Odwe *et al. Conflict and Health* (2025) 19:24
https://doi.org/10.1186/s13031-025-00661-5

Conflict and Health

RESEARCH Open Access

Childhood exposure to intimate partner violence against women and its association with violence against children in refugee settlements in Uganda

George Odwe[1*], Francis Obare[1], Stella Muthuri[1], Peter Kisaakye[1], Dagim Habteyesus[2], Gloria Seruwagi[1], Yohannes Dibaba Wado[3], Yadeta Dessie[3,4], Bonnie Wandera[3], Caroline W. Kabiru[3] and Chi-Chi Undie[1]

Abstract

Background The association between witnessing intimate partner violence against women (IPVAW) and experiencing violence against children (VAC) has received limited attention in humanitarian settings. We examined the prevalence of witnessing IPVAW in childhood and its association with experiencing caregiver-perpetrated physical and emotional VAC and sexual VAC by any perpetrator in Uganda refugee settlements.

Methods Data were from the first-ever Ugandan Humanitarian Violence against Children and Youth Survey (HVACS), conducted from March to April 2022, involving 1,338 females and 927 males aged 13–24 years. Indicators of VAC included ever experiencing sexual (by any perpetrator), physical, or emotional (by a caregiver) violence among 13-17-year-olds and experiencing such violence prior to age 18 among 18-24-year-olds. The analysis entailed cross-tabulation with a chi-square (χ^2) test and a multivariate logistic regression model.

Results The prevalence of witnessing IPVAW in childhood was significantly higher among males (31.2%) compared to females (16.5%). Witnessing IPVAW in childhood was associated with increased odds of experiencing physical VAC by a caregiver for both females (AOR = 2.53; 95% CI = 1.41–4.52) and males (AOR = 3.37; 95% CI = 1.72–6.59). It also significantly increased the odds of experiencing sexual VAC for females (AOR = 3.62; 95% CI = 1.65–7.92) and males (AOR = 5.52; 95% CI = 3.42–8.91). Additionally, witnessing IPVAW increased the odds of experiencing emotional VAC by a caregiver for both females (AOR = 2.61; 95% CI = 1.36–5.03) and males (AOR = 2.78; 95% CI = 1.53–5.07), compared to their peers who did not witness IPVAW.

Conclusion Witnessing IPVAW in childhood is common in refugee settlements in Uganda and is strongly associated with experiencing VAC perpetrated by a caregiver. Violence prevention and response programs should pay attention to IPVAW as a risk factor for VAC, emphasizing integrated approaches that target both forms of violence within households.

Keywords Intimate partner violence against women, Violence against children, Caregivers, Humanitarian settings

*Correspondence:
George Odwe
godwe@popcouncil.org
[1]Population Council, P.O Box 17643-00500, Avenue 5, 3rd Floor, Rose Avenue, Nairobi, Kenya
[2]Population Council, Sealite Mihret Square, Addis Ababa, Ethiopia
[3]African Population and Health Research Center (APHRC), APHRC Headquarters, P.O. Box 10787-00100, Kitisuru, Nairobi, Kenya
[4]School of Public Health, College of Health and Medical Sciences, Haramaya University, Harar, Ethiopia

Introduction

The World Health Organization (WHO) estimates that about 1 in 3 women globally have experienced some physical and/or sexual violence by an intimate partner in their lifetime [1]. Violence against children (VAC) is also a global concern—about half of children aged 2–17 years experience physical, sexual, or emotional violence or neglect each year [2]. Intimate partner violence (IPV), that is, any physical, sexual or psychological harm by a current and/or former spouse/partner [3] and VAC may be heightened in humanitarian settings due to weakened social, institutional, and economic structures and complex humanitarian emergencies [4, 5]. A cross-sectional community-based study in the Rwamwanja refugee settlement in Uganda showed that approximately 63% of female household heads had experienced sexual IPV, while 69% had experienced physical IPV, both perpetrated by male partners [6]. Furthermore, the first-ever Humanitarian Violence Against Children Survey (HVACS) in Uganda showed about half of males and 43% of females aged 18–24 years experienced some form of violence (sexual, physical, or emotional) before the age of 18 [7].

Intimate partner violence against women (IPVAW), and VAC frequently co-occur in households [8, 9], and intersect in several ways, including overlapping risk factors [10], shared root causes, and their consequences for women's and children's physical and mental health [11, 12]. However, little is known about the prevalence of witnessing IPVAW in childhood (herein defined as exposure of a child to acts of physical, emotional, or sexual violence perpetrated by one caregiver (typically the father or a male partner) against another caregiver (typically the mother or a female partner), and its association with VAC in humanitarian contexts. This knowledge gap may hinder efforts to address violence in these settings and further delay progress toward achieving Sustainable Development Goal 5, which focuses on gender equality and empowerment for all women and girls, and Goal 16, which focuses on promoting peaceful and inclusive societies for sustainable development, providing access to justice for all and building effective, accountable and inclusive institutions at all levels [13].

