th>
<th>Model</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife's belief in the ideal age of marriage</td>
<td>Wife's belief in the ideal age of marriage</td>
<td>Wife's belief in the ideal age of marriage</td>
<td>Wife's belief in the ideal age of marriage</td>
<td>Wife's belief in the ideal age of marriage</td>
</tr>
<tr>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
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<tr>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
</tr>
</tbody>
</table>

NB: variables in bold are statistically significant at the $\alpha = 0.10$ threshold.
married (i.e., communities in which descriptive norms indicate the practice of women’s marital choice), individual girls within these communities may be more likely to resist a choice that few or none of the women they marry to have married at an older age. Because this measure is an aggregate of women’s reported choices, we also do not know whether they believe that other women also have made the same choice. It is possible that this measure is more likely giving us information about contexts in which women are more or less likely to have a choice, rather than an objective measure of community behavior. The association between the male perception of the community’s support of marital choice and both of our outcomes is an important reflection of men’s power in the domains of family, marriage, and fertility in this setting. While this offers an important leverage point for intervention that is specific to married girls involved in a family planning intervention trial, it may not be applicable to girls in the non-marital context as well as ensuring an intersectional equity lens in the approach. While these findings offer important insight regarding the influence of marital choice, it is clear that the perceptions of these norms at the community level are not as related to the perceptions of women’s support of women’s age at marriage. However, while beliefs regarding community norms related to appropriate age of marriage for girls were associated with whether or not the wife supported her marital choice herself. While these findings are conditioned at the individual level, they only reinforce the role community norms and expectations have on girls with regard to their marital choice. Consequently, these findings beg the question of how may girls or may not resist harmful practices of CEFM, which have been linked to and CEFM in the context of a high need an understudied nation, Niger, and thus we used norms variables from two points in time, with outliers testing them via cognitive interviews. We then implemented them in the field. Hence, while standard measures could not be used, we engaged in a rigorous process of measurement development to offer potential new measures on these topics.

Conclusion

This study analyzed community and individual level norms related to early marriage of girls and girls’ marital choice in rural Niger, with a sample of adolescent wives and their husbands. In this context of very high rates of child and early marriage we found that village-level norms related to marital choice, particularly the norms of men, may be a key driver of child and early marriage. In addition, earlier age at marriage for girls in this context is significantly associated with lower likelihood of their engagement in marital choice, a finding that may point to limited female empowerment as a driver of both. Further, we find that village-level norms related to early marriage and marital choice, as well as adolescent girls’ report on how their husbands support early marriage, are associated with odds of a wife having had marital choice. Importantly, we did not necessarily find that marriage-related attitudes regarding appropriate age of marriage and wife’s age at marriage or village reports of marital choice. These findings suggest the value

Table 5

<table>
<thead>
<tr>
<th>variable</th>
<th>Betas</th>
<th>SE</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male perception of community support of marital choice</td>
<td>-0.12</td>
<td>0.31</td>
<td>0.29</td>
</tr>
<tr>
<td>Village aggregate wife reports marital choice</td>
<td>0.04</td>
<td>0.15</td>
<td>0.75</td>
</tr>
<tr>
<td>Village aggregate wife reports optimal age of marriage</td>
<td>0.10</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Village aggregate wife reports ideal age of marriage</td>
<td>-0.50</td>
<td>0.05</td>
<td>0.59</td>
</tr>
</tbody>
</table>

NB: variables in bold are statistically significant at the α = 0.10 threshold.
community level social norms change on CEFM in this context, particularly targeting males, and suggest that approaches the focus on sustaining child marriage in far north and south-east Cameroon. In phalombe

not being controlled. They measured?

they measured?

with promoting girls education may be more impactful. 

Ethics and approval and consent to participate

This study was approved by the University of California San Diego IRB, protocol number H1404705 and Niger Ministry of Health. Wives aged 13–17 years were included the study. Based on these individuals being married, they are not viewed as children in Niger and have rights to consent to participate in research and to receive family planning services without consent of their parents (i.e., they are considered emancipated). Similar to California Emancipation of Minors (Family Code Section 700–7002), in which minors who have entered a valid marriage are legally emancipated, according to customary law in Niger. Thus, even if deemed sent, as the Hausa and Zarma languages are not in written form. The consent scripts and forms were also approved by University of California, San Diego IRB.

Author statement

Holly B. Shakyia conceptualization, methodology, formal analysis, write original draft and review; Jay Silverman funding acquisition, supervision, conceptualization, writing original draft and review; Anita Raj funding acquisition, supervision, conceptualization, writing original and review; Justice. 

