

# What does the American public know about 'child marriage'?

David W Lawson (✉ [dlawson@anth.ucsb.edu](mailto:dlawson@anth.ucsb.edu))

University of California Santa Barbara <https://orcid.org/0000-0002-1550-2615>

Rachel Lynes

University of California Santa Barbara

Addison Morris

University of California Santa Barbara

Susan B Schaffnit

University of California Santa Barbara

---

## Research article

**Keywords:** public knowledge of child marriage, global health initiative,

**Posted Date:** December 4th, 2019

**DOI:** <https://doi.org/10.21203/rs.2.18195/v1>

**License:** © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

---

**Version of Record:** A version of this preprint was published at PLOS ONE on September 23rd, 2020. See the published version at <https://doi.org/10.1371/journal.pone.0238346>.

# Abstract

**Background:** A global campaign to eradicate 'child marriage' (<18 years) increasingly targets governments, the private sector and the general public as agents of change. Here, we measure the current state of public knowledge of child marriage, identifying potential misconceptions and inaccurate beliefs. We then consider the implications of our survey for global health initiatives addressing child marriage.

**Methods:** We surveyed USA nationals via the online survey platform MTurk. Participants provided sociodemographic information and answered ten questions about their understanding of child marriage. To identify potential misconceptions and inaccurate beliefs we present descriptive statistics for participant responses paired with correct answers where available.

**Results:** 609 participants provided data for analysis. 59% were women, with a mean age of 37 years, just over half (55%) were university educated, and the majority (79%) were currently employed. Half of those surveyed mistakenly believed that the cut-off for child marriage is younger than the legal threshold of 18 years, and nearly three-quarters incorrectly believed that most child marriages occur at 15 years or below (child marriage primarily takes place in later adolescence). The large majority of participants incorrectly believed that child marriage is illegal throughout the United States (it's illegal in only two states), and mistakenly believed that child marriage primarily takes place among Muslim-majority regions of the Middle East and North Africa (it is most common in sub Saharan Africa and South Asia). Participants tended to substantially overestimate the prevalence of child marriage in both the USA and abroad.

**Conclusions:** These findings suggest that public understanding of child marriage is not only poor, but also shaped by wider misperceptions of both relatively high and low-income nations. Organizations seeking to empower girls and young women by reducing child marriage need to be cautious of these misunderstandings, and wary of the potential for their own activities to seed misinformation. For example, we suggest the terminology 'child marriage', as opposed to 'teen marriage' or 'adolescent marriage', may contribute to widespread confusion about the typical ages at which child marriages occur.

## Background

Rosling et al.'s 2018 book *Factfulness* (1), exposed a widespread ignorance among not only the public, but also global health professionals, about the state of world we live in. In a simple three option multiple-choice questionnaire distributed to nearly 12,000 people in 14 countries, concerning topics such as global life expectancy, child vaccination rates, and gender parity in education, only 10% of test-takers performed better than would be expected if they had chosen their answers at random. Most errors were caused by participants believing the state of the world was considerably worse than it actually is. Rosling et al. (1) attribute this pattern in large part to the way that we receive and process information about our world, most importantly the tendency for negative news to get media interest and retain our attention. Negative news is effective at garnering public interest, but the resulting biases in understanding can also be counterproductive to global health objectives because: 1) efficient action on global health issues requires

accurate information; 2) misrepresentations of low and middle-income countries can reinforce inaccurate and potentially harmful stereotypes; and 3) these stereotypes can be detrimental to relationships with wealthier 'donor' countries by negatively influencing stances on migration, trade and other forms of sociopolitical interaction (1,2). Inspired by Rosling et al. (1), here we consider public understanding of one specific issue: 'child marriage', a topic of increasing prominence in global health.

'Child marriage' is a term defined and used in international development and human rights discourse to refer to marriage under the age of 18 years. It most commonly affects girls and young women, and is most prevalent in sub-Saharan Africa and South Asia, where today an estimated 38% and 30% of girls marry before 18 years respectively (3). Within the development sector it is widely held that child marriage equates to forced marriage without informed consent, and carries substantial physical, mental and socioeconomic costs for girls and women, especially via early pregnancy, school dropout and risk of sexual violence (4). The last decade has witnessed a dramatic escalation in public and policy attention on child marriage. 'Girls Not Brides', for example, was founded in 2011, a global partnership of now over 1,000 civil society organizations committed to ending child marriage and increasing public awareness of its prevalence and purported harmful consequences (5). In 2015, the United Nation's (UN) Sustainable Development Goals marked the first international pledge to abolish child marriage within a generation, with an ambitious 15-year target (6). [Figure 1](#) illustrates the rising interest in child marriage in the general population, with worldwide google searches for 'child marriage' approximately doubling over the last 10 years.

