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Review article

Mapping the Field of Child Marriage: Evidence, Gaps, and Future Directions From a Large-Scale Systematic Scoping Review, 2000–2019



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ABSTRACT

The 2030 Agenda for Sustainable Development explicitly calls for an end to child, early, and forced marriages, a harmful practice that has been experienced by 650 million girls and women globally. The COVID-19 pandemic threatens to halt progress toward this goal and highlights the need to assess research progress and link emerging knowledge with efforts to prevent and respond to child marriage. We conducted a systematic search of publications focused on child marriage covering four languages (English, Spanish, Portuguese, and French), encompassing a 20-year period (1 January 2000-31 December 2019) and including peer-reviewed and gray literature across all major geographic regions of the world. Our review identified and analyzed 1,068 publications from an initial number of 4,081 abstracts screened, finding that studies on the prevalence, determinants, and consequences of child marriage represented a majority of the total publications. Including publications in Spanish and Portuguese yielded results from Latin America and the Caribbean, Mozambique, and Europe, and including publications in French yielded results from West Africa and the Maghreb, in addition to English language publications covering both these and other parts of the word. Our review of the evolution and distribution of research over time and space calls for a greater focus of research on interventions preventing child marriage and responding to the needs of individuals married as children, a multilinguistic approach to knowledge exchange, and for research to be conducted in neglected high-prevalence settings.

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IMPLICATIONS AND CONTRIBUTION

By including research on child marriage in four languages and from peerreviewed journals and other sources from across all major geographic regions of the world, this review provides a comprehensive overview of this exponentially growing field of research. Our assessment across research domains highlights the need to shift attention from diagnosing the problem to building evidence on how to respond.

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The world is paying attention to the issue of child marriage. The 2030 Agenda for Sustainable Development explicitly calls for an end to child, early, and forced marriages, a practice experienced by 650 million girls and women globally, with wide ranging harmful health and social outcomes [1]. The implications of child marriage for girls' health, human rights, and development are increasingly recognized by national policies, regional initiatives, and global commitments. Our understanding of the practice has advanced. We now know that child marriage is associated with girls being withdrawn from school [2], experiencing gender-based violence

[3], social isolation and poor mental health [4], and unwanted or ill-timed pregnancy and poor maternal and child health [5]. In addition to learning about the far-reaching consequences of child marriage, we have learned a great deal about the drivers of the practice such as poverty, gender norms, and a lack of opportunities for education and employment for women and girls [6] and are focusing more on what works programmatically [7].

Across the globe, a diverse network of child marriage actors, including researchers, programme implementers, and advocates, have driven interest and attention to the rights and needs of adolescent girls. Child marriage has become an important focus for organizations working on gender equality, child rights, equity in education, and sexual and reproductive health. International nongovernmental organizations, governments, and civil society groups worldwide have prioritized and increased investment in understanding, documenting, and preventing child marriage. A machine-learning analysis of the lexicon of over 14,000 documents produced since 2011 by a wide range of institutions describes the emergence of this intense interest in child marriage [8].

However, COVID-19 threatens to halt or even roll back this hard-won progress for adolescent girls whose lives already reflected intense societal injustices [9]. The pandemic has exacerbated inequities around the world, confronting girls with school closures and their families with increased economic pressure, increasing the risks of early and forced marriage. UNICEF predicts a rise of an estimated 10 million more child marriages over the next decade [9].

We are at a critical juncture: on the one hand, public interest and attention to ending child marriage have never been greater. On the other, the current global pandemic has redirected investments in the health and well-being of women and girls, just as during previous crises and epidemics [10]. As governments, donors, and development partners restrategize and reprioritize investments, taking stock of the global evidence on child marriage is essential to moving the field forward. The burgeoning volume of research is a measure of the political and social advocacy central to improving and protecting public health [11].

This article maps the landscape of research on child marriage over the last 2 decades (2000–2019) using scoping review and bibliometric analysis methodology. This is the first systematic attempt to assess the global scope of research on child marriage covering four languages (English, French, Portuguese, and Spanish), encompassing a 20-year period (2000–2019) and including peer-reviewed and gray literature across all major geographic regions of the world.

