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Intersecting Disadvantages for Married Adolescents: Life After Marriage Pre- and Post-COVID-19 in Contexts of Displacement

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A B S T R A C T

Purpose: Although there is a growing evidence base on the drivers of child marriage, comparatively little is known about the experiences of married girls in refugee settings and how their development trajectories diverge from those of their nonmarried peers, particularly in the context of the COVID-19 pandemic. Drawing on cross-national panel data from Bangladesh and Jordan, this article explores diversity in child marriage experiences in contexts affected by forced displacement, highlighting how married girls' well-being differs from that of their unmarried peers, and how COVID-19 has reinforced these differences.
Methods: We analyzed longitudinal survey data—collected pre- and post-COVID-19—from the Gender and Adolescence: Global Evidence study with 293 ever-married and 1,102 never-married adolescent girls. Multivariate regression analysis assessed the well-being of married and unmarried girls across contexts and refugee status, both prior to and during the COVID-19 pandemic. These quantitative data are complemented by in-depth qualitative data from adolescents (n = 112), and key informant interviews with service providers and community leaders (n = 62).
Results: Our findings highlight that married girls in contexts affected by displacement are disadvantaged in multiple ways, but that the patterning of disadvantage varies across contexts, and that marriage can also have protective effects in certain contexts. The COVID-19 pandemic has, however, served to exacerbate existing inequalities in all contexts.
Discussion: Although child marriage prevention efforts remain critical, there is also an urgent need for programming that targets married girls in refugee and host communities to mitigate negative outcomes among this vulnerable group.

IMPLICATIONS AND CONTRIBUTION

A mixed methods study demonstrates that the disadvantages of child marriage are exacerbated by overlapping factors such as displacement and now the COVID-19 epidemic. The iniquities vary by context, and in context, marriage can have protective effects.

Evidence over the past 20 years confirms that child, early and forced marriage (CEFM) has life-altering consequences for adolescent girls [1]. Although there is overwhelming evidence on the negative implications of CEFM in terms of early pregnancy, childbearing, poor maternal health, school dropout, and intimate partner violence, evidence on other social and economic domains—such as poverty, low autonomy and decision-making, or nutrition and mental health—is only just beginning to emerge [2–4]. Much of the evidence base compares outcomes for child brides with women who married at an older age, rather than comparing life experiences of similar-age adolescent girls by marital status [1], leaving significant gaps in our understanding of the effects of CEFM on adolescent well-being.

A nascent literature explores how conflict and health crises impact the life experiences and options of married girls compared to unmarried girls. Existing research suggests that, while many of the larger structural constraints that define girls' life experiences and outcomes are common across contexts, humanitarian crises both exacerbate adolescent risk of child marriage and heighten the vulnerabilities of married girls [5–8]. Research in humanitarian settings has noted negative consequences for girls who marry early, including difficult pregnancies and childbirth experiences, increased levels of intimate partner violence, and loss of freedom to spend time with other family or friends [5–8]. Although conflict-affected populations often use child marriage as a coping mechanism in light of economic insecurity and lack of basic services, early marriage often has the opposite effect [8].

There is even less evidence of the effects of public health crises, such as the COVID-19 pandemic, on existing inequalities between married and unmarried girls in conflict-affected settings [5]. Although global estimates suggest that COVID-19 may place 2.5 million more girls at risk of marriage over the next 5 years [9], there is inadequate evidence on how COVID-19 is already impacting married girls. They may be especially vulnerable because livelihoods and social protection support generally targets the household as a unit (or adult women only) [1,10]. However, lack of opportunities and economic insecurity in these contexts may also have negative consequences for most adolescent girls, regardless of their marital status [11,12]. Given the desperate circumstances of many girls in these contexts, it is also possible that marriage offers some protection from the negative economic impacts of COVID-19.

In this article, we utilize mixed-methods data from two settings with considerable conflict-affected populations—Cox's Bazar (Bangladesh) and Jordan—to shed light on differences in ever-married and never-married adolescent girls' life experiences, the role of refugee status, and how the COVID-19 pandemic compounded these differences. In both Cox's Bazar and Jordan, girls living in refugee camps and host communities are at heightened risk of early marriage [6–8,13]. Both contexts share culturally conservative gender norms, especially in terms of women's and girls' sexual purity, their freedom of movement, and their subservience to family honor and interests [8,13]. At the same time, overall child marriage rates are much higher in Bangladesh than in Jordan, as are overall poverty rates and economic deprivations [14–16]. Therefore, the two settings present interesting contexts for mapping potentially similar and differential effects of marital status, refugee status, and the COVID-19 pandemic on adolescent girls' experiences, vulnerabilities, and capabilities.

Methods

Sampling strategy and data

This article draws on two rounds of longitudinal, mixed-methods data collected as part of the Gender and Adolescence: Global Evidence (GAGE) study [17]. The analysis focuses on refugee and nonrefugee girls in Bangladesh and Jordan aged 15–17 at the time of the baseline survey. The decision to focus on girls aged 15 and older was due to low marriage rates for those under 15 (<1%), ensuring that our analysis on the role of marriage would not be confounded by different age profiles.

In Bangladesh, the baseline (2019) is representative of Rohingya and Bangladeshi adolescents living in refugee camps and communities within 60 km of camps in Cox's Bazar. The Jordan baseline (2019) is representative of vulnerable Jordanian and Syrian refugee adolescents registered with the United Nations Refugee Agency and the United Nations Children's Fund who are living in camps (Azraq and Zaatari), host communities, and informal tented settlements (ITSs) in five governorates (Amman, Mafraq, Irbid, Jerash, and Zarqa). In both contexts, we conducted additional purposeful sampling of adolescents who experienced CEFM to ensure large enough samples for quantitative analysis. Further details on sampling methods have been published elsewhere [11,17].