Declaration of competing interest

The authors have no conflicts of interest or financial disclosures to report.

Acknowledgments

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References


Reproductive Health Review, 12, 138–147.


Shakeri, M., 2013; Kidman, 2017; Verguet et al., 2016). Gender transformative in-


Despite dramatic reductions in child marriage over the past decade, more than one in four girls in India still marry before reaching age 18. This practice is driven by a complex interplay of social and normative beliefs and values that are inadequately represented in national- and even state-level analyses of drivers of child marriage. A geographic lens was employed to assess variations in child marriage prevalence across Indian districts, identify hot and cold spots, and quantify spatial dependence and heterogeneity in factors associated with district levels of child marriage. Data were derived from the 2015-16 National Family Health Survey and the 2011 India Census, and represent 636 districts in total. Analyses included global Moran’s I, Spatial Durbin regression, and spatially varying relationships.

Introduction

Despite global recognition that child marriage violates the health and human rights of girls, no world region is projected to meet the Sustainable Development Goal of eliminating this practice by 2030 (Raj, 2010; Elbourne, Bhathal, Fawaz, & Firth, 2019). This geographic analysis of child marriage is designed to explore child marriage interventions and social and behavior change strategies to the specific contexts of communities in India. This study thus aims to understand the actual contours of the participant communities. A better understanding of the role of place and other spatial/geographic dimensions in shaping and upholding social norms can help to better tailor child marriage interventions and social and behavior change strategies to the specific contexts of communities in India.

The prevalence of child marriage, the social and normative factors associated therewith, and the programs and policies designed to intervene therein, are not uniform across India. National, and even state-level, analyses of these factors likely mask district-level inequities (Jiang et al., 2019; Roest, 2016; Srinivasan et al., 2015). Not only are states across India quite distinct from one another in a variety of aspects, including population, geography, economy, religion, and culture, but programs designed to mitigate child marriage are generally implemented at smaller scales (International Institute for Population Sciences (IIPS) & ICF, 2017; Jha et al., 2016; Jacob, 2015; Dheer, Lenartowicz, & Petersen, 2013; Prakash et al., 2019; Harriss, 1999). This study thus aims to understand this address this issue (Population Division of UN Department of Economic and Social Affairs (UNDESA), 2017; International Institute for Population Sciences (IIPS) & ICF, 2017). Over the past decade, India has recorded a nearly 50% reduction in the prevalence of child marriage, from 47% in 2006 to 27% in 2016 (International Institute for Population Sciences (IIPS) & Macro International, 2007; Population Division of UN Department of Economic and Social Affairs (UNDESA), 2017). However, much remains to be done.

Despite these reductions in prevalence, and at the regional level over the past decade, there are significant regional disparities. For example, in the northern Indian state of Rajasthan, the prevalence of child marriage in 2016 was 21%, while in the southern Indian state of Tamil Nadu, the prevalence was only 7% (International Institute for Population Sciences (IIPS) & Macro International, 2007). This study thus aims to understand this address this issue (Population Division of UN Department of Economic and Social Affairs (UNDESA), 2017; International Institute for Population Sciences (IIPS) & ICF, 2017). Over the past decade, India has recorded a nearly 50% reduction in the prevalence of child marriage, from 47% in 2006 to 27% in 2016 (International Institute for Population Sciences (IIPS) & Macro International, 2007; Population Division of UN Department of Economic and Social Affairs (UNDESA), 2017). However, much remains to be done.

Despite dramatic reductions in child marriage over the past decade, more than one in four girls in India still marry before reaching age 18. This practice is driven by a complex interplay of social and normative beliefs and values that are inadequately represented in national- and even state-level analyses of drivers of child marriage. A geographic lens was employed to assess variations in child marriage prevalence across Indian districts, identify hot and cold spots, and quantify spatial dependence and heterogeneity in factors associated with district levels of child marriage. Data were derived from the 2015-16 National Family Health Survey and the 2011 India Census, and represent 636 districts in total. Analyses included global Moran’s I, Spatial Durbin regression, and spatially varying relationships.

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factors that influence child marriage cluster, disperse and interact differently within and across different geographies highlighting place-based variations that may directly contribute to improved targeting of social and behavior change prevention efforts.

Methods

Data sources. Non-geographic data were obtained from the fourth National Family Health Survey (NFHS-4) and the 2011 Census, India, cross-sectional, non-geographic children sampled in 2015 and 2016, respectively (International Institute for Population Sciences (IIPS) & ICF, 2017). Geographic data were obtained from ML Infomap (ML Infomap, 2011). District population density was derived from the 2011 India Census, district distance to state border and district area were obtained from the 2011 census data. Other variables were derived from NFHS-4.