Specifically, the study examines the growth in number of publications, the research domains they discussed, and patterns in these trends by geography, language, and type of publication. We

developed a framework of research domains informed by research gaps and priorities identified by a WHO expert group meeting in 2013 [12]; the framework covers prevalence and trends, determinants and causes, consequences, efforts to prevent child marriage, and efforts to support individuals married as children. This article aims to answer the following research questions: What has been the evolution of research on child marriage over time, language, and geography? What gaps and future directions are indicated by this comprehensive review of the evidence?

Methods

The study design adheres to the preferred reporting items for systematic reviews and meta-analyses extension for scoping reviews. Our detailed methodology is published elsewhere (https://bmjopen.bmj.com/content/bmjopen/11/3/e043845.full. pdf) [13] and was registered with Open Science Framework (https://osf.io/awh8v).

In summary, to identify relevant literature, we conducted academic and gray literature searches from January 2000 through December 2019 and targeted hand-searches of 15 key organizations known to be engaged in work to prevent child marriage. We searched the reference lists of selected articles to further identify research that had not been captured and sought input from international researchers and practitioners to identify additional studies (Table 1, Supplemental Materials).

An experienced systematic reviewer conducted searches in consultation with an expert information specialist. The principal investigators screened articles first by title and abstract and then retrieved and screened full-text articles. For the title and abstract screening, we included articles if they were published from 2000 to 2019 and if their titles or abstracts mentioned "child marriage", "early marriage", "forced marriage", "married adolescents", and the foreign language equivalents. In the case of publications in Spanish or Portuguese about Latin America or the Caribbean, where informal meetings or unions are so common, we included publications focused on topics related to child marriage such as "early pregnancy", "early unions", "divorced or widowed adolescents", or "human trafficking". For articles where screening decisions diverged, the research team met to reach consensus. We applied the following inclusion criteria for the full-text screening phase:

- Publication period—2000—2019
- Document type—Journal articles, reports, working papers, dissertations, substantive evidence-generating or synthesizing briefs and case studies, book chapters.
- Subject area—Child marriage or married adolescents

Shifts in focus on the child marriage domain over time

	2000-2004	2005–2009	2010–2014	2015–2019	Number of publications focusing on the domain
Prevalence and trends in child marriage	22.2%	24.7%	23.6%	20.5%	230
Causes and determinants of child marriage	41.7%	37.0%	38.7%	43.4%	447
Consequences of child marriage	33.3%	33.3%	42.7%	37.1%	404
Efforts to prevent child marriage	27.8%	28.4%	30.7%	33.6%	346
Efforts to support individuals married as children	13.9%	12.3%	11.6%	9.9%	113
Instances of focus on each domain	50	110	331	1,049	1,540
Publications by the 5-year period	36	81	225	726	1,068

Total instances exceed the number of publications as one publication could reflect more than one domain.

• Language—English, French, Portuguese, and Spanish

We used a standardized data extraction form to extract data from all eligible studies. The included studies were coded by a team of extractors. The principal investigators double-screened all included publications and validated coding and reporting.

Results

Figure 1 summarizes the study selection process and results at each screening stage. The search identified a total of 6,334 publications (5,267 records from database searches and 1,067 additional records from targeted hand-searching, expert consultations, and reference list reviews). After duplicates were removed, 4,081 titles and abstracts were screened, 2,089 of which were excluded. The full texts of the remaining 1,992 publications were screened, of which 924 were excluded. In total, we identified 1,068 publications in this review, of which 940 were published in English (88.0%), followed by Spanish (54, 5.1%), Portuguese (39, 3.7%), and French (35, 3.3%).

The 1,068 publications in the data set included 619 peerreviewed journal articles, 280 reports, 59 dissertations, 38 book chapters, and 33 working papers. We identified four guidelinerelated materials and 35 substantive evidence briefs or case studies across disciplines including demography, sociology, anthropology, economics, and public health.

