



# BMJ Open Client-perpetrated gender-based violence among female sex workers in conflict-affected Northern Uganda: a cross-sectional study

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## ABSTRACT

**Study objective** To determine the prevalence and associated factors of client-perpetrated gender-based violence among female sex workers in conflict-affected Northern Uganda.

**Design and settings** We conducted a cross-sectional study among female sex workers in Gulu district in conflict-affected Northern Uganda.

**Participants** The study participants included 300 female sex workers aged 18+ years. The participants were selected using simple random sampling from a database of female sex workers maintained at a national non-governmental organisation in Gulu.

**Outcome measure** The outcome measure was self-reported exposure to client-perpetrated gender-based violence.

**Methods** We used a pretested semistructured questionnaire to collect data on sociodemographic characteristics, sex work-related characteristics, alcohol use, illicit drug use, HIV status and self-reported exposure to client-perpetrated gender-based violence. Then, data were entered into Epi Info V.7 and analysed using Stata V.14.0.

**Results** Among participants, 61.0% reported client-perpetrated gender-based violence. Economic (58.7%) and emotional (52.0%) violence were the most common forms of client-perpetrated gender-based violence in this population. Independently, being: street-based (adjusted OR=9.66, 95% CI 2.78 to 33.5), mobile (adjusted OR=3.21, 95% CI 1.83 to 5.64), HIV-positive (adjusted OR=1.90, 95% CI 1.09 to 3.31) and a low-income earner (<US\$200 000 monthly) (adjusted OR=2.26, 95% CI 1.18 to 4.30) were positively associated with exposure to client-perpetrated gender-based violence.

**Conclusions** There is a high prevalence of client-perpetrated gender-based violence among female sex workers in conflict-affected Northern Uganda. Furthermore, female sex workers who were street-based, mobile, HIV-positive and low-income earners were more likely to experience client-perpetrated gender-based violence. The ministry of health and the development partners need to provide targeted public health interventions to prevent and manage the rampant gender-based violence among this underserved population.

## Strengths and limitations of this study

- This work is among the first studies on client-perpetrated gender-based violence among female sex workers in conflict-affected settings.
- Likewise, the study samples were representative and generalisable since they were selected using a probability sampling technique.
- However, we asked female sex workers about their past exposures to client-perpetrated gender-based violence and could have resulted in recall or information biases.

## INTRODUCTION

Gender-based violence (GBV) refers to harmful acts directed at individuals based on their gender.<sup>1</sup> Examples of GBV include sexual, physical, mental and economic harm inflicted in public or private and the threats of violence, coercion and manipulation.<sup>1</sup> GBV is a violation of human rights that can be life-threatening<sup>1</sup> and thus need close attention, especially among vulnerable populations like female sex workers (FSWs). Although hostility from the more than 20 years of the Lord's Resistant Army (LRA) war in Northern Uganda has ceased, the region has not achieved complete reconciliation, societal integration and economic recovery.<sup>2</sup> In addition, the LRA conflict has led to increased vulnerability to HIV infection,<sup>3</sup> GBV<sup>4</sup> and depression<sup>5</sup> in Northern Uganda.

GBV is rooted in gender inequality, abuse of power and harmful norms that leave survivors unable to achieve legal, social, political and economic equality in society.<sup>6</sup> Vulnerable groups like FSWs are at increased risk of exposure to GBV<sup>7</sup> because of the rampant alcohol use and illicit drug use among FSWs,<sup>8</sup> which increases their odds of GBV.<sup>9</sup> In addition, there is a high level of intimate partner violence among FSWs in Northern Uganda,

which in turn may lead to client-perpetrated GBV.<sup>10</sup> Furthermore, FSWs in Gulu are highly mobile<sup>8</sup> and thus at a greater risk of client-perpetrated GBV.<sup>11 12</sup> Moreover, the illegality of sex work in Uganda<sup>13</sup> makes it difficult for FSWs to prevent or seek management for GBV through social support networks, access to social services or access to legal or GBV services.<sup>14 15</sup>

If left untreated, GBV can lead to poverty, alcohol abuse, inconsistent condom use,<sup>16 17</sup> reduction in condom self-efficacy,<sup>18</sup> poor sexual and reproductive health<sup>19</sup> and mental disorders.<sup>20–23</sup> Thus, there is an urgent need to screen, prevent and manage GBV among FSWs in conflict-affected Northern Uganda. This requires an in-depth understanding of the epidemiology of GBV among FSWs to guide the development of context-specific GBV interventions by the ministry of health and development partners. Therefore, we conducted this study to determine the prevalence and associated factors of client-perpetrated GBV among FSWs in conflict-affected Northern Uganda.