Studies in low- and middle-income countries (LMICs) show an association between witnessing IPVAW in childhood and experiencing VAC [9]. For example, a secondary analysis of a school-based cluster randomized trial in Uganda revealed that one-third of caregiver-adolescent dyads reported both IPV and VAC, with dyads reporting IPV more likely to report VAC [14]. Another study from Uganda revealed that 26% of children who reported witnessing IPV also experienced violence during their childhood years [15]. Similar findings have also been documented in high-income countries, including the United States of America [16, 17]. Additionally, qualitative studies suggest that IPVAW and VAC not only co-occur but also influence each other, perpetuating cycles of abuse [18, 19].

Witnessing IPVAW in childhood may contribute to the intergenerational transmission of violence [20]. Evidence from the first rounds of VAC surveys in LMICs shows a link between witnessing IPV in childhood and experiencing or perpetrating IPV in adulthood. For instance, in Malawi, VanderEnde and colleagues found that men who witnessed IPVAW in childhood were more likely to perpetrate it as young adults [21]. Similar studies in Nigeria and Bangladesh found increased risks of experiencing IPV among both women and men exposed to IPVAW in childhood [22, 23]. In Peru, women who witnessed domestic violence against their mothers were more likely to have experienced IPV in adulthood [24].

While extensive evidence exists on the association between witnessing IPVAW in childhood and experiencing VAC, most of these studies are from non-humanitarian settings or focus on small areas such as one camp/settlement [9, 11, 15, 16]. Evidence about the situation in refugee settings is scarce due to lack of standardized measurement tools [25] and scarcity of rigorous, large-scale, population-based surveys in such contexts [26] amongst other factors. As a result, policymakers and programs often rely on estimates from the general population. However, generalization based on findings from non-humanitarian settings can be problematic, as children and women—who constitute the largest population in refugee settings—may have unique experiences [27, 28]. We examined: (1) the prevalence of witnessing IPVAW in childhood in refugee settlements in Uganda; and (2) whether childhood exposure to IPVAW is associated with experiencing physical and emotional VAC perpetrated by a caregiver, and sexual VAC by any perpetrator, after controlling for other factors. Understanding the prevalence of witnessing IPVAW and its association with VAC in refugee settings is important for informing violence prevention and response strategies in such settings.

Methods

Study design and setting

We analyzed data from the 2022 Uganda Humanitarian Violence Against Children and Youth Survey (Uganda HVACS). Details about the study design have been published elsewhere [7]. In summary, the 2022 Uganda HVACS is a representative, cross-sectional, household-based survey of children and youth aged 13–24 years in 13 refugee settlements in Uganda. Similar to the standard VAC survey methodology (designed for non-humanitarian contexts) [29], the Uganda HVAC was designed to measure the prevalence and circumstances surrounding

VAC (emotional, physical, and sexual violence), including witnessing IPV [7]. In addition, the survey sought to identify risk and protective factors and the consequences of VAC.

Sampling

The 2022 Uganda HVAC survey used a three-stage split sampling design to select and interview participants. The first stage involved a random selection of 56 zones (28 for female and 28 for male interviews) from a list of 109 provided by the United Nations High Commissioner for Refugees (UNHCR) and the Department of Refugees in the Office of the Prime Minister (OPM), which are the two organizations responsible for refugees' affairs in Uganda. In the second stage, 193 and 134 households were randomly selected with equal probability from each of the sampled female and male zones, respectively. In the third stage, one eligible individual in each household was randomly selected for interview. The split sampling approach allocated separate zones or clusters for female and male participants. It ensures the protection of participants' confidentiality and minimizes the chance that opposite-sex perpetrators and survivors could be interviewed in the same community [29]. Households were included if they had at least one eligible member aged 13 to 24. Individuals were excluded if they could not understand or respond to the survey questions due to cognitive impairment or significant physical disabilities, such as severe hearing or speech impairments.

Data collection

Data collection was conducted between March and April 2022. Data were collected electronically using the Open Data Kit (ODK) program installed on data collection tablets running on the Android operating system. Data collection was conducted in face-to-face computer assisted personal interviews (CAPI) by trained interviewers with selected eligible participants using a structured questionnaire. Before data collection began, a field pre-test was conducted. The data collection team, consisting of research assistants and team leaders, received comprehensive training on survey content, research protocol, ethical considerations, and the electronic data collection system. Interviews were conducted in English or five other local languages (Acholi, Juba Arabic, Kigegere, Kinyabwisha and Kiswahili) depending on a participant's preference.

