



Prevalence, patterns, and determinants of gender-based violence among women and girls in IDP camps, Mogadishu-Somalia

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ARTICLE INFO

Keywords:

Gender-based violence
Physical assault
Sexual assault
Rape
Health implications
Internally displaced persons (IDP)
Camps

ABSTRACT

Background: Gender-based violence (GBV) against women and girls, is a global pandemic that affects 1 in 3 women in their lifetime. Somalia is one of the leading countries in human rights violations and has one of the highest rates of sexual and gender-based violence (SGBV) worldwide. Such violence is more prevalent among women and girls in internally displaced persons (IDP) camps who lack livelihood and civil protections. Therefore, this study was designed to identify the prevalence and the determinants of gender-based violence in IDP camps in Deynile district, Somalia.

Methods: This is a cross-sectional study design conducted in IDP camps in Deynile District from August 1 to September 30, 2022. A total of three hundred eighty-four women and girls aged 18 years and above living in the selected IDP camps were involved in the study. The camps were selected randomly while households and participants were selected systematic random sampling. The recall period was set at 12 months (August 2021 to July 2022). Participants were interviewed by well-trained research assistants using pre-tested structured questionnaire. Data was entered into and analyzed with SPSS 25.0. Logistic regression was used, and the significance level was set at p value ≤ 0.05 .

Result: The study revealed that gender-based violence was quite common in the IDP camps in Mogadishu's Deynile area. Physical abuse was the most prevalent type of GBV, which was primarily committed by intimate partners, parents, and other family members. The main factors associated with gender-based violence were young age (OR=4.77, 95% CI: 1.96–11.63, $p < 0.001$), extended family structure (OR=7.89, 95% CI: 4.30–14.47, $p < 0.001$), household size > 5 individuals (OR=1.86, 95% CI: 1.04–3.30, $p < 0.005$), employment (OR=1.57, 95% CI: 1.041–2.32, $p < 0.05$), substance misuse (OR=3.25, 95% CI: 1.57–6.73, $p < 0.05$), a long distance to the nearest police station (OR=2.75, 95% CI: 1.51–5.00, $p < 0.005$), and camp safety protection (OR=1.94, 95% CI: 1.24–3.30, $p < 0.005$).

Conclusion and recommendations: There was a high prevalence of gender-based violence in the IDP camps in Mogadishu's Deynile area. The most common form of GBV was physical violence mainly perpetuated by intimate partners. The study recommends improving some of the modifiable factors that were strongly associated with gender-based violence.

Background

Gender Based Violence (GBV) can be defined as any act that results in or, or is likely to result in physical, sexual or psychological harm or suffering from women including threats or acts of coercion, arbitrary deprivation of liberty, private or public, in the family or community (Text of the Convention on the Elimination of All Forms of Discrimination against Women, 2022). Gender-based violence can include sexual, physical, mental and economic harm inflicted in public or in private

(UNHCR - Gender-based Violence, 2022). Gender-based violence has been the most pervasive, yet least visible human rights violation in the world (Gender-based violence in emergencies | UNICEF 2022), particularly in countries engulfed in protracted conflicts and civil wars. It is a serious violation of human rights and life-threatening health and protection issue. It is estimated that one in three women will experience sexual or physical violence in their lifetime. During displacement and times of crisis, the threat of GBV significantly increases for women and girls (UNHCR - Gender-based Violence, 2022).

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<https://doi.org/10.1016/j.jmh.2023.100193>

Received 11 November 2022; Received in revised form 10 April 2023; Accepted 21 June 2023

Available online 23 June 2023

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Due to being without functional government for about three decades, Somalia has been marked by longstanding political instability and a series of humanitarian crises which forced many Somalis to abandon the country and many more to wind up in Internally displaced persons (IDP) camps. Somalia has one of the largest internally displaced population in the world. It is the scene of one of the world’s longest continuous humanitarian assistance operations, dating back to the late1980s (Drumtra, 2014). Currently, there are more than 518,000 IDPs in Mogadishu, displaced from the countryside by drought and conflict (The New Humanitarian, 2022).