## METHODS

### Study setting, design and population

We conducted a cross-sectional study among FSWs operating in Gulu district in Northern Uganda. In Uganda, the highest burden of HIV infections is among the FSWs.<sup>24</sup> Northern Uganda remains negatively impacted by the LRA conflict since many people have not fully recovered from the more than 20 years of war that devastated social and economic livelihoods. Currently, more than 80% of the inhabitants of Gulu practice subsistence farming.<sup>25</sup> Of estimated 1425 FSWs who operate in the district,<sup>26</sup> the majority live and work in Gulu municipality. Almost all FSWs in the region get HIV treatment, care or prevention services from The AIDS Support Organization (TASO). TASO is a national non-governmental organisation (NGO)<sup>27</sup> highly specialised in HIV services provision in Uganda. In Gulu, TASO Gulu clinic had mapped all (1300+) FSWs who operate in the district. The updated FSWs' database contains sex work venues, hang-out places, mobile phone contacts and residence. This study was limited to only the FSWs who were operating in Gulu and aged 18+ years. We excluded FSWs who were less than 18 years of age due to the ethical dilemma of obtaining parental consent among adolescent FSWs who do sex work without parental knowledge yet live with their parents or guardians.

### Sample size and sampling

A sample size of 380 participants was determined using Cochran (1963, 1975)<sup>28</sup> formula as part of a project that studied depression among FSWs in Gulu and presented elsewhere.<sup>8</sup> We identified 789 eligible FSWs from the database then used a simple random sampling to select 380 potential participants using an online random number generator. To minimise non-response bias, we reached out to FSWs by telephone or their peers to schedule appointments, physically traced them using

existing mapping information or met them during their clinic days. We successfully tracked and contacted 302 out of 380 selected FSWs, of whom 300 were consented and interviewed within the conducive places of their choice.

### Data collection

We collected data between March and June 2020. Using a pretested semistructured questionnaire developed in English and translated into Acholi language, we conducted face-to-face interviews to collect information from each participant. Before data collection, we pretested the study tools among 20 FSWs in the neighbouring Amuru district to check for consistency in question interpretation and language appropriateness. Then, the first author and a trained female research assistant collected data in either Acholi or English depending on the participant's literacy level and language preference. Independent variables included sociodemographic characteristics (like age, education, religion and marital status), sex work-related characteristics (like duration of sex work, average monthly income, place of sex work and mobility), alcohol and illicit drug use, and HIV status. We determined intraregional sex work-related mobility by asking study participants about localities where they provided sexual services. We considered FSWs operating both in rural and urban localities to be mobile since they move long distances to do sex work. The outcome variable for this study was client-perpetrated GBV. We adopted the study questionnaire for assessing client-perpetrated GBV from previous research conducted among FSWs in Kampala, Uganda.<sup>29</sup> We asked each participant whether her client(s) ever: refused to compensate her for sexual services (economic violence), verbally abused (insulted) her (emotional violence), physically abused/beat her (physical violence) or forced her to have sex/raped her (sexual violence). Reporting either economic, emotional, physical or sexual violence by male clients was considered client-perpetrated GBV.

### Data management and statistical analysis

Data were entered and cleaned in Epi Info V.7 then exported to Stata V.14.0 for analysis. Univariate results were described using either frequency with corresponding proportions or mean with corresponding SDs as appropriate. We ran bivariable logistic regression analyses to examine the relationships between client-perpetrated GBV and various independent factors. We reported bivariable results using unadjusted ORs (uORs) with corresponding CIs and p values. Then, we considered all independent variables with  $p < 0.20$  for inclusion in multivariable logistic regression.<sup>30</sup> Controlling for age, marital status and monthly income, we entered all eligible independent variables into a multivariable logistic regression model at the beginning stage of model building. We used the backward elimination method and sequentially removed each factor with the least significant p value while testing model fit using the goodness-of-fit test until we obtained the best fit model. We described results from

the multivariable logistic regression model using adjusted ORs (aORs) with corresponding 95% CIs and p values. After fitting the multivariable logistic regression model, we conducted sensitivity and specificity analyses to estimate the model's predictive power and linktest to check for specification error.