Baseline data collection took place prior to COVID-19 through face-to-face interviews with trained enumerators. The quantitative sample size for the current analysis is 293 ever-married girls and 1,102 never-married girls, with a qualitative sample size of 46 ever-married adolescents, 66 never-married adolescents, and 62 key informants (Key informants included teachers, religious leaders, officials from government departments for women and children, justice, police and social welfare, as well as United Nations agency staff (United Nations Refugee Agency and United Nations Children's Fund) and nongovernmental organization program implementers). The second round of data was collected virtually between April and July 2020 (using tablets and computer-assisted telephone interviewing software [SurveyCTO]), with the aim of understanding the impact of COVID-19. At that time, both governments had issued national lockdowns and closure of schools, but while cases were rapidly escalating in Bangladesh (reaching over 220,000 by late July), they were still much lower in Jordan (approximately 1,300 cases) [18]. We successfully resurveyed 78% of adolescent girls in the Cox's Bazar sample relevant for this analysis and 72% in Jordan. Our sample size for the COVID-19 data collection is 218 ever-married girls and 816 never-married girls. These response rates are similar to those found in other virtual surveys in low- and middle-income countries during crises [19], and appear to be largely at random, with the exception of higher rates of attrition among Syrians in ITS (Table A1). The quantitative data were again complemented by qualitative data with 35 unmarried adolescent girls, 20 married girls, and 37 key informants (Table A2).

Survey instruments covered topics on adolescent well-being, with separate surveys focused on the adolescent and the household (See GAGE method tools and guides, www.gage.odi.org/types/method-tools-and-guides). Qualitative research instruments included interactive individual interview tools to elicit insights on what factors support or hinder adolescent girls to achieve multidimensional capabilities, and to explore the confluence of events that led to their marriage and the quality of their subsequent married life [20].

Researchers obtained written or verbal consent for caregivers and married adolescents, and written or verbal assent for all unmarried adolescents under 18 years. Surveys were translated into local languages (Bangla in Bangladesh [Chittagonian Bangla was used verbally for the Rohingya sample] and Arabic in Jordan) and tested extensively. Research ethics approvals were obtained from the George Washington University Committee on Human Research, Institutional Review Board (071721), the Overseas Development Institute Research Ethics Committee (02438), and locally in each country.

Conceptual framework

Our measures and analysis are informed by GAGE's conceptual framework, which focuses on how "3 Cs"—capabilities, contexts, and change strategies—interconnect to support adolescent well-being. This framework builds on the capabilities approach [21–23], which has evolved as a broad normative framework exploring the assets and entitlements that expand or contract people's ability to "be" and "do" what they value [23]. We draw on Nussbaum's gendered capabilities approach, which foregrounds bodily integrity as a core human capability [24]. Nussbaum defines bodily integrity as freedom of movement, freedom from violence, and opportunities for sexual satisfaction and reproductive choice [25]. In line with this approach, we see adolescents' rights to bodily integrity and freedom from CEFM not only as an end in itself, but also as fundamental to achieving other capabilities essential for well-being and the exercise of rights. In this study, we consider these other capabilities across five key domains: education, health and nutrition, psychosocial well-being, economic security, options and empowerment, and mobility and voice [23,25]. The 3 Cs framework, with its strong focus on contexts, allows for attention to the intersecting disadvantages facing adolescents in contexts of forced displacement, and provides a lens through which to view and assess the role of the COVID-19 pandemic (see Appendix A for additional detail on the conceptual framework) [26–28].

Measures

Outcomes. We measure these 5 capability domains using 11 outcomes for girls at baseline, and 14 similar measures captured during the COVID-19 virtual survey a year later. Although recognizing that several of the measures intersect across domains, we have mapped each measure to the domain it is most closely associated with in the study contexts. At baseline, each domain is measured using the following indicators: (1) *education*, through the adolescent being enrolled in formal school; (2) *health*, through the adolescent's self-reported health and experience of hunger (as a proxy for nutrition); (3) *psychosocial well-being*, through a high score on a measure of psychological distress; (4) *economic security options and empowerment*, through measures on household food insecurity, the adolescent's engagement in paid work, her possession of savings for the future, and money she controls; and (5) *mobility and voice*, through the adolescent's possession of a phone with internet connectivity, a friend she can trust, and her ability to leave her community at least once a week.

The survey undertaken during COVID-19 used similar measures, but with a focus on capturing vulnerabilities and changes related to COVID-19. Each domain is measured by the following indicators: (1) *education*, through an effort at continued learning during school closures; (2) *health*, through worsening of self-reported health and hunger since COVID-19; (3) *psychological well-being*, through anxiety and fear because of COVID-19; (4) *economic security options and empowerment*, through the household's inability to buy food, at least one family member's loss of employment, the adolescent's engagement in paid work, her having any money left since the onset of COVID-19, and whether she thinks things will improve in a year; and (5) *mobility and voice*, through any increase in the adolescent's access to technology since COVID-19, her having interacted with friends or family in the past 7 days, and her having left the house or had any visitors in the past 7 days (see Table A3 for details on variable construction).

Child marriage measures. We ascertained marital status at the baseline survey, classifying adolescents as ever-married under the age of 18 or never-married. In order to maintain our focus on the effect of being married as a child (under 18) at baseline, we excluded 6 girls (0.4% of the sample) who had married at 18 or older, as well as 70 girls who were unmarried at baseline but got married between the 2 rounds (4.7% of sample). We also include an indicator for having had a child as a measure closely related to the experience of child marriage.