It is widely recognized that displaced women are at an increased risk of gender-based violence (GBV) (Asgary et al., 2013). Despite the fact that there was no official framework in place to safeguard citizens, abuses against the civilians were uncommon. However, recent years, Somalia witnessed an upsurge in occurrences of gender-based violence against women and girls due to the restrictions imposed by government due to the COVID-19 pandemic in addition to the persistent communal conflicts, armed conflicts, and natural disasters (The New Humanitarian, 2022). In Somalia, women and girls experience significant levels of suffering, hardship, and terrible violations of their right to a life free from abuse, torture, and discrimination. Somalia has not been able to overcome the conflict and change the strict, discriminatory social and gender norms that marginalize women and teenage girls in all areas of human development (Brief, 2020). Moreover, the recent spikes in intimate partner violence, rape, sexual exploitation, sexual harassment and abuse have multiplied GBV risks for women and girls in IDP camps (Gender-based violence in Somalia, 2022). The already large number of recorded incidences of Gender-Based Violence (GBV) in 2021 continued to increase in 2022, especially for sexual violence and Intimate Partner Violence (IPV), due to multiple displacements, flooding, droughts and armed conflicts (WHO, 2005). Therefore, this study intends to determine the prevalence and determinants of gender-based violence among women and girls in internally displaced people’s camps in Deynile district, Mogadishu-Somalia.

Methods

Study setting and design

This is a cross-sectional study design conducted in IDP camps in Deynile District, from August 1 to September 2022. The district hosts the majority of internally displaced people in Mogadishu, who were predominantly from marginalized and minority groups in the country (Jelle et al., 2017; Seal et al., 2021). The district has more than 1300 verified IDP sites with over 159,525 households and some 739,137 internally displaced people whose majority were women and girls (World Health Organization, 2022; World HealthOrganization, 2022, DRC | Drought in Somalia, 2022, Document, 2022) from Bay, Bakol, Middle Shabelle and lower Shabelle regions (Majid and McDowell, 2012). Most of these IDP camps are privately run, spontaneous settlements that are often overcrowded, lack basic sanitation and health services, and face recurrent evictions and frequent violations (Seal et al., 2021).

Population and sample size

Women and girls over the age of 18 years who lived in IDP camps in the district of Deynile for at least 6 months were included in the study. Sample size was determined using single population proportion formula considering the following assumptions: 50% prevalence from a previous study in northern Uganda (Ager et al., 2018a), level of significance set at 5% and corresponding confidence level of 95%.

The adopted sample size formula is: $n = (Z\alpha/2)^2 p(1 - p)/d^2$

Where:

n = sample size

P = prevalence of sexual violence among house maids = 50%

d = margin of error 5%

$Z\alpha/2$ = critical value at 95% confidence level of certainty (1.96)

Accordingly, the calculated sample size, $n = (1.96)^2 \times 0.5(1-0.5) / (0.05)^2 = 384$

Therefore, the final sample size was 384. The sample size was proportionately divided among the selected five (5) IDP camps in the district.

Sampling technique

Five IDP camps were selected randomly out of the forty-one IDP camps in Deynile district whereas IDP households were chosen using systematic random sampling since all the households were registered. The first household was picked by lottery and the subsequent households were selected using systematic random sampling. Where there was no eligible participant in the chosen household, the next household was approached. If there were many eligible participants, a random selection method was used. The randomly selected IDP camps, total household, and sampled households are displayed in the (Table 1) below.

Data collection procedure and data quality control

Data was collected through face-to-face interviews by four qualified female nurses who were trained as data collectors on gender-based violence using structured questionnaire. As the study seeks culturally sensitive issues, confidentiality of the participants was strictly secured. The questionnaire was initially prepared in English and translated to Somali language to use in the field. The tool was also pretested before the actual use in the field. Pre-test was done with nine women and girls from the nearby IDP camp who had similar socio-demographic characteristics and not sampled for the study. Following the pre-test, necessary adjustments were made to improve item clarity and data quality.

The recall period was set at 1 year (12 months). In order to aid respondent’s memory, a very famous incident involving the disappearance of a lady who used to work for the Somali National Intelligence and Security Agency (NISA), which sparked a wide controversy within the government wings in September 2021, was taken as a point of recall reference. Throughout the period of data collection, the process was supervised by the principal investigator to ensure that the data collectors had the necessary tools, supplies and skills to discharge their duties.