Measures. The outcome of interest was district-level prevalence of child marriage, defined as marriage before age 18, excluding marriages in which gauna was not performed (i.e. spouses do not co-reside and the marriage has not been consummated, which was 0.5% of this sample) among women aged 20-24 years.

Covariates were selected to represent the social and normative factors most related to child marriage in the available data. Geographic measures were included to account for the physical characteristics of each district, and comprised log distance from each district to the nearest ocean or state or union territory border (per 100 km; hereafter referred to as ‘non-ocean state border’ for brevity), log district area (km²) and log district population density (persons/km²). Ocean borders were excluded from distance calculations, as distances to the nearest border was intended to measure the distance to a distinct administrative boundary, rather than geographic distance. In the context of India, as in many other countries, distance to border may also serve as a proxy for environments that tolerate or even produce illegal practices, such as child marriage (Government of India, 2007). This is due to reduced capacity of local government to police trans-jurisdictional activities and actors, as well as to disparities in local laws and, consequently, services of related goods and services (Eller, 2015; Renu, 2013; Su, 2018).

Sociodemographic variables associated with child marriage specifically, and gender inequality in general, are commonly used based on previous research (Raj et al., 2015, McDougal et al., 2018, Raj et al., 2019). These measures include the percentage of women aged 15-49 in the district residing in rural areas, the percentage of women in a district who identified as Muslim, the mean years of education among women aged 20-24 in the district, the ratio of all female to all male births to districts in the past 6 years (per 1000), and the difference between the district vs. state level of child marriage (poor residing with a prevalence higher than the state prevalence). Measures of connectivity were included to assess exposure to media messages and normative discussion about child marriage and the status of women and girls. Media connectivity variables included the percent of women age 15-49 who report watching television, listening to the radio or reading the newspaper in the last six months (per 100). Community connectivity was measured by the percent women age 15-49 in the district who were aware of microcredit programs in the area, and who had ever used one or were interested in using one. Microcredit program awareness and utilization serve as proxy measures for community connect-
percentage point decrease in child marriage prevalence. Female television use was indirectly, though marginally, associated with child marriage. For every increase of 10 percentage points in female weekly television use in neighboring districts, there was a 1.7 percentage point reduction in child marriage prevalence in a given district \( (p < 0.001) \). Female radio use, household internet access and microcredit program utilization were indirectly associated with child marriage prevalence, albeit only marginally \( (p < 0.10) \).

Results show distributions based on 500 multivariable normal distribution simulations. Fit statistics (AIC, BIC, log-likelihood, LM test) are for the entire model.

**Table 2**

<table>
<thead>
<tr>
<th>Table 2: Spatial Durbin multivariable regression model assessing associations with district-level child marriage prevalence in India, 2015–16.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geography</strong></td>
</tr>
<tr>
<td>Coefficient</td>
</tr>
<tr>
<td>Log distance to non-ocean state border (per 100 km)</td>
</tr>
<tr>
<td>Log density (population/km(^2))</td>
</tr>
<tr>
<td>Log area (km(^2))</td>
</tr>
</tbody>
</table>

| **Sociodemographics** | Direct marginal effects | Indirect marginal effects | Total marginal effects |
|---|
| Coefficient | SE | z-value | p-value | Coefficient | SE | z-value | p-value | Coefficient | SE | z-value | p-value |
| Female:male sex ratio at birth (per 1000) | -0.009 | 0.314 | 0.009 | 0.099 | 0.088 | 0.419 | 0.099 | -0.089 | 0.023 | 0.407 |
| SC/ST or OBC (%) | -0.013 | 0.012 | -2.453 | 0.014 | -0.013 | 0.076 | -1.820 | 0.067 | -0.167 | 0.090 | -2.106 | 0.035 |
| Muslim (%) | -0.023 | 0.017 | -1.345 | 0.179 | -0.023 | 0.029 | -0.687 | 0.134 | -0.116 | 0.307 | -0.312 | <0.001 |
| Female education (years) | -0.056 | 0.157 | -3.582 | 0.001 | -0.056 | 0.194 | -3.473 | 0.001 | -0.363 | 0.145 | -3.946 | <0.002 |
| Female:male sex ratio at birth (per 1000) | -0.004 | 0.003 | -1.283 | 0.200 | -0.004 | 0.007 | -0.399 | 0.194 | -0.007 | 0.029 | -0.238 | 0.749 |
| District-state differences in prevalence of child marriage (%) | 0.768 | 0.519 | 1.492 | <0.001 | 0.768 | 0.511 | 1.492 | <0.001 | 0.768 | 0.511 | 1.492 | <0.001 |