Covariates. We include covariates in our multivariate regressions that are correlated with child marriage and are associated with our outcomes of interest: the adolescent's age, household size, location of residence (varies by sample), and household wealth, as measured through asset deciles constructed using principal component analysis.

Data analysis

Prevalence of covariates and outcomes of interest were estimated for the overall study sample and stratified by refugee status (Bangladeshi and Rohingya girls in Cox's Bazar, and Jordanians and Syrians in Jordan) and marital status. We examined bivariate associations of the covariates and outcomes of interest by marital status (within sample), using *t*-tests (with *p*-values). Sample-specific multivariate regression analysis (linear probability models for binary outcomes [Results are qualitatively similar if logistic models are used]) was conducted, controlling for key covariates, comparing baseline outcomes for ever-married versus never-married girls within the refugee and nonrefugee subgroups. We repeat this analysis using the sample of girls who were resurveyed during COVID-19 to assess whether COVID-19 differentially affected ever-married girls. Some outcome measures, such as enrolment in formal school (where measures are distinct for married vs. unmarried adolescents) are only included in the bivariate analysis to shed more light on differences between these two groups. All quantitative analyses were conducted on STATA 16.1 (StataCorp LLC, Cary, NC).

Qualitative interviews were translated and coded deductively according to a thematic coding book using the software package MAXQDA 12. Debriefing sessions to discuss emerging themes from the data collection helped to ensure that codes captured country-specific issues. During qualitative data analysis, we prioritized themes that resonated across the cohort or specific subgroups of adolescents; the selected quotes are used to illustrate these insights.

Table 1
Summary statistics of adolescent girls at baseline in 2019, by country and refugee status: overall

Measures	Bangladeshi	Rohingya	Jordanian	Syrian
	(1)	(2)	(3)	(4)
1. Child marriage				
Ever been married[a]	11.8%	33.8%	15.0%	21.9%
Age at marriage (among married)	14.6	15.1	16.0	15.4
Married before the age of 15 (among married)	42.4%	29.6%	0.0%	17.1%
Was ready to be married (among married)	77.4%	78.8%	80.8%	62.3%
Has a child (among married)	54.5%	41.8%	11.1%	33.6%
2. Demographics and household status				
Age of adolescent	16.2	16.2	16.1	16.2
Number of household members	6.13	5.39	7.31	7.30
Household asset deciles (1–10, 10 is richest)	5.39	5.21	7.28	4.66
Bangladeshi (host community)	100.0%	0.0%	–	–
Rohingya (camp)	0.0%	100.0%	–	–
Jordanian (host community)	–	–	100%	0.0%
Syrian (informal tented settlement)	–	–	0.0%	8.6%
Syrian (camp)	–	–	0.0%	33.4%
Syrian (host community)	–	–	0.0%	58.0%
3. Baseline capability outcomes				
Education				
Enrolled in formal school	55.7%	0.0%	75.0%	49.6%
Health				
Self-reported health is good or very good	67.2%	73.1%	88.3%	80.9%
Felt hungry in the last 4 weeks	31.2%	57.6%	18.4%	15.6%
Psychological well-being				
Psychological distress (GHQ-12 score ≥3)	21.1%	23.9%	32.4%	35.6%
Economic security, options, empowerment				
Household is severely food insecure	30.5%	56.7%	53.6%	42.6%
Engaged in paid work in last year	12.9%	4.6%	9.4%	12.4%
Has savings for future	12.5%	1.3%	7.2%	6.6%
Had money she controlled in last 12 months	69.9%	42.2%	29.4%	18.7%
Mobility and voice				
Has phone that connects to the internet	7.1%	5.0%	33.9%	31.5%
Has friend she trusts	87.1%	55.7%	76.1%	70.8%
Leaves community at least once per week	46.5%	10.3%	23.0%	7.5%
2019 Baseline in-person survey sample size	280	240	180	695

Ndash indicates that a statistic was not available for the relevant group. All variables are based on interviews with the adolescent except household assets and food insecurity. *p*-values are adjusted for clustered standard errors—in Cox's Bazar at the camp-block level for adolescents living in camps and Mauza-segment level for those living in host communities, and in Jordan at the city/town for the host population and by camp/settlement for the refugee population.
GHQ-12 = General Health Questionnaire-12.
[a] Marriage rates for Syrians are 16.7% among those who live in informal tented settlements, 24.1% among those who live in camps, and 19.4% among those who live in host communities.

Results

Descriptive findings (baseline)

At baseline, girls were 16.2 years old on average, with significant variation in rates of early marriage across samples. Marriage rates range from 11.8% among Bangladeshis to 33.8% among Rohingya, and from 15% among Jordanians to 21.9% among Syrians (Table 1, Panel 1). Nearly half of married Bangladeshi adolescents (42.4%) were married before the age of 15, followed by Rohingya (29.6%) and Syrian (17.1%) adolescents. No Jordanian adolescents reported being married before the age of 15. Similarly, among married adolescents, Bangladeshi adolescents are the most likely to have children (54.5%), while Jordanians are the least likely (11.1%). These findings highlight the specific vulnerabilities of refugee populations (Rohingya in Bangladesh and Syrians in Jordan), which had higher rates of marriage and lower household wealth (Table 1, Panel 2) compared to the host populations in each context. Outcome variables at baseline also differed considerably across samples, including variations in education, hunger, control of money, mobility, and connectivity (Table 1, Panel 3).

Role of child marriage (baseline)

Table 2 presents bivariate associations across contexts at baseline, and Table 3 presents complementary multivariate analysis. Discussion of differences in capability outcomes by marital status will focus on the multivariate analysis in Table 3, unless otherwise noted.