Study instrument

A structured interview questionnaire created by the researchers was used, with the majority of the questions being closed-ended. The items of the survey were designed to gather data on respondents’ socio-demographic characteristics as well as their experience with gender-based violence. Gender-based violence (GBV) refers to any harmful act that is perpetrated against a person’s will and is based on gender norms and unequal power relationships. It may be physical, emotional, or sexual in nature involving rape, physical assault, sexual abuse, or intimate partner violence (Brief, 2020; Wirtz et al., 2014). The respondents who indicated that they had been subjected to any form of GBV, were asked additional questions pertaining to the type, frequency, the perpetrators, repercussions, survivor response and actions taken against the

Table 1
Sampled households.

IDP camp	Total households	Sampled households
Towfiiq	560	65
Dayax	434	51
Ramaas	889	103
Bulsho Kaab	1126	131
Doxa	290	34
Total	3299	384

Source: Benadir region administration 2021.

perpetrator.

Definition of the variables

Dependent variable

Gender-based violence: In this paper, gender-based violence refers to harmful acts directed at an individual based on their gender. It is forcing another person to do something against his or her will through violent means. These acts of violence were classified into six categories based on UNCHR classifications, namely: physical assault, psychological abuse, forced marriage, attempted rape, rape, and denial of resources. Every participant who had experienced one of the aforementioned acts of violence over the previous 12 months was deemed to be a case of GBV.

Independent variable

Independent variables in this study include: respondent's state of origin, age, marital status, level of education, employment, years in the IDP camp, family structure, household size, house type and settlement protection.

Data analysis

The data was coded, entered, and analyzed using SPSS version 25.0. All the variables were analyzed, and the results summarized using frequencies and proportions. To examine if significant association exists between the independent and dependent variables, the odds ratio (OR) was calculated using binary logistic regression to find independent predictors of GBV setting the level of significance at $P < 0.05$.

Ethical approval and consent to participate

Ethical clearance was obtained from the institutional review board (IRB) of SIMAD University, Faculty of Medicine, and Health Sciences. After explaining the goals and objectives of the study, written or verbal consent was also obtained from all the individuals identified for recruitment into the study before participating in the discussion. They were also informed that their involvement was entirely voluntary, and they were free to withdraw at any moment if they so desired. They were guaranteed that there was no victimization for refusal & full privacy and confidentiality.

Result

Socio-demographic characteristics

A total of 384 women and girls living in 5 randomly selected IDP camps in Deynile district were interviewed, of whom 94.5% were from the Southwest state of Somalia. The participants' average age (SD) was 23.9 years (6.5) and the majority (72.4%) of them had ever been married.

The study also revealed that about 88% of the respondents had no formal education whereas 98% had no regular employment. Regarding family structure and housing, about 69% of the participants were living in nuclear families with mean (SD) family size of 7.4 (3.3), 99.5% housing in locally made temporary homes which did not have reliable protection. The study also revealed that more than five sixths (83.6%) of the participants lived in the IDP camps less than 5 years (Table 2).

Prevalence and patterns of gender-based violence

The study found out that 18.5% of the women and girls in the IDP camps had experienced gender-based violence in the last 12 months. Further investigation into the nature of the violence revealed that 44.0% of the violence against women and girls were physical assaults, followed by psychological abuse (24.8%), forced marriage (18.8%), attempted rape (7.2%), rape (4.0%) and denial of resources (1.6%).

Table 2
Socio-demographic characteristics of the respondents.

Variable	Frequency (N)	Percentage (%)
Respondent's state of origin		
Southwest	363	94.5
Hirshabelle	12	3.1
Jubbaland	5	1.3
Galmudug	3	0.8
Puntland	1	0.3
Respondent's age bracket		
<20 years	115	29.9
20–30 years	221	57.6
>30 years	48	12.5
Marital status		
Single	106	27.6
Ever married	278	72.4
Years in the IDP camp		
≤5 years	358	93.2
>5 years	26	6.8
Family structure		
Nuclear	234	60.9
Joint	150	39.1
Household size		
≤5	83	21.6
>5	301	78.4
Level of education		
No formal education	339	88.3
Primary education	37	9.6
Secondary education	6	1.6
Postsecondary education	2	0.5
Employment		
Regular employment	6	1.6
Non-regular employment	154	40.1
No employment	224	58.3
House type		
Buush	362	94.3
Cariish	10	2.6
Teendho	3	0.8
Aqal Somali	7	1.8
Jiingad	2	0.5
Settlement protection		
Yes	3	0.8
No	381	99.2

The study showed that about half (57.7%) of that violence were committed by intimate partners or relatives, mostly (60.6%) during the daytime. Moreover, a little over half (57.7%) of the victims were over 20 years old, and 43.7% of them experienced assault more than once.