### Participant and public involvement

We involved study participants and the public in the dissemination of study findings. We shared study findings with relevant local authorities in Gulu and NGOs that provide healthcare services to FSWs in the region. The complex nature of sex work made it difficult to actively involve participants or the public in study design, study conduct or reporting plans. However, the first author has been working among FSWs for more than 3 years. This personal experience and interactions with FSWs informed study design and conduct. Additionally, peers of FSWs were involved in the identification and tracking of participants.

## RESULTS

### Sociodemographic and sex work-related characteristics of study participants

We randomly sampled 380 eligible FSWs for this study. However, we successfully traced only 302 (79.5%) participants and contacted them to participate, of whom 300 were consented and enrolled with a response rate of 99.3%. The participants' mean age was 26.4 years (SD ±6, range=18–50 years), of whom 40% were below 25 years old. Additionally, 62.0% of the participants had no or primary education, 51.3% migrated to Gulu, only 14.3% were married/cohabiting and 60.7% were Catholics. Among the participants, 39.7% had been FSWs for 3–5 years, 63.9% earned money mainly through sex work and 43.5% had low monthly income/earned below the median monthly income of FSWs (US\$200 000 [US\$60]) (table 1).

### Prevalence of client-perpetrated GBV among FSWs in Gulu district

During sex work, 61.0% of the participants experienced at least one incidence of client-perpetrated GBV. The most common forms of GBV were economic (58.7%) and emotional (52.0%) violence, while the least common form of GBV was sexual violence (21.0%). Further analysis showed that 32.7% of the participants reported two or three different forms of client-perpetrated GBV. Lastly, about one-fifth (19.0%) of the participants experienced all the four forms of client-perpetrated GBV (table 2).

### Predictors of client-perpetrated GBV among FSWs

At bivariate level, participants who experienced client-perpetrated GBV were more likely to be based in the street (uOR=12.0, 95% CI 3.64 to 39.8, p<0.001), the club (uOR=3.16, 95% CI 1.66 to 6.00, p<0.001), brothel (uOR=2.91, 95% CI 1.80 to 4.70, p<0.001), bar (uOR:

**Table 1** Sociodemographic and sex work-related characteristics of study participants

Characteristic	No (N=300)	%
<b>Age (completed years)</b>		
<25	120	40.0
25–29	85	28.3
30+	95	31.7
<b>Education</b>		
≤Primary level	186	62.0
≥Secondary level	114	38.0
<b>District of origin</b>		
Gulu	146	48.7
Others	154	51.3
<b>Married/cohabiting*</b>		
No	257	85.7
Yes	43	14.3
<b>Religion</b>		
None/others	36	12.0
Catholic	182	60.7
Protestant	48	16.0
Born again	34	11.3
<b>Years of sex work</b>		
≤2	108	36.0
3–5	119	39.7
>5	73	24.3
<b>Sex work is the only income source</b>		
No	108	36.1
Yes	191	63.9
<b>Monthly income (US\$)*</b>		
≥US\$300 000	114	38.1
US\$200 000 to <US\$300 000	55	18.4
<US\$200 000	130	43.5
<b>Practice mobile sex work</b>		
No	161	53.7
Yes	139	46.3
<b>Use illicit drug</b>		
No	216	72.0
Yes	84	28.0
<b>Took alcohol during interview week*</b>		
No	107	36.3
Yes	188	63.7
<b>Frequency of alcohol consumption</b>		
Never	79	26.5
Sometimes	52	17.5
Daily	167	56.0
<b>Reported HIV status*</b>		
Negative	173	57.9
Positive	126	42.1

Continued

**Table 1** Continued

Characteristic	No (N=300)	%
*Missing data: marital status (2), alcohol consumption (2), income (1) and HIV status (1). USh, Uganda Shilling		

2.16, 95% CI 1.29 to 3.60,  $p=0.003$ ) or mobile (uOR=3.99, 95% CI: 2.41 to 6.62,  $p<0.001$ ). In addition, illicit drug use (uOR=2.21, 95% CI 1.27 to 3.86,  $p=0.005$ ), age (uOR=2.05, 95% CI 1.14 to 3.68,  $p=0.016$ ) and living with HIV (uOR: 1.72, 95% CI 1.07 to 2.79,  $p=0.026$ ) were all positively associated with client-perpetrated GBV. After controlling for age, marital status and monthly income, multivariable logistic regression results showed that: street-based sex work (aOR=9.66, 95% CI 2.78 to 33.5), mobility (aOR=3.21, 95% CI 1.83 to 5.64), living with HIV (aOR=1.90, 95% CI 1.09 to 3.31) and low monthly income (aOR=2.26, 95% CI 1.18 to 4.30) all remained positively associated with client-perpetrated GBV. Regression diagnostic tests showed that the adjusted model had; good predictive power (0.77), non-significant goodness-of-fit test outcome ( $p=0.97$ ) and no specification error (linktest hatsq,  $p=0.38$ ) (table 3).