Married girls are significantly poorer and have smaller households than their unmarried counterparts (Table 2, Panel 1). Accordingly, married adolescents are significantly less likely to be enrolled in formal schooling, except among Rohingya adolescents, where no girls are enrolled in formal schooling (married or unmarried) (Table 2, Panel 2).

Self-reported health is similar for ever-married and never-married Bangladeshi and Syrian girls. However, there are significant differences among Rohingya, where ever-married girls are 10.9 percentage points (pp) (*p* = .052) less likely to report good health than never-married girls; and among Jordanians, where self-reported health among ever-married adolescents is 13.2pp (*p* = .063) higher than among never-married girls. Although ever-married Bangladeshi adolescents are more likely to have experienced hunger than their never-married counterparts in bivariate

Table 2
Summary statistics of adolescent girls at baseline in 2019, by country and refugee status: by marital status

Measures	Bangladeshi			Rohingya			Jordanian			Syrian		
	Ever married	Never married	*p*-value	Ever married	Never married	*p*-value	Ever married	Never married	*p*-value	Ever married	Never married	*p*-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Demographics and household status												
Age of adolescent	16.5	16.1	.014	16.5	16.1	<.000	16.7	16.0	<.000	16.7	16.1	<.000
Number of household members	5.64	6.20	.272	5.04	5.55	.016	7.78	7.23	.021	6.89	7.41	.321
Household asset deciles (1—10, 10 is richest)	4.39	5.53	<.000	4.85	5.39	.066	5.56	7.59	<.000	4.11	4.82	.053
2. Baseline capability outcomes												
Education												
Enrolled in formal school	3.0%	62.8%	<.000	0.0%	0.0%	—	7.4%	86.9%	<.000	9.2%	61.0%	.001
Health												
Self-reported health is good or very good	69.7%	66.8%	.691	65.7%	76.5%	.036	96.3%	86.9%	.049	80.9%	80.8%	.973
Felt hungry in the last 4 weeks	54.5%	28.0%	.040	54.3%	59.2%	.377	11.1%	19.7%	.003	18.4%	14.8%	.472
Psychological well-being												
Psychological distress (GHQ-12 score ≥3)	27.3%	20.3%	.401	28.4%	21.6%	.138	22.2%	34.2%	.019	38.4%	34.8%	.159
Economic security, options, empowerment												
Household is severely food insecure	51.5%	27.6%	.001	50.6%	59.9%	.094	57.7%	52.9%	.397	37.3%	44.0%	.207
Engaged in paid work in the last year	21.2%	11.8%	.017	4.9%	4.5%	.888	11.1%	9.2%	.379	13.2%	12.2%	.649
Has savings for future	18.2%	11.7%	.287	1.2%	1.3%	.969	7.4%	7.2%	.892	15.8%	4.1%	.004
Had money she controlled in the last 12 months	60.6%	71.1%	.196	48.1%	39.1%	.116	14.8%	32.0%	.028	21.1%	18.1%	.601
Mobility and voice												
Has phone that connects to the internet	9.1%	6.9%	.607	7.4%	3.8%	.122	48.1%	31.4%	.022	49.3%	26.5%	.001
Has friend she trusts	78.8%	88.2%	.131	51.9%	57.7%	.425	55.6%	79.7%	<.000	61.8%	73.3%	.101
Leaves community at least once per week	42.4%	47.0%	.403	9.3%	10.9%	.643	19.2%	23.7%	.457	7.9%	7.4%	.902
2019 Baseline in-person survey sample size	33	247		81	159		27	153		152	543	

Ndash indicates that a statistic was not available for the relevant group. All variables are based on interviews with the adolescent except household assets and food insecurity. *p*-values are adjusted for clustered standard errors—in Cox's Bazar at the camp-block level for adolescents living in camps and Mauza-segment level for those living in host communities, and in Jordan at the city/town for the host population and by camp/settlement for the refugee population.
GHQ-12 = General Health Questionnaire-12.

Table 3
Role of marital status on the capability domains of adolescent girls at baseline in 2019, by host community and refugee status

Outcomes	Bangladeshi	Rohingya	Jordanian	Syrian
	(2)	(3)	(5)	(6)
Health				
Self-reported health is good or very good	0.053 (0.077)	−0.109* (0.055)	0.132* (0.052)	0.028 (0.031)
Felt hungry in the last 4 weeks	0.201 (0.139)	−0.068 (0.064)	−0.142*** (0.018)	0.015 (0.031)
Psychological well-being				
High psychological distress (GHQ-12 score ≥3)	0.069 (0.086)	0.066 (0.046)	−0.153* (0.070)	0.009 (0.025)
Economic security, options, empowerment				
Household is severely food insecure	0.181** (0.076)	−0.104 (0.071)	0.001 (0.079)	−0.110** (0.039)
Engaged in paid work in the last year	0.063 (0.040)	0.019 (0.037)	0.003 (0.054)	0.013 (0.025)
Has savings for future	0.080 (0.060)	0.001 (0.008)	0.067*** (0.006)	0.126*** (0.026)
Had money she controlled in the last 12 months	−0.077 (0.086)	0.088 (0.059)	−0.166 (0.105)	0.043 (0.036)
Mobility and voice				
Has phone that connects to the internet	0.005 (0.049)	0.050* (0.026)	0.181*** (0.021)	0.212*** (0.036)
Has friend she trusts	−0.069 (0.062)	−0.093 (0.083)	−0.248*** (0.040)	−0.131* (0.057)
Leaves community at least once per week	−0.005 (0.063)	0.011 (0.031)	−0.064* (0.026)	−0.006 (0.039)
2019 Baseline in-person survey sample size (N)	271	223	180	686