Even with increasing public interest we expect the general population of the USA to hold misconceptions about child marriage for several reasons. First, well-intentioned campaigns may inadvertently misrepresent the realities of child marriage by presenting and emphasizing narratives of extreme scenarios most capable of capturing donor attention. Most notably, organizations campaigning against child marriage routinely portray child brides as very young, often prepubescent girls, getting married to considerably older men. Yet, in every world region, the majority of 'child brides' are in fact married in later adolescence, and spousal age gaps are more variable than routinely portrayed. According to recent UNICEF statistics, worldwide 76% of marriages under 18 years take place at or over 15 years (3). We believe this emphasis on relatively extreme scenarios will lead people to overestimate the prevalence of child marriage in line with the tendencies described by Rosling et al. (1), but moreover to specifically overestimate the prevalence of child marriages at very young ages.

The second and related reason is terminology. The term 'child marriage' is rooted in a human rights framework, taking the legal definition of childhood which gives way to adulthood at 18 years (7,8). Yet in popular discourse, and more generally across the social and health sciences, childhood refers to the period before puberty, after which children become adolescents or teenagers, and then adults. As such, the public may understandably be under the false assumption that 'child marriage' refers to the marriage of especially young, or even pre-pubescent individuals. Confusion may be further compounded by the inconsistent usage of terminology across behavioral domains, with for example pregnancy at young ages generally referred to as 'teen pregnancy' or 'teen motherhood' (e.g. 9,10).

Finally, child marriage is categorized by the UN and related organizations as a ‘harmful cultural practice’, akin to female genital cutting/mutilation, presenting a moral or ethical obligation for intervention (11). As part of this framing, advocacy activities invite donors to be outraged that girls/young women are forced into marriage to draw support for the end child marriage movement. Child marriages are explicitly defined as forced marriages by UN and USAID (12,13) and throughout much of the wider policy and academic literature (e.g. 14). This stance contrasts a growing body of evidence that female adolescents are often active agents in the marriage process in some cultural contexts, and that early marriage does not always imply coercion or clear costs to wellbeing in the context of locally-available alternatives (15–20). With such framing, the USA and other high-income populations are implicitly positioned as morally superior to those where child marriage is more common. Coupled with broader ethnocentric misconceptions about low-income countries, we therefore anticipate the general public will be surprised to discover that, despite escalating pressure placed on lower-income populations to ban child marriage, it remains legal in most high-income nations. In the USA, for example, only New Jersey and Delaware recently made marriage under the age of 18 years illegal, while it remains legal with parental consent in the remaining 48 states (21).

## Methods

We designed and implemented an internet survey of the American public to assess their state of knowledge on child marriage. Our surveys were conducted on Amazon Mechanical Turk (MTurk), an online tool used to recruit members of the general population in survey research. Our survey was set to accept responses from USA nationals only, of at least 18 years of age and was restricted to participants that had a MTurk approval rating over 85%. Participants were paid \$0.50 for completing the survey, which took approximately 10 minutes to complete. A target sample size of 750 individuals was selected to balance budgetary constraints with the benefits of a large sample, anticipating some degree of non-completion.

Participants were asked 10 questions pertaining to ‘child marriage’: 1) Marrying under \_\_\_ years is the legal definition of child marriage agreed upon by the United Nations [fill in the blank to the best of your knowledge]; 2) In your opinion, what age in years do you think marks the end of childhood?; 3) To the best of your knowledge, in what age range do the majority of child marriages take place across the world today?; 4) To the best of your knowledge, in what region of the world are the highest proportion of women married as children today?; 5) To the best of your knowledge, in how many of the 50 U.S. states is child marriage legally permitted today?; 6) To the best of your knowledge, what percentage of married women in Sub-Saharan Africa today were married before the age of 18 years?; 7) To the best of your knowledge, what percentage of women in South Asia today were married before the age of 18?; 8) To the best of your knowledge, what percentage of married women in the USA today were married before the age of 18?; 9) To the best of your knowledge, what percentage of married women in the USA in 1950 were married before the age of 18?; and 10) How commonly do you think child marriages are forced? Participants were explicitly instructed to give responses based on their current knowledge and not to use the internet or other sources before answering.

In addition to the questions on child marriage, participants provided their sociodemographic characteristics (state of residence, sex, age, education level, employment status, and political leaning). They also answered two test questions used to confirm that participants were giving considered responses. The first test question asked them to describe what they ate yesterday in a grammatically correct sentence, and the second asked them to list three given colors in reverse order. Failure to answer these questions correctly led to the participant being excluded from analysis. At the end of the survey participants were directed to an information sheet providing accurate statistics on child marriage.

To identify potential misconceptions and inaccurate beliefs about child marriage we present descriptive statistics for each of the 10 questions on child marriage alongside correct responses where available (primarily based on the most recent global early marriage statistics compiled by UNICEF (3)). We have no hypotheses regarding potential relationships between sociodemographic characteristics of participants and their knowledge of child marriage. However, as an exploratory exercise we also present bivariate relationships between each sociodemographic characteristic and participants' responses in our supplementary material. Here, ANOVA or chi-squared tests are used as appropriate to detect differences in responses by sociodemographics. All data analysis was conducted in Stata v.15.0.