Key variables

Dependent variables

Dependent variables include (a) experience of physical and (b) emotional VAC, both perpetrated by a caregiver, (c) and sexual VAC (any perpetrator). We used questions administered to children aged 13–17 years about their lifetime experiences of VAC, while for youth aged 18–24, we focused on their experiences before the age of 18.

a) ***Physical VAC perpetrated by a caregiver*** was assessed based on a question asking participants if they had ever experienced any physical acts of violence in their lifetime (e.g., slapping, pushing, punching, kicking, whipping, beating with an object, choking, smothering, trying to drown, burning, and using or threatening to use a gun, knife, or other weapon) perpetrated by a parent, adult caregiver, or other adult relatives. Physical VAC perpetrated by a caregiver was defined as having experienced one or more of these forms of physical acts of violence perpetrated by a parent, adult caregiver, or other adult relative in a lifetime for 13-17-year-olds and before age 18 years for 18-24-year-olds.

b) ***Emotional VAC perpetrated by a caregiver*** was assessed based on a question asking participants if they had ever experienced incidents such as being told they were not loved or did not deserve to be loved, that they should never have been born or should have died, or being ridiculed or put down (e.g., being told they were stupid or useless). Emotional VAC perpetrated by a caregiver was defined as having experienced one or more of these forms of emotional violence perpetrated by a parent, adult caregiver, or other adult relative in a lifetime for 13-17-year-olds and before age 18 years for 18-24-year-olds.

c) ***Sexual VAC*** included having experienced one or more incidents of unwanted sexual incidents, including unwanted sexual touching, unwanted attempted sex, physically forced sex, and pressured (threats, harassment, luring, or tricking) sex in childhood perpetrated by any perpetrator. Compared with physical or emotional VAC, there was no direct question asked about the type of sexual VAC perpetrators. Sexual VAC was defined as having experienced one or more of these forms of sexual violence perpetrated by any perpetrator in a lifetime for 13-17-year-olds and before age 18 years for 18-24-year-olds.

Independent variables

The main independent variable is ***witnessing intimate partner violence against women [mother] in childhood, hereafter written as witnessing IPVAW***. It was assessed based on a question asking participants the number of times (never, once, a few times, or many times) they saw or heard their mother or stepmother being punched, kicked, or beaten up by their father or stepfather in their lifetime (for 13-17-year-olds) and before the age of 18 (for 18-24year-olds). Witnessing IPVAW in childhood was dichotomized into 1, representing those who reported witnessing IPVAW at least once in childhood (0–17 years), and 0 otherwise.

Other independent variables include ***socio-demographic factors***: (a) age, categorized into two groups (1 = 13–17 years and 2 = 18–24 years); (b) level of education (coded as 0 = never attended/less than primary, 1 = some/completed primary, and 2 = some/completed secondary or higher); (c) Work status (coded as 1 = worked for payment in the past 12 months and 0 otherwise), orphanhood status (categorized as 1 = lost one or both parents before age 18, and 0 otherwise) living with biological mother at the time of survey (yes/no) and (d) country of origin (coded as 1 = South Sudan, 2 = Democratic Republic of Congo (DRC), and 3 = others).

Analysis

The analysis is based on 1,338 females and 927 males aged 13–24 years who completed the survey. We used cross-tabulation with Pearson Chi-Square (χ^2) test to (1) examine whether there were significant differences in the distribution of female and male respondents by key background characteristics; and (2) examine whether there were significant associations between dependent variables (experience of physical and emotional VAC, both by a caregiver; and sexual VAC by any perpetrator) and socio-demographic factors. We estimated logistic regression models to examine whether those who witnessed IPVAW in childhood were more likely to (a) experience physical VAC by a caregiver; (b) sexual VAC by any perpetrator; and (c) emotional VAC by a caregiver adjusting for socio-demographic factors (age, level of education, work status, orphanhood status, living with biological mother at the time of survey and country of origin). We considered a p-value of <0.05 statistically significant, with 95% confidence intervals. Correlation and Variance Inflation Factor (VIF) analyses were performed to check for multicollinearity and tolerance values of all variables. No major multicollinearity problems were associated with most variables (mean VIF was 1.06 for females and 1.13 for males). The analyses were stratified by sex and age (13-17-year-olds and 18-24-year-olds), taking into account complex survey design by applying weights to the estimates. All analyses were conducted using Stata® version 18,

Ethical considerations

Ethical approval was obtained from the Population Council IRB (Protocol 986), as well as from the local review board, Mildmay Uganda Research and Ethics Committee (MUREC)– REC REF 0310–2021. The Uganda National Council for Science and Technology (UNCST) granted the research clearance (SS1130ES). All participants provided verbal informed consent (for those aged 18–24 years and emancipated minors aged 13–17 years, that is, those who had assumed adult roles and responsibilities, such as, household headship marriage or had begun childbearing) and assent (for those aged 13–17 years). In addition, parental consent was obtained for participants aged 13–17 years. Gender-based violence (GBV) counselors or caseworkers, seconded to the survey by UNHCR implementing partners, accompanied the data collection team. They provided immediate psychosocial support to study participants in need and facilitated referrals for further care, including health services, counseling, child protection, and shelters, where appropriate.