Coefficients reported in the table for each subgroup reflect the estimated impact of being married as a child on each capability outcome, controlling for relevant covariates. Separate linear probability models controlling for covariates and marital status were run for each baseline capability outcome and for each of the four subpopulations. The covariates for all regressions include the adolescent's age, number of household members, location of residence, and household asset status. In all models, standard errors are clustered according to sampling design.
GHQ-12 = General Health Questionnaire-12.
***$p < .01$.
**$p < .05$.
*$p < .10$.

analysis (54.5% vs. 28%, $p = .040$; Table 2, Panel 2), this relationship is not statistically significant in the multivariate regression. Covariate coefficients (Table A4) show that differences in hunger is driven by differences in household wealth. Similar to self-reported health, ever-married Jordanian adolescents are 14.2pp ($p = .001$; Table 3) less likely to report hunger than their never-married counterparts. Among Rohingya adolescents, reports of hunger are high for both ever- and never-married adolescents (54.3% and 59.2%; Table 2, Panel 2) but not statistically different.

Although psychological distress is high among all populations (30.3% overall), the survey data reveal limited differences by marital status, with ever-married Jordanian girls being 15.3pp less likely to exhibit psychological distress ($p = .094$). However, the qualitative data suggest that psychological distress manifests itself differently for ever-married and never-married girls, with social isolation and heavy domestic and care work burdens being key sources of stress and anxiety among married girls in our sample. A 17-year-old married Syrian refugee girl, living in a host community in Jordan, attributed her feelings of sadness to the truncation of her educational opportunities due to marriage and early motherhood:

> There was an agreement to complete my education during the engagement period. Then I got married. Then the story was lost…I wanted to complete my education but then I had the baby so I was not able to study. So, I'm filled with sadness.

Food insecurity is high across all samples, though the association with marital status is mixed according to context. Although we found significantly higher rates of food insecurity among ever-married Bangladeshis in Cox's Bazar (18.1pp, $p = .019$), ever-married Syrian girls are less likely to be food insecure (11.0pp, $p = .039$). Where the rates of food insecurity are highest—among Rohingya and Jordanian adolescents—we found no significant differences by marital status (Table 2, Panel 2). The qualitative data underscore that adolescent mothers are negatively impacted by food insecurity, both in terms of their own

access to nutrition as well as concerns about how to feed their infants. In a cultural context where young women are traditionally valued according to the number of children they have, the depth of concern among many young mothers is captured by a 17-year-old married Rohingya girl: "I do not want another son, I cannot feed this one properly, why would I take another?"

In terms of paid work, approximately 11.8% of Jordanian adolescents in our sample work, but we found no significant differences by marital status among Jordanians and Syrians. In Bangladesh, very few Rohingya girls (4.6%) work for pay, regardless of marital status. Ever-married Bangladeshi adolescents are twice as likely to be working as their never-married counterparts in the bivariate analysis (21.2% vs. 11.8%, $p = .017$; Table 2, Panel 2), but multivariate analysis reveals that this is driven by age differences. The qualitative findings further reveal a sea-change over the past 5 years in terms of opportunities for young women, especially divorcees. As a Bangladeshi community leader explained:

> The government has taken many steps [for] girls. Now girls have gotten their rights [and] a lot of change has happened in the field of girls' jobs. Now most of the girls do jobs…In every job sector, they are working…girls are working in Grameen bank, NGOs and garments…The rate of divorce is more than before…[Now divorced girls] do jobs… thousands of divorced girls are working in the garments.

Our findings suggest that ever-married Jordanian and Syrian girls are more likely than never-married girls to have savings for the future (6.7pp, $p < .001$; 12.6pp, $p = .005$, respectively). Qualitative data suggest that this is likely because brides acquire cash and assets at the time of marriage. Interestingly, we found no differences in adolescents reporting that they have money they control in the past 12 months, except among Jordanians, where ever-married girls are less likely to have control over money than never-married girls in the bivariate analysis (14.8% vs. 32.0%, $p = .028$; Table 2, Panel 2). Our qualitative findings

Table 4
Summary statistics of adolescent girls during COVID-19 in 2020, by country and refugee status: overall

Measures	Bangladeshi (1)	Rohingya (2)	Jordanian (3)	Syrian (4)
Education				
Doing something to continue learning during school closures (among enrolled in school)	95.9%	–	98.8%	97.3%
Health				
Worse self-reported health than prior to COVID-19	12.4%	7.1%	13.6%	15.9%
Hungry more often in the past 4 weeks than prior to COVID-19	28.1%	25.6%	12.7%	14.7%
Psychological well-being				
Completely or moderately worried/anxious because of COVID-19	86.3%	89.7%	61.0%	60.7%
Completely or moderately scared/fearful because of COVID-19	81.0%	86.5%	59.3%	62.2%
Economic security, options, empowerment				
Household unable to buy essential food items during COVID-19	65.2%	77.7%	35.8%	44.8%
Family member lost employment permanently or temporarily due to COVID-19	72.9%	57.2%	53.5%	66.5%
Engaged in paid work during COVID-19	3.2%	1.9%	4.2%	5.3%
Had money she controlled prior to COVID-19	23.5%	13.0%	33.1%	13.9%
Still has money since COVID-19 (among those with money immediately prior to COVID-19)[a]	25.9%	0.0%	23.1%	32.4%
Thinks things will be better off in a year	84.4%	87.5%	73.3%	62.4%
Mobility and voice				
Increase in technology access since prior to COVID-19	37.4%	18.8%	70.1%	61.1%
Interacted with friends in the last 7 days	26.3%	16.9%	36.4%	29.0%
Left house in the last 7 days	30.4%	24.0%	53.4%	44.5%
2020 COVID-19 virtual survey sample size	249	156	118	511

See notes for Table 1. All variables are based on interviews with the adolescent except for the measures of the household being unable to buy essential food items during COVID-19 and loss of family member's employment during COVID-19, which are reported by the primary female caregiver in most cases.

