Child marriage in Yemen: a mixed methods study in ongoing conflict and displacement

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Objectives: This study assesses the prevalence of and risk factors for child marriage in Yemen, which was experiencing a nationwide conflict at the time of the study. Study Design: We conducted a survey of internally displaced persons (IDPs) and host communities using a stratified multistage cluster sampling design. Each household included an interview with a female adult (n = 1210), a household roster (n = 8400), and one female adolescent interview (n = 1210). We used multivariate logistic regression to assess the association between child marriage and various risk factors. We also used data from focus groups (n = 411) and key informant interviews (n = 30) to explore community perspectives and understand contextual factors relating to child marriage.
Results: Prevalence of child marriage among IDP females aged 10-19 was 18.1% compared to 12.7% among hosts. In the regression model, being older (aOR = 1.95), never attending school (aOR = 3.94), place of origin of Saada (aOR = 4.41), and unemployment of the female adult (aOR = 2.84) showed increased odds of child marriage. Head of household unemployment (aOR = 0.58) and completed higher education (aOR = 0.42) showed decreased odds. Qualitatively, economic factors were cited as central factors in decision-making, both for host communities and even more so for IDPs. Perceptions of marriage readiness and negative consequences of child marriage were dependent on gender normative expectations.

Conclusions: Displaced girls experience child marriage more than boys or host girls. Displacement effects economic security and household power dynamics, which affects marriage decision-making and girls ability to self-advocate. Efforts to address child marriage in Yemen should include livelihood support, with awareness and conflict management components that start in pre-adolescence and include married and unmarried girls.

Keywords: child marriage, Yemen, Internally displaced person, conflict, displacement, adolescent

Introduction

Child marriage is a human rights violation that has increasingly been recognized by international actors as an indicator of numerous other global health issues. The Convention on the Rights of the Child defines child marriage as marriage when one or both parties is under the age of 18 (UN General Assembly 1989), and most of the burden is experienced by young girls (Mathur et al. 2003; Loaiza and Wong 2014; Malhotra et al. 2014; UNICEF 2019). About one in five girls in the world are married under age 18, a rate which dramatically increases to about 40% of all girls in just the developing world (Mathur et al. 2003; UNICEF 2019). Nine of the 10 countries with the highest rates of child marriage are considered fragile states (Lemmon 2014; Lemmon and ElHarake 2014). Though attention from research and humanitarian institutions is increasing, insufficient research has been done on the prevalence of child marriage and associated risk factors in humanitarian settings (Neal et al. 2016; El Arab and Sagbakken 2019; Birchall 2020).

While the drivers and consequences of child marriage are intertwined, research has shown that married girls are more likely to have lower educational attainment, experience intimate partner violence, and live in poverty than girls who do not marry before age 18 (Mathur et al. 2003; Lemmon and ElHarake 2014; Loaiza and Wong 2014). Girls who are married young also have a greater risk of adverse health experiences, as they are more likely to give birth as adolescents and thus have a high risk of pregnancy complications and maternal mortality (Haberland et al. 2005; Lemmon and ElHarake 2014; Save the Children 2014; IASC 2015).

Prior to the Syrian conflict, the Arab States region experienced a faster decrease in child marriage prevalence than any other region in the world, though rates remain high and vary in different contexts. Regional data from 2013 show that
about one in six girls are married before the age of 18 (Roudi-Fahimi and Ibrahim 2013). The Arab States region is also experiencing multiple conflicts and high rates of displacement and migration, both internally and externally. The Yemen conflict, which entered its sixth year in March 2020 and was considered the worst humanitarian crisis in the world by the UN in 2019, is being fought between ‘pro-government’ forces—allied with an internationally recognized government (IRG) and backed by a Saudi-Led Coalition (SLC) that includes the US and UK—and ‘pro-Houthi’ forces allied with Iran (ACLED 2019; UN News 2019). An additional principal party to the conflict is the Southern Transitional Council, which is supported by the United Arab Emirates. While Sana’a is considered the capital of Yemen under the constitution, it is under the territorial control of the Houthi-backed Supreme Political Council. In 2015, the SLC took control of Aden and declared it their capital. Confrontations between the IRG and Houthi forces have resulted in multiple air-strikes and ground clashes in Aden and Sanaa. In 2014, the Houthis took over Ibb governorate, and has since been a ‘hotbed of infighting’ (ACLED 2019). About 70% of Yemen’s population is in urgent need of humanitarian assistance, and over 3.5 million people have been internally displaced (UNICEF and ICRW 2017; IDMC 2019). Economic instability and political turmoil have hindered humanitarian access and assistance, causing about 8.4 million people to be food insecure, including about 3 million acutely malnourished children and pregnant or lactating women (UNICEF and ICRW 2017; UNOCHA 2019).