## DISCUSSION

There is a high prevalence of client-perpetrated GBV (61.0%) among FSWs in conflict-affected Northern Uganda. It is worth noting that there is a gap in the literature on client-perpetrated GBV among FSWs in conflict-affected settings. Moreover, the current magnitude of client-perpetrated GBV among FSWs in Gulu is much lower than in Kampala (82%).<sup>29</sup> This could be because, in our study, a much smaller proportion of FSWs solely depended on sex work for income (63.9%) than in Kampala (95%). In light of a close relationship between HIV infection and GBV,<sup>31</sup> the ministry of health and healthcare managers need to develop robust GBV

**Table 2** Prevalence and forms of client-perpetrated GBV among study participants

Characteristics	No (N=300)	%
Experienced client-perpetrated GBV		
No	117	39.0
Yes	183	61.0
Client-perpetrated GBV experienced		
Economic violence	176	58.7
Emotional violence	156	52.0
Physically violence	145	48.3
Sexual violence	63	21.0
Two or three forms of violence	98	32.7
All forms of violence	57	19.0

GBV, gender-based violence.

interventions to address the GBV situation among FSWs in Uganda. There is also a need to navigate the legal challenge of criminalising sex work in the country.<sup>13</sup> Otherwise, the illegality of sex work will continue to perpetuate violence against FSWs and affect their ability to seek medical support, form support networks or take legal action against the perpetrators. The ministry of health and health managers should equip and support FSWs to deal with GBV.

Several factors were found to increase the odds of client-perpetrated GBV among FSWs. Importantly, street-based FSWs were ten times more likely to experience client-perpetrated GBV than FSWs who conduct sex work elsewhere. Available studies are in agreement with current findings.<sup>32-34</sup> Therefore, targeted measures are urgently needed to protect FSWs who operate on the street. These measures could include: provision of information and safety tips, creating awareness about legal and civil rights of FSWs, training street-based FSWs in self-defence, forming self-defence groups, providing defensive items like alarms and deterrent sprays, or developing warning systems for FSWs to inform their peers of potentially violent clients.<sup>35</sup> It is high time NGOs and civil society organisations advocate for safe places for FSWs. There is also a need for more participatory research on how to make streets safer for FSWs. In addition, mobile FSWs were three times more likely to report client-perpetrated GBV than their non-mobile counterparts. This finding agrees with available reports among FSWs in India, Tanzania and Canada.<sup>11 12 36</sup> Mobile FSWs have less control over their work environment, yet male clients often refuse to use condoms with new FSWs.<sup>36</sup> Therefore, mobile FSWs require special attention, especially in the fight against HIV. Likewise, HIV-positive FSWs had an increased odd of experiencing client-perpetrated GBV. This finding agrees with previous studies among people living with HIV<sup>37</sup> and FSWs.<sup>7 38</sup> Research has shown that this is a bidirectional relationship.<sup>39 40</sup> FSWs who suffer from GBV are at greater risk of HIV transmission due to inconsistent condom use.<sup>16 17</sup> Thus, the ministry of health and healthcare managers need to integrate GBV interventions within the existing HIV programmes to reduce HIV infections driven by the high prevalence of HIV (33%) among FSWs.<sup>41</sup> Lastly, FSWs with low income were twice more likely to experience client-perpetrated GBV. Only a few studies examined the relationship between client-perpetrated GBV and income. In Tanzania, income level did not affect client-perpetrated GBV.<sup>12</sup> However, the current finding agrees with a study among FSWs in Ethiopia.<sup>42</sup> Low-income earning FSWs may engage in riskier sexual behaviours, have poor negotiation for safer sex with clients, or operate in unsafe places like the street. Thus, there is a need for economic empowerment to provide FSWs with alternative sources of income or improve their welfare.