The number of publications on child marriage increased substantially across the twenty-year period examined (Figure 2). Five-year time groupings show that the literature more than doubled between 2000-2004 and 2005-2009, while approximately tripling in 2010-2014 and tripling again in 2015-2019. A notable increase in publications began in 2013, with approximately two thirds (726; 68.0%) of the documents having been published in the 2015-2019 study period. The maximum number of documents published in a single year was 237 (22.2%) published in 2019. In contrast, only 11.0% (117) of the documents were published in the first 10 years, 2000-2009. Articles in French, Spanish, and Portuguese also increased in number, although not as sharply as those in English. A notable increase in publications in these languages was observed in the 2010–2014 period, with the acceleration continuing in Spanish and Portuguese in 2015–2019 (Supplemental Table 2).

Journal articles dominate across the time periods, accounting for 58.0% (619) of all included articles. The percentage of reports increased over time, with just four reports (or 4.9% of the total publications) published from 2005 to 2009 compared with 57 reports in the 2010–2014 period (25.3% of the total) and 217 (29.3%) from 2015 to 2019. An increase in dissertations is also observed, particularly in Portuguese, rising from three in 2010–2014 (37.5% of all publications in Portuguese in that time period) to 16 in 2015–2019 (57.1%).

Seven geographic regions were represented by the retrieved publications. The majority of publications focused on sub-

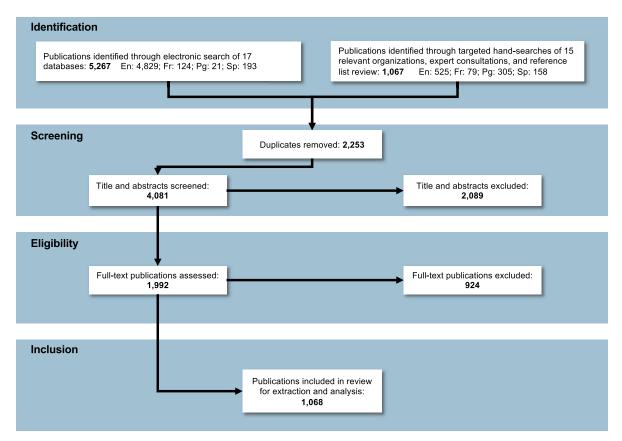


Figure 1. Study selection process.

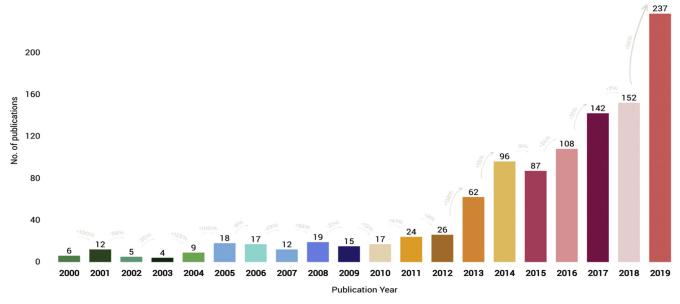


Figure 2. Growth in number of publications over time, by single year.

Saharan Africa (SSA) (358) and South Asia (307). Latin America and the Caribbean (LAC) (98) and the Middle East and North Africa (MENA) (87) followed with far fewer total publications. Fewer publications focused on East Asia and the Pacific (57), Europe and Central Asia (43), North America (30), and Australia and New Zealand (1). A total of 173 publications provided a comparative global or low- and middle-income country focus.

The number of publications increased over time for every region (Figure 3), with a sharp increase visible between the third (2010–2014) and fourth (2015–2019) time periods (data for each region available in Supplementary Table 4). SSA showed the greatest growth, from six publications in 2000–2004 to 248 in

2015–2019. South Asia had the greatest number of publications in the first time period, and the numbers continued to increase, rising from 14 in 2000–2004 to 76 in 2010–2014 and to 199 in 2015–2019.