[a] Adolescents reported having money prior to COVID-19 as follows: Bangladeshis 23.5%, Rohingya 13%, Jordanians 33.1%, and Syrians 13.9%.

suggest that, because Jordanian girls are less likely than Syrian refugee girls to be married as children, those that do marry young tend to come from natal families with very conservative gender norms and to marry into similarly conservative families.

In terms of whether girls have a personal phone with internet connectivity, we find similar rates for ever-married and never-married girls in Bangladesh, though they are significantly higher for ever-married girls in Jordan—18.1pp higher ($p = .001$) among Jordanians and 21.2pp higher ($p = .002$) among Syrians. Although access to a phone suggests some level of voice in terms of communicating outside the household and, with smartphones, internet access, this is tempered by tight surveillance by husbands and in-laws. An 18-year-old married Syrian girl living in a host community in Jordan explained why she did not have a phone:

> I do not have my own phone. It is prohibited to carry one. Not just by my husband…for all girls like me…One married girl we knew had a phone for a while but they [in-laws] found the phone with her and they beat her up.

Married girls are also more socially isolated. For example, married Jordanian and Syrian girls are 24.8pp ($p = .003$) and 13.1pp ($p = .069$) less likely than their unmarried counterparts to have a friend they can trust, respectively. Although the differences are not statistically significant in Bangladesh, the rates are consistently lower for ever-married girls (Table 2, Panel 2). In the qualitative data, the lack of access to friendship networks and peer support was a common finding across contexts. As a 17-year-old married Syrian girl in a host community in Jordan explained: "After marriage, the number of my friends has declined and this has affected me so much…I feel that I have no one. The conditions here are so difficult without my friends."

In terms of mobility, we find that ever-married Jordanian girls are 6.4pp ($p = .067$) less likely than never-married girls to have left the community at least once a week. There are no other significant differences between married and unmarried girls, but it is notable that the refugee samples have lower rates of mobility in both countries (Table 2, Panel 2). In Jordan, the qualitative findings underscore that conservative gender norms constrain movement outside the home for all adolescent girls, regardless of marital status. As a 17-year-old married Syrian girl living in a host community in Jordan explained:

> I am used to staying at home…People may gossip about girls who go out without a husband or a father or an older brother. I do not go to any centre to do activities, I do not go to the mall or the market…I used to visit my [natal] family but then they returned to Syria.

Descriptive findings (COVID-19)

COVID-19 has severely disrupted the lives of young people in our sample, largely due to policy responses to curb the spread of the virus, including school closures and restrictions on economic activity. Table 4 presents descriptive statistics of the impact of COVID-19 across samples. Although most girls who were enrolled in school before COVID-19 reported doing something to continue learning during school closures, the closures and other restrictions on mobility left many adolescents socially isolated; a minority of girls had interacted with friends or family in the past 7 days, and many had not even left the house. Most adolescents reported that their household had experienced negative economic shocks due to COVID-19, including being unable to buy essential food items or a family member losing employment

Table 5
Summary statistics of adolescent girls during COVID-19 in 2020, by country and refugee status: by marital status

Measures	Bangladeshi			Rohingya			Jordanian			Syrian		
	Ever married	Never married	p-value	Ever married	Never married	p-value	Ever married	Never married	p-value	Ever married	Never married	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Education												
Doing something to continue learning during school closures (among enrolled in school)	50.0%	96.6%	.195	–	–	–	100.0%	98.8%	.255	83.3%	97.7%	.466
Health												
Worse self-reported health than prior to COVID-19	25.0%	10.6%	.002	11.3%	4.9%	.038	18.8%	12.7%	.095	12.8%	16.8%	.279
Hungry more often in the past 4 weeks than prior to COVID-19	34.4%	27.2%	.195	28.3%	24.3%	.599	25.0%	10.8%	.003	13.7%	14.9%	.735
Psychological well-being												
Completely or moderately worried/anxious because of COVID-19	96.9%	84.7%	.001	90.4%	89.3%	.799	87.5%	56.9%	<.000	68.4%	58.4%	.005
Completely or moderately scared/fearful because of COVID-19	87.5%	80.1%	.064	88.5%	85.4%	.500	75.0%	56.9%	.019	69.2%	60.2%	.048
Economic security, options, empowerment												
Household unable to buy essential food items during COVID-19	78.1%	63.3%	.010	72.5%	80.4%	.140	42.9%	34.7%	.198	50.0%	43.2%	.263
Family member lost employment permanently or temporarily due to COVID-19	75.0%	72.6%	.614	66.7%	52.5%	.052	64.3%	52.0%	.007	78.2%	63.2%	.019
Engaged in paid work during COVID-19	0.0%	3.7%	.004	0.0%	2.9%	.084	18.8%	2.0%	<.000	5.1%	5.3%	.928
Still has money since COVID-19 (among those with money immediately prior to COVID-19)[a]	25.0%	25.9%	.872	0.0%	0.0%		0.0%	26.5%	.005	16.7%	35.6%	.001
Thinks things will be better off in a year	78.1%	85.4%	.238	88.0%	87.3%	.871	60.0%	75.2%	.067	62.9%	62.3%	.891
Mobility and voice												
Increase in technology access since prior to COVID-19	31.3%	38.3%	.221	19.2%	18.6%	.915	50.0%	73.3%	.007	53.8%	63.2%	.039
Interacted with friends or family in the last 7 days	25.0%	26.5%	.767	19.2%	15.7%	.458	37.5%	36.3%	.451	39.7%	25.9%	.007
Left house or had visitors in the last 7 days	34.4%	29.8%	.446	28.8%	21.6%	.179	50.0%	53.9%	.140	49.1%	43.1%	.169
2020 COVID-19 virtual survey sample size	32	217		53	103		16	102		117	394	

See notes for Table 1. Statistics for all variables are based on interviews with the adolescent except for the measures of the household being unable to buy essential food items during COVID-19 and loss of family member's employment during COVID-19, which are reported by the primary female caregiver in most cases.