In terms of the location of the incident, it was discovered that more than 70% of the incidents took place at the victims' homes, and most of the time (83.1%), the assaults took place in situations when the victims were alone themselves.

In terms of the victim's immediate response to the crime, the study revealed that more than one-third (33.8%) attempted to dissuade the attacker through conversation, followed by 25.4% sobbing, 23.9% yelling for help, 8.5% fleeing the scene, and another 8.4% either defending themselves or fainting unconsciously. According to the study, as the result of the violence, nearly half of GBV survivors (47.2%) suffered physical injuries, followed by emotional/psychological damage (23.7%), infectious diseases (11.3), reproductive problems (7.2%), and socio-cultural problems (6.2%).

On the other hand, according to the study, about two-third (64.8%) of the GBV victims had never disclosed this experience to someone else and majority (60%) of those who shared with others disclosed it after days to months. More importantly, as little as 4.2% of the victims reported the incidence to the security institutions (Table 3).

Upon asking the reasons for not reporting this serious crime, the most frequently cited justifications were lack of confidence in public institutions (46.5%) followed by lack of information about human rights (43.7%), fear of stigma, isolation and social exclusion (43.7%), poverty, lack of education and lack of livelihood opportunities (42.3%), lack of access to justice institutions and mechanisms (41%), fear of exposure to

Table 3
Prevalence and patterns of gender-based violence.

Variable	Frequency (N)	Percentage (%)
Experience of gender-based violence (past 12 months)		
Yes	71	18.5
No	313	81.5
Nature of the GBV (N = 71)		
Physical assault	55	44.0
Psychological abuse	31	24.8
Forced marriage	23	18.4
Attempted rape	9	7.2
Rape	5	4.0
Denial of resources	2	1.6
Type of perpetrator		
Intimate partner/relative/friend	41	57.7
Employer	12	17.0
Armed stranger	8	11.3
Unarmed stranger	5	7.0
Government soldier/personnel	4	5.6
Other	1	1.4
Incidence time		
Daytime	43	60.6
Nighttime	28	39.4
Age at incident		
≤20 years	30	42.3
>20 years	41	57.7
Number of GBV experience		
Single	40	56.3
Multiple	31	43.7
Place of incidence		
Home	51	71.8
Outside home	20	28.2
Companion at incidence time		
Yes	12	16.9
No	59	83.1
Survivor's immediate action		
Tried to deter the assailant	24	33.8
Burst into tears	18	25.4
Shouted for help	19	23.9
Scaped	6	8.5
Struggled for self-defense	4	5.6
Fainted due to shock	2	2.8
GBV impact to the survivor		
Physical injury	46	47.2
Communicable disease	11	11.3
Reproductive problem	7	7.2
Emotional/Psychological trauma	23	23.7
Social/Economic difficulties	6	6.2
None	4	4.1
Sharing the GBV incidence to others		
Yes	25	35.2
No	46	64.8
Reporting the incidence to security organizations		
Yes	3	4.2
No	68	95.8

further violence (38%), discriminatory socio-cultural laws (21.1%), inadequate legal framework (15.5%), the issue was resolved (8.5%) and the perpetrator escaped (5.6%) (Fig. 1). Furthermore, to make matters worse, none of the reported offenders were brought to justice and prosecuted.

Trends of GBV incidence

The study demonstrated that the number of occurrences of gender-based violence against women and girls in the study area has increased over time, from zero incident in September 2021 to 17 in August 2022. (See Fig. 2).

Factors associated with gender-based violence among women and girls in IDP camps

Approximately 19% of the women and girls in the IDP camps were found to have experienced gender-based violence in the past 12 months.

IDP camp, age, family structure, employment, household size, security protection and distance to nearest police station were significantly associated with gender-based violence.