The next three regions (LAC, MENA, and East Asia and the Pacific) rose to 40–80 publications each in the final time period. Europe and Central Asia had 24 and North America had 21 publications in 2015–2019. Australia and New Zealand had the fewest number of publications with only one in the final time period 2015–2019.

Table 2 presents region of publication coverage by language. While publications in English are most numerous, their coverage

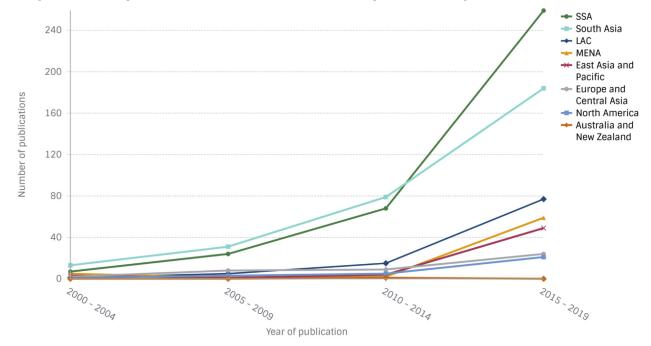


Figure 3. Number of publications by region, by 5-year time period.

of LAC is weak. The majority of publications on LAC (63 of 98) were published in Spanish or Portuguese. Our knowledge of Europe and Central Asia has also been greatly enhanced by publications in French, Portuguese, and Spanish; these accounted for 19 of 43 publications on that broad region. A closer look shows that the publications in French are concentrated in SSA (Democratic Republic of the Congo [DRC], Madagascar, Burkina Faso, Mali, Mauritania, Senegal, Benin, Cameroon, Kenya, Niger, Togo), MENA (Morocco, Algeria, and Tunisia), and France, whereas those in Portuguese highlight Brazil and Portugal.

Among the 157 countries represented, the 20 countries on which most publications focused were India (165), Ethiopia (103), Bangladesh (97), Niger (81), Nigeria (67), Nepal (67), Malawi (67), Uganda (52), Indonesia (50), Tanzania (50), Kenya (49), Mali (49), Brazil (44), Burkina Faso (44), Pakistan (44), Zambia (44), Mozambique (41), Senegal (36), Zimbabwe (36), and Ghana (33). The only country outside of South Asia or sub-Saharan African in this top 20 list was Brazil, with a ranking of 13 and a total of 44 publications.

Table 3 arrays the 20 countries with the highest prevalence of child marriage and displays the order of publication volume and burden of child marriage (the number of girls married by the age of 18 years or by the age of 15 years in some cases) by this prevalence ranking. It is readily apparent that the number of publications does not correspond closely to the prevalence and that burden is also only loosely associated. The DRC has a prevalence of 37% and a child marriage burden of 1,390,000 girls yet ranks 26th with regard to research volume. The Central African Republic, for example, is second in child marriage prevalence at 68% yet ranks 46th with regard to volume of publications written about the practice. Similarly, South Sudan, Somalia, Eritrea, and Mauritania have some of the highest prevalence of child marriage in the world (52%, 45%, 41%, and 37%, respectively), yet they have far lower rankings by publication volume.

Table 1 presents the distribution of the literature across child marriage research domains for the four 5-year periods, with many publications having more than one domain of focus. The five research domains were unevenly represented across the total publications. Two domains, the determinants and causes and the consequences of child marriage, were the most commonly represented, a focus on 41.9% (447) and 37.8% (404) of publications, respectively. Efforts to prevent child marriage received the next greatest level of attention at 346 (32.4%). Studies on prevalence

Table 2Region of publication focus by language

	English	French	Portuguese	Spanish	Total
Sub-Saharan Africa	330	21	6	1	358
South Asia	305	0	0	2	307
Middle East and North Africa	79	6	1	1	87
Latin America and the Caribbean	35	0	27	36	98
East Asia and the Pacific	57	0	0	0	57
Europe and Central Asia	24	6	4	9	43
North America	25	2	1	2	30
Australia and New Zealand	1	0	0	0	1
Global	139	1	4	5	149
LMICs	22	0	1	1	24
Total	1,017	36	44	57	1,154

Total sums to more than 1,068 because a single publication could cover more than one region.