Results

Background characteristics

Interviews were completed with 1,338 females and 927 males aged 13–24 years. The distribution by age was nearly equal for both 13-17-year-olds and 18-24-year-olds among female and male participants (Table 1). Majority of participants were from South Sudan (66.0% of females and 66.9% of males) and were not orphans (74.2% of females and 70.2% of males). Significantly more males than females had some or completed secondary or higher educational level (30.6% vs. 14.5%) and had worked for money or other payments in the past 12 months (47.2% vs. 30.7%). About two-thirds (65.9%) of females and 58.8% of males reported living with their biological mothers at the time of the survey.

Prevalence of experiencing physical and emotional VAC by a caregiver, experiencing sexual VAC by any perpetrator, and witnessing IPVAW in childhood

Among 13-17-year-olds, the prevalence of experiencing physical VAC by a caregiver was significantly higher among males than females (38.5% vs. 20.4%) (Table 2**).** About a quarter of both females (22.6%) and males (24.7%) experienced emotional VAC by a caregiver, while 8.6% of females and 10.3% of males experienced sexual VAC by any perpetrator. The proportion of males reporting witnessing IPVAW (lifetime) was higher (29.8%) than females (21.4%), though the difference was not statistically significant.

Among 18-24-year-olds, the prevalence of experiencing physical VAC by a caregiver was significantly higher among males than females (31.2% vs. 21.6%). Approximately 17.1% of females and 22.5% of males experienced emotional VAC by a caregiver. The prevalence of sexual VAC by any perpetrator was higher among females (19.4%) compared to males (9.5%), though the difference was not statistically significant. The prevalence of witnessing IPVAW in childhood (before age 18) was significantly higher among males (31.2%) compared to females (16.5%).

Table 3 presents the prevalence of experiencing physical and emotional VAC by a caregiver and experiencing sexual VAC by any perpetrator by socio-demographic factors.

Table 1 Distribution of participants by socio-demographic characteristics, Uganda HVACS 2022

	Females (*N* = 1338)		Males (927)		*p*-value
	Unweighted *n*	Weighted % (95% CI)	Unweighted *n*	Weighted % (95% CI)	
Age					
13–17	716	51.4[47.2,55.6]	532	48.5[44.5,52.5]	0.319
18–24	622	48.6[44.4,52.8]	395	51.5[47.5,55.5]	
Level of education					
Never attended/less than primary	260	15.6[11.1,21.6]	126	9.3[5.4,15.4]	**0.002**
Some/completed primary	903	69.9[63.3,75.8]	595	60.1[55.5,64.6]	
Some/completed secondary or higher	175	14.5[11.4,18.2]	206	30.6[25.2,36.4]	
Worked for money or other payments in the past 12 months					
No	915	69.3[63.4,74.6]	537	52.8[40.8,64.5]	**0.013**
Yes	423	30.7[25.4,36.6]	390	47.2 [35.5,59.2]	
Orphanhood status[a]					
Not orphan	978	74.2[67.6,79.8]	648	70.2[65.3,74.6]	
Orphan	360	25.8[20.2,32.4]	279	29.8 [25.4,34.7]	0.335
Lived with biological mother at the time of the survey					
No	495	34.1[30.1,38.3]	334	41.2[32.4,50.5]	
Yes	843	65.9[61.7,69.9]	593	58.8[49.5,67.6]	0.105
Country of origin					
South Sudan	658	66.0[40.9,84.5]	458	66.9[43.1,84.3]	0.889
DRC	606	28.2[13.9,48.9]	418	25.0[13.5,41.6]	
Others[b]	74	5.7[1.3,21.8]	51	8.1[2.5,23.6]	

Note[a]–Lost one or both parents before age 18; [b]Others include Rwanda, Burundi, Somalia, Ethiopia, Eritrea, and Sudan

Among 13-17-year-olds, the proportion reporting physical VAC by a caregiver varied significantly by socio-demographic factors: sex, education level, work status, orphanhood status, and country of origin. Notably, the prevalence of experiencing physical VAC by a caregiver was significantly higher among those with primary education or higher compared to those with no or less primary education, those who worked for pay in the past 12 months (49.4% vs. 22.4%), and those who were orphaned (34.5% vs. 27.2%). In contrast, there were no significant associations between most socio-demographic factors and experience of sexual VAC by any perpetrator or emotional VAC by a caregiver.

Among 18-24-year-olds, the prevalence of experiencing physical VAC by a caregiver was significantly higher among males than females (38.5% vs. 21.4%). However, there was no significant association between experiencing physical or emotional VAC by a caregiver or sexual VAC by any perpetrator by most socio-demographic factors.