| **Media connectivity** | Direct marginal effects | Indirect marginal effects | Total marginal effects |
|---|
| Coefficient | SE | z-value | p-value | Coefficient | SE | z-value | p-value | Coefficient | SE | z-value | p-value |
| Female weekly television use (%) | -0.016 | 0.057 | -0.294 | 0.769 | -0.016 | 0.057 | -0.294 | 0.769 | -0.016 | 0.057 | -0.294 | 0.769 |
| Female weekly radio use (%) | 0.021 | 0.026 | 0.786 | 0.419 | 0.021 | 0.026 | 0.786 | 0.419 | 0.021 | 0.026 | 0.786 | 0.419 |
| Female weekly newspaper use (%) | -0.120 | 0.022 | -5.420 | <0.001 | -0.120 | 0.022 | -5.420 | <0.001 | -0.120 | 0.022 | -5.420 | <0.001 |
| Female mobile phone access (%) | 0.043 | 0.041 | 1.030 | 0.307 | 0.043 | 0.041 | 1.030 | 0.307 | 0.043 | 0.041 | 1.030 | 0.307 |
| Household has internet access (%) | 0.011 | 0.042 | 0.250 | 0.801 | 0.011 | 0.042 | 0.250 | 0.801 | 0.011 | 0.042 | 0.250 | 0.801 |

| **Community connectivity** | Direct marginal effects | Indirect marginal effects | Total marginal effects |
|---|
| Coefficient | SE | z-value | p-value | Coefficient | SE | z-value | p-value | Coefficient | SE | z-value | p-value |
| Female microcredit program utilization (%) | 0.057 | 0.015 | 3.002 | <0.001 | 0.057 | 0.015 | 3.002 | <0.001 | 0.057 | 0.015 | 3.002 | <0.001 |
| Female microcredit program utilization (%) | 0.075 | 0.015 | 1.409 | 0.156 | 0.075 | 0.015 | 1.409 | 0.156 | 0.075 | 0.015 | 1.409 | 0.156 |

Results show distributions based on 500 multivariable normal distribution simulations. Fit statistics (AIC, BIC, log-likelihood, LM test) are for the entire model.
masked by national, or even state-level, estimates. This analysis of the first National Family Health Survey in India designed to be representative at the district level reveals substantial subnational geographic variation in the district-level prevalence of child marriage among women aged 20-24 in India, as well as the presence of spatial dependence and spatial heterogeneity in factors associated with child marriage. This indicates both that the relationships between some district-level socioeconomic and normative factors (e.g. marginalized groups, female education and some forms of media exposure) and child marriage levels are influenced not only by the prevalence of these factors within each district, but also of levels of these factors in neighboring districts. Additionally, the strength of these relationships varies substantially across geographies.

Geographic factors were strongly predictive of child marriage in multilevel regression accounting for that spatial dependence, suggesting that these place-based characteristics (particularly density and area) are strongly related to levels of child marriage within communities (districts). This relationship was most associated with the district's own characteristics, but also by the characteristics of neighboring districts. This statistically significant interplay across districts' characteristics highlights the tremendously contextual nature of child marriage, and particularly the social and normative factors that influence age at marriage (Cislaghi et al., 2020). Hotspots of heightened levels of child marriage were identified in border districts of Madhya Pradesh, Rajasthan, West Bengal, Bihar, Jharkhand, Andhra Pradesh, and Telangana.