Sub-Saharan Africa, Latin America and the Caribbean, and Europe and Central Asia are regions where our knowledge of child marriage research was greatly increased by the inclusion of French, Portuguese, and Spanish.

Table 3Prevalence and burden of child marriage by number of publications

Countries	Ranking by prevalence of child marriage ^a	Ranking by publication volume	Burden (number of child brides —by 18) ^b
Niger	1 (76%)	4	745,000
Central African Republic	2 (68%)	46	69,000 by 15
Chad	3 (67%)	28	185,000 by 15
Bangladesh	4 (59%)	3	4,382,000
Mali	5 (54%)	12	108,000 by 15
Mozambique	6 (53%)	17	750,000
Burkina Faso	7 (52%)	14	83,000 by 15
South Sudan	8 (52%)	64	132,000 by 15
Guinea	9 (47%)	27	122,000 by 15
Somalia	10 (45%)	63	No data
Nigeria	11 (43%)	5	3,742,000
Malawi	12 (42%)	7	No data
Eritrea	13 (41%)	114	30,000 by 15
Ethiopia	14 (40%)	2	2,276,000
Madagascar	15 (40%)	32	141,000
Nepal	16 (40%)	6	662,000
Uganda	17 (40%)	8	723,000
Sierra Leone	18 (39%)	29	117,000
Democratic	19 (37%)	26	1,390,000
Republic of			
the Congo			
Mauritania	20 (37%)	43	26,000 by 15

^a UNICEF data: Percentage of women 20–24 years old who were first married or in union before they were 18 years old. Source: UNICEF global databases 2020, based on Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS), and other national surveys.

and trends (21.5%, 230) followed some distance behind. Publications on efforts to support child brides were fewest in number (10.6%, 113).

Publications on efforts to prevent child marriage and support child brides capture a more intervention-oriented literature, in contrast with the domains of prevalence and trends, causes and determinants, and consequences. An analysis that combines the three diagnosis-focused domains and contrasts it with the two response-focused domains examines the extent to which peerreviewed journal articles and gray literature focus on each (Supplemental Table 3). Peer-reviewed journal articles strongly favored prevalence and trends, causes and determinants, and consequences, 619 (77.5%), and far less on efforts to prevent child marriage or support child brides, 183 (29.6%). Similarly, gray literature favored diagnosis but to a lesser extent with 66.8% (300) and 58.4% (262) that focused on response. Overall, the two categories reflecting responses to child marriage totaled approximately 30% of all references to the domains across all four periods, whereas the publications on causes and determinants, consequences of child marriage, and prevalence and trends accounted for over 70% of the total.

Discussion

This is the first attempt to synthesize evidence from a broad and diverse global literature examining child marriage across 2 decades, four languages, and all geographies.

The dimensions of time—changes over the 2 decades—and space—patterns across diverse geographies—are central to our analysis of the evolution of the literature on child marriage.

^b Girls Not Brides child marriage atlas, which consolidates data from the above mentioned sources.

Our data capture the development of the field with the growing recognition of child marriage as a focus of research and attention at the United Nations and in global development. In 2010, the sustainable development goals highlighted the importance of gender equality and also the need to leave no one behind, including vulnerable groups like adolescent girls. In 2011, Girls Not Brides, the global network to end child marriage, was founded. In 2012, the first United Nations Day of the Girl Child called attention to the obstacles child marriage poses to the rights of girls. In 2015, sustainable development goals target 5.3 was established to "eliminate all harmful practices, such as child, early, and forced marriage and female genital mutilations" [14], a development that surely contributed to the continued rapid growth in the number of publications. Indeed, approximately two thirds (726; 68.0%) of all publications were produced in the last 5 years of the study period, 2015–2019.