This study was conducted in five randomly selected IDP camps in Deynile district. Regarding the association between camps and the incidence of GBV, it was found that women and girls living in Dayax camp was 83% times less likely to experience gender-based violence compared to Doha camp (OR=0.170, 95% CI: 0.056–0.504, $p<0.001$). The odds of experiencing gender-based violence were 4.77 times higher among women and girls who are younger than 20 years of age compared to those older than 20 years (OR=4.77, 95% CI: 1.96–11.63, $p<0.001$). Similarly, the odds of suffering from gender-based violence were 7.9 times higher among women and girls who lived in joint families with respect to those living in nuclear families (OR=7.89, 95% CI: 4.30–14.47, $p<0.001$).

With reference to substance abuse, women and girls who use substances were more than three times more likely to experience gender-based violence compared to non-users (OR=3.25, 95% CI: 1.57–6.73, $p<0.05$). Similarly, the odds of experiencing gender-based were 1.6 more likely to occur among employed women and girls compared to unemployed (OR=1.57, 95% CI: 1.041–2.32, $p<0.05$). Furthermore, the odds of encountering gender-based violence were almost 2 times higher among women and girls whose household consisted of more than five individuals compared to those who were from families of less than or equal to five members (OR=1.86, 95% CI:1.04–3.30, $p<0.005$).

In terms of camp security or home protection, the study showed that women and girls living in IDP camps without such security were nearly twice as likely to experience gender-based violence compared to those living in IDP camps with security protection (OR=1.94, 95% CI:1.24–3.30, $p<0.005$). Moreover, the study revealed that the participants whose camp located 2 km away from the nearest police station were 2.7 times more likely to encounter GBV compared to those who lived <2 km away from the nearest police station (OR=2.75, 95% CI:1.51–5.00, $p<0.005$).

Demographic characteristics such as marital status, formal education and employment did not reveal any significant association with the risk of encountering gender-based violence (Table 4). The absence of significance on participant education and marital status can be attributed to the unbalanced set of observations (like 72.4% of the participants being ever married versus 27.6% unmarried, as well as 88.3% had no formal education against 11.7% had not).

Discussion

Gender-based violence (GBV) or violence against women and girls (VAWG), is a global pandemic that affects 1 in 3 women in their lifetime (Gender-Based Violence, 2022). Refugees and internally displaced people, who do not enjoy the protection of their own governments, are among those most vulnerable to acts of gender-based violence (Freedman, 2016).

In the present study, the 1-year prevalence of gender-based violence was 18.5%. Although the prevalence is measured in different units, it is primarily in line with the pooled prevalence of 24.5 in Africa (Muluneh et al., 2020). However, the prevalence of gender-based violence among women and girls in IDP camps in this study is lower than one in Uganda (Ager et al., 2018b). This difference might be due to the difference in the overall prevalence. This can also be explained by the fact that traditionally, like many African countries, Somali women are reluctant to report acts of violence against them due to fear of social discrimination (Palermo et al., 2014, UNICEF, 2022). The study also demonstrated that the number of occurrences of gender-based violence against women and girls in the study area has increased over time, from three incidents in January to 17 in December 2021. This finding is in line with the reports published by the local and social media of the country which stated that violence against women has been on the rise.

