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Sexual and reproductive health factors associated with child, early and forced marriage and partnerships among refugee youth in a humanitarian setting in Uganda: Mixed methods findings

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Miranda G. Loutet[1], Carmen H. Logie[2,3,4,5], Moses Okumu[6], Isha Berry[1], Simon O. Lukone[7], Nelson Kisubi[7], Alyssa McAlpine[2], Simon Mwima[8] and Peter Kyambadde[8,9]

Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada[1]; Factor-Inwentash Faculty of Social Work, University of Toronto, Toronto, ON, Canada[2]; United Nations University Institute for Water, Environment, and Health, Hamilton, ON, Canada[3]; Centre for Gender & Sexual Health Equity, Vancouver, BC, Canada[4]; Women's College Research Institute, Women's College Hospital, Toronto, ON, Canada[5]; School of Social Work, University of North Carolina Chapel Hill, Chapel Hill, NC, USA[6]; Uganda Refugee and Disaster Management Council, Yumbe, Uganda[7]; National AIDS Coordinating Program, Ugandan Ministry of Health, Kampala, Uganda[8]; Most at Risk Population Initiative (MARPI), Mulago Hospital, Kampala, Uganda[9]

***For Correspondence**: Email: *miranda.loutet@mail.utoronto.ca*

Abstract

Preventing early and forced marriage is a global priority, however, sexual and reproductive health (SRH) among youth remains understudied in humanitarian settings. This study examined child, early and forced marriage and partnership (CEFMP) among young refugees in Bidi Bidi refugee settlement, Uganda, and associations with SRH outcomes among young women. This mixed-methods study involved a qualitative phase with young (16-24 years) sexual violence survivors (n=58), elders (n=8) and healthcare providers (n=10), followed by a quantitative phase among refugee youth (16-24 years; n=120) during which sociodemographic and SRH data were collected. We examined SRH outcome differences by CEFMP using Fisher's exact test. Qualitative data showed that CEFMP was a significant problem facing refugee young women driven by stigma, gender norms and poverty. Among youth refugee survey participants, nearly one-third (31.7%) experienced CEFMP (57.9% women, 42.1% men). Among women in CEFMP compared to those who were not, a significantly higher proportion reported forced pregnancy (50.0% vs. 18.4%, p-value=0.018), forced abortion (45.4% vs. 7.0%, p-value=0.002), and missed school due to sexual violence (94.7% vs. 63.0%, p-value=0.016). This study illustrates the need for innovative community-engaged interventions to end CEFMP in humanitarian contexts in order to achieve sexual and reproductive health and rights for youth. *(Afr J Reprod Health 2022; 26[12s]: 66-77).*

Keywords: Refugee, adolescent, child marriage, early marriage, forced marriage

Résumé

La prévention des mariages précoces et forcés est une priorité globale, toutefois, la santé sexuelle et reproductive (SSR) parmi les jeunes restent sous-étudier dans les lieus humanitaires. Cette étude a examiné des mariages d'enfants, précoces et forcés (MEPF) et des partenariats parmi les jeunes refugiés au installation de refugiés Bidi Bidi, à Ouganda, et les associations avec les résultats SSR parmi les jeunes femmes. Cette étude de méthodes mélangés était compris d'une phase qualitative avec des jeunes (16-24 ans) survivantes de la violence sexuelle (n=58), les aînés (n=8) et les fournisseurs de soins de santé (n=10), suivit par une phase quantitative parmi les jeunes refugiés (16-24 ans; n=120) pendant lequel les données sociodémographiques et SSR ont été collectionnée. On a examiné les résultats SSR différents de MEPF utilisant le test exact de Fisher. Les données qualitatives ont montré que MEPF était un problème important pour les jeunes femmes refugiés, causer par le stigma, les normes de genre, et la pauvreté. Parmi les participants d'une questionnaire étant aussi des jeunes refugiés, presqu'un tiers (31.7%) ont eu l'expérience MEPF (57.9% femmes, 42.1% hommes). Parmi les femmes dans MEPF en comparaison avec celles qui n'étaient pas, une proportion notamment plus haute ont signalé la grossesse forcée (50.0% vs. 18.4%, valeur-p=0.018), avortement forcé (45.5% vs. 7.0%, valeur-p=0.002), et l'école manquée à cause de la violence sexuelle (94.7% vs. 63.0%, valeur-p=0.016). Cette étude démontre le besoin pour des interventions innovants qui engage la communauté pour mettre fin au MEPF dans les contextes humanitaires et pour pouvoir atteindre la santé et les droits sexuel et reproductifs pour les jeunes. *(Afr J Reprod Health 2022; 26[12s]: 66-77).*