Association between witnessing IPVAW in childhood and experiencing VAC

Table 4 presents the association between witnessing IPVAW in childhood and experiencing physical or emotional VAC by a caregiver, as well as sexual VAC by any perpetrator. Among 13-17-year-olds, the proportion reporting physical or emotional VAC perpetrated by a caregiver was significantly higher among those who reported witnessing IPVAW compared to those who did not, for both females and males. The proportion reporting experiences of sexual VAC by any perpetrator was also higher among those who witnessed IPVAW compared to those who did not. However, this relationship was not statistically significant among females. A similar pattern was observed among 18-24-year-olds, with the proportion of females and males reporting experiences of physical or emotional VAC by a caregiver or sexual VAC by any perpetrator statistically significantly higher among those who witnessed IPVAW in childhood compared to their counterparts who did not.

Table 5 present logistic regression results examining the association between witnessing IPVAW in childhood and dependent variables: experiencing physical VAC by a caregiver, sexual VAC by any perpetrator, and emotional VAC by a caregiver, adjusting for socio-demographic factors (level of education, work status, orphanhood status, living with a biological mother at the time of the survey, and country of origin). Among 13-17-year-olds, witnessing IPVAW significantly increased the odds of experiencing physical VAC by a caregiver for both females (AOR = 6.76; 95% CI = 3.96–11.56) and males (AOR = 4.74; 95% CI = 1.69–13.33). Males who witnessed IPVAW had significantly increased odds of experiencing

Table 2 Prevalence of experiencing physical and emotional VAC by a caregiver, experiencing sexual VAC by any perpetrator, and witnessing IPVAW in childhood

	13-17-year-olds			18-24-year-olds		
	Females (*n* = 716)	Males (*n* = 532)	p-value	females (*n* = 622)	Males (*n* = 395)	p-value
	Weighted% [95%CI]	Weighted% [95%CI]		Weighted% [95%CI]	Weighted% [95%CI]	
Experienced physical violence by a caregiver						
No	79.6 [70.2,86.6]	61.5 [48.5,73.1]		78.4 [73.5,82.7]	61.5 [48.3,73.2]	
Yes	20.4 [13.4,29.8]	38.5 [26.9,51.5]	**0.023**	21.6 [17.3,26.5]	38.5 [26.8,51.7]	**0.007**
Experienced sexual violence (any perpetrator)						
No	91.4 [87.1,94.3]	89.7 [82.8,94.0]		80.6 [64.3,90.5]	90.5 [84.8,94.1]	
Yes	8.6 [5.7,12.9]	10.3 [6.0,17.2]	0.531	19.4 [9.5,35.7]	9.5 [5.9,15.2]	0.111
Experienced emotional violence by a caregiver						
No	77.4 [71.3,82.5]	75.3 [65.4,83.2]		82.9 [73.0,89.7]	77.5 [71.8,82.3]	
Yes	22.6 [17.5,28.7]	24.7 [16.8,34.6]	0.626	17.1 [10.3,27.0]	22.5 [17.7,28.2]	0.201
Witnessed IPVAW in childhood						
No	78.6 [65.3,87.8]	70.2 [58.1,80.0]		83.5 [78.3,87.7]	68.8 [58.3,77.6]	
Yes	21.4 [12.2,34.7]	29.8 [20.0,41.9]	0.248	16.5 [12.3,21.7]	31.2 [22.4,41.7]	**0.001**

sexual VAC (AOR = 2.30; 95% CI = 1.33–3.98) and emotional VAC by a caregiver (AOR = 4.05; 95% CI = 1.85–8.85) compared to those who did not witness IPVAW. However, this association was not found to be statistically significant among females. Witnessing IPVAW increased the odds of experiencing emotional VAC at the hands of a caregiver by nearly three times among females (AOR = 3.41; 95% CI = 1.82–6.39), a pattern not observed among males.

Among 18-24-year-olds, witnessing IPVAW in childhood was associated with increased odds of experiencing physical VAC by a caregiver for both females (AOR = 2.53; 95% CI = 1.41–4.52) and males (AOR = 3.37; 95% CI = 1.72–6.59). It also significantly increased the odds of experiencing sexual VAC for females (AOR = 3.62; 95% CI = 1.65–7.92) and males (AOR = 5.52; 95% CI = 3.42–8.91). Additionally, witnessing IPVAW increased the odds of experiencing emotional VAC by a caregiver for both females (AOR = 2.61; 95% CI = 1.36–5.03) and males (AOR = 2.78; 95% CI = 1.53–5.07), compared to their peers who did not witness IPVAW.

Discussion

Literature shows that witnessing IPVAW in childhood is a risk factor for experiencing VAC [10]. However, the association between witnessing IPVAW in childhood and experiencing VAC has received limited attention in humanitarian settings [30]. This paper contributes to the literature by examining the association between witnessing IPVAW in childhood and experiencing physical and emotional VAC by a caregiver and sexual VAC by any perpetrator among children and young people aged 13–24 years in refugee settlements in Uganda.