## Results

755 people completed the online survey. We excluded any individual who did not complete the full survey ( $n = 40$ ) or failed to provide valid responses to either of the two test questions ( $n = 106$ ). This left 609 valid cases for analysis. 59.0% of participants identified as female and 41.6% as male (with 0.5% respondents selecting neither male nor female). Participants were aged between 18 and 74 years (mean = 37.0 years; standard deviation (s.d.) = 11.9). A majority of respondents were university educated (55.0% had a bachelor's degree or higher), currently employed (78.7%) and born in the United States (95.1%). The geographic spread of participants was wide, including residents of 46 out of 50 states, and Washington DC. Political leanings were on average left of center. Asking participants to place themselves on a scale ranging from zero for completely liberal to 100 for completely conservative, the mean score was 42.3 (s.d. = 31.2). Full descriptive statistics on participants can be found in Table 1.

Table 2 shows participant responses to questions on child marriage alongside correct answers where they exist. Participants were asked what age the UN defines as the threshold for child marriage, and what age they believed childhood ends, with the option to answer any age in years. [Figure 2A](#) shows the distribution of responses for both of these questions (excluding 3 improbable answers for age marking the end of childhood). The mean response for both the UN threshold for child marriage was 16.7 years (s.d. = 2.0) and 16.2 years (s.d. 4.1) for the end of childhood. 48.8% of all participants correctly identified 18 years as the UN threshold defining 'child marriage', though 50.1% guessed a younger threshold (with 31.5% answering that only marriages under the age of 16 years qualify as child marriages). Fewer participants suggested that childhood ends at the 18-year threshold (39.4%), with 46.5% of participant suggesting that childhood ends at or below 16 years.

Participants were then asked in which age ranges and in which regions of the world do most 'child marriages' occur? Almost three-quarters of participants (73.6%) believed that child marriage was most common under 16 years, with 43.7% selecting ages 13–15 years. In reality, child marriages are most frequent just below 18 years of age, with 76% of child marriages taking place at or over age 15 years (3). Most participants (51.4%) incorrectly answered that 'child marriage' is most common in the Middle East and North Africa. The next most common guess was the correct answer, with 14.8% of participants correctly identifying that most child marriages take place in sub-Saharan Africa.

Participants were asked in how many US states is child marriage currently legal. 42.5% thought that child marriage was illegal in all states, and half of respondents guessed it was legal in 2 or fewer states (mean = 7 states; s.d. 11.7) (Figure 2B). In reality the marriage of minors is only banned in two states (21). Participants were asked what proportion of women marry before 18 years of age in sub-Saharan Africa, South Asia (the two world regions with the highest rates of child marriage), and in the USA today and in the 1950s. Participants overestimated its frequency in Sub-Saharan Africa and South Asia (Figure 2C), but also substantially overestimated its prevalence in the USA today and in the past (Figure 2D).

Finally, we asked participants how many child marriages participants they believed to be forced. The large majority felt that child marriage was forced most or all of the time. We are aware of no data which speaks to what percentage of marriages (of minors or adults) are truly forced. However, several studies have concluded that child marriages are not always forced, with varying degrees of agency exercised by those marrying as minors (see Discussion).

As an exploratory measure we looked at bivariate relationships between participant characteristics and understandings of early marriage. Tables with bivariate relationships can be found in the supplementary materials ([Supplementary Table 1–5](#)). We found that women, older participants and those who are currently unemployed or retired showed a greater tendency to overestimate the proportion of women married before age 18-years in sub-Saharan Africa and South Asia compared to men, younger participants and those who are currently students or employed (respectively). Women were also more likely to say that child marriages are forced always or most of the time, and more likely to guess that child marriages mostly take place at ages under 12 years than men. Participants with a higher education guessed that child marriage was legal in more US states than those with lower education, though they still vastly underestimated the correct answer. More educated respondents were also less likely to misidentify the Middle East and North Africa as the regions with the highest rate of child marriages.

## Discussion

Our results suggest that the American public are poorly informed about child marriage. This in itself is not especially surprising, and is in line with the widespread ignorance about global health issues demonstrated by Rosling et al. (1). What is interesting, however, is the direction of common errors, revealing biases in popular understanding. These misconceptions have important implications for initiatives addressing child marriage and aiming to empower girls and young women in both low- and

high-income settings. Most strikingly, half of those surveyed mistakenly believed that the cut-off for child marriage is younger than the legal threshold of 18 years, and nearly three-quarters incorrectly believed that most child marriages occur at 15 years or below, despite the fact that child marriage primarily takes place in later adolescence (3). With many participants also answering that they believe childhood ends earlier than 18 years, we argue that the specific terminology of 'child marriage' or 'child bride', as opposed to say 'adolescent' or 'teen marriage' contributes to this confusion. In contrast, marriage at equivalent ages in high-income populations, like the USA, are more typically referred to as cases of 'teen marriage' (e.g. 22), 'early marriage' (e.g. 23) or 'adolescent marriage' (e.g. 24). Such terminology conjures notions of relatively older girls/young women with a higher degree of autonomy in the decision to marry. The term 'child marriage' is used with reference to higher-income populations, but more rarely (e.g. 25). The reasons behind, and implications of, this discrepancy in terminology require consideration.