Yemen also has one of the highest rates of child marriage in the world. A 2017 UNICEF study found that 32% of women aged 20–24 were married before age 18 and 9% were married before age 15 (UNICEF and ICRW 2017). Though Yemen has endorsed efforts to end child marriage and proposed a law in 2014 setting the minimum age of marriage at 18, that law was never officially ratified, leaving the legal age of marriage unclear (Human Rights Watch 2014; UNICEF 2019). There is also a large gap in educational attainment between girls and boys, resulting from entrenched social norms that often limit women to domestic roles with little decision-making power (UNICEF and ICRW 2017).

Though both conflict and child marriage are significant issues throughout the region, there has been little research into how conflict and displacement affect rates of child marriage. Previous literature reviews have identified a number of qualitative studies examining factors related to child marriage in humanitarian settings; however, little quantitative research exists among displaced and conflict-affected populations (Save the Children 2014; Neal et al. 2016). This study, which is part of a four-country study in the Arab States region, is unique in its comparison of displaced populations to host counterparts.

Quantitative surveys were used to estimate the prevalence of child marriage among displaced populations in three governorates, with qualitative interviews used to further describe associations seen in the quantitative data. This study is novel in its ability to both contribute to a new and necessary evidence base, as well as provide a starting point for making child marriage a central focus of addressing the needs of people in crisis.
Methods

Our study used a mixed methods approach. For the quantitative survey, we used a multi-stage stratified cluster sampling design, with the three study governorates (Ibb, Sana’a and Aden) acting as the first stratum. These governorates were selected due to their geographical (Figure 1) and cultural representation, concentration of IDPs, and accessibility to research. The second stratum was within each governorate, breaking down the study populations into two subgroups (IDP and host). Qualitative interviews included focus group discussions (FGDs) with adults and adolescents from host and IDP populations, as well as key informant interviews (KIIs) with local officials.

The population of interest was internally displaced persons (IDPs), while host communities in the same geographic area were sampled as a comparison group. Data collection was conducted in February and March of 2019 by local research teams with the support of colleagues from the Women’s Refugee Commission (WRC) and Johns Hopkins University (JHU). A local research consultant hired by the UNFPA Yemen Country Office worked with the Yemen Central Statistical Organization to recruit experienced data collectors who were from the same governorates and districts where the study was being conducted. Separate quantitative and qualitative teams of data collectors with experience in their respective methodologies received a 5-day training that included modules on research ethics, sampling design, study tools, data quality and working with vulnerable populations. Data collection occurred from January to March 2019.

![Figure 1. Map of Yemen with study sites circled in green. Source: Medecins Sans Frontières.](https://academic.oup.com/jrs/advance-article/doi/10.1093/jrs/feaa144/6126388)
The recruitment goal for each population subgroup within each governorate was 200 households, thus 200 IDP households and 200 host community households were targeted in each governorate. Sample sizes were calculated with the intent of ensuring precision. Absent data on child marriage prevalence within displaced populations, a prevalence of 50% was presumed to maximize sample size. The margin of error was set at ±5% and the design effect for cluster sampling was assumed to be 2. Within each governorate, clusters were selected by district with probability proportional to size. Sampling at the cluster level was done by selecting starting points at district central locations and proceeding in a randomly selected direction, choosing the next nearest house that met study eligibility until the targeted cluster number was achieved. To be eligible for the study, households had to have at least one adult female aged 15–49 (if 15–17, the female needed to be married) and one adolescent female aged 10–19.

The household survey was modelled after Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) with added questions to ascertain characteristics of the head of household (HH), perceptions of child marriage, social norms, and exposure to structured interventions around child marriage (Central Statistical Organization [Yemen] 2013). The female adult interview included a household roster in which the interviewee was asked to list all members of the household who had lived there for at least one month in the last year, as well as their age, sex, and marital status. Further roster questions were asked about all household members aged 10–24. Surveys were pilot tested in districts outside of the sampling frame to assess acceptability of content and phrasing. Due to local restrictions on electronic data collection tools, all surveys were conducted on paper and later entered into Magpi v 6.0.0 (Magpi 2019).

Child marriage prevalence was estimated using several key indicators. The two indicators used in this study are: the proportion of people aged 20–24 who were married before age 18 and before age 15; and the proportion of adolescents aged 10–19 who are currently married. The first statistic assesses completed risk of child marriage, while the second represents those currently experiencing child marriage. Though formal marriages in Yemen should be registered at the Ministry of Justice, marriage contracts can be made by religious or community leaders. Thus, marriage was defined as formal or informal union to ensure inclusion of all types of marriages occurring in this context.