[a] Adolescents reported having money prior to COVID-19 as follows: Bangladeshis 23.5%, Rohingya 13%, Jordanians 33.1%, and Syrians 13.9%.

permanently or temporarily. These disruptions have led to self-reported changes in well-being outcomes of interest including on mental health, hunger, and control of money.

Changes during COVID-19

Although the literature has focused on the potential of COVID-19 to increase child marriage, our findings highlight that the pandemic was also associated with worse outcomes for already married girls (Tables 5 and 6). In Bangladesh, both ever-married Bangladeshis (13.2pp, $p = .003$) and Rohingya (0.050pp, $p = .095$) were significantly more likely to report worsening health since the pandemic compared to their unmarried counterparts. Ever-married Bangladeshi girls were also significantly more worried/anxious (10.6pp, $p = .004$) and scared/fearful about the COVID-19 situation (7.3pp, $p = .080$) (Table 6). Both ever-married Bangladeshi and Rohingya girls felt more economically insecure during the pandemic. Ever-married Bangladeshi girls were 15.3pp ($p = .026$) more likely than never-married girls to report that their household was unable to buy essential food items during the pandemic. Meanwhile, ever-married Rohingya girls were 18.2pp

($p = .028$) more likely to report that someone in their household had lost employment due to the pandemic. Qualitative findings highlight that loss of household income made it difficult to meet basic food needs. Ever-married Rohingya girls focused on the compound challenges of rising food prices and reduced mobility to get to markets outside camps as a result of lockdowns (prior to the pandemic, households could sell part of their food aid package at market and buy other food items more flexibly). A 17-year-old married Rohingya girl noted: "Sometimes we have to eat rice only with salt. We could sell food and buy something for us before. But [now] they give us food like we are beggars."

In Jordan, ever-married Syrian and Jordanian girls were also more likely to be worried/anxious about COVID-19 (38.2pp, $p = .021$ and 9.5pp, $p = .016$, respectively). Ever-married Jordanian girls were 6.7pp more likely to report worsening health due to COVID-19 ($p = .013$). Although they were also 17.6pp more likely to be working ($p = .002$), they were 14.6pp ($p = .049$) less likely to believe that they would be better off in a year's time. Similar to married Rohingya girls in Bangladesh, ever-married Syrians in Jordan were 16.6pp ($p = .002$) more likely to report that someone in their household lost employment during the pandemic.

Table 6
Role of marital status on the capability domains of adolescent girls during COVID-19 in 2020, by country and refugee status

Outcomes	Bangladeshi	Rohingya	Jordanian	Syrian
	(1)	(2)	(3)	(4)
Health				
Self-reported health is worse than prior to COVID-19	0.132*** (0.043)	0.050* (0.030)	0.067** (0.016)	−0.055 (0.041)
Hungry more often in the past 4 weeks than prior to COVID-19	0.050 (0.063)	0.039 (0.082)	0.109** (0.029)	−0.047 (0.032)
Psychological well-being				
Completely or moderately worried/anxious because of COVID-19	0.106*** (0.036)	0.024 (0.041)	0.382** (0.104)	0.095** (0.027)
Completely or moderately scared/fearful because of COVID-19	0.073* (0.041)	0.040 (0.044)	0.201 (0.121)	0.095* (0.041)
Economic security, options, empowerment				
Household unable to buy essential food items during COVID-19	0.153** (0.068)	−0.068 (0.057)	−0.037 (0.067)	0.071 (0.048)
Family member lost employment permanently or temporarily due to COVID-19	0.043 (0.051)	0.182** (0.081)	0.037 (0.054)	0.166** (0.051)
Engaged in paid work during COVID-19	−0.035** (0.015)	−0.034 (0.021)	0.176*** (0.025)	−0.003 (0.015)
Thinks things will be better off in a year	−0.105* (0.064)	0.006 (0.049)	−0.146** (0.052)	−0.022 (0.045)
Mobility and voice				
Increase in technology access since prior to COVID-19	−0.075 (0.065)	0.017 (0.055)	−0.242*** (0.025)	−0.113*** (0.018)
Interacted with friends or family in the last 7 days	−0.013 (0.056)	0.029 (0.050)	−0.171* (0.073)	0.154** (0.054)
Left house or had visitors in last 7 days	0.042 (0.061)	0.066 (0.057)	−0.149** (0.033)	0.076 (0.044)
Observations	245	152	118	504

Coefficients reported in the table for each subgroup reflect the estimated impact of being married as a child at baseline on each capability outcome during COVID-19, controlling for relevant covariates. Separate linear probability models controlling for covariates and marital status were run for each baseline capability outcome and each of the four subpopulations: Bangladesh Cox Bazar host; Bangladesh Cox Bazar Rohingya; Jordan host; and Jordan Syrian. The covariates for all regressions include the adolescent's age, number of household members, location of residence, and household asset status. In all models, standard errors are clustered according to sampling design.
***$p < .01$.
**$p < .05$.
*$p < .10$.

Ever-married girls in Jordan were less likely to report increased access to technology (24.2pp for Jordanians, $p = .001$ and 11.3pp for Syrians, $p = .002$). Qualitative findings underscored husbands' control of phone and social media use, which remained unchanged during the pandemic. A 17-year-old married Syrian girl in Jordan noted that even though she has some access to her husband's internet accounts, his surveillance of her online communication has not altered during lockdown: "I use Facebook but I use my husband's account. He does not allow me to download the application and have my own account. He refused, even now [lockdown] when we are at home all the time."