Mots-clés: Refugié, adolescent, mariage d'enfants, mariage précoce, mariage forcé

Introduction

Despite child and forced marriage being considered a human rights violation, UNICEF estimates that 12 million girls under the age of 18 years will marry against their will each year[1]. Child and forced marriage is defined by the United Nations Office of the High Commissioner on Human Rights as any marriage where at least one person is under the age of 18 years and/or a marriage where one or both people have not expressed full and free consent of the union[2]. Child and forced marriage disproportionately affect women and girls and the burden is much higher in low-income countries where almost 40% of young women 20-24 years were married before the age of 18, compared to 20% globally[1]. The highest rates of child marriage in the world are in sub-Saharan Africa, where the prevalence of child marriage ranges from 14% in Rwanda, 45% in Uganda, up to 77% in Chad[3].Uganda has reported a slow pace of progress in increasing median age of marriage of girls; ages have increased less than one year (17.5 to 18 years of age) from 1995 to 2012[4].

Child and forced marriage occurs for a number of reasons including gender inequality, poverty, insecurity and tradition[5], but the combination of key drivers is context-specific[6] and any intervention to prevent child and forced marriage must match local contexts[7]. Girls and women forced into marriage at a young age are at high risk of sexual and gender-based violence (SGBV)[3,8], face discrimination and isolation from their communities, have higher risk of maternal morbidity and mortality, tend to drop out of school at a younger age, and are less likely to hold a job outside the home[9]. This can prevent their full participation in economic, political and social spheres.

Child and forced marriage is particularly common in conflict-affected countries and humanitarian settings and is exacerbated due to common drivers[2]. Child marriage may be used as a survival strategy to make it possible to cope with financial challenges faced by refugees with limited economic opportunities[10,11]. Access to systems that keep individuals safe can be particularly challenging during and after crises due to a breakdown in formal justice and civil registration systems[12]. Therefore, even if child marriage is illegal, the systems may no longer exist or function efficiently or effectively to protect girls, and because women's safety and rights often become the last priority amid conflict and crises the barriers faced by women in gaining access to such systems persist[13]. Furthermore, access to essential services such as school and sexual and reproductive healthcare is often disrupted in these settings due to distance, costs and stigma[14].

A recent systematic review reported that there remains a dearth of peer-reviewed literature on sexual and reproductive health among refugee girls and young women in Africa[14]. There are knowledge gaps on the prevalence and health outcomes of child, early and forced marriage in humanitarian settings[10,15]. To address this gap we examined child, early and forced marriage and partnership (CEFMP) among young refugees in Bidi Bidi refugee settlement, Uganda, and associations with sexual and reproductive health outcomes among young women.

Methods

Study design and participants

Refugee adolescents and youth aged 16-24 years in Bidi Bidi Refugee Settlement, Uganda were enrolled into a two-phase sequential transformative mixed-methods pilot study called Ngutulu Kagwero. Phase 1 involved a formative qualitative phase and phase 2 was a pre-post trial of a SGBV educational comic (registered at ClinicalTrials.gov (#NCT04656522)). The study took place in Bidi Bidi Refugee Settlement in northwestern Uganda, which is the second largest refugee settlement in the world and is home to refugees primarily from South Sudan. Research objectives and methods for the full pilot study are published elsewhere[16], as well as results of the primary endpoint of the trial[17]. Relevant methodology for the aims of this sub-study is summarized here.