These relationships between neighboring states are of great importance in understanding the sub-national heterogeneity of child marriage in India. While Indian states may differ from one another with respect to administrative capacity and legal frameworks (Harris, 1999), many state boundaries can be considered porous in terms of culture, with people from the same caste or sub-caste communities residing in adjacent states (Obehe et al., 2013). In the context of child marriage, this is key, as traditionally, marriages in India occur between individuals from the same caste or community (Kaur & Palviwar, 2003). Importantly, however, results also identify a significant indirect association between female education and child marriage, one that is in fact substantially larger in magnitude than the direct effect. High levels of female education in neighboring districts predict lower levels of child marriage in a given district five times more powerfully than those within its own boundary. Thus, while the level of female education within a district has a strong and negative association with child marriage, that association is substantially larger based on levels of girl education in neighboring districts. Cross-border marriages, including the practice of bride buying noted above, may in part explain this finding. An additional plausible explanation is that of social diffusion, where districts with higher levels of girl education and lower levels of child marriage may be more likely to both passively and actively share those values and norms, as well as backlash and stigma associated with norm divergence, with nearby communities (Nguyen et al., 2019; Raman et al., 2018). This may be indicative of a broader social benefit mechanism to girl education, highlighting positive spillover effects of the normalization of increased female education and gender equality and thus increased emphasis on girl's schooling and delayed marriage. In India, child marriage prevention programs have in large part focused on incentives for completing secondary school, though there have also been initiatives to improve girls' empowerment, autonomy and rights awareness (Jha et al., 2018; Lee-Rife et al., 2012; Mehta, Sarkar, Sreenath, Rehwa, & Mehta, 2018; Prakash et al., 2019). Implementation of most of these programs, even those that are centrally funded, has generally been targeted to select states or districts, and evidence is mixed on their effectiveness (Government of India, 2020; Jha et al., 2018; Kolams et al., 2014; Lee-Rife et al., 2012; Ministry of Women and Child Development and Government of India, 2019; Prakash et al., 2019). These results suggest that interventions designed to reduce child marriage through education would be well served by considering regional, rather than targeted, interventions to increase education in a broader geographic area that may bridge across state borders.

Media connectivity, as measured via weekly newspaper use and
mobile phone access for women, was strongly associated with lower district levels of child marriage, even after accounting for other covariates; this association was present, but marginal, for television use. Access to the internet and usage of higher socioeconomic status, which tends to be associated with lower levels of child marriage (Koj, 2010; Ellevira et al., 2017). Indeed, 74% of women in the highest-income India had access to mobile phone, compared to only 22% in the lowest quintile; 61% of women in the highest-income India quintile report weekly newspaper use, vs. 5% in the lowest quintile (International Institute for Population Sciences (IIPS) & ICF, 2017). The associations between media connectivity and child marriage are significant across a range of media use, suggesting that there are geographically-specific factors differentially affecting these relationships. To the extent that child marriage preven- cines programs that leverage media connectivity for their communication strategies, this variation may reflect differences in programming availability and messaging across India. The fact that radio use was a weak predictor of marriage among women may reflect its low overall prevalence (only 11% of women nationally reported weekly radio use), which may simply be too small to influence norms and behaviors in the nation as a whole (International Institute for Population Sciences (IIPS) & ICF, 2017).

As a result of the normative underpinnings of child marriage, pre- vention programs, as with many initiatives focused on behavior and norms change, commonly use multichannel social communication change strategies: individual, small group, or community mobilization approaches within the local community that directly target program recipients, while mass media convenes advocacy, education and aware- ness-building efforts within a larger population of individuals (Gage, 2013; Jh, 2016; Kalamar et al., 2016; Lee-Rife et al., 2012; Mehera et al., 2018; Prakash et al., 2015; Svanemyr, Amri, Rubben, & Belayneh, 2010). The diffusion of mass media creates opportunities for program messages to reach beyond traditional media, and reflects the reality that community-level change efforts is not a universally effective approach across India, but may be more effective within these assessed districts. Data are cross-sectional, and causality cannot be presumed. Finally, this study concerns itself with the highest wealth quintile, and could have included those with lower socioeconomic status, however, the relationships between mobile phone access and early marriage in those communities should be considered when determining the suit- ability of mobile phone access for women as a means of prevention. Further, while this study suggests that these diffusion pathways can be explicitly integrated into child marriage and key associated factors. Given the heterogeneous array of child marriage prevention programs that have been imple- nent in India, in terms of target population and program content and design, these findings underscore the need for a deeper understanding of local challenges to roll-out, delivery, and uptake (Jh et al., 2016; Lee-Rife et al., 2012). Mass media such as news- papers and mobile phones, may be important communication avenues for addressing these challenges and disequilibrium. Importantly, the program design (Cislaghi et al., 2019a; Starmann et al., 2018). Indeed, 74% of women in the highest-income India had access to mobile phone, compared to only 22% in the lowest quintile; 61% of women in the highest-income India quintile report weekly newspaper use, vs. 5% in the lowest quintile (International Institute for Population Sciences (IIPS) & ICF, 2017). The associations between media connectivity and child marriage are significant across a range of media use, suggesting that there are geographically-specific factors differentially affecting these relationships. To the extent that child marriage preven- cines programs that leverage media connectivity for their communication strategies, this variation may reflect differences in programming availability and messaging across India. The fact that radio use was a weak predictor of marriage among women may reflect its low overall prevalence (only 11% of women nationally reported weekly radio use), which may simply be too small to influence norms and behaviors in the nation as a whole (International Institute for Population Sciences (IIPS) & ICF, 2017).


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