A comparison of child marriage to teen pregnancy is instructive. Pregnancy under the age of 18 is labelled as 'teen pregnancy' in global and public health discourse across both low and high-income contexts. As such, if a 17-year-old is pregnant, she is labelled a 'teen', but if married, and especially if she from a low-income country, she is a labelled 'child'. This distinction is likely rooted in the fact that interest in teen pregnancy initiated in reference to sexual and reproductive health in high-income societies, before later being extended into wider global health scholarship (9,10). In contrast, interest in child marriage gained momentum first through concerns over female wellbeing in relatively poorer nations, originating out of an international human rights framework which approaches the notion of a child as a legal entity (5,8). Notably, the adoption of a legal 18-year threshold between child and adult was a logical consequence of a series of legal changes relating to childhood in high-income countries which had come about over nearly a century, such as the implementation of child labor laws and mandatory schooling (22). In contrast, this threshold is relatively arbitrary in countries and contexts without this shared historical progression of legal changes surrounding concepts of childhood. Strategic representations of childhood innocence and suffering also have a long history in international development advocacy, where they are recognized as an effective, yet often problematic, method of garnering public attention and donor support for multiple humanitarian causes (2).

What implications might there be of the public overestimating the prevalence of very early child marriages? On the one hand, it might have the desirable outcome of creating a sense of urgency and increasing commitments to the global health target to end child marriage. But this potential benefit comes at the cost of perpetuating harmful stereotypes. In particular, it reinforces views of girls/young women in low-income countries as predominantly passive victims rather than active agents in their own lives. Since child marriages are mostly assumed to occur via exploitative coercion by parents and husbands, overestimating the prevalence of child marriage may also reinforce wider views of low-income nations as in urgent need of moral rescue from their own cultural traditions. Such representations can counterintuitively undermine humanitarian empathy and instead encourage ethnocentric judgements of low-income countries as to blame for their own hardships (2), and more generally stifle consideration of the broader structural factors (e.g. poverty, lack of viable alternatives) determinantal to girls and women (26,27).

The large majority of participants incorrectly believed that child marriage is illegal throughout the majority of the USA. Marriage before age 18 years is, in fact, illegal in only two states. This finding has at least two implications. First, organizations such as Unchained at Last (28) which campaign to criminalize child marriage in the USA, should act on the assumption that the public are currently almost totally unaware that it remains legal across almost the whole country. Second, it is evident that few Americans are aware of the hypocrisy inherent to their country's position on the topic of child marriage. On the one hand, the US and other high-income nations are putting considerable pressure on low-income nations to adopt and enforce criminal laws regarding child marriage. On the other hand, recent efforts to raise ages at marriage in the US have largely been unsuccessful due to the sentiment that pregnant teenagers should have the option of marriage (29). Such contingencies are notably absent from the US's exported position on marriage before age 18 years.

Participants substantially overestimated the prevalence of child marriage abroad, but also at home. This fits the general tendency for the public to overestimate the prevalence of undesirable behaviors and outcomes as demonstrated by Rosling et al. (1). Alternatively, these misconceptions could result, at least in part, from the public holding outdated viewpoints rather than outright errors, since the prevalence of child marriage has declined globally over recent years. This interpretation however is at odds with the fact that public awareness of child marriage has risen dramatically over the last decade (Figure 1). As such, to the extent that the public are informed about child marriage we can expect them to have heard more recent statistics, rather than outdated ones. Participants also had a poor sense of the regional distribution of child marriage outside of the USA, with the majority answering that child marriage primarily takes place among Muslim-majority regions of the Middle East and North Africa (it is most common in South Asia and sub Saharan Africa). This misconception could be reflective of wider stereotypes about Islam and the treatment of women and girls within Muslim culture. This is a speculative interpretation, but is consistent with wider patterns of Islamophobia documented in the US (30).

A limitation of our study is the use of an MTurk survey, rather than a more representative survey of the American public. Past research has, for example, demonstrated that MTurk workers are more educated, less religious, and more likely to be unemployed than the general population (31). The reliability of data collected from MTurk has also not been found to be significantly different than data collected by traditional means (32). A second limitation of our study is that our methodology cannot pinpoint the source of public misconceptions over child marriage, or evaluate the potential role of end child marriage campaigns in seeding misinformation. In this sense it would particularly useful in future work to consider variation in public understanding in relation to such factors as experience of other cultures, educational or professional background with global health, and knowledge of the global goal to end child marriage.

Action can be taken to limit public misconceptions over child marriage. We advocate that the term 'child marriage' is replaced with more appropriate terminology which synchronizes public understanding with reality. 'Adolescent' or 'teen marriage' are solid alternatives. Alternatively, 'child marriage' could be used with specific reference to marriage at especially young ages, such as under the age of 15 or 16 years. Such efforts would also encourage discussions about the potentially distinct drivers and wellbeing

implications of marriage in late vs. early adolescence. Likewise, more care needs to be taken to not present all cases of early marriage as forced by definition—a statement which is at odds with a growing body of research in both low and high-income settings (15,16,18–20,25). These recommendations do not deny the existence or seriousness of forced child marriage, or that coercion, consent and the emergence of autonomy among young people are complicated phenomena to define and measure (8). They do however avoid the promotion of stereotypes which will, in some cases, unfairly villainize parents and husbands, and falsely victimize and stigmatize young people that choose to marry. More appropriate terminology would also encourage greater engagement with the reality that at least some young girls and women actively choose to marry when alternative options are unavailable. Ultimately, this can only lead to more culturally-sensitive and more effective public and global health policy and practice.