Discussion

In line with the broader evidence base, our findings show that refugee girls are at significantly greater risk of child marriage than their host community counterparts, and face heightened vulnerabilities overall [5–8]. However, our results show heterogeneous outcomes for married and unmarried girls. On the one hand, some capability deprivations are experienced by married girls across all settings, which undermine their well-being and threaten to truncate their future access to opportunities. These include high rates of having responsibility for at least one child, lower rates of household wealth, and severely constrained access to schooling. In Bangladesh, our findings indicate additional risks in terms of health and food security. In Jordan, additional capability deprivations were predominantly related to social isolation stemming from conservative gender norms.

On the other hand, for Jordanians, child marriage is associated with generally better physical and mental health outcomes, with married girls reporting higher rates of self-reported health, lower levels of hunger, and lower likelihood of psychosocial distress. This may, in part, reflect the fact that economic insecurity is driving child marriage, and that natal families are arranging marriages where a girl's marital family has better financial prospects than their own [6,29]. In addition, somewhat surprisingly, married Syrian girls fared better than married Jordanian girls on several dimensions (food insecurity, access to savings, and having a friend they trust). Lower levels of food insecurity and access to savings could partly reflect access to a package of basic support available in refugee camps, which results in lower rates of multidimensional poverty within camps compared to in host communities in Jordan [30,31]. Across all contexts, married girls also have better phone access than unmarried girls, suggesting that phone use may be seen as more acceptable for married girls, although this finding was nuanced by the qualitative data, which reveal that mobile phone use by married girls is often only permitted under tight surveillance by husbands and in-laws.

Despite heterogenous outcomes for married and unmarried girls in host and refugee communities across contexts before the pandemic, married girls consistently fared worse during the COVID-19-related lockdowns. In Cox's Bazar, ever-married adolescents were more likely to report worsening health due to COVID-19, and to be worried/anxious and scared/fearful about the situation (the latter was strongest among ever-married Bangladeshi girls, who were also less likely to believe they would be better off in a year compared to their unmarried counterparts). This suggests that, while Rohingya adolescents likely experience COVID-19 as one shock among multiple that have been triggered by their forced displacement, Bangladeshi girls experience the pandemic as a more substantive worry [11,13]. For economic outcomes, ever-married girls (especially Rohingya refugees) were more likely to report a household member losing employment due to COVID-19 and were less likely to report engaging in paid work themselves. This is likely due to the protracted lockdowns affecting movement in and out of camps, and the curtailment of informal work, which many refugee households depend on to meet their basic needs [32].

In Jordan, differences between ever-married and never-married girls centered around greater worries about the COVID-19 situation, and a higher likelihood of being in a household that had lost work for married Syrian adolescents. The qualitative findings suggest that these concerns reflect married girls' worries about how they can meet basic household needs. This likely reflects the far-reaching impacts of prolonged lockdowns and service closures on the population including the increase in poverty in Jordan as a result of the pandemic [31].

Limitations

Our findings should be considered in light of four limitations. First, this analysis is largely cross-sectional, comparing already married girls to never-married girls, so does not consider the determinants of CEFM. This means we are unable to completely disentangle whether findings are due to marriage itself or pre-existing vulnerabilities of girls who experience CEFM. Note that controlling for baseline wealth does partially address this issue. Second, sample sizes for married girls were relatively small, in some cases limiting the ability to conduct multivariate regression analysis. Third, the virtual nature of the COVID-19 survey round may weaken comparisons with data from the in-person surveys, as this modality could have hindered candid reporting (of psychosocial distress, for example). Finally, GAGE samples are not expected to be nationally representative, and results should be interpreted with this in mind.

Conclusions and policy implications

Overall, our findings suggest that while child marriage can be an important determinant of adolescent girls' capability deprivations, the patterning of these deprivations is likely to be highly context-specific, shaped by overlapping sources of disadvantage that include poverty and forced displacement. In the context of macro shocks such as the pandemic, it is critical to avoid simplistic generalizations about the patterning of deprivations and to ensure instead that policy and programming are informed by context-specific vulnerability assessments that include marital status as one consideration among multiple intersecting sources of disadvantage [33,34]. This suggests, for example, that programs that target unmarried girls (such as girls' clubs, educational initiatives, etc.) may not be accessible to married girls given their other responsibilities at home, while programming targeting older women (such as parenting skills or livelihoods interventions) may not be accessible to younger girls. More attention is needed to develop specific programming that considers the unique constraints that married girls and unmarried girls face, including in humanitarian settings.

In the context of the pandemic, access to mobile phones and other information and communications technology presents an opportunity (especially in contexts such as Jordan and Bangladesh, where connectivity rates are relatively high [Although some analysts have cautioned against the use of digital technology to reach married adolescent girls, this research has tended to be with populations in sub-Saharan Africa where connectivity rates are significantly lower [35,36]]) to shape new, innovative, and cost-effective ways to deliver services, particularly to married girls (who are very likely to be out of school). This could include giving them information and support on sexual and reproductive health and rights, bringing them up to grade level on schooling, and engaging them in learning and livelihood opportunities at scale. Many such programs

already target older women, yet the returns on investment are likely much higher—and more essential—for the current generation of adolescent girls living in the most deprived conditions, many of them in situations of crisis or displacement. This suggests a need to revisit and further nuance earlier work highlighting linkages between child marriage and negative economic outcomes across the life course and intergenerationally [37,38].

Supplementary Data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.jadohealth.2021.12.001.

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