All of the 20–24-year-old girls married before 18 and before 15 were over 18 at the time of interview thus the risk of child marriage was completed. The advantage of this measurement is that it is a global standard and child marriage in humanitarian settings can be compared readily to national or sub-national data across the globe. The disadvantage for humanitarian program purposes is that many child marriages of 20–24-year-olds would have occurred years in the past and thus the indicator is not as useful for assessing current risk or designing interventions.
Measuring the proportion of adolescent 10–19-year-olds who are currently married provides a picture of current marriage among this age group, but it must be interpreted with some caution for two reasons. First, although 10–17-year-olds may not be married at the time of interview, the risk of being child married in the near future still remains. Second, if the 18 and 19-year-olds were not married as children then their risk of experiencing child marriage has passed (though, in our research, we have found that many were married as children). However, UNICEF, Girls Not Brides, and other partners include as one of five indicators related to child marriage the ‘percentage of girls 15–19 years of age currently married or in union’ so this range was included in the study, as well as 10–14-year-olds since local partners indicated that marriage even at these lower ages was occurring, albeit at lower rates (Levine et al. 2008; Warner et al. 2013; UNICEF 2019).

All prevalence measures were calculated using the roster of household members and associated factors were explored using data from the interview with the female adult. Principal component analysis was used to create a socioeconomic index based on asset data of 12 items (Filmer and Pritchett 2001; Vyas and Kumaranayake 2006). Bivariate analysis was conducted to determine individual effects of select variables and inform multivariate regression models. Multicollinearity was assessed to identify if variables were found to be highly correlated, and one of them was thus dropped from the model. All analysis was performed using SPSS v 25.0.0.0 (IBM CORP 2017), which includes a complex samples module that was used to factor in the governorate and population strata, as well as clustering within the household.

Qualitative

Qualitative methods included FGDs and KIIs. FGDs were stratified by characteristics of interest (sex, population, age), with two FGDs in each category and 16 FGDs per governorate, each composed of 7–12 participants. Ten KIIs were conducted in each governorate with medical professionals, religious leaders, NGO staff, and educators who work with IDP populations. To recruit FGD participants, snowball sampling methods were used starting with community leaders in each district. Key informants were identified by UNFPA research partners using purposive sampling.

Using a conceptual framework, interview guides were created to assess perceptions of marriage, decision making, impact of conflict, and potential interventions. This framework was based on another used by UNFPA that uses the socioecological model of behaviour change to explore how social norms sustain gender-based violence (Heise and Manji 2016). Participatory ranking methodology was used to assess the importance of perceived consequences of child marriage (Ager et al. 2010). Identified consequences were then collated by the number of groups who mentioned it, and their corresponding rank scores were tallied to find the
median score. All interview guides were translated and piloted prior to roll-out in each governorate. Thematic analysis was conducted using a codebook developed according to the conceptual framework. Transcripts were coded and the codebook adapted as necessary during an initial open coding phase. Coding was performed collaboratively by two analysts from JHU using Dedoose v 8.2.27 (SocioCultural Research Consultants LLC 2019). Codes were subsequently explored by organizing them into themes identified during the coding process. Multiple data displays were made to assess relationships between codes or themes and populations, with the final data display including drivers and consequences of child marriage within thematic areas, organized by population.

Ethics

All protocols and questionnaires were reviewed by the JHU Institutional Review Board (Reference #: 9264) and the Yemen Ministry of Health. Any participant aged 18 or above gave consent as adults; married females aged 15–17 were considered emancipated minors consistent with local laws and practice and therefore were consented as adults. Unmarried adolescents aged 15–17 gave assent and parental permission was obtained on their behalf. Community leaders were consulted about the study protocol and raised concerns about interviewing very young girls. Focus group participants were thus limited to only adolescents aged 15 and older. All interviewees were matched with data collectors of the same sex to avoid potential response bias and to respect the sensitivity of the topic. All responses were anonymous, and interviews were conducted in a private location identified and agreed to by participants.

Results

Quantitative

Quantitative results will first go through demographic characteristics, then the child marriage prevalence indicators and how they vary by age and displacement status. There will then be a discussion of potential drivers and consequences of child marriage through multivariate regression and bivariate analysis. The final number of surveys used in analysis was 1212 household surveys (including a household roster, with information on 8400 individual household members), and 1209 adolescent surveys. Demographic characteristics of household members were derived from the household roster (see Table 1).

A little over half of household members were female (55%), which was similar across IDP (55.5%) and host (54.6%) populations. The majority of household members were under the age of 24. Mean length of time that the household had lived in their current location was much less for IDPs (25.4 months) than hosts (157.4 months). The wealth index created through principal component analysis was heavily right skewed, showing many of the households were living at a lower
socioeconomic status (SES), with IDPs at a lower average SES status than host communities (−0.69 and 0.54, respectively).