## Conclusion

In conclusion, public understanding of child marriage is not only poor, but also clearly shaped by wider misperceptions of both relatively high and low-income nations. Following Rosling et al. (1), we advocate that the public and global health community do more to consider their role in shaping popular (mis)understandings, and take active steps to minimize ethnocentric bias in their representation of early marriages. Our study is also relevant to current debates about the best definitions of childhood and adolescence. For example, following delayed transitions to adult social and economic independence in high-income countries, it has been recently proposed that the meaning of adolescence should be extended to refer to the ages of 10–24 years, as opposed to 10–19 years (33). These discussions should include a consideration of the potential for chosen terminology to lead to popular misunderstanding, and an acknowledgement of cultural and contextual variation in the timing of life transitions.

## Abbreviations

UN—United Nations

UNICEF—United Nations International Children’s Emergency Fund

USA—United States of America

## Declarations

**Ethics approval and consent to participate:** As an anonymous internet survey involving only adults with low risk to participants, the study was deemed exempt from ethical review procedures by the University of California Office of Research. Consent was obtained by participants completing the survey.

**Consent for publication:** Not applicable

**Availability of data and materials:** The datasets used during the current study are available from the corresponding author on reasonable request.

**Competing interests:** None.

**Funding:** This study was funded by the National Science Foundation (Award Number: 1851317) and the University of California, Santa Barbara. The funders played no role in this study.

**Authors' contributions:** DWL, RL, AA & SS designed and implemented the study, SS carried out the data analysis, DWL & SS wrote the paper.

**Acknowledgements:** We thank Michael Barlev and Spencer Mermelstein for guidance on using MTurk.

## References

1. Rosling H, Rosling O, Rönnlund AR. Factfulness: ten reasons we're wrong about the world - and why things are better than you think. Flatiron Books; 2018.
2. Hart J. Saving Children: What role for anthropology? *Anthropol Today* 2006;22(1):5–8.
3. UNICEF. Child Marriage; 2019. [cited 2019 Nov 23]. Available from: <https://data.unicef.org/topic/child-protection/child-marriage>
4. Raj A, Jackson E, Dunham S. Girl child marriage: A persistent global women's health and human rights violation. In: *Global Perspectives on Women's Sexual and Reproductive Health Across the Lifecourse*. Springer International Publishing; 2017. p. 3–21.
5. Hodgkinson K. Understanding and addressing child marriage. 2016. [cited 2019 Nov 23]. Available from: <https://www.her-choice.org/wp-content/uploads/2016/07/Her-Choice-Scoping-Study-Final-July-16.pdf>
6. General Assembly UN. Transforming our world: The 2030 agenda for sustainable development. Vol. A/RES/70/1. 2015.
7. Convention on the Rights of the Child. Geneva; 1989. [cited 2019 Nov 23]. Available from: <https://www.ohchr.org/documents/professionalinterest/crc.pdf>
8. Dixon-Mueller R. How Young is "Too Young"? Comparative Perspectives on Adolescent Sexual, Marital, and Reproductive Transitions. *Stud Fam Plann* 2008;39(4):247–62.
9. Furstenberg F. Reconsidering Teenage Pregnancy and Parenthood. *Societies* 2016 1;6(4):33.
10. Kramer KL. Evolutionary Perspectives on Teen Motherhood: How Young Is Too Young?. In *The Arc of Life* 2017 (pp. 55-75). Springer, New York, NY.
11. Winter B, Thompson D, Jeffreys S. The UN Approach to Harmful Traditional Practices. *Int Fem J Polit*. 2002;4(1):72–94.
12. United Nations. Child, early and forced marriage, including in humanitarian settings [Internet]. [cited 2019 Nov 23]. Available from: <https://www.ohchr.org/EN/Issues/Women/WRGS/Pages/ChildMarriage.aspx>
13. Child, early and forced marriage resource guide. 2015 [cited 2019 Nov 22]. Available from: <https://www.usaid.gov/documents/1865/child-early-and-forced-marriage-resource-guide>