According to study, most of the violent incidents reported were

Reasons for not reporting the incidence

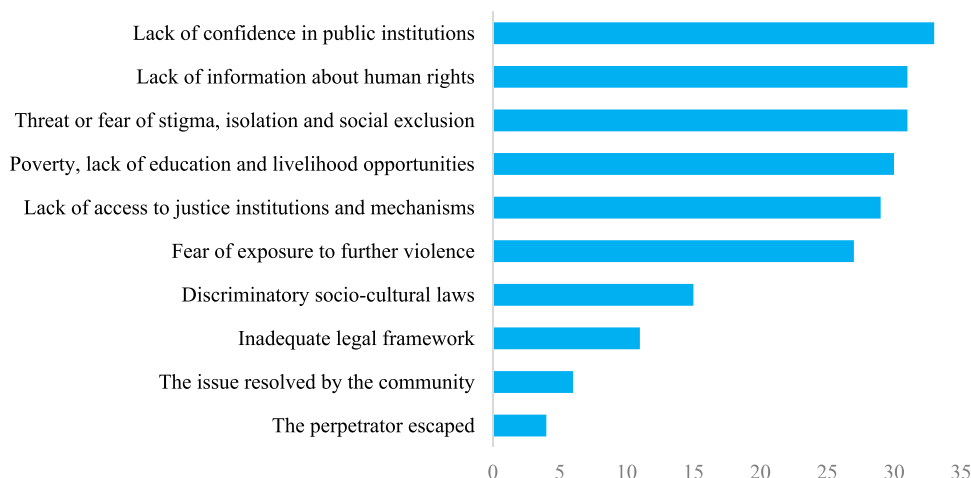


Fig. 1. Reasons for not reporting the incidence.

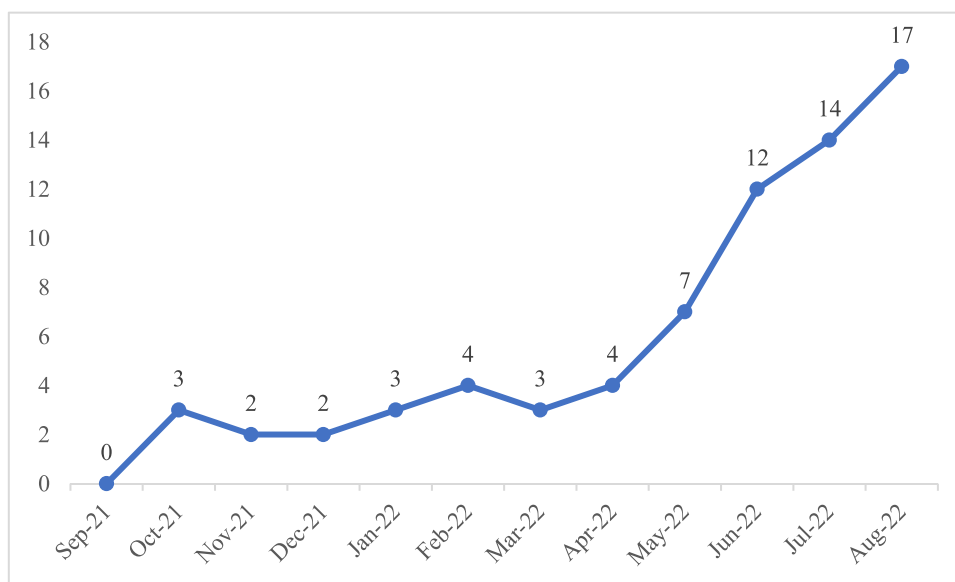


Fig. 2. Trends of GBV incidences among women and girls among in IDP camps (Sep 2021-Aug, 2022).

physical assaults (44.0%) followed by psychological abuse (24.5%), forced marriage (18.0%), attempted rape (7.5%), rape (3.8%) and a denial of resources (1.9%). This is almost consistent with other studies conducted in several settings (Gender-Based Violence, 2022; Tantu et al., 2020)]. These GBV incidents left victims with a variety of medical and social problems including physical injuries, emotional/psychological damage, infectious diseases, reproductive problems, and socio-cultural problems. Several studies conducted in Somalia and South Sudan reported similar findings (Dahie, 2022; Gender-based violence in health emergencies, 2022).

Regarding the nature of the perpetrator, the study showed that about half (49.3%) of that violence was committed by intimate partners or relatives and most of these incidents (70%) happened at homes. This can be explained by the fact that these individuals have more chance to interact with the victims. Similar results were reported by several studies (Bhattacharjee et al., 2020; Stark and Ager, 2011).

The study also showed that the immediate actions taken by GBV survivors included negotiating, crying, shouting for help, trying to escape from the scene, or defending themselves in an effort to stop the

perpetrators from the aggression. This is due to the fact that these were the only options the poor survivors had to pull through this dangerous incident.

The most painful piece of information that the study revealed was that the majority (64.8%) of the survivors have never disclosed this painful experience and as little as 4.2% of the victims reported the incident to security organizations, however, none of them was prosecuted. On examining further, the study revealed that the reasons behind the lack of GBV case reporting include lack of confidence in public institutions, fear of stigma, poverty, lack of education and lack of livelihood opportunities, lack of access to justice institutions, fear of exposure to further violence and inadequate legal framework. Many studies across the continent and beyond have reported similar findings (Palermo et al., 2014; Joseph et al., 2017; Why does gender-based violence go under-reported? 2022; Sexual and gender based violence (SGBV) prevention and response - UNHCR, 2022). Since the offenders are not apprehended and punished, underreporting encourages such crimes to persist.