In brief, during Phase 1, in-depth interviews were conducted among 12 youth who were sexual violence survivors; aged between 16 and 24 years; identified as refugees or forcibly displaced persons; resided in the Bidi Bidi refugee settlement; capable of providing informed

consent; and spoke Juba Arabic, Bari or English. In-depth interviews were also conducted among eight refugee elders aged 55+ years old and/or persons identified as an elder by their community and eight healthcare providers working in Bidi Bidi. An additional 48 youth participated in focus groups who were between 16 and 24 years; identified as refugees or forcibly displaced persons; resided in the Bidi Bidi refugee settlement; capable of providing consent; interested and/or concerned about issues of SGBV in their community. In Phase 2, 120 youth participants were recruited and enrolled into the pre-post trial using purposive, non-random sampling methods by peer navigators in Bidi Bidi. Participants in Phase 2 included persons aged between 16 and 24 years; identified as refugees or forcibly displaced persons; reside in the Bidi Bidi refugee settlement in Zone 3; capable of providing informed consent; and spoke Juba Arabic, Bari or English.

Data collection and measures

In-depth interviews and focus groups were conducted during Phase 1 of the study (February 2020). Interviews and focus groups were facilitated by trained researchers from the Uganda Refugee and Disaster Management Council (URDMC), and qualitative data were recorded, transcribed and translated from Juba Arabic or Bari into English when necessary. Interviews explored personal experiences and perspectives, and focus groups explored sexual violence drivers and facilitators, protective factors, and recommendations for prevention and for post-rape clinical care.

Sociodemographic and sexual and reproductive health data were collected during Phase 2 using tablet-based structured surveys. Participants were followed over a 2-month time period between November 2020 and February 2021, and interviewed directly before the comic book intervention (baseline), directly after, and at 2-month follow-up. However sociodemographic and sexual and reproductive health data were only collected at one time point (either at baseline or 2-month follow-up), and only data relating to comic book outcomes were asked at more than one time point. Child, early and forced marriage or partnership (CEFMP) was defined as marriage that occurred at less than 18 years of age and/or the participant reported that they were forced into marriage or partnership. Data on sexual and reproductive health outcomes and sexual and physical violence experiences were included from the baseline survey based on a 12-month recall period to avoid any changes to reporting that may have occurred due to the educational comic intervention. Specifically, sexual violence was defined as any report in the past 12 months of being threatened with sexual violence by anyone, forced to have sex against will, forced to have sex to be able to eat, have shelter, or have sex for essential services [such as protection or school] or safety, or physically forced or made to feel that had to become pregnant against will. Physical violence was defined as any report in the past 12 months of being threatened with physical violence by anyone or being hit, punched, kicked, slapped, choked, hurt with a weapon, or otherwise physically hurt by anyone. Participants' experiences of sexual and/or physical violence were reported together.

Data analysis

We used thematic analysis to examine the qualitative data from the in-depth interviews and focus groups. The data were coded independently by three researchers and triangulation was conducted to increase reliability and validity of results. The codes were explored to reflect and define themes relating to sexual violence experiences among youth and post-rape care preferences, which would ultimately be used to design the educational comic intervention. Codes and the themes that emerged were reassessed considering ties to existing literature on CEFMP. Relevant data to reflect themes of CEFMP were extracted to illustrate emerging themes. The qualitative results and quotes were reported using the defined themes.

Sociodemographic factors and sexual and reproductive health outcomes were described using means and standard deviations for continuous variables and frequency and proportions for categorical variables. We examined differences in sexual and reproductive health outcomes by CEFMP using Fisher's exact test, and these statistical analyses were stratified by gender due to

observations from the qualitative data that experiences of CEFMP differed by gender. We also conducted bivariate and multivariable logistic regression adjusting for age, highest level of education and asset index to estimate associations between CEFMP and sexual and reproductive health outcomes among young refugee women. P-values and 95% confidence intervals were reported from regressions. However, due to small sample sizes the logistic regression models were not presented as the primary analysis, but the approach was used to verify results. All statistical analyses were conducted using STATA version 16.1 (StataCorp, College Station, TX, USA).