14. Warria A. Forced child marriages as a form of child trafficking. *Child Youth Serv Rev*:274–9.
15. Archambault CS. Ethnographic Empathy and the Social Context of Rights: “Rescuing” Maasai Girls from Early Marriage. *Am Anthropol*. 2011;113(4):632–43.
16. Boyden J, Pankhurst A, Tafere Y. Child protection and harmful traditional practices: female early marriage and genital modification in Ethiopia. *Dev Pract*. 2012;22(4):510–22.
17. Schaffnit SB, Urassa M, Lawson DW. “Child marriage” in context: exploring local attitudes towards early marriage in rural Tanzania. *Sex Reprod Heal Matters*. 2019;27(1):1571304.
18. Stark L. Poverty, Consent, and Choice in Early Marriage: Ethnographic Perspectives from Urban Tanzania. *Marriage Fam Rev*. 2018;4929:1–17.
19. Schaffnit SB, Hassan A, Urassa M, Lawson DW. Parent–offspring conflict unlikely to explain ‘child marriage’ in northwestern Tanzania. *Nature human behaviour*. 2019 (4):346
20. Knox SEM. How they see it: Young women’s views on early marriage in a post-conflict setting. *Reprod Health Matters*. 2017;25:S96–106.
21. Tahirih Justice Center. Understanding state statutes on minimum marriage age and exceptions [Internet]. Forced Marriage Initiative. 2019. Available from: <https://www.tahirih.org/wp-content/uploads/2016/11/FINAL-State-Marriage-Age-Requirements-Statutory-Compilation-PDF.pdf>  
<http://www.tahirih.org/wp-content/uploads/2016/11/FINAL-State-Marriage-Age-Requirements-Statutory-Compilation-PDF.pdf>
22. Dahl GB. Early Teen Marriage and Future Poverty. *Demography* 2010;47(3):689–718.
23. Carlson E. Family Background School and Early Marriage. *J Marriage Fam*. 1979;41(2):341–53.
24. Martino SC, Collins RL, Ellickson PL. Substance Use and Early Marriage. *J Marriage Fam*. 2004;66(1):244–57.
25. Syrett NL. *American Child Bride: A History of Minors and Marriage in the United States*. Chapel Hill: The University of North Carolina Press; 2016.
26. Walley C. Searching for Voices: Feminism, anthropology, and the global debate over female genital operations. *Cult Anthropol*. 1997;12(3):405–38.
27. Pot H. INGO Behavior Change Projects: Culturalism and Teenage Pregnancies in Malawi. *Medical anthropology*. 2019 19;38(4):327-41.
28. Unchained at Last. 2019. [cited 2019 Nov 23]. Available from: <https://www.unchainedatlast.org/>
29. Clark D. End child marriage in the U.S.? You might be surprised at who’s opposed. *NBC News*. 2018. [cited 2019 Nov 23]. Available from: <https://www.nbcnews.com/politics/politics-news/end-child-marriage-u-s-you-might-be-surprised-who-n1050471>
30. Mogahed D, Mahmood A, Chouhoud Y, Ikramullah E. American Muslim Poll. Predicting and Preventing Islamophobia. 2019. [cited 2019 Nov 23]. Available from: <https://www.ispu.org/public-policy/american-muslim-poll/>
31. Goodman JK, Cryder CE, Cheema A. Data collection in a flat world: The strengths and weaknesses of Mechanical Turk samples. *J Behav Decis Mak*. 2013;26:213–224.

32. Buhrmester M, Kwang T, Gosling SD. Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality data? *Perspect Psychol Sci.* 2011;6:3–5.
33. Sawyer SM, Azzopardi PS, Wickremarathne D, Patton GC. The age of adolescence. *The Lancet Child & Adolescent Health.* 2018 1;2(3):223-8.
34. Tsui A, Nolan D, Amico C. Child Marriage in America: By the Numbers. 2017 [cited 2019 Nov 13]. Available from: <http://apps.frontline.org/child-marriage-by-the-numbers/>