**Prevalence of child marriage**

Analysis of the prevalence indicators of interest is presented in Tables 2 and 3, disaggregated by gender and population group (host community and IDPs).
According to the data, displaced girls aged 10–19 have the highest rate of current marriage (18.1%) compared to boys and host counterparts. Breaking down this range, about 4.0% aged 10–14 and 23.7% of girls aged 15–19 are married. As noted previously, these rates do not represent completed child marriage since many are still at risk, and they include 18–19-year-olds who are not legally children. However, subanalysis showed that 73.1% of married girls aged 18–19 was married before age 18 (77.6% of IDPs and 66.7% of hosts). Comparing current child marriage with the percentage of displaced women aged 20–24 married before age 18 (17.0%) suggests a potential increase in rates of child marriage for the younger cohort. Boys aged 10–19 had low rates of child marriage compared to girls (4.3% of displaced boys and 2.2% of hosts). Bivariate analysis confirms that females had about five times greater odds of being married than males of the same age (OR = 5.38, CI: 3.85, 7.51).

**Exploration of Potential Child Marriage Drivers**

Due to the finding in bivariate analysis that girls are significantly more likely to be married than boys, separate regressions were performed for boys and girls.

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**Table 2**

| Indicator                  | Frequency by population (%) |
|----------------------------|-----------------------------|
| Host community             |                             |
| Male (n = 271)             | Female (n = 209)            |
| Married before 15          | 0.7 (0.2–2.9)               |
| Married before 18          | 4.1 (2.0–7.9)               |
| IDP                        |                             |
| Male (n = 209)             | Female (n = 176)            |
| Married before 15          | 1.9 (0.6–6.1)               |
| Married before 18          | 18.2 (13.0–24.8%)           |

**Table 3**

| Indicator                  | Frequency by population (%) |
|----------------------------|-----------------------------|
| Host (n = 1659)            | IDP (n = 1712)              | Total (n = 3371) |
| Females 10–19 (n = 2149)   | 12.7 (10.8–14.8)            | 18.1 (15.8–20.5) | 15.4 (13.9–17.0) |
| 10–14 (n = 560)            | 0.7 (0.2–2.8)               | 1.8 (0.7–4.2)     | 1.3 (0.6–2.6)     |
| 15–19 (n = 1589)           | 17 (14.6–19.7)              | 23.7 (20.9–26.8)  | 20.4 (18.5–22.4)  |
| Males 10–19 (n = 1222)     | 2.2 (1.3–3.7)               | 4.3 (2.9–6.4)     | 3.3 (2.4–4.5)     |
| 10–14 (n = 634)            | 0.6 (0.2–2.6)               | 0.6 (0.2–2.4)     | 0.6 (0.2–1.7)     |
| 15–19 (n = 588)            | 3.8 (2.2–6.7)               | 8.3 (5.5–12.4)    | 6.1 (4.4–8.5)     |

aUsing information from household roster.
Additionally, since about 89% of households had the male and female HH's from the same place of origin, only the male HH place of origin was included due to its stronger significance in the model. Regression results for boys showed age was the only variable found to be significant, with each additional year in age increasing the likelihood of being married by 60%. Results of the multivariate analysis for girls are displayed in Table 4.

Increased age (AOR = 1.95, CI: 1.74–2.19), never attending school (AOR = 3.94, CI: 2.22–7.00) and a female adult being unemployed (AOR = 2.84, CI: 1.28–6.27) correspond to an increased odds of girls being currently married as a child. However, unemployment of the head of household shows a decreased odds of being child married (AOR = 0.58, CI: 0.39–0.85), along with having completed higher education (AOR = 0.42, CI: 0.20–0.90). Longer duration at current location slightly lowers the likelihood of being child married (AOR = 0.98, CI: 0.97–0.99). The

Table 4

Factors Associated with Adolescent Girls 10–19 Being Currently Married in Yemen (Multivariable Regression, N = 3371)

| Exposure variable                  | AOR*  | 95% CI** |
|-----------------------------------|-------|----------|
| School attended<sup>a</sup>       |       |          |
| No                                | 3.94  | 2.22–7.00|
| HH school level<sup>b</sup>       |       |          |
| Read and write                    | 1.19  | 0.62–2.27|
| Primary                           | 1.59  | 0.98–2.57|
| Secondary                         | 1.59  | 0.93–2.71|
| Post-secondary                    | 1.26  | 0.47–3.36|
| Higher                            | 0.42  | 0.20–0.90|
| HH employment<sup>c</sup>         |       |          |
| No                                | 0.58  | 0.39–0.85|
| HH place of origin<sup>d</sup>    |       |          |
| Haija                             | 1.37  | 0.76–2.47|
| Saada                             | 4.41  | 1.82–10.72|
| Taiz                              | 0.73  | 0.46–1.15|
| Hudeida                           | 0.99  | 0.64–1.54|
| Female adult employment<sup>e</sup>|       |          |
| No                                | 2.84  | 1.28–6.27|
| Age<sup>§</sup>                    | 1.95  | 1.74–2.19|
| Duration<sup>§</sup>              | 0.98  | 0.97–0.99|