Results

Qualitative results

Qualitative participants included 58 youth (50% men; 50% women; mean age: 20.9 years), 8 elders (mean age: 58.3 years), and 10 healthcare providers (mean age: 31.5 years). The following five themes relating to CEFMP emerged from the interviews:

1. CEFMP is a significant problem facing refugee young women

In this theme, participants explained that there is expectation for both boys and girls to marry at a young age. However, youth in Bidi Bidi specifically identified CEFMP as a significant problem facing refugee young women compared to young men:*"According to me the most vulnerable are the girls here in our community as most of the girls will be forced to get married at early age and this is common here in Bidi Bidi" (Youth, woman).* This was also described by another youth as: *"The cases are very many like our girls who are 18 years below are marrying very fast but mainly forced. I have a neighbor who is below 13 years but is already married." (Youth, woman)*

2. Locally, CEFMP is considered a form of sexual and gender-based violence

Throughout the interviews CEFMP was identified as a form of SGBV by participants, and commonly occurred after experiencing SGBV. A healthcare provider in Bidi Bidi explained this phenomenon: "*Psychologically [SGBV survivors] are traumatized. Some of the perpetrators are actually caretakers of these survivors thus making it hard to face society. Bruises, fractures, tears from physical violence. They socially stigmatized and drop out of schools, get unwanted pregnancies, forced to marry, and contract diseases." (Healthcare provider)* In some instances, young women were forced to marry sexual violence perpetrators. As a youth described: *"Some are ignorant and use the traditional rules of: if a man rapes a woman, he marries her and keeps her as his wife." (Youth, man)* This was corroborated by an elder who discusses challenges in future marriage for young women sexual violence survivors: *"The culture also creates stigma in the survivors who think if they report the case, they may not get married again, since a girl who had sex is not fresh and cannot be accepted by the in-laws so the man who has raped her must marry her." (Elder)*

3. Stigma, gender norms, and poverty are drivers of CEFMP in humanitarian settings

Participants described enablers of CEFMP, which included cultural expectations and sexual violence stigma as was described by a youth: *"The community tends to isolate victims of sexual and gender-based violence instead of helping and sensitizing them about overcoming the challenges associated with sexual and gender-based violence. The community gossips about victims of such violence and insults them referring to some of them as prostitutes instead counseling victims. The community sometimes sends victims of sexual abuse such as rape to go for forceful marriage terming them (the victims) as useless to the community." (Youth, woman)* As well as stigma, an elder in the community identified gender norms to be a driver of CEFMP: "*Also, some fathers abuse their daughters for being dull in school and tell them to get married since they can't manage school." (Elder)* Family poverty was also described as a driver of CEFMP in Bidi Bidi by a youth: *"Poverty: This is one of the causes of SGBV in our community. Most people here force their young girls to get married at early age against their will just to get rich and this very common in the settlement"*

Table 1: Sociodemographic characteristics among youth who were in a child, early and/or forced marriage/ partnership compared to those who were not (n=120)

	Total	**No child, early or forced marriage/ partnership**	**Child, early and/or forced marriage/ partnership**
Total, n (%) or mean (SD)	120	82 (68.3)	38 (31.7)
Age in years, mean (SD)	19.8 (2.4)	19.5 (2.1)	20.4 (2.7)
Gender			
Woman	60 (50.0)	38 (46.3)	22 (57.9)
Man	60 (50.0)	44 (53.7)	16 (42.1)
Country of origin			
Other	1 (1.2)	1 (1.2)	0 (0.0)
South Sudan	119 (99.2)	81 (98.8)	38 (100.0)
Education			
Primary or lower	44 (38.3)	30 (37.5)	14 (40.0)
Secondary or higher	71 (61.7)	50 (62.5)	21 (60.0)
Asset index			
Q1 (lowest)	40 (34.8)	32 (40.0)	8 (22.9)
Q2	37 (32.2)	27 (33.8)	10 (28.6)
Q3 (highest)	38 (33.0)	21 (26.3)	17 (48.6)

(Youth, woman) This was corroborated by an elder, demonstrating the impact of poverty through generations, family, and community: "*Poverty leading to forceful marry off of girls." (Elder)* Participants discussed how drivers are exasperated by humanitarian crises; as a youth described: *"It happened especially during journey, the parents separated with the children and during the process some girls got raped by the soldiers and forced to get married to them." (Youth, man)*