Our analysis of type of publication offers insights into the evolution of who has been working on child marriage: Starting in 2010, many civil society organizations began to include child marriage in their work, and a sharp rise in the fraction of total publications made up of reports, working papers, guidelines, and evidence briefs can be seen starting at that time. More organizations aligned themselves behind advocacy for this cause [15]. Tellingly, only four evidence-based guidelines on child marriage were uncovered, whereas in related fields such as adolescent health, dozens of guidance documents exist to direct programs and policies [16].

Overall, our findings indicate that although the evidence base on child marriage is expanding exponentially, the distribution of studies across geography and domain of focus is uneven, suggesting several areas where attention is required. We expected a greater shift in research focus from prevalence, trends, causes, and determinants (diagnosing the problem) toward a greater emphasis on efforts to prevent child marriage (responding to the problem). Yet, our results revealed that the overwhelming majority of outputs focused on prevalence and trends and causes and determinants across the twenty-year time period. Many fewer seem to exist on prevention or support for individuals married as children. It may be that child marriage needed to be established as an important topic in each setting: As each country came to the issue of child marriage for the first time, it was necessary to conduct the basic research that would describe the problem in that setting.

Another factor that may influence this finding is that research on causes and consequences can make use of secondary data analysis, which facilitates research in the Global North, whereas efforts to prevent child marriage and support child brides require work "in the field", via direct involvement in programs. A final observation is that despite the observed growth in attention to child, early, and forced marriages and unions and a rise in programming, evaluation research has not kept up with the burgeoning programs addressing child marriage.

As for the spatial dimension of the change over the twenty-year period, our results show that child marriage research expanded geographically and by language in keeping with its increasingly prominent position on the global agenda. Three regional clusters can be observed in the increases in publication volume across all regions: regions with over 200 publications over the 20-year period, regions with 40–80 publications, and regions with 0–25 publications. In the first category are SSA and South Asia, on which nearly two thirds of all publications were generated.

While publications were concentrated in South Asia in 2000— 2004, the especially rapid growth in SSA caused that region to surpass South Asia in the 2015–2019 time period. LAC, MENA, and East Asia and the Pacific also experienced upward inflections between 2010-2014 and 2015-2019. These three regions figure in the second cluster, rising from just a handful to having over 40 publications each. Of particular note was LAC, with one publication in the 2000-2004 period rising to nearly 80 in the 2015-2019 period. The comparatively large number of dissertations in Spanish and Portuguese suggests further momentum in the coming years. Growing concern with child marriage among populations in humanitarian settings contributed importantly to the increase in publications on MENA; another source of interest was in the literature in French on the experiences of immigrants from North Africa in France. In East Asia and the Pacific, the focus of a number of studies was on indigenous populations (e.g., in Vietnam, Laos).

The preponderance of publications in English in the earlier periods indicates that research interest in child marriage initially grew among researchers writing in English. Interest among researchers writing in French grew over the 2005–2009 and 2010–2014 periods; the sharp increase in publications on LAC in Spanish and Portuguese occurred in the 2015–2019 period.

A set of intertwined issues may be at play: first is the identification of child marriage as a topic of interest to researchers publishing in a given language and the development of the discourse and momentum in that language. As Murdie et al. [15] have demonstrated for English, a comparatively small number of publications between 2000 and 2010 identified child marriage as an issue and began to establish the terms the field would come to use. Despite the broad forces of globalization, the fact remains that researchers and advocates are constrained in their exposure to new ideas by the languages in which they receive information about child marriage. The politics of the terminology vary by language as well, and there has been reluctance by French-, Spanish-, and Portuguese-speaking researchers to use the term "child marriage", which crystallized in English over this period; many researchers find the term excessively advocacy oriented and victimizing of girls (Margaret Greene, personal communication with European and Latin American researchers). The diversity of terms in LAC relating to child marriage makes the problem less visible and slowed efforts to bring women's rights, indigenous rights, youth rights, sexual and reproductive rights movements together to take on child marriage [17]. The terminology problem—most especially the informality of child marriages or "unions" in LAC-has slowed recognition of the existence of child marriage in LAC.