## Tables

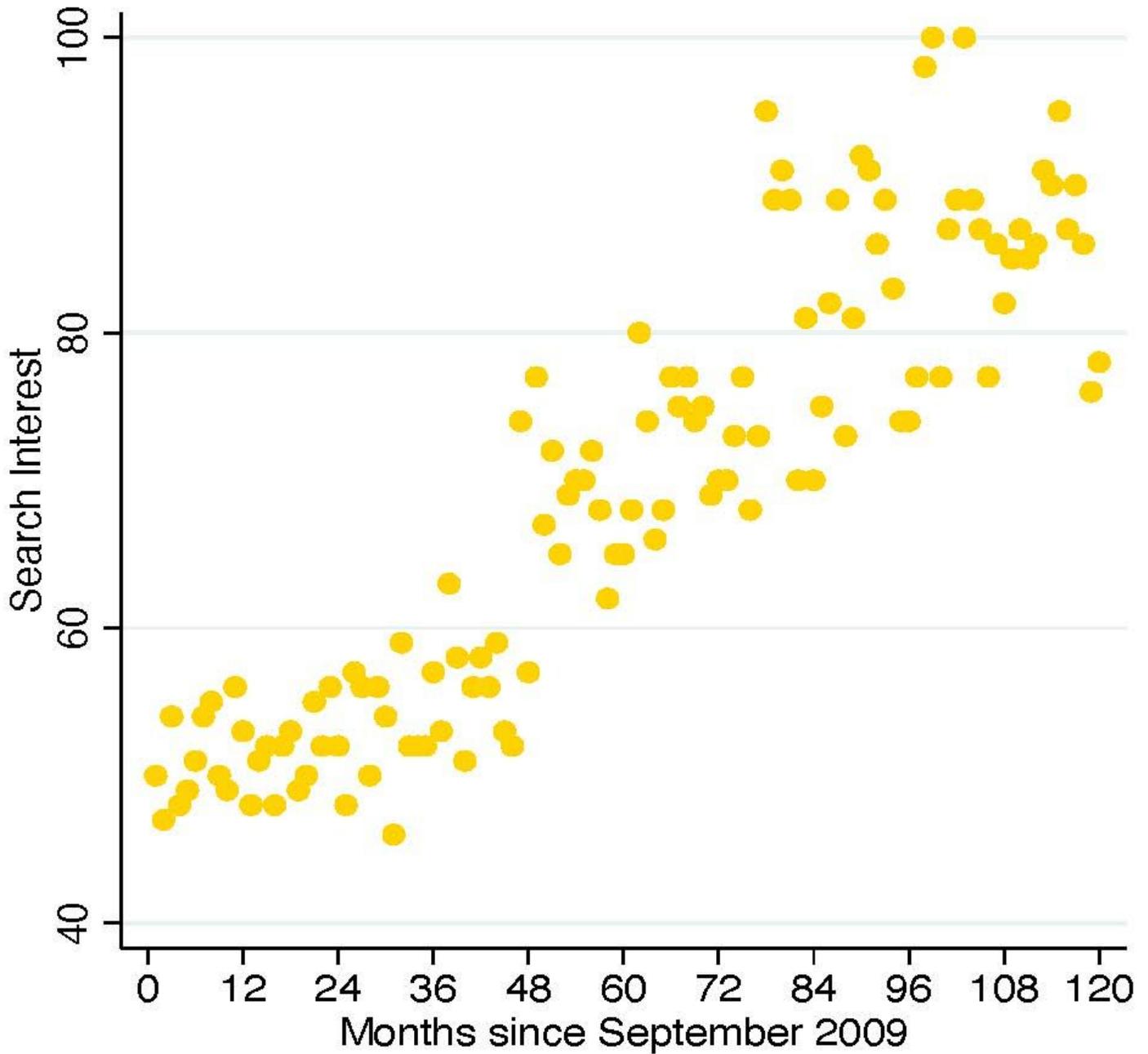
Table 1: Participant Characteristics (N=609)	
	mean (s.d.)/n (%)
Sex	
Female	359 (58.95)
Male	247 (40.56)
Other	3 (0.49)
Age (years)	36.96 (11.87)
Highest level of education	
Some high school	5 (0.82)
High school diploma/G.E.D.	57 (9.36)
Some college	146 (23.97)
Associate's degree	66 (10.84)
Bachelor's degree	264 (43.35)
Master's degree	66 (10.84)
Doctoral degree	5 (0.82)
Employment status	
Unemployed	76 (12.48)
Employed	479 (78.65)
Student	32 (5.25)
Retired	22 (3.61)
Political leanings (0 to 100, liberal to conservative)	42.33 (31.22)



Table 2: Participant Responses (n=609) and Correct Answers		
Question	Responses [mean (s.d) / N (%)]	Correct Answer
<b>Q1.</b> What is the legal threshold for 'child marriage' as defined by the UN?	16.70 (2.00)	18 years (3)
<b>Q2.</b> What age marks the end of childhood?	16.21 (4.12)	Legally, 18-years (7), but the terms 'child' and 'childhood' are used inconsistently throughout the social and health sciences.
<b>Q3.</b> In which age range do most 'child marriage' occur?		Child marriages typically occur most frequently in late adolescence, just under the threshold of a8 years. According to the most recent UNICEF statistics three quarters (76%) of child marriages globally occur at or above 15 years (3).
Under 10 years	36 (5.91)	
10-12 years	146 (23.97)	
13-15 years	266 (43.68)	
16-18 years	135 (22.17)	
19-21 years	26 (4.27)	
<b>Q4.</b> Child marriage is legal in how many of the 50 US states?	7.03 (11.70)	The marriage of minors is only completely banned in two states. In the remaining 48 states, marriage under 18-years is allowed in various circumstances (22).
<b>Q5.</b> In which world region is 'child marriage' most common?		Child marriage is most common South Asia & sub-Saharan Africa (3).
Central Asia	37 (6.08)	
East Asia and Pacific	64 (10.51)	
Europe	8 (1.31)	
Middle East and North Africa	313 (51.40)	
North America	34 (5.58)	