**Table 3** Factors associated with client-perpetrated GBV among FSWs

Factor	Experienced GBV		Unadjusted OR (95% CI)	Adjusted OR (95% CI)
	Yes, N (%)	No, N (%)		
<b>Age (completed years)</b>				
<25	63 (52.5)	57 (47.5)	1	1
25–29	59 (69.4)	26 (30.5)	2.05 (1.14 to 3.68)†	1.88 (0.93 to 3.79)
≥30	61 (64.2)	34 (35.8)	1.62 (0.93 to 2.82)	1.80 (0.91 to 3.55)
<b>Married/cohabiting</b>				
No	162 (63.0)	95 (37.0)	1	1
Yes	21 (48.8)	22 (51.2)	0.56 (0.29 to 1.07)	0.56 (0.27 to 1.18)
<b>Monthly income (US\$)</b>				
≥US\$300 000	67 (58.8)	47 (41.2)	1	1
US\$200 000 to <US\$300 000	35 (63.6)	20 (36.4)	1.23 (0.63 to 2.38)	1.84 (0.85 to 3.97)
<US\$200 000	81 (62.3)	49 (38.8)	1.16 (0.69 to 1.94)	2.26 (1.18 to 4.30)*
<b>Mobile sex worker</b>				
No	75 (46.6)	86 (53.4)	1	1
Yes	108 (77.7)	31 (22.3)	3.99 (2.41 to 6.62)†	3.21 (1.83 to 5.63)***
<b>Sex work in a brothel</b>				
No	62 (47.0)	70 (53.0)	1	---
Yes	121 (72.0)	47 (28.0)	2.91 (1.80 to 4.70) †	---
<b>Sex work in bars</b>				
No	107 (54.9)	88 (45.1)	1	---
Yes	76 (72.4)	29 (27.6)	2.16 (1.29 to 3.60)†	---
<b>Sex work on streets</b>				
No	139 (54.9)	114 (45.1)	1	1
Yes	44 (93.6)	03 (6.4)	12.0 (3.64 to 39.8)†	9.66 (2.78 to 33.5)***
<b>Sexwork in clubs</b>				
No	128 (55.4)	103 (44.6)	1	---
Yes	55 (79.7)	14 (20.3)	3.16 (1.66 to 6.00)†	---
<b>Use illicit drug</b>				
No	121 (56.0)	95 (44.0)	1	---
Yes	62 (73.8)	22 (26.2)	2.21 (1.27 to 3.86)†	---
<b>Consume alcohol</b>				
Never	43 (54.4)	36 (45.6)	1	---
Sometimes	37 (71.1)	15 (28.9)	2.07 (0.98 to 4.35)†	---
Daily	102 (61.1)	65 (38.9)	1.31 (0.76 to 2.26)	---
<b>HIV status</b>				
Negative	96 (55.5)	77 (44.5)	1	1
Positive	86 (68.2)	40 (31.8)	1.72 (1.07 to 2.79)†	1.90 (1.09 to 3.31)*

\*P<0.05, \*\*\*p<0.001.

†Significant at p<0.20 and entered into the multivariable model.

FSW, female sex worker; GBV, gender-based violence.

### Strengths and limitations of the study

Unlike most previous studies among FSWs that used non-probability sampling methods, we used a simple random sampling technique to select our sample. Thus, the study participants were representative of FSWs in the area and more generalisable for FSWs in similar settings. This study had some limitations: data collected may have been

negatively influenced by recall bias since we asked FSWs about their personal experience of client-perpetrated GBV. Besides, we implored some sensitive information relating to sex work that might have been difficult to answer and thus under-reported. However, we interviewed FSWs in such a way that we reduce any chance of information bias.

## CONCLUSION

There is a high prevalence of client-perpetrated GBV among FSWs in conflict-affected Northern Uganda. Further analysis indicated that street-based, mobile, low-income earning and HIV-positive FSWs were more likely to experience client-perpetrated GBV. Therefore, the ministry of health and the development partners need to provide targeted public health interventions that prevent and manage GBV among this underserved population.

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**Contributors** SO conceived and designed the study, collected and entered data, conducted data analysis, interpreted the findings and wrote the first draft of the manuscript. RN, CA and NMT conceived the study, supported data analysis and critically reviewed the draft manuscript. All authors approved the final manuscript for publication.

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**Patient consent for publication** Not required.

**Ethics approval** We obtained ethical clearance for this study from Makerere University School of Public Health Higher Degrees, Research and Ethics Committee (No: 2017/HD07/2063U). Each participant provided written informed consent. We maintained participants' privacy and confidentiality throughout the different processes of participant enrolment, data collection, analysis and reporting.

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**Data availability statement** Data are available on reasonable request. The datasets used and analysed during the current study are available from the corresponding author on reasonable request.

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