4. Outcomes of CEFMP in humanitarian settings include poor education, diminished reproductive rights, and increased SGBV

Participants described a multitude of outcomes effecting girls who experienced CEFMP. For instance, CEFMP was reported to impact a girl's education, as was described by an elder in Bidi Bidi: *"The young girls dropout of school and go for early marriage." (Elder)* CEFMP was also reported to result in a loss of girls' autonomy and reproductive rights, and could result in further perpetration of SGBV, which was described by a healthcare provider in Bidi Bidi: *"For instance, if the young girl sleeps in the boy's home, the next day her parents will find out where she slept and force her to marry that boy whether she likes it or not. The roles of taking care of the home is totally left to the women and in so doing you realize that their rights are violated by the man. In the host community young girls are denied education and they are normally given away for marriages between the ages of 13-18. Most are denied the right to family planning because the men believe that family planning is bad and if the man finds out that these women are using family planning, he will even divorce them." (Healthcare provider)*

5. Community-based education solutions are necessary for preventing CEFMP and supporting those who are experiencing CEFMP in humanitarian settings

Finally, participants provided community-based solutions for preventing CEFMP and supporting those experiencing CEFMP. Education for girls and the community on the dangers of CEFMP was proposed as a solution to reduce SGBV in Bidi Bidi. This included education for girls themselves: *"Girls should be taught about their rights and dangers of early or forced marriages to their health and future as a whole." (Youth, woman)* Others noted the need for community education: *"I would like to see the community educated against early marriages. It seems most people in the community are not aware of the dangers of early marriages." (Youth, woman)*

Quantitative results

This analysis included 120 youth who enrolled and completed data collection at baseline for Phase 2. The baseline demographics for this study

Table 2: Sexual and reproductive health outcomes among youth who were in a child, early and/or forced marriage/ partnership compared to those who were not, by gender (n=120)

Sexual and reproductive health outcomes	Women				Men			
	Total	No child or forced marriage/ partnership	Child and/or forced marriage/ partnership	p-value*	Total	No child or forced marriage/ partnership	Child and/or forced marriage/ partnership	p-value*
Total, n (%)	60	38 (63.3)	22(36.7)		60	44 (73.3)	16 (26.7)	
Forced pregnancy	18 (30.0)	7 (18.4)	11 (50.0)	0.018	n/a	n/a	n/a	-
Forced abortion	13 (21.7)	3 (7.9)	10 (45.5)	0.002	n/a	n/a	n/a	-
Have children	17 (28.3)	8 (21.1)	9 (40.9)	0.139	11 (18.3)	6 (13.6)	5 (31.3)	0.143
Experienced physical and/or sexual violence	49 (81.7)	30 (79.0)	19 (86.4)	0.731	41 (68.3)	33 (75.0)	8 (50.0)	0.114
Survival sex worker	28 (46.7)	14 (36.8)	14 (63.6)	0.062	6 (10.0)	5 (11.4)	1 (6.3)	1.000
Missed school due to sexual violence (among those who experienced sexual violence)	35 (76.1)	17 (63.0)	18 (94.7)	0.016	9 (50.0)	6 (46.2)	3 (60.0)	1.000

* P-values from Fisher's exact test

Supplementary Table 1: Sociodemographic and economic characteristics among youth who were in a child, early and/or forced marriage/ partnership compared to those who were not by gender