Reference groups:
<sup>a</sup>;<sup>e</sup>Yes.
<sup>b</sup>None.
<sup>d</sup>Host community.
*Adjusted odds ratio;
**Confidence interval;
<sup>§</sup>Continuous variable.

Italicized values were found significant at \( P < 0.05 \).
largest increase in likelihood of child marriage is among IDPs who are displaced from the Saada governorate (AOR = 4.41, CI: 1.82–10.72).

**Exploration of Consequences and Effects of Child Marriage**

Rates of polygamy and spousal age difference were examined as factors that affect household power dynamics for married girls. Polygamy was relatively uncommon, with 2.7% of females aged 10–24 who are currently married reporting their spouse having other wives. However, rates of polygamy were twice as high among IDPs (3.4%) than hosts (1.7%). About half of girls (43.1%) reported being 1–5 years younger than their spouses, and a third (33.0%) reported a difference of 6–10 years. Maternal health consequences were explored among married girls aged 10–19, 46.1% of whom had already given birth. Of these girls, about 1 in 10 had lost a baby (10.7%). This rate increases to 1 in 8 for married IDP adolescent girls (12.7%).

Education was explored among married girls both by having ever attended school and then the highest level completed. More married girls reported never attending school than unmarried girls (16.0 and 6.4%, respectively). Additionally, among married girls, 73.7% of displaced girls did not complete secondary education, compared to 65.6% of host girls.

**Qualitative**

Qualitative results first discuss the decision-making process for child marriage and what factors influence perceived readiness for marriage. We then present findings on how displacement has affected these perceptions. Lastly, we examine the consequences of child marriage identified by participants and how they were explored using a participatory ranking methodology. There were 411 participants in FGDs and 30 KIs, for a total of 441 qualitative interviewees. The characteristics of qualitative interview participants are summarized in Table 5.

**Marriage Decision-Making Practices are Dependent on Gendered Beliefs**

The participants most often cited fathers or other male relatives as making the decisions about child marriage, especially the marriage of young girls. While mothers did have some influence, it was primarily in relation to their abilities to influence their husbands or the girls themselves. These roles are a part of gender normative traditions that contribute to child marriage. One such norm is the belief that women’s societal roles are restricted to marriage responsibilities in the home. As one man stated:

‘There are no girls who refuse. A woman is a woman. Her only choice is the husband or the grave.’—FGD with male adults from host community

While this statement is explicit, other participants also alluded to this belief by describing their fear that girls may never get married and marrying them off early
ensures their futures. Both men and women cited that girls are often married at younger ages because they were predestined to be married early. This belief led parents to accept a suitor for their child even at a young age because it was ‘fate.’

In addition to these cultural factors, decision-makers felt strongly that marriage was a way to prevent threats to honour. These threats could come from children themselves, as fathers expressed a fear that their sons and daughters might ‘deviate,’ a term usually referring to premarital romantic or sexual behaviour. Other fears included external threats to honour, especially fear of sexual harassment, which could be mitigated by marriage because married girls are perceived to be better protected. In the following passage, one mother described marriage as a way to protect their daughters.

‘The marriage has increased because the people are afraid for the girl, especially when they hear the rumors that the houses have been attacked, so it is better to marry the girl to be protected by her husband.’—IDP female adult

This fear was not described for boys, thus highlighting a factor in the perceived need to marry girls at a younger age than boys.

In addition to external factors that affected marriage decision-making, many participants also cited factors specific to the child that made them ‘ready’ for marriage. The idea of ‘readiness’ encompassed whatever participants believed made children sufficiently prepared to run a household and/or support a family.
‘The issue is not a matter of age, the issue is a matter of mind. When she is mature and the one who asks to marry her is a good man, it is to marry whether she is young or adult.’—Host female adolescent

In this quote, a young married female describes how age is an arbitrary measure of readiness, and that what really matters is the girl’s mental capacity. However, readiness for marriage differed for boys and girls. For boys, it was more often stated in reference to completing their education and having a source of income. For girls, readiness was about physical and mental maturity, which would allow them to properly run a household and raise children. Many participants specified female body parts, such as a small pelvis, uterus, spine, or others, that would limit successful pregnancy and childbirth as indicators that a girl is not yet ready for marriage. One participant explained that if girls do marry young, there should be awareness raising about delaying childbirth until she is older and physically ready for pregnancy.