Witnessing IPVAW in childhood within households was common in the study settings and more prevalent in males than females across both age groups (29.8% vs. 21.4% among 13-17-year-olds and 31.2% vs. 16.5% among 18-24-year-olds). The prevalence between males and females was statistically significantly different among 18-24-year-olds but not among 13-17-year-olds. In contrast, some studies from low- and middle-income countries show gender parity in children's exposure to IPV [15, 31, 32]. This discrepancy may reflect context-specific factors within refugee settlements, including displacement-related stress, shifts in gender roles, and exposure to violence both within and outside the household [5]. It is also possible that social desirability bias may have led to underreporting among females due to power dynamics in decision-making and socio-cultural norms such as those that assume male dominance over women [33, 34].

Additionally, our study revealed a high prevalence of physical and emotional VAC perpetrated by caregivers in refugee settlements in Uganda. Notably, physical VAC by a caregiver was more frequently reported by males than females across both age groups (38.5% vs. 20.4% among 13-17-year-olds, and 38.5% vs. 21.5% among 18-24-year-olds). This finding is consistent with evidence from both refugee and non-refugee settings, which indicates

Table 3 Proportion of respondents who experienced physical or emotional VAC by a caregiver or sexual VAC by any perpetrator by socio-demographic factors, Uganda HVACS 2022

		Experienced physical violence in childhood by a caregiver		Experienced sexual violence in childhood by any perpetrator		Experienced emotional violence in childhood by a caregiver	
	Unweighted *n*	Weighted %	*p*-value	Weighted %	*p*-value	Weighted %	*p*-value
13-17-year-olds							
Sex							
Females	716	20.4		8.6		22.6	
Males	532	38.5	**0.023**	10.3	0.531	24.7	0.626
Level of education							
Never attended/less than primary	154	22.6		10.2		21.1	
Some/completed primary	1038	28.5		8.4	0.065	22.4	0.089
Some/completed secondary or higher	56	53.1	**0.049**	21.8		43.0	
Worked for money or other payments in the past 12 months							
No	955	22.4		7.8		20.2	
Yes	293	49.4	**< 0.001**	14.4	**0.046**	33.5	0.075
Orphanhood status							
Not orphan	939	27.7		8.4		23.3	
Orphan	309	34.5	**< 0.001**	12.6	0.163	24.5	0.795
Lived with biological mother							
No	335	32.0		12.3		25.8	
Yes	913	28.2	0.497	8.2	0.176	22.7	0.614
Country of origin							
South Sudan	592	26.0		7.8		25.9	
DRC	593	32.1	**0.035**	13.2	0.289	18.5	0.457
Others[b]	63	54.3		10.8		22.6	
18-24-year-olds							
Sex							
Females	622	21.6		19.4		17.1	
Males	395	38.5	**0.007**	9.5	0.111	22.5	0.201
Level of education							
Never attended/less than primary	232	27.8		17.4		10.1	
Some/completed primary	460	28.6	0.696	13.3	0.722	19.4	**0.038**
Some/completed secondary or higher	325	33.8		14.2		24.0	
Worked for money or other payments in the past 12 months							
No	497	21.8		12.3		18.0	
Yes	520	38.4	**0.012**	15.9	0.221	21.8	0.202
Orphanhood status							
Not orphan	687	33.9		15.2		20.4	
Orphan[a]	330	22.6	0.065	12.0	0.414	18.8	0.720
Lived with biological mother							
No	494	25.2		17.0		21.5	
Yes	523	34.7	0.189	12.0	0.278	18.8	0.590
Country of origin							
South Sudan	524	28.3		10.0		20.7	
DRC	431	32.1	0.458	19.8	0.099	17.5	0.798
Others[b]	62	43.9		31.5		21.0	

Note: [a]–Lost one or both parents before age 18; [b]-Others include Rwanda, Burundi, Somalia, Ethiopia, Eritrea, and Sudan

Table 4 Association between witnessing IPVAW in childhood and experiencing physical or emotional VAC by a caregiver or sexual VAC by any perpetrator