Nine countries with high prevalence of child marriage ranging from 37% to 68% have been featured in very few publications (Central African Republic = 16, Chad = 26, South Sudan = 11, Guinea = 27, Somalia = 11, Eritrea = 3, Madagascar = 22, Sierra Leone = 26, DRC = 27, and Mauritania = 17). These countries figure among the world's poorest. In addition, six of the ten high-prevalence—low-research countries are French-speaking, affirming the perception that child marriage may not have benefited from the same political urgency in the Franco-phone countries that it has in the English-speaking world.

We interpret the more limited research focus on these countries as a clear indicator of the need for increased investment, including research investment, in these settings. Although 339 publications were generated on SSA between 2000 and 2019, they focused disproportionately on a handful of countries

(including Ethiopia, Niger, Nigeria, Malawi, and Uganda). Research focus in these countries appears to be linked to one or more factors: having the highest prevalence of all countries (Niger, with the other countries all in the top 20), the presence of non-governmental organizations conducting intervention research, and several large-scale research initiatives such as Young Lives and GAGE (Ethiopia), national policy initiatives (Malawi, Ethiopia), and focus from the UNFPA-UNICEF Global Programme to End Child Marriage (Niger, Uganda). In SSA and other regions, donors' decisions to invest in child marriage research—or not—have likely also played a role in shaping research focus and volume.

Strengths and limitations

The inclusion of four languages in our search strategy enriched the research by expanding its geographical focus and permitting future analyses of how the discourse varies across languages and regions. Still, a limitation is that our search strategy did not identify publications in languages other than English, French, Portuguese, and Spanish. We know, for example, that numerous studies were published over this period in Farsi, Turkish, and Bahasa Indonesia. It is likely that many studies exist in Bengali, Nepali, Hindi, and other languages as well.

In addition, in line with scoping reviews, this review included a heterogeneous set of publications of varying publication types, study methodologies, and settings to provide a global overview of the evidence. Recognizing the slower growth in research on programs to prevent child marriage and respond to the needs of individuals married as children, we intend to conduct further analyses of our database that focus more closely on intervention research.

The 20-year 2000—2019 period permits us to paint a remarkable picture of the field of child marriage. The unusually large database created for this systematic scoping review places the entire field in our grasp. Efforts to extend the review to capture the evidence on child marriage published in 2020 and beyond are underway.

Conclusions and Call to Action

The practice of child marriage remains widely prevalent, affecting millions of girls, women, and communities worldwide. However, the advances made in understanding the practice across seven regions and four languages over the last 20 years mark a global revolution in our knowledge and understanding. Our review has covered a period over which our understanding of child marriage evolved from being seen as a culturally or religiously rooted traditional practice specific to South Asia to the recognition that it is a widespread global challenge rooted in gender inequality and the control of girls' sexuality that is manifested differently in different parts of the world.

This review uncovers an exponential rise in evidence on child marriage, especially in South Asia and SSA. Growth in the volume of research publications also suggests that interest in child marriage, particularly in documenting the problem, has caught on in LAC, MENA, and in East Asia and the Pacific. The literature describing responses to child marriage remained a smaller proportion of overall publications over the 20 years in question. While it is clear that the discourse framing child marriage as a problem is well established in English, our review has highlighted that knowledge production is occurring in languages

other than English and enriching our understanding of LAC, Europe, and Francophone and Lusophone Africa, in particular. By describing the landscape of research on child marriage and highlighting gaps in what we know, this review lays the foundation to bridge knowledge and implementation at a time of intense resource constraints.

Several important recommendations for the child marriage field emerge from our review of the evidence over the last 2 decades. First, in regions where we have knowledge of the practice including its prevalence, determinants, and consequences, research attention must now be directed to evidence-based interventions on preventing child marriage and responding to the needs of individuals married as children including both implementation and cost, as well as impact [18]. Our findings confirm that ample evidence exists documenting the problem, and a shift needs to occur from diagnosis to response. This is particularly critical in regions where the problem is being documented, but comparatively few programs exist to address it.