Displacement as a Driver of Economic Insecurity and Subsequently Child Marriage

Though the factors that affected decision making were similar among IDPs and hosts, it was readily apparent that these factors were exacerbated for IDPs who were facing unique challenges from displacement. Economic stability was a major concern for IDP participants, who expressed that the overall lack of resources in the country was greatly affecting their decision-making. One IDP adolescent female described that economic instability was one of the reasons her family had to leave their place of origin, but even after displacement they are still unable to subsist.

‘We are displaced persons because of the material need, dispersion, and instability. After displacement, we need the money more than before to relieve the burdens on the fathers.’—Host female adolescent

Interestingly, lack of income or job opportunities was most often cited as a barrier to marriage for boys and a facilitator for girls. Men without resources are unable to pay bride prices or support a family. Alternatively, families of girls facing economic hardship would often marry them off to relieve burden and lower family costs. These thoughts were expressed more frequently among IDPs, since they believed that their instability made them more desperate than their host counterparts to shift the financial burden.

For girls, the biggest impact of displacement was increased fear of sexual harassment. Since IDPs are not consistently provided housing, they often live in very close living quarters near people not in their family or from their place of origin. Parents believed their daughters were at more risk of threats to honour than prior to displacement, which increased their drive to marry girls at a younger age.

Consequences of Child Marriage as a Function of Gender Normative Marriage Roles

Results of participatory ranking methodology to assess perceived consequences of child marriage mirrored the results described previously. Table 6 shows the issues
for boys identified from all 48 groups separated by host and IDP, and Table 7 does the same for girls. It includes both the number of groups that suggested each issue, as well as the median ranking by those who suggested it.

The top three consequences for both host and IDP boys were disruptions to education, economic burden, and family problems. For both host and IDP girls, consequences were poor physical health, disruptions to education, and family problems. While participants agreed about the importance of school, they differed in their belief as to why. For boys, it was believed important for their employment

| Effect                   | Host (n = 24) | IDP (n = 24) | Groups | Median score | Groups | Median score |
|--------------------------|--------------|--------------|--------|--------------|--------|--------------|
| Stop education           | 18           | 16           | 2      | 2.5          | 10     | 2            |
| Financial burden         | 12           | 11           | 2.5    | 2            | 2      | 2            |
| Family problems          | 11           | 10           | 2      | 2            | 4      | 2            |
| Too much responsibility  | 6            | 10           | 2.5    | 2            | 3      | 3            |
| Poor mental health       | 6            | 6            | 2      | 6            | 2      | 2            |
| Deviation                | 1            | 4            | 2      | 4            | 2      | 2            |
| Poor physical health     | 10           | 10           | 2      | 10           | 1      | 1            |
| Marriage problems        | 3            | 3            | 1      | 3            | 2      | 2            |
| Inadequate child rearing | 2            | 4            | 1      | 4            | 1.5    | 1.5          |
| Divorce                  | 3            | 3            | 1      | 3            | 1      | 1            |

*Identified during participatory ranking exercise.*

| Effect                   | Host (n = 24) | IDP (n = 24) | Groups | Median score | Groups | Median score |
|--------------------------|--------------|--------------|--------|--------------|--------|--------------|
| Physical health          | 19           | 23           | 3      | 3            | 3      | 3            |
| Stop education           | 20           | 20           | 2      | 1            | 1      | 1            |
| Family problems          | 12           | 13           | 2      | 2            | 2      | 2            |
| Poor child rearing       | 11           | 9            | 2      | 2            | 2      | 2            |
| Divorce                  | 2            | 4            | 1.5    | 3            | 3      | 3            |
| Poverty                  | 3            | 1            | 3      | 1            | 2      | 2            |
| Mental health            | 3            | 2            | 1      | 2            | 2      | 2            |
| Marital problems         | 1            | 2            | 2      | 2            | 2      | 2            |
| Too much responsibility  | 0            | 3            | 0      | 0            | 3      | 2            |

*Identified during participatory ranking exercise.*
prospects, and for girls, it was important for proper child-rearing. These perceived marriage roles were pervasive among adolescents themselves, as one adolescent male expressed:

‘The man is jealous of the woman who is educated while he is not. If he married a woman during the period of her study, he would not let her complete.’—Host male adolescent

This influence that a husband has on his wife’s activities allude to the power imbalance for child brides. Her role as a mother is seen as paramount, even though adolescent girls described an inability to properly care for children at such a young age. A female adolescent counterpart who was married as a child described her experience:

‘For me, I accepted to marry to save myself and I stopped my education. I did not know it is that big responsibility. I had kids and did not know how to raise them, it was like children taking care of children.’—IDP female adolescent

Other participants said educated girls are granted more agencies and are better equipped to contribute to domestic and economic household stability. However, these comments most often related to her abilities as a wife and mother.