	Women		**Men**	
	Child and/or forced marriage/partnership	**No child or forced marriage/partnership**	**Child and/or forced marriage/partnership**	**No child or forced marriage/partnership**
Total (n, %)	22 (36.7)	38 (63.3)	16 (26.7)	44 (73.3)
Age in years (mean, SD)	19.5 (2.6)	18.8 (1.8)	21.6 (2.5)	20.0 (2.3)
Level of education (n, %)				
Primary or lower	12 (57.1)	17 (44.7)	2 (14.3)	13 (31.0)
Secondary or higher	9 (42.9)	21 (55.3)	12 (85.7)	29 (69.0)
Asset index (n, %)				
Q1 (lowest)	4 (19.1)	16 (42.1)	4 (28.6)	16 (38.1)
Q2	7 (33.3)	13 (34.2)	3 (21.4)	14 (33.3)
Q3 (highest)	10 (47.6)	9 (23.7)	7 (50.0)	12 (28.6)
Earned money in the past 12 months (n, %)				
No	11 (52.4)	26 (68.4)	4 (28.6)	17 (40.5)
Yes	10 (47.6)	12 (31.6)	10 (71.4)	25 (59.5)
Decisions about moneys earned (n, %)				
Participant decides	3 (30.0)	6 (50.0)	7 (70.0)	16 (64.0)
Someone else decides	7 (70.0)	5 (41.7)	2 (20.0)	8 (32.0)
Decide jointly with someone else	0 (0.0)	1 (8.3)	1 (10.0)	1 (4.0)

Supplementary Table 2: Bivariate and multivariable logistic regression models to estimate the association between CEFMP and sexual and reproductive health outcomes among young women

	Bivariate logistic regression models			Multivariable logistic regression models		
	OR	95%CI	p-value	aOR*	95%CI	p-value
Forced pregnancy	4.43	1.37, 14.28	0.01	9.09	2.00, 41.28	0.004
Forced abortion	9.72	2.29, 41.33	0.002	34.42	4.52, 261.97	0.001
Have children	2.6	0.82, 8.23	0.11	2.65	0.59, 11.84	0.2
Experienced physical and/or sexual violence	1.69	0.40, 7.17	0.48	2.66	0.49, 14.58	0.26
Survival sex worker	3	1.02, 8.93	0.05	3.09	0.89, 10.67	0.07
Missed school due to sexual violence (among those who experienced sexual violence)	10.59	1.22, 91.80	0.03	10.05	0.99, 102.36	0.05

* adjusted for age, highest level of education and asset index

population have been previously reported (17), but in brief the mean age was 19.8 years (SD=2.4), half were women, and 61.7% had secondary education or higher (Table 1). The mean age (and range) when first married was significantly lower among women compared to men (17.3 years (min: 15 to max: 20) vs. 20.1 years (min: 16 to max: 25), p-value=0.003). Almost a third (38/120) of youth experienced a child, early and/or forced marriage/partnership (CEFMP), the majority of which were women (57.9%) (Table 1). The rate of CEFMP among young girls who were married was 75.0% (9/12) and among young boys who were married was 60% (9/15). Among women who experienced CEFMP, the majority had primary-level education or lower (57.2%), had not earned money in the past 12 months (52.4%) and did not have decision making power over how money is used (70.0%) (Supplementary Table 1).

Sexual and reproductive health outcomes were worse among women who experienced a CEFMP compared to those who did not experience a CEFMP (Table 2). A significantly higher proportion reported forced pregnancy (50.0% vs. 18.4%, p-value=0.018), forced abortion (45.4% vs. 7.9%, p-value=0.002), and missed school due to sexual violence (94.7% vs. 63.0%, p-value=0.016). Although not significant, a higher proportion of women who experienced CEFMP reported having children (40.9% vs. 21.0%, p-value=0.139), experienced physical and/or sexual violence (86.4% vs. 79.0%, p-value=0.731), and sex work for survival (63.6% vs. 36.8%, p-value=0.062) compared to women who did not experience CEFMP. Due to small sample size, the bivariate and adjusted multivariable logistic regression models among women were not presented as the primary analysis, but our findings that CEFMP was associated with forced pregnancy, forced abortion, and missed school due to sexual violence were verified (Supplementary Table 2). Outcomes were worse among women who experienced a CEFMP compared to men who experienced a CEFMP, including 40.9% of women in a CEFMP having children compared to 31.3% of men, 86.4% of women in a CEFMP experienced physical and/or sexual violence compared to 50.0% of men, and 94.7% of women in a CEFMP missed school due to sexual violence compared to 60.0% of men (Table 2).