		Experienced physical VAC by a caregiver			Experienced sexual VAC by any perpetrator		Experienced emotional VAC by a caregiver	
		Unweighted n	Weighted % [95% CI]	p-value	Weighted % [95% CI]	p-value	Weighted % [95% CI]	p-value
13-17-year-olds								
Females	**Witnessed IPVAW**							
	Did not witness	599	12.6 [7.9,19.7]	**< 0.001**	7.0[3.8,12.6]	0.213	17.7[13.8,22.4]	0.001
	Witnessed	117	49.0[39.3,58.7]		14.4 [5.5,32.4]		40.0 [27.3,55.1]	
Males	**Witnessed IPVAW**							
	Did not witness	406	27.4[15.2,44.1]	**0.002**	7.3 [3.4,15.3]	**0.005**	17.4[9.5,29.5]	**0.016**
	Witnessed	126	64.7[48.0,78.4]		17.4[12.8,23.3]		41.9 [28.1,57.1]	
18-24-year-olds								
Females	**Witnessed IPVAW**							
	Did not witness	488	19.0[15.0,23.6]	**0.001**	16.5[6.2,37.2]	0.055	14.6[7.3,26.9]	**0.017**
	Witnessed	134	34.8[25.5,45.3]		34.4[22.4,48.8]		29.6[19.9,41.7]	
Males	**Witnessed IPVAW**							
	Did not witness	279	27.0[17.8,38.8]	**< 0.001**	4.3[2.4,7.5]	**< 0.001**	17.0[11.0,25.4]	**0.002**
	Witnessed	116	63.8[47.8,77.3]		21.1[16.9,26.0]		34.8[28.5,41.7]	

Table 5 Logistic regression model examining the association between witnessing IPVAW in childhood and experiencing physical or emotional VAC by a caregiver or sexual VAC by any perpetrator, Uganda HVACS 2022

			Experienced physical VAC by a caregiver		Experienced sexual VAC by any perpetrator		Experienced emotional VAC by a caregiver	
		Unweighted *n*	AOR^ [95% CI]	*p*-value	AOR^ [95% CI]	*p*-value	AOR^ [95% CI]	*p*-value
13-17-year-olds								
Females	**Witnessed IPVAW**							
	Did not witness ‡	599	1.00		1.00		1.00	
	Witnessed	117	6.76[3.96,11.56]	**< 0.001**	2.74[0.85,8.76]	0.085	3.41[1.82,6.39]	**0.001**
Males	**Witnessed IPVAW**							
	Did not witness‡	406	1.00		1.00		1.00	
	Witnessed	126	4.74[1.69,13.33]	**0.006**	2.30[1.33,3.98]	**0.005**	2.91[0.93,9.06]	0.064
18-24-year-olds								
Females	**Witnessed IPVAW**							
	Did not witness‡	488	1.00		1.00		1.00	
	Witnessed	134	2.53[1.41,4.52]	**0.004**	3.62[1.65,7.92]	**0.003**	2.61[1.36,5.03]	**0.007**
Males	**Witnessed IPVAW**							
	Did not witness‡	279	1.00		1.00		1.00	
	Witnessed	116	3.37[1.72,6.59]	**0.002**	5.52[3.42,8.91]	**< 0.001**	2.78[1.53,5.07]	**0.002**

Notes:‡ -Reference category; AOR-Adjusted Odds Ratios; ^adjusted for level of education attainment, work status, orphanhood status, living with biological mother at the time of the survey, and country of origin

that boys are often subjected to harsher physical discipline compared to girls due to gender expectations for the boys to be household heads or leaders in the society [35]. Additionally, boys tend to display more externalizing behaviors such as aggression or defiance, which can provoke more punitive responses from caregivers [36]. The prevalence of emotional VAC perpetrated by caregivers ranged between 17.1% and 24.7%, with no statistically significant difference between females and males. Conversely, among 18-24-year-olds, the prevalence of sexual VAC (by any perpetrator) was higher in females than males (19.4% vs. 9.5%), which underscores the heightened vulnerability of females to sexual violence in these settings [5].

Our findings show that witnessing IPVAW was associated with experiencing VAC at the hands of a caregiver. The proportion of females and males reporting experiences of physical or emotional VAC by a caregiver or sexual VAC by any perpetrator was significantly higher among those who witnessed IPVAW in childhood compared to their counterparts who did not. In addition, witnessing IPVAW in childhood was strongly associated with increased odds of experiencing physical, sexual, and emotional VAC, even after adjusting for

socio-demographic factors. This finding aligns with other studies from non-humanitarian settings, including in Uganda, highlighting the association between children's exposure to IPV at home and experiences of VAC [15, 16, 21, 37]. The association between witnessing IPVAW in childhood and VAC may happen through various pathways. For instance, IPV may create a hostile home environment, increasing stress and conflict, lowering parental patience, and reducing parents' emotional availability and capacity to provide a safe environment, leading to frustration, harsher parenting practices, neglect, and a higher likelihood of VAC [38, 39]. However, the link between witnessing IPVAW in childhood and experiencing VAC may be compounded by other risk factors such as poverty, lower parental education level, poor relationship with parents, and alcohol or drug abuse, which our study did not account for [40].