Gender-based violence in the past 12 months was significantly associated with age, family structure, employment, household size,

Table 4
Association of socio-demographic characteristics and gender-based violence among women and girls.

Characteristics	N (%)	Gender-based violence		OR 95%(CI)	P value
		Yes=71	No=313		
IDP camp					
Towfiiq	64 (16.7)	8(12.5)	56(87.5)	1.129 (0.340–3.750)	0.843
Dayax	49 (12.8)	24 (49.0)	25(51.0)	0.170 (0.056–0.504)	0.001
Ramaas	103 (26.9)	19 (18.4)	84(81.6)	0.713 (0.245–2.074)	0.535
Bulsho kaab	131 (34.2)	15 (11.5)	116 (88.5)	1.247 (0.421–3.698)	0.690
Doxa	36 (9.40)	5(13.9)	31(86.1)	Ref	
Respondent's age					
<20 years	115 (29.9)	10 (14.1)	105 (33.5)	4.77 (1.96–11.63)	0.001*
20–30 years	221 (57.6)	46 (64.8)	175 (55.9)	1.73 (0.87–3.45)	0.120
>30 years	48 (12.5)	15 (21.1)	33 (10.6)	Ref	
Marital status					
Single	106 (27.6)	14 (19.7)	92(29.4)	1.70 (0.900–3.19)	0.102
Ever married	278 (72.4)	57 (80.3)	221 (70.6)	Ref	
Formal education					
No	339 (88.3)	66 (93.0)	273 (87.2)	1.96 (0.829–4.64)	0.125
Yes	45 (11.7)	5 (7.0)	40 (12.8)	Ref	
Family structure					
Joint	234 (60.9)	16 (22.5)	218 (69.6)	7.89 (4.30–14.47)	<0.0001*
Nuclear	150 (39.1)	55 (77.5)	95 (30.4)	Ref	
Employment (of any kind)					
Yes	160 (41.7)	32 (45.1)	128 (40.9)	1.57 (1.0.41–2.32)	0.022*
No	224 (58.3)	39 (54.9)	185 (59.1)	Ref	
Substance use (of any kind)					
Yes	36 (9.4)	14 (19.7)	22 (7.0)	3.25 (1.57–6.73)	0.002*
No	348 (90.4)	57 (80.3)	291 (93.0)	Ref	
Household size					
≤5	83 (21.6)	22 (31.0)	61(19.5)	Ref	
>5	301 (78.4)	49 (69.0)	252 (80.5)	1.86 (1.24–3.30)	0.035*
Camp/house protection					
Yes	53 (13.8)	15 (21.1)	38 (12.1)	Ref	
No	331 (86.2)	56 (78.9)	275 (87.9)	1.94 (1.12–3.56)	0.013*
Distance to nearest police station					
≤ 2 KM	155 (40.4)	16 (22.5)	139 (44.4)	Ref	
>2 KM	229 (59.6)	55 (77.5)	174 (55.6)	2.75 (1.51–5.00)	0.001*

security protection and distance to the nearest police station were significantly associated with gender-based violence.

In terms of the correlation between camps and the prevalence of GBV, it was discovered that Dayax camp residents were 83% less likely than Doha camp residents to encounter gender-based violence. This can be as a result of the enormous number of internally displaced people housed in this camp and its near proximity to the district administration and security centers.

The odds of experiencing gender-based violence were 4.77 times higher among young women and girls than their contra parts. This can

be explained that perpetrators prefer young females because they are more attractive. Similar findings were found by study conducted in neighboring Kenya and Ethiopia (Bhattacharjee et al., 2020; Getachew et al., 2022). Another important predictor of gender-based violence was extended family. Compared to those living in nuclear families, women and girls in extended families were nearly eight times more likely to experience gender-based violence. This might be due to the fact that extended families tend to be huge in size and the possibility that members are not biologically linked (Ali et al., 2021).