Discussion

Using two sources of data from refugee youth living in the Bidi Bidi refugee settlement, we identified drivers and sexual and reproductive health outcomes associated with child marriage. The prevalence of CEFMP in the settlement was high, with almost a third of the study population experiencing a CEFMP. The prevalence was particularly high among women which was also discussed by Bidi Bidi refugee youth qualitatively, with 75% of young women who were married had done so before the age of 18 years. Our key qualitative findings were that drivers of CEFMP are gender norms, sexual violence stigma, and family poverty, which are further exacerbated in the humanitarian context. Our key quantitative findings were that a significantly higher proportion of young women who experienced CEFMP also reported experiencing a forced pregnancy, forced abortion, and missed school due to sexual violence. These outcomes of CEFMP including loss of reproductive rights and education were also discussed qualitatively by members of the Bidi Bidi refugee community.

In our study, women who were in a CEFMP were significantly more likely to experience a forced pregnancy or forced abortion, which was also supported through discussion of loss of reproductive rights through interviews with elders and healthcare providers in Bidi Bidi. This is similar to a study in India that reported child marriage was significantly associated with high fertility, repeat childbirth in less than 24 months, multiple unwanted pregnancies, pregnancy termination and sterilisation when controlling for duration of marriage, which suggests that women who are in a CEFMP often do not have rights over their reproduction[18]. This was also supported by our qualitative data, where a healthcare worker from the Bidi Bidi community explained how young women who experience CEFMP do not have autonomy over their reproduction including not being permitted to use family planning. Findings from a global study across 15 countries showed that child

marriage increases total fertility rates by 0.25-1.1 children per women because women who marryearlier tend to have children earlier and more children over their lifetime compared to those who marry later[11]. This association with adverse reproductive outcomes from ours and other studies show how CEFMP can contribute to a higher risk of maternal and infant mortality[19].

Both qualitative and quantitative results indicate that missed school and early drop out due to sexual violence was significantly higher among women who had experienced CEFMP in Bidi Bidi; this was also supported by quantitative results that indicate the majority of women who experienced CEFMP had a very low level of education. There is strong evidence that those who marry before age of 18 tend to complete fewer years of schooling[4,20-24]. A study conducted by Wodon *et al*., examined various national-level data sources from Uganda and concluded that early marriage/pregnancy both causes lower levels of education for girls and is a result of early drop-out from school, especially for girls living in rural areas and in underprivileged households[25], which supports our findings among refugee women living in the rural refugee settlement.

Patriarchal gender norms relating to sexuality and domestic roles were described qualitatively as drivers of child marriage in Bidi Bidi. Numerous studies have shown child marriage is linked with parents' attitudes and community norms[12-30]. In Tanzania and Ghana, parents have reported using child marriage as a way to protect their daughters from concerns about family honor, girls' virginity, sexual assault or pregnancy outside of marriage[26,31]. Child marriage was also reported to occur due to gender norms that place higher importance on young women's domestic roles over education, with the majority of refugee young women in Bidi Bidi who experienced CEFMP reporting that they did not earn money and did not have decision making power over how money was used. Findings from settings in sub-Saharan Africa affirmed that child marriage is rooted in inequitable gender norms that prioritize women's role in the home over education or employment[4,32,33].

Sexual violence stigma was identified by refugee youth, elders and healthcare workers in Bidi Bidi as a driver of child marriage, as sexual violence survivors were forced to marry and isolated from their community. Isolation from services and support structures due to social stigma was also reported by refugees in Uganda who experienced child marriage a decade prior to our study[34], demonstrating how difficult it is to change social norms. It was reported by multiple participants in Bidi Bidi that sexual violence survivors are often forced to marry sexual violence perpetrators, which may explain the high rates of SGBV reported among women who experienced child marriage globally and especially in sub-Saharan Africa[3,8]. This is particularly important due to the recommendation from youth in Bidi Bidi that education on the dangers of child or forced marriages could reduce SGBV.