Additionally, the perceived significance of health impacts was different for boys and girls. As physical maturity was an important factor in perceived readiness of marriage for girls, the lack of it was cited as leading to poor health outcomes for girls who give birth at a young age.

‘Marriage affects the health of the girl because it is difficult to bear the troubles of pregnancy, childbirth, and upbringing of children. This affects her health and her life and may lead to death during childbirth for the girl or the fetus.’—Host male adult

Alternatively, many parents feared that boys who are married too young will face mental health consequences associated with stress from financial pressure. Thus, financial pressure was highly ranked due to its negative impact on the mental health of boys.

When asked about recommendations for interventions that would prevent child marriage, the most common responses were awareness raising about the risks of child marriage; programs to help build livelihoods, including training and funding opportunities; and better access to and quality of education. The participant in the following quote believed that efforts to increase knowledge of laws and consequences of child marriage would be an effective intervention.

‘The community is ignorant [about child marriage]. When there is repeated awareness raising campaigns, people will finally understand and know their rights and duties.’—IDP male adult

Some key informants were aware of the lack of any law specifying the legal minimum age for marriage, but most FGD participants either shared incorrect
information or expressed a lack of awareness. This highlights the importance of knowledge and economic stability in decision-making.

**Discussion**

This study explores how conflict and related displacement affect decision-making on, and consequences of, child marriage. Study prevalence data show that displaced girls have a higher rate of current child marriage, compared to their male and host girl counterparts. The prevalence rates for 20–24-year-olds in this study are lower than recent UNICEF child marriage data from Yemen, which indicate 32% were married before age 18 and 9% were married before age 15 (UNICEF and ICRW 2017). However, data in this study cannot be generalized to the entirety of the Yemen population for reasons related to sampling design. First, sampling was targeted at areas with high IDP concentrations, and thus did not include rural areas where child marriage rates have been found to be higher (UNFPA 2012). Second, our sample of 20–24-year-olds was low due to our focus on households with 10–19-year-olds, which preserved our ability to examine the proximate effect of displacement on child marriage. The percent of displaced girls aged 10–19 who are currently married (Table 3) is larger than the percent of those aged 20–24 who were married before age 18 (Table 2). Though cross-sectional data cannot assess child marriage trends, this suggests the possibility of an increased rate of child marriage in the younger group. Additionally, the higher rates among displaced over host populations indicates that local context alone cannot account for all child marriages and there indeed could be a role of displacement.

Quantitative results also show that girls displaced from Saada have four times the odds of being married than girls displaced from any other governorate. As Saada is the governorate that experienced the earliest instances of violence, this could mean that longer exposure to conflict increases risk of child marriage, a phenomenon that has been found throughout the region (Lemmon 2014; Oxfam 2016; HPC 2017; Mourtada 2017; Baron 2019). The qualitative results showed that IDPs face unique challenges which, in turn, increase the likelihood of child marriage. Especially important to focus group participants were protection concerns for displaced girls now living near strangers in close quarters. These concerns are validated by reports that show sexual harassment and violence have increased in Yemen and other displacement settings (Lemmon 2014; OCHA 2015; UNFPA 2015; Oxfam 2016; Mourtada et al. 2017). This suggests that conflict and displacement exacerbate pre-existing drivers of child marriage. Thus, addressing child marriage, especially among younger adolescents, as a part of building the initial humanitarian response is a critical protection measure.

Results also showed that the exacerbating effect of displacement on economic security was an important factor in decision-making. However, the directionality of that effect seemed to vary. When examining IDP status in multivariate analysis, displacement alone was no longer significant when including other measures of SES, such as current employment or asset ownership. This could mean that it is the detrimental effect of displacement on economic and social stability that affects
child marriage, not just displacement itself. In qualitative interviews, participants saw economic insecurity as an important factor for child marriage and believed economic pressures caused more parents to marry their girls young. However, the multivariate model shows that having an unemployed head of household led to a decreased odds of child marriage. A potential explanation from an Oxfam study on gender and conflict in Yemen is that men who are unemployed will force their children to beg for money, thus children are seen as an important source of income (Oxfam 2016). It is also possible that educated fathers, regardless of employment status, prioritize girls’ education and are more likely to delay marriage for their daughters. However, this relationship is complex and merits further investigation.