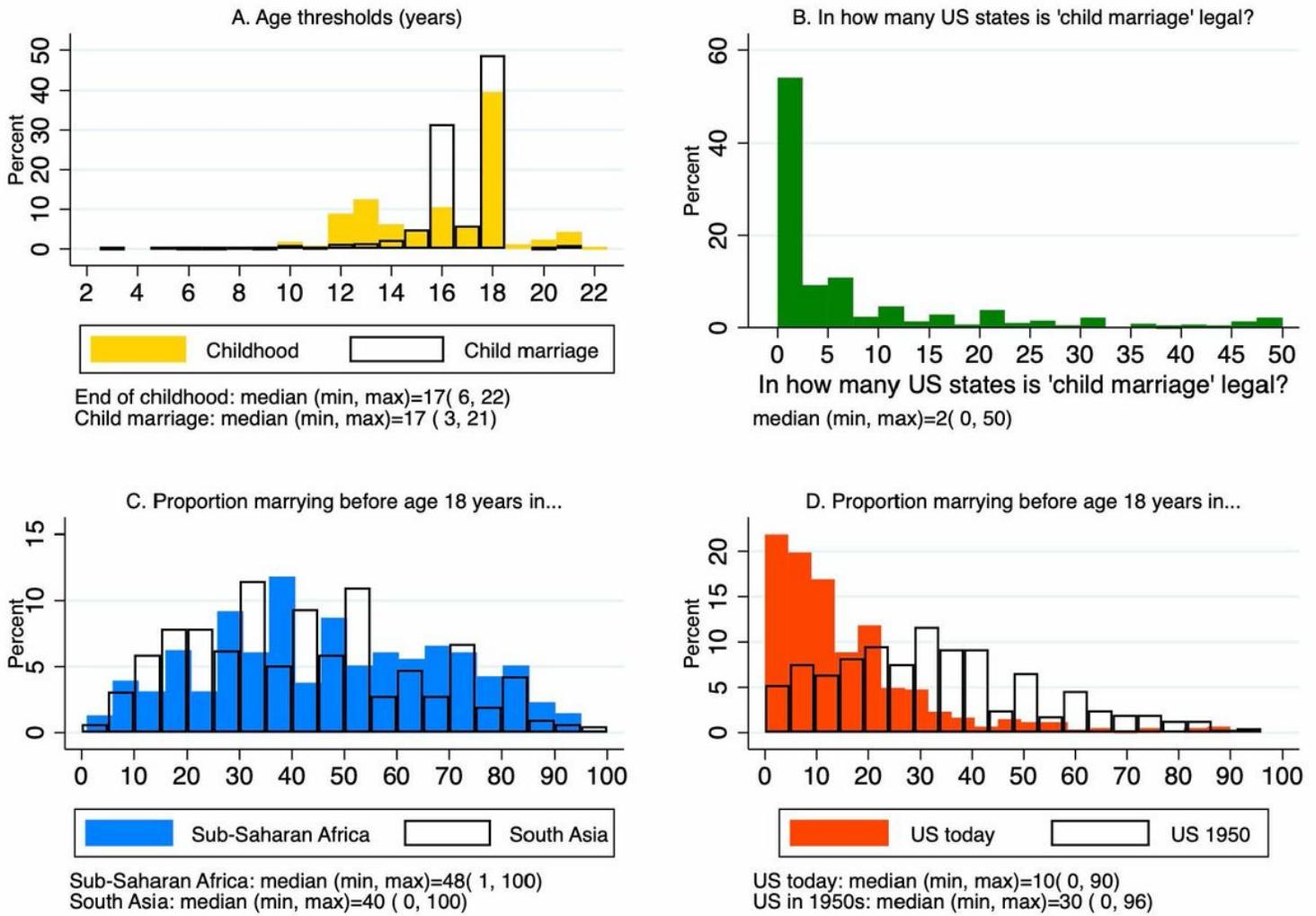
South Asia	63 (10.34)	
Sub-Saharan Africa	90 (14.78)	
<b>Q6.</b> What proportion of women marry before age 18 years in sub-Saharan Africa?	47.99 (22.65)	38% married before age 18 in sub-Saharan Africa (3).
<b>Q7.</b> What proportion of women marry before age 18 years in South Asia?	41.18 (21.70)	30% married before age 18 in South Asia (3).
<b>Q8.</b> What proportion of women marry before age 18 years in the US?	15.32 (15.75)	Given how statistics on marriage under 18 are recorded, this is difficult to assess. According to recent estimates approximately 200,000 people married as minors between 2000 and 2015 (34). This suggests that participants dramatically overestimated the true proportion of women married under 18-years in the US.
<b>Q9.</b> What proportion of women married before age 18 years in the US in the 1950s?	32.62 (20.68)	Approximately 15-20% of women married under age 18-years in the US throughout the 1950s (23).
<b>Q10.</b> How often are child marriages forced?		According to legal frameworks all marriages under age 18 years are forced because minors are understood to lack agency and/or informed choice. However, ethnographic work from around the world demonstrates varying levels of agency among girls entering marriages ranging from none to a great amount (see main text).
Always	183 (30%)	
Most of the time	378 (62%)	
Rarely	46 (8%)	
Never	2 (0.3%)	

## Figures



**Figure 1**

Trends in worldwide Google searches for 'child marriage'. 'Search interest' measures the number of worldwide google searches for 'child marriage' relative to the highest volume of searches (represented as 100) observed between September 2009 and 2019. Data are publicly accessible from trends.google.com.



**Figure 2**

Histograms showing distribution of participant responses. A) age thresholds of childhood and the UN definition of 'child marriage', B) in how many US states is 'child marriage' legal, and the proportion of women marrying before age 18 years in C) sub-Saharan Africa and South Asia, and D) the US today and in the 1950s.

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Lawsonetal.SupplementaryInformation23.11.19.docx](#)