Family poverty was described as a cause of child marriage in Bidi Bidi, which was also supported through quantitative data that showed the majority of women who experienced CEFMP had not earned money in the past 12 months and did not have decision making power over how money is used. Numerous studies have found an association between household socioeconomic status and age at marriage but the mechanisms through which this relationship operates varies between settings[6]. Among other refugee populations in South Sudan, Cameroon, and Nigeria, child marriage is thought to alleviate economic burden and make it possible to cope with financial challenges faced by refugees[10]. Although financial burden on families was reported as a driver of child marriage qualitatively by youth and elders in our study, we did not see a difference in economic status of the youth by child marriage. This may be due to similar reports from humanitarian settings in the Middle East region where child marriage provided financial stability for the child entering the marriage[35,36]. Importantly, a higher proportion, although not statistically significant, of girls from Bidi Bidi who were in a CEFMP had a history of conducting sex work for survival compared to those not in a CEFMP, so this could infer a history of poverty and that the marriage may have alleviated that poverty.

Participants in our study discussed how drivers of child marriage are exacerbated by humanitarian crises resulting in a much higher rate of child marriage in the Bidi Bidi refugee settlement compared to national estimates in Uganda[3]. High

rates of child marriage have been reported in humanitarian settings globally[13,14,34,35,37]; however, it is much harder to track in these settings due to inaccessible civil registration services[38]. This has been described among refugees in Uganda 10 years prior to our study, with poverty, limited education opportunities and weakened family structure – all exacerbated by conflict – affecting the views, perceptions and behaviours of youth around relationships and marriage compared to the time before their experience of war[34]. Although sources of conflict vary across time and geography, the intersection and prominence of these driving factors remains relevant among refugee youth in Bidi Bidi.

Psaki *et al*., have recently proposed a conceptual framework of the drivers of child marriage, which can be adapted to describe drivers in a humanitarian setting such as Bidi Bidi[6]. Social norms and attitudes and poverty and economic factors are core distal conditions that drive proximal factors leading to child marriage. Psaki's conceptual framework suggests that norms that drive child marriage may reflect broader gender norms including sexuality, mobility, and participation in the labor market, which was reported by youth, elders and healthcare providers in Bidi Bidi as gender norms, sexual violence stigma, and family poverty. Drivers may also influence short, medium and longer-term outcomes for girls and their families including but not limited to sexual and reproductive health outcomes. Psaki's framework provides an adaptable structure to designing context-specific interventions to address the drivers of child marriage.

There are a few important limitations with our study. The cross-sectional nature of how sociodemographic and sexual and reproductive health data were collected means that temporality of CEFMP and other outcomes is not always known because youth were asked to recall any experiences in the past 12 months without specifying exactly when they occurred. In addition, collecting data on past experiences may result in recall bias. We mitigated these limitations as much as possible by asking time-bound questions such as whether the participant experienced sexual violence in the past 12 months, as opposed to ever experiencing sexual violence. The sensitive nature of data collected for this study may also have been subjected to social-desirability bias and interviewer bias; however, this was minimized by working with data collectors who were peers, but who lived in another area of Bidi Bidi, to ensure participants did not worry of community stigma and by training the data collectors in research ethics with a strong focus on de-stigmatization and privacy. Finally, this is a secondary data analysis of a study that was designed for another purpose, so there are other factors and outcomes that are important to consider among those who have experienced CEFMP that we were unable to collect or comment on. However, this description of CEFMP in Bidi Bidi is extremely important, as it has not been described in this population before and can provide evidence for further studies and targeted programs.

Ethics approval

Ethical oversight for the study was provided through the Mildmay Uganda Research Ethics Committee (REF 0212-2019), Uganda National Council for Science and Technology (SS 5273), and the University of Toronto Research Ethics Board (Ref: 37981).

Conclusion

We found that CEFMP is common among youth in humanitarian settings such as Bidi Bidi and is associated with controlling girls' sexual activity and fertility. Using both qualitative and quantitative data we were able to enhance the credibility and validity of our study results showing the driving influence of poverty and education on risk of CEFMP and the resulting impact on reproductive outcomes among young refugee women. The implications of these results demonstrate how gender norms and stigma are perpetuated, especially in environments where resources are scarce and stressors are high. With data and evidence, we can design and implement programs to effectively address the needs of women and girls and create interventions that eradicate CEFMP. However, these interventions must be context-specific, and so using the Psaki conceptual framework to present evidence will inform approaches that are most likely to be effective in

different contexts and contributing to the 2013 World Health Organization priority areas for research on child marriage[15].

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