Our findings underscore the heightened risk of IPV and VAC co-occurring within households in refugee settings, which are often characterized by marginalization, economic insecurity, and weakened social and protective networks [4, 5, 41]. In such settings, families frequently experience poverty, limited access to livelihood opportunities, and restricted access to essential services, all of which may exacerbate household stress and increase the likelihood of both IPV and VAC co-occurrence [30, 42]. Additionally, weakened family support systems and disruption of community protection structures may further reduce accountability and increase the risk of violence perpetration and normalization [43]. Studies show that repeated exposure to violence within the family can have intergenerational impacts, where children who witness IPVAW are at a heightened risk of becoming perpetrators of IPV in adulthood [20–22].

Strength and limitations

We used a robust, representative dataset from children and youth aged 13–24 years across all 13 refugee settlements in Uganda, providing unique insights on the association between witnessing IPVAW in childhood and experiencing VAC in the hands of a parent or caregiver. However, our study has some limitations. Due to the cross-sectional design, it is not possible to establish causality between witnessing IPVAW and experiencing VAC. As our study relied on retrospective reports on witnessing IPVAW and experiencing VAC, the estimates may have been affected by recall bias, social desirability bias, and stigma around disclosing violence experienced or witnessed in childhood [44]. Some participants may not have accurately recalled the details of their experiences, particularly those very early in childhood. It is also possible that some participants may not have been comfortable disclosing personal and sensitive life experiences with strangers, thus providing an underestimate of the prevalence of violence. For this paper, we focused specifically on physical violence perpetrated by a parent, adult caregiver, or other adult relative, excluding those by other perpetrators such as intimate partners, peers, or other adults in the community. Our estimates of witnessing IPVAW and experiences of VAC perpetrated by caregivers may not be comparable to other surveys, including standard VAC surveys and Multiple Indicator Cluster Surveys (MICS), due to difference sampling frames, timeframes for capturing violence, and details of specific forms of violence [7].

Although our results indicate a significant association between witnessing IPVAW in childhood and experiencing VAC in Uganda refugee settlement settings, further research is needed to explore health consequences and risk factors for the occurrence of IPVAW and VAC within households. These experiences may lead to more severe health consequences, including mental health challenges. In a related study, we established that experiencing sexual, physical, or emotional VAC was associated with poor mental health (severe mental distress, suicidal ideation, and/or attempted suicide and self-harm) in Uganda refugee settlements [45].

Conclusion and implications

Witnessing IPVAW in childhood is common in refugee settlements in Uganda and is strongly associated with experiencing VAC perpetrated by a parent or caregiver. The findings have implications for programs. Violence prevention and response programs should pay attention to IPVAW as a risk for experiencing VAC, emphasizing the need for integrated approaches that target both forms of violence within households. The high prevalence of witnessing IPVAW in childhood and experiencing VAC perpetrated by caregivers in the study setting highlights the need to promote positive parenting practices. Initiatives such as awareness creation and skill-building sessions can help foster nurturing, non-violent parenting and contribute to breaking cycles of violence.

Abbreviations

VAC	Violence Against Children
HVACS	Humanitarians Violence Against Children Survey
LMIC	Lower - and Middle-Income Countries
IPV	Intimate Partner Violence
IPVAW	Intimate Partner Violence Against Women
GBV	Gender-Based Violence
WHO	World Health Organization
UNHCR	United Nations High Commissioner for Refugees
OPM	Office of the Prime Minister

Acknowledgements

We are deeply grateful to all the research participants who shared their time, and experiences with the research team. We also would like to thank the diligent and dedicated team of data collectors who made this work possible. We are grateful for the technical support provided by the US Centers for Disease Control and Prevention, Together for Girls Partnership, Office of the Prime Minister- Uganda, UNHCR-Uganda, UNHCR Regional Bureau for East and Horn of Africa and the Great Lakes Region, and UNHCR implementing partners

and Baobab RPC's Council Advisory Group (CAG) members during the design and implementation of the HVAC study. The opinions expressed in the paper are, however, solely those of the authors and do not necessarily reflect the views of the funding agency or partners that provided technical support to the research.

Author contributions
GO, FO, SM, and CU conceptualized the study. GO analyzed the data and wrote the first draft. FO, SM, GS, PK, YW, CK, DY, YD, BW and CU reviewed the manuscript for substantial intellectual content. All authors contributed to substantive revisions of the manuscript and read and approved the final manuscript.

Funding
This work was supported by the UK Aid from the UK Foreign, Commonwealth and Development Office (FCDO) through the Baobab Research Programme Consortium, under Grant number PO8612.

Data availability
The datasets generated and/or analyzed during the current study are available in the Population Council repository. https://dataverse.harvard.edu/dataverse/popcouncil.

Declarations

Ethics approval and consent to participate
Ethical approval was obtained from the Population Council IRB (Protocol 986), as well as from the local review board, Mildmay Uganda Research and Ethics Committee (MUREC)– REC REF 0310–2021. All participants provided verbal informed consent to participate in the survey.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

Received: 19 September 2024 / Accepted: 21 March 2025
Published online: 17 April 2025

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