Second, we recommend increased sharing of knowledge particularly across various languages. Our study shows why it is important to include languages beyond English in any research endeavor; this is particularly important for child marriage as a widespread global problem for which our knowledge of specific regions is limited by the language barrier. By adopting a crosslinguistic approach to knowledge exchange, the child marriage field will be diversified and strengthened.

A third, clear recommendation that emerges from this review is the need to conduct research in settings where the prevalence of child marriage is high. Although this seems obvious, our findings highlight the research neglect of a number of high-prevalence countries, Central African Republic, Chad, South Sudan, Guinea, Somalia, Eritrea, Sierra Leone, the DRC, and Mauritania among them.

The prevention of child marriage and support for individuals married as children must remain a global and national priority. After all, marriage and the context in which it occurs establish life circumstances for most of the world's population. Our review of the evolution and distribution of research over time and space calls for greater attention to the geographies where research is conducted, the problems it focuses on, and the actions it mandates.

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Supplementary Data

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References

- [1] United Nations Children's Fund. Child marriage: Latest trends and future prospects. New York: UNICEF; 2018.
- [2] Wodon Q, Nguyen MC, Tsimpo C. Child marriage, education, and agency in Uganda. Fem Econ 2016;22:54–79.
- Kidman R. Child marriage and intimate partner violence: A comparative study of 34 countries. Int J Epidemiol 2017;46:662

 –75.

- [4] Le Strat Y, Dubertret C, Le Foll B. Child marriage in the United States and its association with mental health in women. Pediatrics 2011;128: 524–30
- [5] Raj A. When the mother is a child: The impact of child marriage on the health and human rights of girls. Arch Dis Child 2010;95:931–5.
- [6] Zahra F., Austrian K., Gundi M., et al., 2021 Drivers of marriage and health outcomes among adolescent girls and young women: evidence From Sub-Saharan Africa and South Asia. J Adol Health 69;2021:S31-S38.
- [7] Malhotra A, Elnakib S. 20 years of the evidence base on what works to prevent child marriage: A systematic review. J Adolesc Health 2021;68: 847–62.
- [8] Murdie A, Polizzi M. Human rights and transnational advocacy networks. In: Jennifer NC, Alexander HM, Mark L, eds. The Oxford handbook of political networks. New York: Oxford University Press; 2017. Northampton, MA.
- [9] Yukich J., Worges M., Gage A., et al., Projecting the impact of the COVID-19 pandemic on child marriage. J Adol Health 69;2021:S23-S30.
- [10] Rafaeli T, Hutchinson G. The secondary impacts of COVID-19 on women and girls in Sub-Saharan Africa. K4D helpdesk report 830. Brighton, UK: Institute of Development Studies; 2020.

- [11] Kapilashrami A, Smith KE, Fustukian S, et al. Social movements and public health advocacy in action: The UK people's health movement. J Public Health 2016;38:413–6.
- [12] Svanemyr J, Chandra-Mouli V, Raj A, et al. Research priorities on ending child marriage and supporting married girls. Reprod Health 2015;12:1–4.
- [13] Greene M, Siddiqi M. Detailed study protocol for systematic scoping review of research on child marriage, 2000–2019. BMJ Open 2021;11:e043845.
- [14] United Nations, Department of Economic and Social Affairs. Available at: https://sdgs.un.org/2030agenda. Accessed December 20, 2020.
- [15] Murdie A, Park B, Hart J, Mullinax M. Building momentum: Changes in advocacy discourse around early child marriage, 2011-2017. In: Contesting human rights. Northampton, MA: Edward Elgar Publishing; 2019:13—42.
- [16] WHO recommendations on adolescent sexual and reproductive health and rights. Geneva: World Health Organization; 2018. License: CC BY-NC-SA 3.0 IGO
- [17] Girls Not Brides. Child, early and forced marriage and unions in Latin America and the Caribbean. London: Girls Not Brides; 2020.
- [18] Plesons M, Travers E, Malhotra A, et al. Updated research gaps on ending child marriage and supporting married girls for 2020–2030. Reprod Health 2021;18:152.