Exploration of the consequences of child marriage show that imbalanced power dynamics within the household put girls in a disadvantaged position to advocate for education and reproductive health rights. Quantitative results reveal that married girls are often many years younger than their spouses, and qualitative interviewees added that the husband is meant to protect the girl who stays at home with domestic responsibilities. These responsibilities include childbearing, as almost half of married 10–19-year-old girls had already given birth at the time of this study. The 2016 Oxfam study also showed that there is additional pressure from community leaders in times of conflict to have more babies to replace boys lost in war (Oxfam 2016). Additionally, conflict often changes power dynamics in the household, especially when men are unemployed, and women take on income-generating activities (Ministry of Public Health and Population and Central Statistical Organization 2015; Oxfam 2016). Thus, while child brides fare worse than their unmarried counterparts in non-humanitarian contexts, their vulnerability is heightened in conflict settings because they are more likely to experience social isolation, intimate partner violence, and pressures on fertility and fecundity. This is an important finding when considering future programming that includes livelihood support and indicates that power dynamics and conflict management should be included in life skills programming. This includes advocating for sexual and reproductive health information to be available and accessible to adolescent girls, irrespective of marital status.

Education seems to play an important role as both a driver and consequence of child marriage. Girls who had never gone to school were more likely to be married than girls who had ever attended school. This is particularly important considering girls represent 63% of school drop-out children (OCHA 2014). The fact that this persists after displacement shows the importance of the continuation of education for displaced populations. It should be noted that this association could indicate that school non-attendance leads to child marriage or that child marriage prevented girls from attending school, or both. Any scenario, however, indicates that access and quality of education and vocational training programs should be enhanced for girls and caregivers.

Participants’ recommendations for programming from qualitative interviews map to the quantitative and qualitative results found in the study. While most wanted some kind of livelihood assistance or training, this should be accompanied by awareness raising so that additional income does not negatively impact power
dynamics and conflict within the household. Additionally, advocacy efforts should focus on enacting the proposed changes to marriage laws and continue to engage women as was done during the National Dialogue Conference in 2014 (USAID 2014). Previous evaluation of programs against child marriage so far has not been targeted specifically at humanitarian populations or with child marriage as a main outcome (Haberland 2005; Malhotra et al. 2014; Freccero and Whiting 2018). Some programs have had success in the region already, including the ‘Safe Age of Marriage’ program in Yemen that focused on changing social norms by increasing community awareness and praising positive changes (Freij 2009). Additionally, the current UNFPA-UNICEF Global Programme to End Child Marriage includes Yemen as one of its target countries (UNICEF and UNFPA 2017). While these efforts have helped bring child marriage to the forefront of research and advocacy efforts, this study can contribute to ongoing efforts such as these and also inform future projects.

Limitations

This study should be considered with certain limitations. First, due to the ongoing conflict in Yemen, the study team was restricted by both governmental and safety mandates. The local community leaders and a number of parents involved in the pilot study refused to allow adolescents aged under 15 to be interviewed. There were also concerns about violent activity in certain zones that would have been included in data collection, so those zones were excluded. Both of these omissions mean that the study possibly missed those most vulnerable to child marriage. Second, the sampling strategy and sample size used in the study mean that it cannot be generalized to the rest of the population of Yemen or to populations from other conflict settings. Lastly, as is true with all studies on sensitive topics, it is likely that response bias affected the reliability of responses. The study population included many people receiving assistance from humanitarian groups, and though consent forms included language that services would not be affected, there is a chance that participants thought they might gain or lose access based on their responses.

Conclusion

In Yemen, displaced girls, especially those with longer exposure to conflict, have the highest risk of child marriage compared to boy and host girl counterparts. Economic instability is a primary factor in marriage decision-making but has a complex relationship with the effects of displacement on employment. Additionally, imbalanced power dynamics within the household of married girls put them at a disadvantaged position to advocate for their education and reproductive rights. These drivers are exacerbated during conflict, when girls face increased protection concerns and pressure both from husbands and the community to fulfil domestic responsibilities. Once married, child brides fair worse than their unmarried counterparts, especially in humanitarian settings where their
vulnerability to intimate partner violence and childbirth complications are heightened. Girls’ education is often not prioritized by families, especially after marriage, though there is consensus that education is necessary for economic stability. Future programming should start in the pre-adolescence period and include both increased access to livelihoods and child marriage awareness raising. However, this should be coupled with conflict management and advocacy for girls’ agency to mitigate potential negative effects on household power dynamics. Though more research is needed to assess the effectiveness of the humanitarian response in addressing child marriage, this study demonstrates the importance of focusing humanitarian programming on interrupting both existing and conflict-related pathways to child marriage.

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