The study revealed that women and girls with substance abuse problems were more than three times more likely to experience gender-based violence compared to non-users. Several other studies reported similar findings (Substance Abuse and Woman Abuse by Male Partners, 2022; Arnold et al., 2008; Heise et al., 2002). On the other hand, due to possible interactions between substance misuse and GV experience and the effects these interactions may have on regression, this result may be biased by simultaneity.

A very surprising piece of information was that employment was significantly associated with gender-based violence. This is explained by the fact that women in IDP camps seek employment, as a home maid, from the host communities where violence are more prevalent.

It has also been found that increase in family size increases the odds of gender-based violence. Common sense indicates that if the number of family members increases, their resources would not be enough, and this leads to resource-based conflict. Furthermore, according to this study, women and girls living in IDP camps without security protection were more likely to experience gender-based violence.

While the majority of women and girls living in IDP camps lacked home or camp security, those who did were less likely to encounter gender-based violence. Studies conducted in parts of Somalia and neighboring Ethiopia also reported the same finding (Abubeker et al., 2021; Beyene et al., 2022). This finding was supported by another finding that states that women and girls living in IDP camps far from the police station had increased risk of experiencing GBV (Krause, 2020; Nabukeera, 2020; Muuo et al., 2020). This is due to that police typically are responsible for maintaining public order and safety, enforcing the law, and preventing, detecting, and investigating criminal activities including gender-based violence against women and girls.

Besides the statistical significance the study found on the variables discussed above, there are several variables which did not show any statistical significance including marital status and education. This could be due to the unbalanced set of observations in these variables.

Strength and limitation of the study

This study has several strengths including that it is the first of its kind to document the prevalence and determinants of gender-based violence among women and girls in IDP camps in Mogadishu. The study also focused on the most vulnerable part of the society which is internally displaced women & girls in Mogadishu. The study has also been strengthened by its emphasis on the prevalence of GBV over the last 12 months, which portrays a clear picture of the current situation for women and girls living in IDP camps. Hence its findings should draw policymaker's attention to the magnitude and the correlates of gender-based violence against the vulnerable women and girls in IDP camps.

However, the study had a number of shortcomings. Firstly, it covered the IDPs in one district of Benadir. It is true that the district hosts the largest internally displaced people in the country that may share similar characteristics with other parts of the country, but they are by no means homogeneous and so there is the need to exercise caution in generalizing the findings to all IDPs in the country. Secondly, as the study addresses a socially sensitive topic, there was the possibility that the respondents may miss GBV incidents as they are ashamed to mention the incident, but this issue was resolved by recruiting female enumerators who had received interviewing techniques training. Finally, the data gathering tool was created by the authors and was not validated in this regard.

However, a pilot testing and post-pilot modification was done to enhance the quality of the tool.

Conclusion

The study findings suggest that there is a high prevalence of gender-based violence in the IDP camps of Deynile district, Mogadishu. The most common form of GBV was physical violence mainly perpetuated by intimate partners, parents, and relatives. The factors associated with GBV mainly revolve around socio-cultural characteristics including, family structure, household size, age, employment, substance abuse, distance to the nearest police station and camp protection.

The findings of this study ought to propose that the public should be educated about the impact gender-based violence and a protective mechanism must be put in place to safeguard the community, particularly the women and girls living in IDP camps.

It is therefore important for university authorities and other stakeholders, including non-governmental organizations, to develop and implement risk reduction and health-promotion programs directing efforts at making campuses safer through appropriate no-tolerance policies, an effective redress mechanism and improved counseling of victims of GBV. Special attention should be given to joint families with history or signs of substance abuse and drug addiction.

Finally, the study recommends that a multicenter study be conducted to generate a more consistent and comprehensive national picture of gender-based violence and factors contributing to it.

Support

There was no support for this study.

CRedit authorship contribution statement

Hassan Abdullahi Dahie: Conceptualization, Formal analysis, Supervision, Visualization, Writing – original draft, Writing – review & editing. **Mohamed Maalim Dakane:** Formal analysis, Methodology, Resources, Software, Writing – original draft, Writing – review & editing. **Bashir Said Hassan:** Data curation, Methodology, Supervision, Validation, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

The researchers thank SOS Children's Villages, Somalia and all study participants for their cooperation and participation.

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